INSTRUCTOR

ARMY JROTC

LEADERSHIP EDUCATION & TRAINING

Desk Reference

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US Army Cadet Command - FT. Knox, Kentucky

HEADQUARTERS, DEPARTMENT OF THE ARMY

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Part I: Lesson Overview

Army Institutional Training Relationship

The Competency for a unit is similar to the Terminal Learning Objective (TLO) you may remember as a student or trainer during your active duty career. The Lesson Question is similar to the Enabling Learning Objective (ELO), and the Lesson Objectives are similar to the Learning Steps.

Chapter and Lesson Relationship

Chapters consist of one or more lessons. Lessons support the competency for the chapter. All education in a chapter should be taught sequentially to meet the competencies and other educational requirements.

Lesson Plans vs. Student Learning Plans

Each Lesson Plan contains the information needed for an instructor to teach a lesson-by-lesson phase. Student Learning Plans are similar in that they inform the Cadet as to what they are expected to learn during the lesson and how they will be assessed. In both the Lesson Plan and the Student Learning Plans, references are made to student learning activities. These activities are the actual tasks that Cadets must complete during each of the 4-phases of the lesson. The student learning activities are designed to support the learning objectives of the lesson and provide engaging opportunities that use a variety of learning strategies.

The Lesson Plan also provides student learning activities, as well as, correlating teaching notes for each that provide teachers with the detailed directions for preparing and delivering the instruction to the Cadets.

Competency

Each JROTC lesson addresses a competency as the intended learning result. Competencies describe discipline-specific skills, knowledge, and attitudes that are measurable and observable. Performance standards (criteria and conditions) provide the specifications for assessing mastery of a competency. Cadets show they have learned competencies by applying them in the completion of assessment tasks that require them to **do** one or more of the following:

- make a decision
- perform a skill
- perform a service
- solve a problem
- create a product

Common Core State Standards

In 2012, JROTC Cadet Command agreed to associate the learning outcomes for each of the 188 lessons in the curriculum to the Common Core State Standards. To date, 45 states and three United States Territories have adopted the English Language Arts (ELA) and Mathematics Common Core State Standards.

The JROTC curriculum has crosswalked all lessons to 9-10th grade ELA Common Core Standards and Numbers and Quantity Mathematic Common Core as appropriate.

Standards linked or associated with JROTC lesson outcomes do not imply that the outcomes meet the requirements for acquisition of core subject area credit. However, by linking the Common Core ELA and Math as appropriate, the curriculum provides a picture of how JROTC curriculum supports core areas such as English/Language Arts, History, Social Studies, Science and Technology, thus serving as state, district, and school wide partners in meeting education goals.

Categories within the Common Core State Standards ELA that link to JROTC curriculum include the following:

Reading: Information as Text

Writing

Speaking and Listening

Language

Reading: Historical/Social Studies

Writing: Historical/Social Studies, Science, & Technical Subjects

Categories within the Common Core State Standards for Mathematics that link to JROTC curriculum include the following:

High School – Numbers & Quantity

The Common Core State Standards' Initiative Mission is:

The Common Core State Standards provide a consistent, clear understanding of what students are expected to learn, so teachers and parents know what they need to do to help them. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers. With American students fully prepared for the future, our communities will be best positioned to compete successfully in the global economy. (http://www.corestandards.org/)

National Governors Association Center for Best Practices, Council of Chief State School Officers
Common Core State Standards ELA and Mathematics
National Governors Association Center for Best Practices, Council of Chief State School Officers, Washington D.C.

National Health Education Standards 2007 (NHES)

Health Education is a central theme integrated throughout the JROTC program. A number of requirements, electives, and curricular competencies have been incorporated to ensure that students meet nationally recognized health standards,

NHES states:

National Health Education Standards (NHES) are the framework for health instruction in schools. The NHES were designed to support schools in meeting the essential goal of enabling students to acquire the knowledge and skills needed to promote personal, family and community health. The eight standard statements enable education professionals to align health education curriculum, instruction and assessment practices (http://www.cancer.org/healthy/morewaysacshelpsyoustaywell/schoolhealth/national-health-education-standards-2007)

JROTC curriculum experts crosswalked all state Health Standards to the NHES and saw a direct correlation to the national benchmarks. Recent efforts have associated or linked the NHES to appropriate to lesson competencies in Units 2, 3, and 4. All eight NHES standards are addressed across in these units of the curriculum and can help to build a case for High School Health credit.

National Association for Sport & Physical Education 2004 (NASPE)

Physical fitness is a central theme integrated throughout the JROTC program. A number of requirements, electives, and curricular competencies have been incorporated to ensure that students meet high standards of fitness (President's Challenge) and health.

JROTC curriculum experts crosswalked all state Physical Education Standards to the NASPE Standards and saw a direct correlation to the national benchmarks. Recent efforts have associated or linked the NASPE to appropriate to lesson competencies in Units 2 and 4. All six NASPE standards are addressed in these units of the curriculum and can help to build a case for High School PE credit.

National Association for Sport and Physical Education (NASPE)
1900 Association Drive
Reston, VA 20191
http://www.aahperd.org/naspe/standards/nationalStandards/PEstandards.cfm

Linked Program Outcomes

These program outcomes describe what JROTC Cadets will know and be able to do upon successful completion of the JROTC program. They serve as a tool for summarizing and communicating the intended results of the JROTC program. The program outcomes provide the foundation for mastery of the "big picture" proficiencies and help instructors and Cadets begin and progress "with the end in mind."

Lesson Question

The lesson question is based on the overall goal or purpose of the lesson. For example, if the purpose of a lesson is for Cadets to understand the mission of JROTC, then the question could be, "How can JROTC help Cadets become better citizens?" Cadets who can answer the lesson question demonstrate their understanding of the concepts and information included in the lesson. Because the lesson objectives are written with Bloom's Taxonomy as a guide, the lesson question naturally incorporates Bloom's Taxonomy and engages Cadets in using a range of thinking skills.

Core Abilities

The JROTC Core abilities describe the broad, life-long skills that every Cadet needs for success in all career and life roles. They are drawn from the over-all goals and values that drive the JROTC program. Core abilities are not learned in one lesson or LET, but rather they are linked to lesson competencies in order to integrate or thread them throughout the JROTC curriculum.

When they teach each lesson, instructors explicitly introduce, teach, reinforce, and assess the core abilities that are designated as particularly relevant to the lesson competency. The core abilities will be displayed prominently in JROTC classrooms. Cadets should know and be able to recite them early in their JROTC experience. They should view them as the essential, value-added skills that every employer seeks.

Learning Objectives

Learning Objectives are the competency's supporting skills, attutides, or knowledge. They tell Cadets 'what' they will learn in the lesson. Similiarly, learning activities tell Cadets 'how' they will learn the objectives. Learning Objectives appear on the Student Learning Plan, Lesson Plan, and the Lesson Presentation. Cadet

Multiple Intelligences

Howard Gardner, in his book Frames of Mind, put forth his theory of Multiple Intelligences for the psychological community. Almost immediately, his theory took the educational community by storm. There are books, instructional strategies, tests, learning centers, research studies, and professions centered on his theory that each individual is intelligent in a unique way. He asserts there is no single way of being smart and that the question should be, "How are you smart?" not, "How smart are you?" With that question, he revolutionized the thinking about the definition of intelligence.

His theory makes sense. Everyone is different from everyone else in appearance, interest, ability, talent, and personality. And the brain is no exception. We all have different kinds of minds. We use our different intelligences to solve problems, to choose a profession, and to excel in different aspects of our lives. Some of us are good with language; we talk and write easily, tell good stories, and express our thoughts clearly. Others of us are designers who can decorate a room, design a house, or landscape a yard. Some are artistic and can create songs, draw paintings, play an instrument, or choreograph dances. Others are scientists or inventors who can solve problems, study issues, or do experiments. And some are team players who are good at working with, understanding, and influencing other people.

As a JROTC instructor, you can capitalize on the different intelligences of the Cadets in your program. The intelligence of the group can help you ensure that everyone understands the concepts critical to the JROTC curriculum. Teaching Cadets about the intelligences, and incorporating learning activities that include the different intelligences, assures the likelihood of more Cadets succeeding in the program.

Gardner has identified eight (possibly nine) intelligences. He believes there are more but only eight have met his stringent criteria for inclusion. The eight are described below, with appropriate classroom learning activities.

1. Bodily/Kinesthetic --This intelligence is the gift of physical prowess, muscle memory and coordination, fitness, and action. It is manifest in the skills of athletic performing, dancing, doing, experiencing,

fixing, forming, making, and repairing. Learning activities that tap into this intelligence include: Acting, Body Language, Choreography, Constructing, Energizers, Experiments, Field Trips, Games, Learning Centers, Manipulating, Pantomimes, Role Play, Sports, Use of Materials and Tools, etc.

2. Visual/Spatial --This intelligence is the gift of visually representing and appreciating concepts, ideas, and information. It is manifest in the skills of creating, imagining, visualizing, perceptions, and seeing in the mind's eye. Learning activities that tap into this intelligence include: Artwork, Blueprints, Cartoons, Designs, Drawings, Films, Graphic Organizers, Illustrations, Layouts, Photography, Manipulative, Maps, Models, Murals, Posters and Charts, Props, Sculptures, Storyboards, Videotapes, etc.

3. Logical/Mathematical -- This intelligence is the gift of reasoning and thinking in symbols and abstractions. It is manifest in the skills of calculating, computing, concluding, and logic. Learning activities that tap into this intelligence include: Analogies, Computer Games, Deductive and Inductive Reasoning, Formulas, Graphs and Information Organizers, Learning Logs, Outlines, Problem-Solving, Puzzles, Statistics, Surveys, Symbols, Timelines, etc.

4. Verbal/Linguistic -- This intelligence is the gift of language and literacy. It is manifest in the skills of listening, reading, speaking, and writing. Learning activities that tap into this intelligence include: Biographies, Books, Crosswords, Debates, Dialogue, Discussions, E-mail, Internet Searches, Letters, Magazines and Newspapers, Poems, Readers' Theater, Reports, Research, Short Stories, Speeches, Storytelling, etc.

5. Musical/Rhythmical -- This intelligence is the gift of melody, music, rhyme, rhythm, and sound. It is manifest in the skills of playing an instrument, vocal performance, appreciation of sounds and music, and timing and patterns. Learning activities that tap into this intelligence include: Background Music, Ballads, Cheers and Chants, Choirs, Choral Readings, Clogging/Tapping, Drumming, Folk Songs, Imitations, Jingles, Percussions, Raps, Songs, Sound Reproductions, etc.

6. Naturalist--This intelligence is the gift of discernment among the diversity of flora and fauna, understanding the interrelationships of the natural world, and survival instincts. It is manifest in the skills of classifying flora and fauna, observing, appreciating, and understanding the natural world, recognizing patterns in nature, and identifying the impact and consequences of environmental chaos on the order of life. Learning activities that tap into this intelligence include: Astronomy, Bird Watching, Ecology, Environmental Issues, Field Studies, Gardening, Geology, Native Plants, Nature Walks, Orienteering, Outdoor Education, Mythologies, Pattern Identification, Recycling, Street-Wise, Weather Forecasting, etc.

7. Interpersonal -- This intelligence is the gift of working with people and understanding the complexities of human relationships. It is manifest in the skills of caring, collaborating, communicating, empathizing, leading, and peacemaking. Learning activities that tap into this intelligence include: Base Partners, Case Studies, Class Discussions, Classroom Roles and Responsibilities, Constructivism, Cooperative Learning, E-mail, Group Projects, Interviews, Jigsaw, Pen Pals, Service Learning, Shared Homework, Structured Conversations, Team Building, Tutoring, Whip Arounds, etc.

8. Intrapersonal -- This intelligence is the gift of inner thought, self-awareness, and self-reflection. It is manifest in the skills of goal setting, self-assessing, and self-regulating. Learning activities that tap into this intelligence include: Authentic Assessments, Autobiographies, Calendaring, Choice Theory, Diaries, Goal Setting, Independent Reading, Meditations, Metacognition, Personal Essays, Personal Planning Time, Poetry Writing, Portfolios, Quiet or Reflection Time, Reflective or Response Journals, Rubrics, etc.

Thinking Skills

Thinking is a complex activity involving the brain's neurons (nerve cells) linking with other neurons as waves of impulses travel from neuron to neuron searching for recognizable patterns, identifying related schemas, connecting with stored information and memories, and making new connections in its search for meaning, understanding, and creativity. Researchers and educators have studied the processes of thinking for years and new discoveries continue to emerge regarding how the brain thinks. Science can tell us what happens neurologically and educators can identify and teach specific thinking skills. However, there is still much to learn about the thinking process.

Numerous skills comprise the act of thinking. These skills can be grouped into two categories, creative and critical thinking.

- *Creative thinking* -- includes skills like: brainstorming, generalizing, hypothesizing, inferring, inventing, making analogies, personifying, predicting, relating, visualizing, etc.
- *Critical thinking* -- includes skills like: analyzing for cause and effect, logic, attributes, comparing/contrasting, classifying, drawing conclusions, evaluating, recognizing bias and assumptions, sequencing, prioritizing, etc.

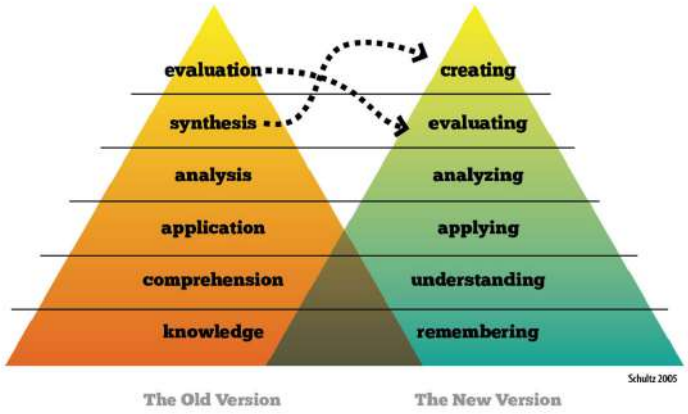
Thinking skills were incorporated into the lesson plans to assist you in your work with Cadets. As Cadets work to acquire new skills, understand new information, and apply what they are learning, incorporating thinking skills will help them to be more successful.

The specific thinking skills selected as the foundation for the curriculum come from a few helpful sources: Bloom's Taxonomy, Robert Sternberg's Triarchic Model, graphic organizers, metacognitive questions, Stephen Glenn's processing model, and Socratic questions. These thinking tools will help you develop both creative and critical thinking skills in your Cadets. While you are teaching Cadets specific thinking skills, you can provide them with opportunities to practice thinking by using the skills in experiential learning activities such as problem solving, project development, decision-making, and service learning. No single thinking skill will suffice in isolation when the learning activity, like planning a service learning experience, requires Cadets to utilize a variety of thinking skills, intelligences, knowledge bases, and performance skills.

Bloom's Taxonomy

In 1956 Benjamin S. Bloom published his now famous taxonomy of thinking. He classified thinking into six categories - Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation - that described his understanding of the cognitive domain. During any learning activity, you can use Bloom's questions to encourage understanding and meaning for your Cadets. Educators faithfully recommended moving up the taxonomy in order to encourage higher order thinking.

In the 1990's, a former student of Bloom, Lorin Anderson and David Krathwohl, revised Bloom's Taxonomy and published Bloom's Revised Taxonomy in 2001. Key to this is the use of verbs rather than nouns for each of the categories and a rearrangement of the sequence within the taxonomy. They are arranged below in increasing order, from **Lower Order Thinking Skills (LOTS)** to **Higher Order Thinking Skills (HOTS)**.



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Notice that the competencies and learning objectives in a lesson use Bloom's Taxonomy verbs. A competency would suggest a higher level of learning, with supporting learning objectives often written with verbs at a lower learning level. As you use a variety of thinking skills in the classroom, you are helping the diversity of Cadet learners to achieve the lesson objectives and master the new skills and information.

1. *Remembering* – This is the process of memorization, of recalling facts and data, of recognizing patterns, of identifying related experiences, and of connecting new information to what is already known. The focus of remembering questions is to help Cadets remember facts. You can ask Remembering questions using who, what, when, where, why, and how or with verbs that ask Cadets to describe, label, list, locate, name, repeat, etc. Some sample Remembering questions are:
   - What is the mission of JROTC?
   - What are the main battles, in sequential order, of the Civil War?
   - How might you describe three unique components of vitamins and minerals?
   - Where is the JROTC Cadet Command located?

2. *Understanding* – This is the process of interpreting, paraphrasing, inferring, summarizing, and condensing. The focus of Understanding questions is to encourage Cadets to vary or change the way they express their knowledge. You can ask Understanding questions using verbs such as clarify, define, demonstrate, explain, simplify, translate, etc. Some sample Understanding questions are:
   - Clarify what you think the author means by that.
   - Explain which equation works best when figuring out load on a transport.
   - Summarize the four main points of the article.
   - Simplify the process into three simple steps.

3. *Applying*– This is the thought process involved with the abstract, conceptual, hypothetical, as well as the specific and concrete. It means carrying out or using a procedure through executing or implementing. Applying relates and refers to situations where learned material is used through products like models, presentation, interviews, and simulations. The focus of Applying questions is to challenge Cadets to imagine using their latest knowledge in new and unique ways, to look for unusual relationships or connections, and to consider the impact of changes. You can ask Application questions using verbs such as adapt, adjust, adopt, alter, change, convert, employ, engage, modify, solve, use, utilize, vary, etc. Some sample Applying questions are:
   - What happens when you alter the number of troops in the mission?
   - What changes are needed in order for you to agree with the author?
   - Which three options are best for solving the problem?
   - How could this approach to leadership be used to your advantage?

4. *Analyzing* – This thought process is involved with examining, generalizing, associating, correlating, and connecting. It means breaking material or concepts into parts, determining how the parts relate or interrelate to one another or to an overall structure or purpose. Mental actions include differentiating, organizing, and attributing as well as being able to distinguish between components. The focus of Analyzing questions is to break down information or data into parts, to determine and observe how the parts are related, and to explain relationships among data points. You can ask Analyzing questions using verbs such as analyze, arrange, classify, examine, explore, inspect, investigate, sort, survey, systematize, etc. Some sample Analyzing questions are:
   - How would you arrange the pieces according to their most beneficial aspects?
   - What common threads did you find from analyzing your survey of five successful professionals?
   - What would you recommend from your examination of the benefits/detriments of vitamin supplementation?
   - How might you systematize the JROTC recruiting process in this school?

5. *Evaluating*– This thought process uses assessment, appraisal, standards, criterion, and judgment. The focus of Evaluation questions is to assess the value or contribution of theories, ideas, and programs, to judge the effectiveness of particular methods and procedures, and to think critically. You can ask Evaluating questions using words such as effective, practical, accurate, complete, useful,

satisfying, inspiring, damaging, plausible, feasible, prudent, beneficial, etc. Some sample Evaluating questions are:

- Explain how practical it would be to try recruiting Cadets using this criteria.
- What is the feasibility of applying these changes to our class?
- What are the benefits of incorporating service learning into our curriculum?
- How accurate is the computer system under these conditions?

6. *Creating*– This thought process incorporates creativity, inventiveness, refinement, integration, and construction. It means putting the elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing. The focus of Creating questions is to rearrange information or data into new and different configurations, to encourage creativity through unconstrained, spontaneous, and thoughtful connections, and to explore alternative associations. You can ask Creating questions using words such as imagine, predict, what if, estimate, speculate, theorize, conjecture, infer, presume, suppose, etc. Some sample Creating questions are:
   - What do you imagine might happen to the group if the roles were eliminated?
   - What changes do you conjecture might occur in the school if service learning were a part of every class?
   - What is your theory regarding the mechanism(s) affected by ingesting megadoses of fat-soluble vitamins?
   - Suppose the computer crashes again, how might we be prepared for it?

Metacognition

Metacognition means thinking that goes beyond the process of a simple, single, cognitive focus such as, "What is the definition of leadership?" Metacognition is what happens when the thought process expands and moves into much broader considerations like why, when, where, how, who, and what. For example: Who is the epitome of an excellent leader? Why do I think these leadership traits are most important? Where do I think my leadership skills have been used to their best advantage? What other definitions do I believe should be included? How have others adapted generic leadership principles to fit their personalities and their leadership styles? When will I begin to incorporate this definition into my life?

As Cadets use metacognition they move through different levels of awareness. The levels range from: becoming aware of what they are thinking and doing; arriving at that "aha!" moment of understanding; considering their perceptions and feelings; purposefully planning to reproduce what is working for them; and evaluating how they might improve and when and where they might implement what they have learned. When your Cadets begin to use metacognitive thinking they will engage in important thought processes beyond cognition.

By modeling the use of different types of questions, you can assist Cadets in developing the skills of metacognition. Four types of questions that generate different ways of thinking metacognitively start with the words, "What," "So What," "Now What," and "What Else." You can ask the questions in sequence, using one, well-crafted question from each type, following each learning experience.

1. *What?* – These questions ask Cadets to consider what they are trying to accomplish, to reflect on their plan, what they are learning, what skills they are acquiring, what have they been experiencing, etc. Some "What?" questions include:
   - What just happened?
   - What were you trying to do?
   - What was working for you? What was working for others?
   - What were you expected to do?

2. *So what?* – These questions encourage Cadets to monitor their progress in accomplishing what they planned, to reflect on why it is important to them to do or learn what they are doing and learning, to consider the impact of their experiences on themselves, their understanding, their motivation, their personal meaning, their attitudes, their feelings, etc.
   - So what part was most successful for you?
   - So what are you feeling now about what happened?

- So what additional help do you need to clarify any misunderstandings?
- So what have you learned that you didn't understand before?

3. *Now what?* – These questions ask Cadets to examine ways they can apply or integrate their new learning, to explore ways to improve upon what they have learned, to consider what will motivate a change in their thoughts, feelings, and behaviors, etc.
   - Now what do you think are the most important next steps for you?
   - Now what could you say to someone who questions why you are doing this?
   - Now what might you do differently next time?
   - Now what are you looking forward to trying?

4. *What else?* – These questions allow Cadets to contribute anything else they might have been thinking but that wasn't explicitly asked of them earlier.
   - What else have you been thinking?
   - What else ought you to consider?
   - What else is important to you?
   - What else might happen?

Socratic Dialogue

Socrates used the art of reasoning to help himself and others arrive at truth. He was skilled in the art of using questions to create conceptual conflicts that persuaded others to question their beliefs and to search for deeper, more meaningful understandings. He was not content to let the status quo or tradition dictate the thinking. He used questions to help others follow their thoughts logically, rationally, and critically and to reject conclusions that were illogical, irrational, and fallacious. You, too, can use questions to help Cadets learn how to think logically, rationally, and critically. Here are some types of questions that can assist you:

1. Validate and Justify Questions
   - Your point contradicts the accepted position. What reasons do you have for…?
   - Others find flaws in this line of reasoning. How will you use it to…?
   - The example is unclear. What is your intention for…?

2. Rationale and Why Questions
   - In what ways do you agree/disagree with…?
   - Can you explain why this…?
   - What if the situation were…?

3. Review and Paraphrase Questions
   - What is the point you are…?
   - How might you summarize the…?
   - What are you suggesting is the…?

4. Procedural Insight Questions
   - How did the process impact…?
   - What might you do next time to…?
   - What impact did that comment have on…?

5. Personal Point-of-View Questions
   - I define it as… How do you define…?
   - From my perspective I see… In what ways do you think we…?
   - My conclusions are based on… What is the foundation for your…?

Socratic questions can help you clarify Cadets' understandings and assist them in making sense of the learning activities and information they encounter in the JROTC classroom. As the instructor, you have the

option of what to ask, and in what order. By asking Cadets to think in a variety of ways, you assist them in constructing meaning that is truly meaningful to them.

Stephen Glenn's E-I-A-G

In his book, How to Raise Self-Reliant Children in a Self-Indulgent World, psychologist and author Stephen Glenn shares his active processing model for promoting thinking and discussions. His thinking and reflecting model, E-I-A-G, is an acronym for Experience-Identify-Analyze-Generalize. This four-step questioning model can help you guide your Cadets through the process of developing an understanding and making sense of what they are experiencing and learning. It is important you use these questions as the foundation of your group discussions. Cadets, listening to others express their insights, can process what they are hearing, share their own thoughts, and begin to formulate their understanding as an amalgamation of all the thoughts and ideas they encounter and process.

Below is a description of the E-I-A-G model with examples of questions related to each phase of the model. You can use this model as a guideline for asking Cadet's thoughtful questions in a sequence that facilitates a range of thinking that will help Cadets truly understand the skills, concepts, and information.

1. Experience – Cadets explain what they just experienced, react to what they accomplished, review what they attempted, identify what they observed, etc. Some sample questions are:
    - What did you notice was going on?
    - What was your role in the activity?
    - What happened as you worked with the group?
    - How did others accomplish the task?
    - How would you describe the experience?

2. Identify – Cadets identify what they learned, how they reacted or responded to the activity, how they felt about the experience, what insights they gained, etc. Some sample questions are:
    - What surprised you about the experience?
    - What was your reaction to what happened?
    - How did you feel about the process and the result?
    - What was easiest/hardest for you? What was easiest/hardest for the group?
    - What insights did you get from participating in the activity?

3. Analyze – Cadets explore reasons why it is important they learn the information, develop the skills, or participate in the activity. They consider how they know that they learned the information, acquired the skill, or understood the concepts. They explore cause and effect and evaluate the impact their thoughts have on their feelings and on their behaviors, etc. Some sample questions are:
    - What were some of your reasons for reacting the way you did?
    - Where did you find the most difficulty? Please explain why that was the most difficult for you.
    - How did your thinking change because of the activity?
    - What were some personal connections you made that helped you during the experience?
    - How do you know that you understand the information?

4. Generalize – Cadets consider ways they can apply what they learned, how it connects to their lives and their life experiences, and how they might incorporate the skills and knowledge they acquired. They can imagine ways to transfer the knowledge and apply the skills. Some sample questions are:
    - How do you see yourself using these skills?
    - What are your next steps in order to incorporate these new skills and ideas?
    - Where have you seen these skills modeled in real life?
    - If you were to recommend this to someone else, what would you say?
    - In what situations might you see yourself applying what you have learned?

Graphic Organizers

Graphic organizers encourage Cadets to list or contribute as much information as they have time and space to complete, to organize the information both logically and creatively, and to clearly show how they view the relationships or connections among the various pieces of information. Each graphic organizer can be

assessed following a similar procedure for evaluating a short answer section of a test. Evaluation guidelines can include the following:

- Inaccurate information (1 point per circle)
- Incomplete information (2 points per circle)
- Satisfactory and accurate information (3 points per circle)
- Accurate and additional information (4 points per circle)

For example, Cadets can be tested on their understanding of how JROTC promotes better citizenship by creating a concept map. The concept map can be developed individually or by a small group. If developed by a small group, Cadets write their initials next to the circle that contains their contribution.

The different graphic organizers used within the lesson plans are detailed in Part III of this document.

Authentic Assessments

Cadet authentic assessments include graphic organizers, journals, learning logs, observation checklists, portfolios, rubrics, and tests and exams.

Materials

Materials are the equipment, resources, supplies, and technologies you will need to teach the lesson effectively. Materials include such things as chart paper, markers, computer or overhead projector, Koosh balls, videos, visuals, exercises, assessments, etc. They are separated into high end (use if you have a computer in the classroom) and low end (use if no computer is available and print out visuals on transparencies for overheads). Cadets need access to the materials required to accomplish the goals of the lesson.

Cadet Reference

The Cadet reference will include material the Cadet may use throughout their involvement in JROTC.

Key Words

Key words are provided in Cadet Handbooks, Cadet Texts, Lesson Presentation, and in lesson plans for the benefit of the Cadet and the instructor.

Because the learning is student-centered, the Cadet will have the ability and the time to look up the words in resource publications in the classroom. Additionally, the Cadets will have the words in their handbook, and a homework assignment could be to look up the words before the designated class.

The instructor can guide the class toward key words as they progress through the lesson. Key words have been identified to allow the text to be written at a higher level. It is important to insure the Cadets understand the key words as they progress through the lesson.

As Cadets work through a lesson they should work to be able to define each of the words by the end of the class. There is a slide for the key words and this should be used only as a reinforcing tool. In the reflection portion of the apply phase, the instructor may clarify definitions for the Cadets if needed.

Lesson Delivery Setup

In every lesson plan there are two places to determine how to prepare for the lesson. A short description on how to organize and prepare for class follows the list of materials and key words in the section labeled "Lesson Preview." As well, setup instructions are also detailed in the beginning of each phase within the lesson plan.

Lesson Preview

The lesson preview is a shortened version of your lesson plan. It provides a quick look at the learning activities and instructional strategies included in each phase of the lesson. The lesson preview provides you with the big picture of what Cadets are going to learn and how they are going to learn it.

Icebreaker/Energizer

These are physically active games or other activities that increase group interaction, promote a sense of team, generate laughter and a sense of fun, and introduce the concept or lesson objectives.

Phase 1 – Inquire

The purpose of this phase is to determine what Cadets already know or don't know about the lesson content. The questions below will help both instructor and Cadets understand the Cadets' baseline understanding of the lesson objectives. What do Cadets know? What don't they know? What do Cadets misunderstand? What are the Cadets' past experiences? What do Cadets want to know? What is the purpose of the lesson? How motivated are the Cadets to learn the content? What are some practical reasons for Cadets to participate in the lesson?

Phase 2 – Gather

The purpose of this phase is to research and collect information from a variety of sources, to synthesize information, to evaluate existing information, to collect data, to evaluate ideas, or to observe new skills. Some important questions the teacher and Cadets can ask during this phase are, "What new and essential information or new concepts did we find? What are some new, critical component skills? What connections or associations can be made? What can Cadets do to make sense of the new information? What is the best way to gather the information? What new understandings can Cadets construct?

Phase 3 – Process

The purpose of the Process Phase is to use the new information, practice new skills, and engage in different activities. The following questions will help both teacher and Cadets. "What can I do with the information? How can Cadets demonstrate their understanding of the data collected? What ways can Cadets show relationships among the data or concepts? What ways can Cadets practice and improve their skill(s)? What can Cadets do to reinforce their understanding of the new concept? How can Cadets ensure the new information is stored in long-term memory?"

Phase 4 – Apply

The purpose of this phase is to help Cadets make real-life applications of the new information or ideas. Cadets can also consider ways to integrate the lesson concepts or skills with other curriculum area. They also plan ways to transfer their learning into personal use outside the classroom. Questions that can help both instructor and Cadets during this phase are "WHAT ELSE can be done with the information? What else is needed to make the information usable? What else can Cadets do to use the information or skills? What else is needed to understand ways to apply the concepts or skills?"

Performance Assessment Tasks

Performance Assessment Tasks are consistently built as an activity in all Apply Phases of a Lesson Plan. They require that students develop a measurable product (e.g. paper, chart, graphic) or deliver an observable process. The assessment task targets the lesson's competency and provides your Cadets with evidence of meeting the competency's goal. Each assessment task will provide a step-by-step set of directions to the Cadet, outlining the assessment or assignment requirements. The second part of the assessment task is a Scoring Guide. This may be in the form of a checklist or rubric.

Scoring Guide Checklists:

Checklists include two elements - the observable skills and the standards or criteria to assess skill level and competency. For example, the scoring guide below is a checklist for the competency: *Present a speech for a specific purpose*. This can be used to observe the Cadet and provide feedback on their overall performance, or it could be used as a Cadet Self-Check to use while preparing for the speech. Scoring will be dependent on the standard that you, the instructor, establish. You might create a scoring standard that gives each criterion met a score of '1', making the total possible score for this assessment task 10 points. The standard for success would be established by you. It might be 8 out of 10 criteria observed as met for an 80 percent mark.

Scoring Guide

Rating Values:
Met = 1 point
Not Met = 0 points

Scoring Standard:
There are 10 criteria on this checklist, each worth 10 points. Eight out of 10 criterion must be met to have successfully completed this assessment task.

Criteria	Ratings
1. Your speaking rate is appropriate	met not met
2. You speak so everyone in the audience can hear you	met not met
3. Your voice pitch varies for emphasis and is pleasant to listen to	met not met
4. Your pauses were used appropriately	met not met
5. You articulate clearly	met not met
6. You pronounce words accurately	met not met
7. You connect with your audience	met not met
8. You appear confident	met not met
9. You use visual aids appropriately to support the speech without distraction	met not met
10. Your reflection paragraph includes what you did well in your speech and what you would like to improve	met not met

Scoring Guide Rubrics

Though all JROTC Scoring Guides for Performance Assessment Tasks are presented as Scoring Checklists, they are editable documents and can be changed to Scoring Rubrics. Rubrics indicate a specific value for the observed or presented criterion. They can be used to show progression of skills and abilities and are excellent resources to include with artifacts presented in the Cadet Portfolios. To make this a graded Assessment Task, it would be essential to develop a scoring standard. As outlined above, there are 10 criteria in this Scoring Guide example, each worth three (3) points. Now the total score possible is 30 points. The standard might require that a minimum of 1 be met on all criteria. This would enable students an opportunity to progress in their speaking abilities with recorded evidence of progression outlined on the Scoring Guide.

Scoring Guide – Rubric

Rating Values:
3 – met criterion as outlined; evidence of practice and preparation
2 – met criterion as outlined; additonal practice and preparation needed
1 – met criterion as outlined; little to no evidence of practice or preparation
0 – did not meet criterion as outlined; no attempt to deliver criterion

Scoring Standard:
There are 10 criteria each worth three (3) points each. All criterion must achieve a minimum score of 2 points; 20 points must be achieved in order to have successfully completed this assessment task.

Criteria	*Ratings*
1. Your speaking rate is appropriate	3 2 1 0
2. You speak so everyone in the audience can hear you	3 2 1 0
3. Your voice pitch varies for emphasis and is pleasant to listen to	3 2 1 0
4. Your pauses were used appropriately	3 2 1 0
5. You articulate clearly	3 2 1 0
6. You pronounce words accurately	3 2 1 0
7. You connect with your audience	3 2 1 0
8. You appear confident	3 2 1 0
9. You use visual aids appropriately to support the speech without distraction	3 2 1 0
10. Your reflection paragraph includes what you did well in your speech and what you would like to improve	3 2 1 0

Cadet Portfolio Performance Assessment Task:

The Cadet Portfolio is one of the most authentic forms of assessment within the JROTC Program. A Cadet Portfolio Performance Assessment Task is developed over time by a Cadet. It includes the products developed by a Cadet and the processes observed while in teams that showcases the emerging skill and knowledge level of the JROTC Cadet.

All Cadets will create a portfolio that contains an organized collection of work based on accomplishments, personality, goals, and aspirations. The portfolio should provide insight and information on the Cadet's personal achievements and growth over time. Instructors will ensure that all Cadets have a portfolio and will periodically discuss evidence of growth and improvement demonstrated in the portfolio. Instructors can require additional assignments that will tailor portfolios to address areas of concern of their school and/or the individual needs of the Cadet. Cadets will begin creating their portfolio with LET 1 upon entry to the JROTC program. Portfolios will be maintained on all Cadets enrolled in the JROTC program for the duration of their JROTC career.

LET 1 JROTC Portfolios will include the following:

- A personal cover page.
- Mission statement of goals.
- Electronic copy of Personal Skills Map results (personal profile). (Unit 3, Chapter 1, Lesson 3)
- Winning Colors Communication Discovery Form (personal profile). (Unit 3, Chapter 1, Lesson 1)
- Learning style inventory (personal profile). (Unit 3, Chapter 2, Lesson 3)
- At least two samples reflecting academic work from JROTC or other classes.
- Electronic copy of Cadet Challenge results. (Unit 4, Chapter 1, Lesson 2)
- Completed Learning Plans and Assessments from each core lesson.

LET 2, LET 3 and LET 4 Cadet Portfolios will contain the items listed above and include the additional comments below:

- Personal financial planning portfolio. (Unit 3, Chapter 11 and NEFE materials)
- Computer printouts of Personal Skills Map profile and updates of Winning Colors Discover forms –minimum of one annually.
- Results of Fitness Summary (JUMS Cadet Record). (Unit 4, Chapter 1, Lesson 2
- The appreciating diversity reflection assessment tool. (Unit 3, Chapter 1, Lesson 2
- An entry for JROTC Essay Contest.
- A resume with references.
- Samples of awards, certificates of accomplishment and other achievements.
- Samples representing academic units of study from any subject area within or outside of the JROTC Program, etc.
- Electronic copy of Cadet Challenge results. (Unit 4, Chapter 1, Lesson 2 and fitness summary; Unit 4 Chapter 1, Lesson 2)
- Service Learning project reflection. (Unit 3, Chapter 8, Lesson 3)
- Completed Learning Plans and Assessments from each core lesson.

The Portfolio Scoring Guide below contains criteria outlined in the CCR 145-2; 2-6. Ratings suggest a simple checklist. You may adjust this rating scale to a simple rubric, providing rating values and scoring standards as you believe appropriate for your Cadet population. This Scoring Guide can then serve as an effective tool for grading portfolios and student self-assessment.

Criteria	Ratings
LET 1 JROTC Portfolios will include the following:	
A personal cover page.	Complete Not Complete
Mission statement of goals.	Complete Not Complete
Electronic copy of Personal Skills Map results (personal profile). (Unit 3, Chapter 1, Lesson 3)	Complete Not Complete
Winning Colors Communication Discovery Form (personal profile). (Unit 3, Chapter 1, Lesson 1) Learning style inventory (personal profile). (Unit 3, Chapter 2, Lesson 3)	Complete Not Complete
At least two samples reflecting academic work from JROTC or other classes.	Complete Not Complete
Electronic copy of Cadet Challenge results. (Unit 4, Chapter 1, Lesson 2)	Complete Not Complete
Completed Learning Plans and Assessments from each core lesson.	Complete Not Complete
LET 2, LET 3 and LET 4 Cadet Portfolios will contain the items listed above and include the additional comments below:	
Personal financial planning portfolio. (Unit 3, Chapter 11 and NEFE materials)	Complete Not Complete
Computer printouts of Personal Skills Map profile and updates of Winning Colors Discover forms –minimum of one annually.	Complete Not Complete
Results of Fitness Summary (JUMS Cadet Record). (Unit 4, Chapter 1, Lesson 2)	Complete Not Complete
The appreciating diversity reflection assessment tool. (Unit 3, Chapter 1, Lesson 2)	Complete Not Complete
An entry for JROTC Essay Contest.	Complete Not Complete
A resume with references.	Complete Not Complete
Samples of awards, certificates of accomplishment and other achievements.	Complete Not Complete
Samples representing academic units of study from any subject area within or outside of the JROTC Program, etc.	Complete Not Complete
Electronic copy of Cadet Challenge results. (Unit 4, Chapter 1, Lesson 2 and fitness summary; Unit 4 Chapter 1, Lesson 2)	Complete Not Complete
Service Learning project reflection. (Unit 3, Chapter 8, Lesson 3)	Complete Not Complete
Completed Learning Plans and Assessments from each core lesson.	Complete Not Complete

Creation of Teams During Lessons

We have intentionally included various ways to divide the class into teams. The goal is to have all the Cadets interact with the rest of the class and to have different team configurations in different lessons or phases. Often groups that work together for long periods form cliques, which could be counter-productive to the goals of JROTC and the learning process. To broaden the learning experience, form Cadet teams that encompass diversity from all angles -- intelligences, learning styles, backgrounds, and Winning Colors. Forming unique teams using different techniques should help your Cadets relate to and bond with one another. As you work with the Cadets these traits will become obvious. When there is a specific need to remain in You the People groups, squads, platoons, or companies for specific lessons, this will be addressed in the lesson.

For any small team activity, ensure that each team contains no more than 4 or 5 Cadets. If class size is large and forming teams would require including more than 4 Cadets in each team, create 2 or more teams to work on the same topic/activity. If a decision is to be reached within the team, an odd number will assure there is no tied vote. If teams are required to “present” their “product” to the whole class (e.g., perform a skit, explain a graphic organizer, etc.), choose only one team that worked on that topic to “present” (in the interest of saving class time for other activities). Do not select the team to “present” until all teamwork is completed and all teams are ready to "present."

Embedded Questions

The JROTC Curriculum has a database of questions built within the Curriculum Manager for each lesson. They are designed guided by Dr. Steve Huff’s F.I.T. Model of Instruction. Each question can be used with Automated Response Systems (handheld student clickers) and are also part of the embedded slides within the Lesson Presentation. The same questions can also be built into lesson, chapter, and unit quizzes or examinations.

These questions include Focusing (F) Questions, Vocabulary (V) Questions, and Reinforcing (G and Q) Questions. The coding is evident in the question.

- Focusing (F) Questions are introduced at the beginning of a lesson, during the Inquire Phase, and draw attention to the topic to be presented in the lesson and help grab Cadet attention, providing feedback to them and to you about what it is that they already know about the subject.
- Vocabulary (V) Questions quiz Cadet’s on the key word definitions. They can be presented at any time during the learning experience, but by default are presented during the Apply Phase of a lesson and serve as review.
- Reinforcing (G and Q) Questions provide a check on comprehension. These questions are presented during the Gather and/or Process Phase of a lesson, typically after new information has been presented to students or after existing knowledge has been built upon using higher level thinking skills.

All questions are housed in a CPS Database within Curriculum Manager. Though the lesson presentation might show a few questions, the database houses many more and can be configured into quizzes and exams by using the Exam Builder in Curriculum Manager.

Each question is not only coded by type, but by difficulty level.

Level 1 Questions check for basic knowledge or comprehension. They question the meaning of terms or concepts. Focusing (F) Questions, Vocabulary (V) Questions, and some Reinforcing (G and Q) Questions are coded Level 1.

Level 2 Questions prompt Cadets to provide evidence of critical thinking. A typical question might be centered around a short scenario, where students need to make a decision or analyze a situation in order to provide the proper answer. Many Reinforcing (Q) Questions are Level 2.

Level 3 Questions require that Cadets build upon previous knowledge and newly introduced concepts, facts, or principles to make a decision. They often have multiple parts. Many Reinforcing (Q) Questions are Level 3.

Level 4 Questions require that students evaluate a situation and determine the best course of action using previous knowledge, new learning, and experience. There are some Level 4 Questions in the CPS Database. Developing a solid examination requires a combination of Level 2, 3 and 4 Questions.

Testing and the JROTC Curriculum

What evidence *do* you have that student learning success has occurred upon completion of an Army JROTC unit of study? Perhaps you deliver to your Cadets a 100-question test at the end of a unit of instruction. What do the scores reveal? Is the test valid? Is it reliable? Does the test measure what a Cadet knows or show what a Cadet can do as a result of a learning experience?

Tests developed within the JROTC performance-based curriculum have been carefully structured and can certainly be *one* strategy to provide evidence of student learning. Since the curriculum's inception in 2000, authentic assessments include graphic organizers, journals, learning logs, observation checklists, portfolios, rubrics, *and* tests and exams.

A formal process of testing validity and reliability has not been completed on any JROTC Unit of Study test. However, careful measures to validate questions are part of the curriculum's continuous improvement process. Data pertaining to test scores can be gathered through the Army JROTC Curriculum Manager. Information provided below outlines the organization's internal process.

Validity: Valid test questions are those that relate directly to the material presented to students, whether from a textbook, instructor presentation, or supporting learning materials. JROTC Curriculum Lesson Plans provide detailed directions to instructors on how to deliver the lesson content designed to support the targeted student learning outcome. JROTC curriculum has formative assessment built into each lesson through a bank of questions. These questions were reviewed informally for validity during their development. All questions have been reviewed and evaluated by curriculum consultants. Each test question is leveled based on difficulty and type.

Level 1 Questions check for basic knowledge or comprehension. They question the meaning of terms or concepts.
Level 2 Questions prompt Cadets to provide evidence of critical thinking. A typical question might be centered around a short scenario, where students need to make a decision or analyze a situation in order to provide the proper answer.
Level 3 Questions require that Cadets build upon previous knowledge and newly introduced concepts, facts, or principles to make a decision. They often have multiple parts.
Level 4 Questions require that students evaluate a situation and determine the best course of action using previous knowledge, new learning, and experience. Developing a solid examination requires a combination of Level 2, 3 and 4 Questions.

Testing Reliability: Determining whether a bank of test or exam questions are reliable is another aspect of vetting test questions. A reliable test question is one where students of consistently select the same answer. JROTC test banks have not been formally tested for reliability. Testing scores can be obtained as a report from Curriculum Manager as a first step to informally determine whether or not a test question is reliable.

Army JROTC Assessments

A Statement Pertaining to Valid and Reliable Testing

Army JROTC Curriculum Design

The Army JROTC Curriculum is a world-class curriculum based on the principles of performance-based, learner-centered education. Grant Wiggins and Jay McTighe identified the stages where desired results could be achieved and then planned instruction and learning experiences would mirror those results. Learner-centered, performance-based learning specifies desired results (knowledge, skills, and attitudes) in advance of instruction; explicitly states standards used to measure performance, requires learners to perform the competency as evidence of achievement, and provides learners with opportunities to develop each competency. As a result, Cadets:

- Learn skills they can use; not outlines of information or isolated facts
- Know the performance expectations up front
- Engage as active partners in the learning process
- Document accomplishments and competence
- Learn how to learn

The 188 JROTC lessons align with the 9-12th Grade Common Core Standards, the National Health Education Standards (NHES), and the National Physical Education Standards (NPES). The "depth" of knowledge, or complexity, is attained by utilizing Blooms Taxonomy. These 188 were designed under the direction of the Worldwide Instructional Design System http://www.wids.org (WIDS). Their guidance provided the model, methodology, and software to develop all student learning outcomes and performance standards. Such benchmarks drive the development of all student learning and assessment, whether a competency, a learning objective, a single student learning activity or a testing question.

JROTC Assessment Framework

The JROTC curriculum uses a balanced approach to assessing learning.

1. Traditional assessments focus on fundamental curriculum knowledge through the use of classroom assessments, assignments, tests, quizzes, and standardized tests.
2. Cadet portfolios focus on process, product, and growth. Key features are reflection, goals setting, emotional intelligence, academic growth over time, and self-evaluation.

JROTC values authentic assessment, and has developed performance assessment tasks with scoring guides and performance criteria that require Cadets to produce something -- projects, papers, and presentations. These assessments target lesson competencies and performance standards and provide evidence of the learning outcomes. Evidence of learning and development is based on a Cadet's portfolio of work and not standardized exams.

Headquarters, JROTC maintains the test bank of items that reside in the Curriculum Manager (CM). The items are intended to assess baseline knowledge of content only - as a diagnostic during instruction or possibly as an end of course test or formative assessment. This is an important point because JROTC "supports" core subjects. JROTC tests and assessments were not designed as high stakes measures to compare Cadets or instructors across programs, predict success on external exams (i.e. ACT/SAT exams), or to **validate** a measure like "reading comprehension".

Test banks include multiple choice and short answer questions that target *comprehension* of knowledge, *understanding* of concepts, and successful *analysis* and *evaluation* through the *application* of principles and processes through transfer of learning. Each question is coded within the JROTC Curriculum Manager Test Bank as Level 1, 2, 3 and 4 questions. ***Reliable*** exams require combination of Level 1-4 questions. Level 1 Questions check for basic knowledge or comprehension. They question the meaning of terms or concepts.

Level 2 Questions prompt Cadets to provide evidence of critical thinking. A typical question might be centered on a short scenario, where students need to make a decision or analyze a situation in order to provide the proper answer.
Level 3 Questions require that Cadets build upon previous knowledge and newly introduced concepts, facts, or principles to make a decision. They often have multiple parts.
Level 4 Questions require that students evaluate a situation and determine the best course of action using previous knowledge, new learning, and experience.

The curriculum and all supporting programming is reviewed and accredited by AdvancED, see www.advanc-ed.org, under the new Standards of Quality for Special Purpose Institutions.

Feedback and Focus During the Lessons

In student-centered learning, one of the objectives is to have the Cadets present or teach what they have learned to the rest of the class. The instructor will often need to correct some misconceptions or focus on important information not addressed by the Cadets. This needs to be done in a manner that will not alienate the Cadets. There are many feedback methods to do this. Some ways to present the information that had been missed would be to poll the class with leading questions. The Cadets would then be the ones filling in the missed information. One way to dispel misconceptions is just not to address them. You can do this by highlighting, circling, checking, or using some other positive means to identify the correct responses on presentations. Not addressing or highlighting the incorrect answers will also help by not reinforcing the negative responses. At times you may need to just mark through the answers if there is a question. Remember, try to draw the answers from the Cadets and allow them to complete the requirements.

Handouts and Exercises

Electronic handouts and exercises will be available on the Unit's CD-ROMs that complements the different lesson plans. They are easily accessible and allow you to customize and print exactly what you will need to distribute in class. The instructor will have to make copies to distribute as needed to the Cadets. This option will allow the instructor to have some latitude in the materials to be used in the class.

Example: The lesson on uniforms discusses two ways to wear ranks on shirts and has a note indicating this is a decision at each school. The instructor can customize handouts to focus on the needs of the school program.

Homework

Homework has been included as an addition to many lessons. Usually homework is optional and is supplemental to the lesson. Use of homework will require some form of grading or accountability. Here are a few suggestions to check for the completion of homework, without getting bogged down in the task of grading and recording the results:

If the homework was a notebook entry, have the Cadet show you the homework as a "ticket" to get into the classroom. (Of course you will have to explain this when you handout the assignment or the Cadets will not be ready.) Quickly scan the material to see that some work has actually been done. For those not presenting homework, make a note next to their name and arrange for a later conference about the importance of homework.

Try to make the assignment a matrix or a rubric you can mark with a transparency overlay. This will allow you to rapidly score the papers and make the appropriate entries in your grade book.

Use the homework as a preparation for the next lesson, such as looking up the key words before the designated class or as a transition from one lesson to another. For Cadets who were absent on the previous day, or did not complete the homework, you may need to have some supplemental material for them to use during the lesson.

Self-paced Options

Though student learning activities are designed to be delivered by an instructor, all instructional resources are available on Curriculum Manager. This makes it possible for students to pace themselves through a lesson, acquiring JROTC credit by completing all activities as self-paced activities.

Textbooks
There are three textbook options available for use with the JROTC curriculum. Your Lesson Set Up will outline the textbook options applicable to the lesson you are teaching. Each type of textbook is to be a supplemental reading material and classroom resource, and not the only source of content delivery in the Gather Phase of a Lesson. JROTC Lessons are not designed around a textbook, but built to support a competency. There are many other resources, including your own expertise, embedded flash objects, assigned research, and Internet searches that serve as valuable strategies for gathering new information.

The textbook options are as follows:

Units 1-6 Hardbound Textbooks:
These are hardbound unit textbooks and contain all core and elective JROTC lesson content (except new lessons in 2010 U3C1L5 and U4C1L3, which have supporting electronic text sections within Curriculum Manager; See E-text section below). The content presented in the textbooks is predominately government-owned, but does include some publisher-owned content, which makes it difficult to update and remain current. The JROTC Curriculum is not static, but changes with emerging 21st century learning themes. The goal of JROTC Curriculum is to be relevant to Cadets. The hardbound textbooks can be ordered for use in the classroom.

LET 1-4 Softbound Textbooks:
The current softbound textbooks include content that supports the LET 1-4 Core Lessons. Identical versions of the LET softbound textbooks are also available digitally by lesson and are located within the Global Resources folder in Curriculum Manager.

E-Text for Health and PE
In 2010, JROTC Health and PE lessons were revised to crosswalk to the National Health and PE standards. This revision revised lesson activities, created new content learning objectives, and created an electronic text or e-text. For lessons that are considered lessons toward Health or PE credit, the e-text will be available under the lesson's Resources folder in Curriculum Manager. An entire PE and Health e-text are also located in the Global Resources. There is not a printed version of this text at this time.

Instructor
The term "instructor" is used throughout the lesson plans and materials. Instructor means a teacher, facilitator, SAI, or any other title of the person in charge of the classroom as appropriate.

Use of Negatives and Incorrect Examples
The focus on the lessons is skill- building -- what to do. There is little time to address the negative or focus on what not to do. We need all the time we can get to develop the skills imbedded in each lesson. Incorrect or negative examples are counter-productive to good training. Remember the old example, "Don't think of a pink elephant!"

Part II: You the People

Grading

Winning is a key motivator in our society. You should provide prizes for groups that do well to promote effort and excellence. The grading process is a combination of effort and quality.

Instructors should observe their groups in action. Look for groups that:

- Use the library.
- Work with the seven citizenship skills.
- Answer a good number of questions.
- Organize their efforts.
- Show group efficiency.
- Use all members of the group to their best effect.

Quality is relative to the other current groups. Quality is a subjective process. Look for groups that:

- Come up with a superior answer to the question/problem.
- Raise the solution to a new level, creating a win-win situation.
- Dig more deeply into an issue than other groups have
- Provide answers that uncover new aspects of the issue/problem.
- Use new thinking to attack it.

Representative Sessions

You the People representative sessions develop the skills needed by citizens to elect good representatives. They mirror the representative process under which our local, state, and federal government works.

Each group chooses representatives by majority vote. Representatives may change at the will of the group. Remind the Cadets that those not chosen as the representative will QUIETLY watch the representative sessions as “voters” who have transferred their power to the elected representative. Before the session, remind the “voters” they will evaluate their representative using the rating sheet in their Cadet handbook. The goal here is to impress two things:

- The skills and qualities to look for in a good representative.
- The importance of monitoring them between elections.

The Library

Research is vital to knowledge. One of the most important traits of citizenship is the ability to find out the facts and process the information to arrive at the truth. The You the People process require participants to discuss problems/questions/issues using sufficient information to look at all sides before making a decision.

Show the librarian the program so the librarian can see the importance of his/her role. Communicate to the librarian which issues the Cadets are following so the librarian can direct the Cadets to appropriate reference material, from any medium. Ask the librarian not to do the Cadets' research.

Ask the librarian to watch your Cadets as they go through the research process, help them when they ask, and provide an evaluation of each Cadet as input to the group’s final grade.

Teaching Method

- This process uses a similar teaching method to the Cadet-centered four-phase lessons used in the JROTC curriculum. The principle is simple. You can’t train people to come to their own conclusions by telling them what to do.
- When possible, answer a Cadet’s question with a question. Rather than give Cadets the answer it is better to ask them questions that will help them to find the answer.

- Your questioning should be presented to ensure they know what they are doing, that it makes sense, and so they will not get in trouble.
- Let them make mistakes. Mistakes, as long as they are not harmful, can be the best teachers.
- You may have to give a mini-lecture to explain events or historical actions that bear on the issue, put it into context, fill in some of the core competencies, or focus the Cadets.

When Teaching This Program

- *Be flexible:* Let current events show the Cadets how the constitution is a living document that affects them every day. Show Cadets how they affect the results with their actions and their votes.
- *Be a coach:* They perspire, you inspire! Ask why? Focus them on the purpose of whatever they are doing and let them discover what truth they can.
- *Be personable:* Treat Cadets as adults in training. Remind them that all common People now alive and yet unborn will be dependent on them to make this nation work.

Tips for Teachers (From teachers who use You the People)

- Spend time periodically on the inspirational part of this program. Use the quotes in the handbook and the video. Reinforce their vital historic role as the latest group of common People to try to rule themselves.
- Ground the Cadets in the citizenship skills before they start the Cadet action group process. Use the Citizenship Skills development exercises coupled with the evaluation sheets after Cadets start the group process.
- Grading is based on group performance and individual effort within the group. (See Grading Matrix.) Their evaluation sheets about their own group performance will help.
- The final exam can be anything from coming to agreement on some current constitutional issue through the use of representatives, to going to some local authority/council/board and trying to help solve something.
- Work closely with your principal. Many times younger Cadets will want to tackle a school issue such as locker placement, bell schedules, dress codes, and the like. It is a good idea to pre-brief the principal about what they are up to and ask if he or she is willing to play the game.
- Develop a broad list of website resources that Cadets can use in their research. Make sure to get sites on all sides of issues. If you list “non-partisan” sites, make sure they are, in fact, non-partisan.
- Keep a chart of your course objectives. Check them off as the Cadets learn them through the normal discovery process, as they get “hot” about what is in the news.
- Use the Constitution Booklet as a reference to reinforce the fact that the Constitution is tied to the ideals of the Declaration of Independence, works in their lives every day, and makes them different from all other citizens in the world.

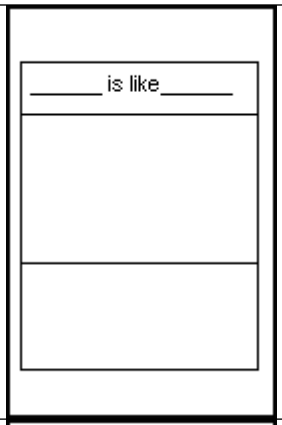
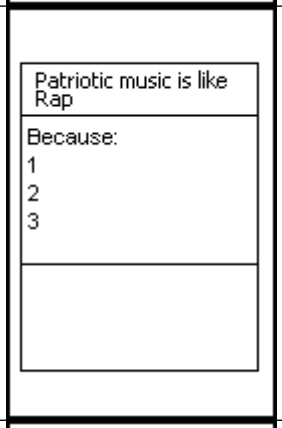
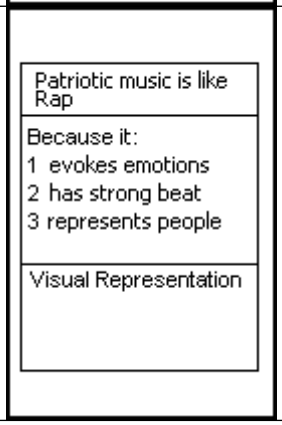
Information Evaluation

One of the main requirements of citizenship is the ability to be an informed voter. There are two questions to ask if you want to become an informed voter.

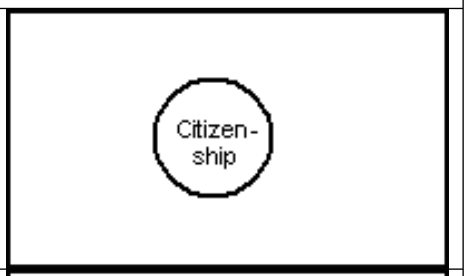
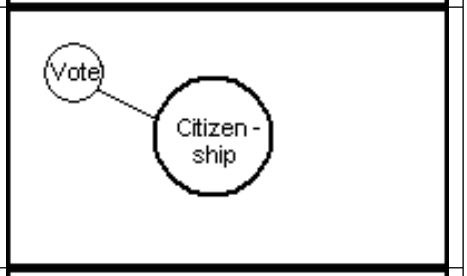
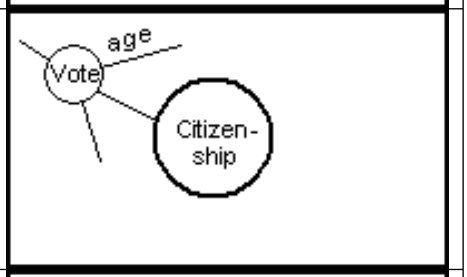
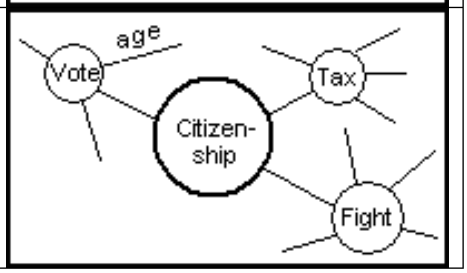
1. *ASK WHY!* Everything has a purpose and if you know the purpose you can understand, or maybe not understand, what is going on.
2. *FIND OUT WHO BENEFITS!* Do this with every issue you face no matter how simple and innocent it seems. Remember, if you want to know the truth, follow the MONEY, EGO, and POWER trail (MEP) all the way to the end.

Part III: Graphic Organizers and Thinking Maps®

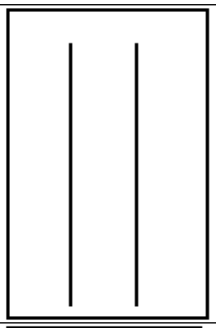
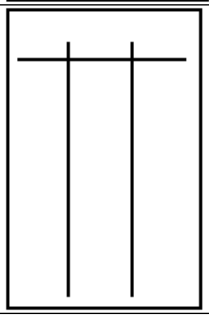
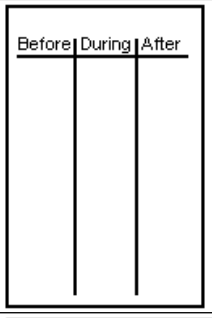
Analogy Chart
This thinking and organizing process involves comparing one thing to another thing that initially seems unrelated. The benefit of the process comes from having to explore the connections and the critical elements. For example, Cadets could compare patriotic music to rap music.

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers.	
2	Draw a diagram like the one at the right. It is best to use a straight edge to make this look neat.	
3	If the analogy is not given in the lesson plan you will have to create your own. The best way to do that is to think like a high school Cadet for one of the two categories. For example: Patriotic music is like Rap. If you have a specific number of responses number the chart in advance, otherwise, to allow you flexibility, do not number.	
4	Enter the responses as they are given. If you have numbers make sure your points are addressed in the activities. You might also want to add a visual or even audio representation to evoke responses from other multiple intelligences.	

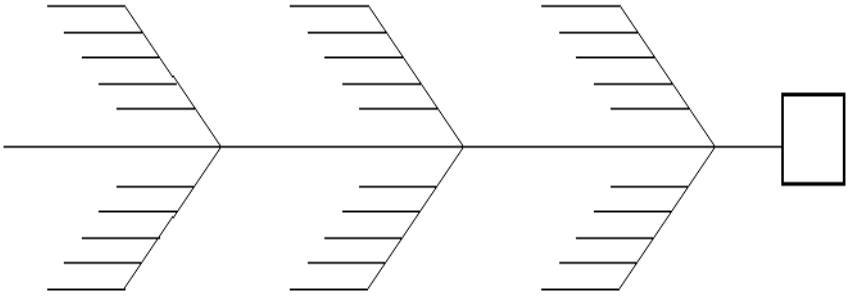
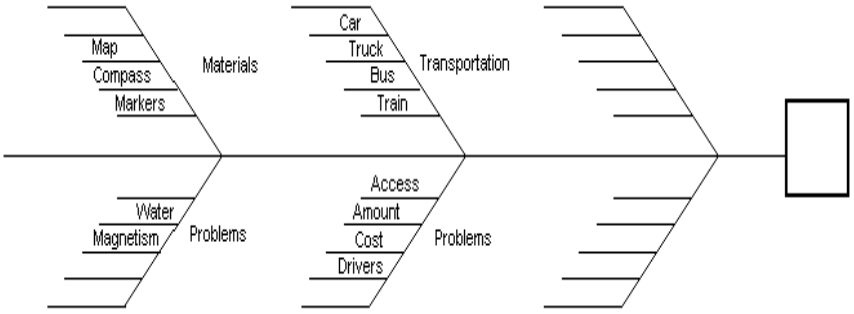
Concept Web
The center circle is the main concept or idea. The smaller circles connecting to the main concept represent the sub concepts; connected to these sub concepts are sub-sub concepts. For example, the center circle could be citizenship. The smaller connected circles are sub concepts related to citizenship. These smaller circles can also be explored for additional supporting concepts. An illustration might be the sub concept of voting as a critical part of citizenship. Most Cadets can't vote yet, but they could continue to explore how they might encourage voting or how they might get involved with the voting process.

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers. If possible place the paper in a horizontal position.	
2	Draw a circle in the center of the paper with a diameter sufficient to hold the main idea and write the main idea in the circle.	
3	Draw a connected sub-concept containing a concept related to the main concept.	
4	Draw a ray out from the sub-concept and place an element of voting on the ray. Add additional rays as needed.	
5	Add additional sub-concepts with rays as needed to cover all the elements.	

Double T-Chart
This is a three column chart that has three specific labels like, “Before, During, After” or “Look, Sound, Feel” or “What, So What, Now What” or “High, Medium, Low” or any other concept that includes three distinct elements. For example, Cadets could use a Double T-Chart to plan a service-learning activity and label the three columns – Before, During, After. This page is a Double T-Chart with borders. (Also see KWL and KDL tabs.)

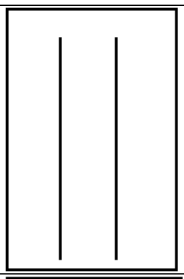
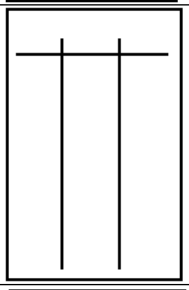
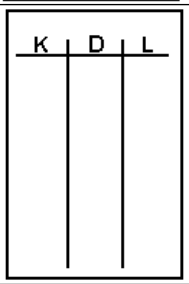
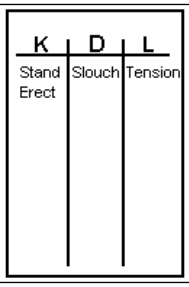
STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers.	
2	Leaving about 2 inches at the top and bottom of the page draw two vertical lines dividing the paper in thirds or spaced to fit the needs of the lesson. This will provide three distinct work areas.	
3	About 3 to 4 inches down from the top draw a horizontal line, forming a Double T.	
4	Instruct the Cadets to write the focusing points above the horizontal line. (Guide under “Explanation” above.)	
5	Instruct the Cadets to write their responses under the appropriate column.	

Fishbone Diagram
This structure helps Cadets think of important components of a problem to solve, an issue to explore, a project to plan, etc. The head of the fish represents a problem, issue, or project. “Ribs” of the fish represent component parts of the problem and the related elements of each part. For example, Cadets could explore how to prepare for an upcoming orienteering competition. Each rib represents the critical elements of preparation. Attached to each rib are the processes or activities that will assist in accomplishing each key element.

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the colored markers you plan to use.	
2	Draw a square about the size of a CD-ROM case. This will be the head.	
3	Draw a horizontal line from the left side of the head to the left side of the paper. This is the backbone.	
4	Draw ribs out from the backbone above and below the backbone. Make sure they correspond and touch each other at the intersection. Add rays as needed.	
5	Instruct the Cadets to write their responses for one point of view on the bottom set of bones and the other point of view on the top. EXAMPLE: On the bottom write; Problems On the top write: Materials and Transportation	

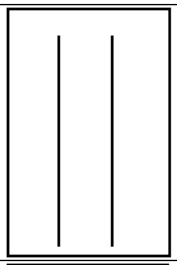
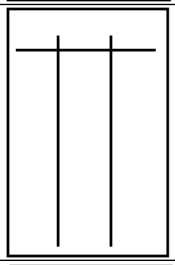
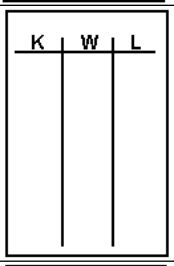
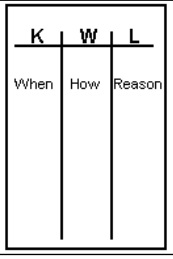
KDL Chart

This is a three-column chart. The specific labels for each column are:
K, “What do you KNOW?”
D, “What do you DO?”
L, “What have you LEARNED?”
The KDL chart is useful when Cadets KNOW what is right but do not DO what is right. The LEARN column is often used to plan corrective actions. For example, Cadets KNOW to stand erect and still at “attention.” What they DO is slouch at “attention” in formation. They LEARN to feel muscle tension in specific areas to know when they are standing erect at “attention.” (Also see KWL and Double-T tabs.)

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers.	
2	Leaving about 2 inches at the top and bottom of the page draw two vertical lines dividing the paper in thirds or spaced to fit the needs of the lesson. This will provide three distinct work areas.	
3	About 3 to 4 inches down from the top draw a horizontal line, forming a double T.	
4	Instruct the Cadets to write the K, D, and L above the horizontal line.	
5	Instruct the Cadets to write their responses under the appropriate column when directed.	

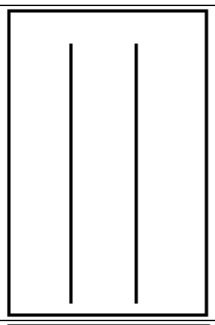
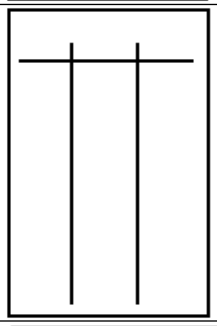
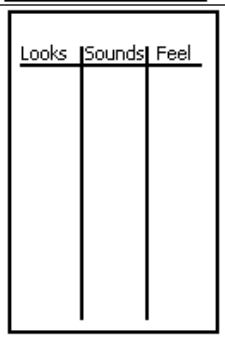
KWL Chart

This is a three-column chart. The specific labels for each column are:
K, “What do you KNOW?”
W, “What do you WANT to know?”
L, “What have you LEARNED?”
The KWL chart is useful when Cadets are faced with new or difficult information. For example, at the beginning of the unit on leadership, you might create a KWL chart for recording Cadets’ responses to “What do you KNOW about leadership?” and “What do you WANT to know about the subject?” At the end of the unit, you can return to the chart and fill in the last column, “What have you LEARNED about leadership?” with the Cadets. (Also see – Double-T and KDL tabs.)

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers.	
2	Leaving about 2 inches at the top and bottom of the page draw two vertical lines dividing the paper in thirds or spaced to fit the needs of the lesson. This will provide three distinct work areas.	
3	About 3 to 4 inches down from the top draw a horizontal line, forming a double T.	
4	Instruct the Cadets to write the K, W, and L above the horizontal line.	
5	Instruct the Cadets to write their responses under the appropriate column when directed.	

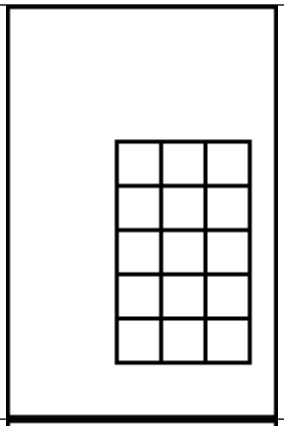
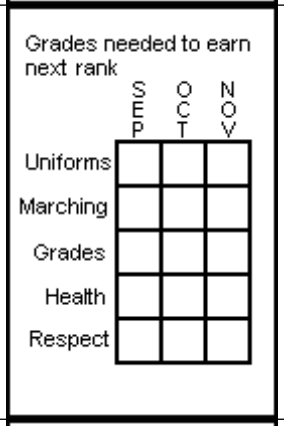
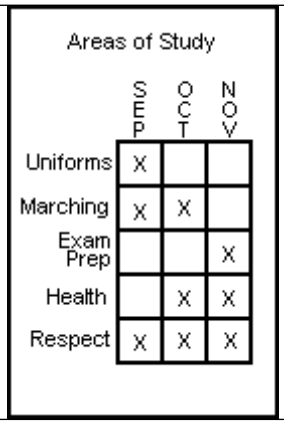
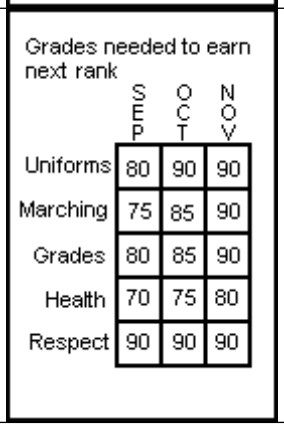
Looks-Sounds-Feels

This chart that has three specific columns "Looks, Sounds, and Feel." Although similar to the Double-T chart or the KWL chart, this chart deals with senses not normally associated with graphic organizers. For example, if you wanted to discuss dress shoes you would need to know as much about them as possible.

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers.	
2	Leaving about 2 inches at the top and bottom of the page draw two vertical lines dividing the paper in thirds or spaced to fit the needs of the lesson. This will provide three distinct work areas.	
3	About 3 to 4 inches down from the top draw a horizontal line, forming a double T.	
4	Instruct the Cadets to write the focusing points above the horizontal line.	
5	Instruct the Cadets to write their responses under the appropriate column.	

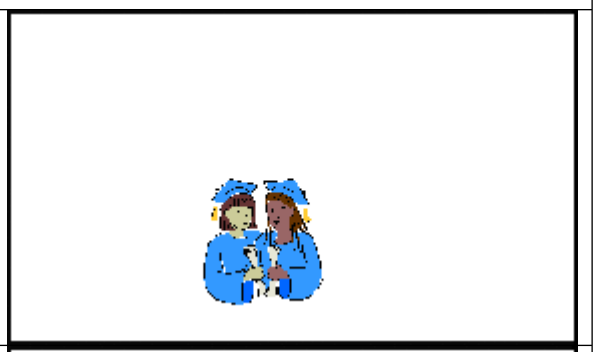
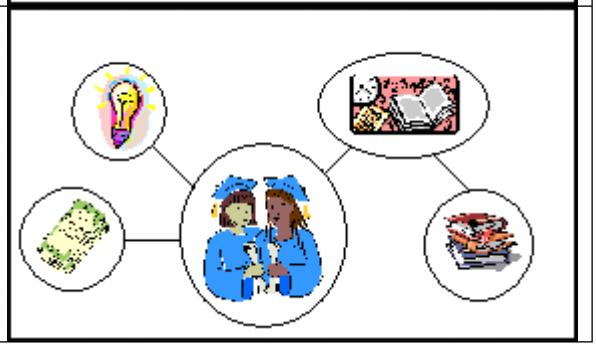
Matrix

This is a helpful tool to identify relationships and component pieces of an issue or data points. Intersecting horizontal and vertical lines create a grid used to classify and categorize related elements. For example, Cadets could create a calendar matrix for accomplishing specific advancements. The vertical columns are labeled across the top by month. The horizontal columns are labeled down the left side by specific areas of advancement. Inside the grid are the elements that must be met each month in order to achieve advancement.

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers.	
2	After determining how many rows and columns you will need, draw a grid on the chart paper. Use a straight edge to draw the lines and determine the spacing. Make sure you leave space for labels.	
3	Add the labels to the matrix and a title line if that will make the matrix clearer.	
4	Enter values in the grid to provide additional information. In some cases the matrix can be left blank and used as a checklist. It could also be a relationship tool where an X in a block could indicate an action needed.	 

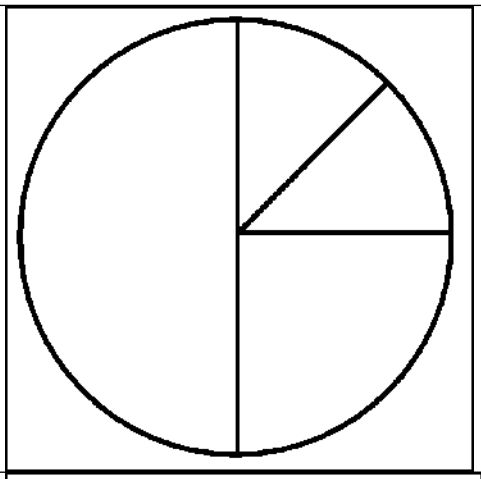
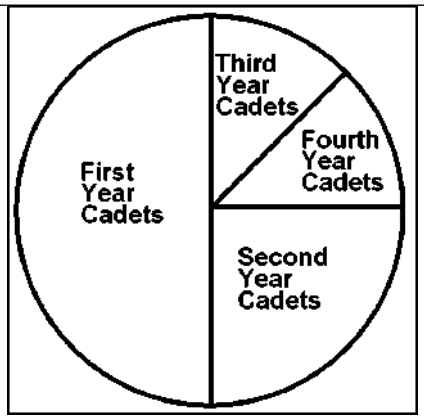
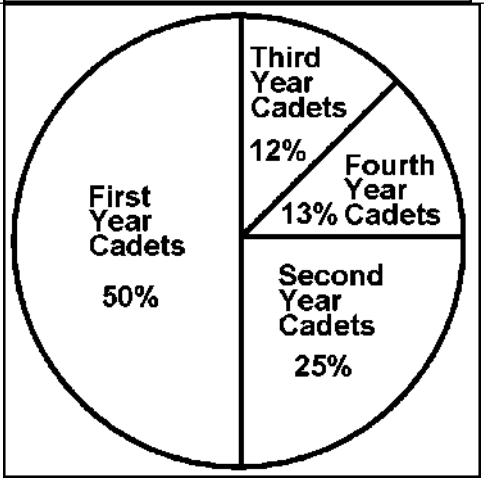
Mind Map

A mind map is a form of brainstorming using a free-flowing documentation process where lines connect concepts to each other. The core subject is in the center; the main spokes are like sub parts of chapters. Related ideas can be color coded or circled or attached by lines. Pictures and words can both be used. For example, you could use this tool to discuss what it will take for a Cadet to successfully earn a high school diploma.

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers. If possible place the paper in a horizontal position.	
2	Draw the central concept on the paper. Ask the Cadets to define what the concept is. For example: Graduate from high school	
3	The Cadets will brainstorm what it takes to graduate and draw pictures or images to show these items. For example: Money, books, studying, and ideas are some of the information they could provide.	
4	Link the thoughts to show relationships of ideas. For example: Books are needed before you can study and get your degree. Ideas as well as money are independent ideas that support receiving a degree.	

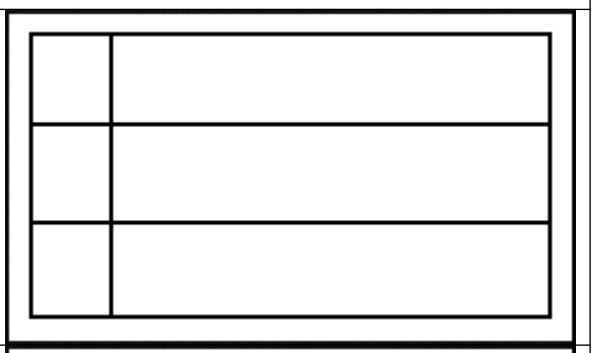
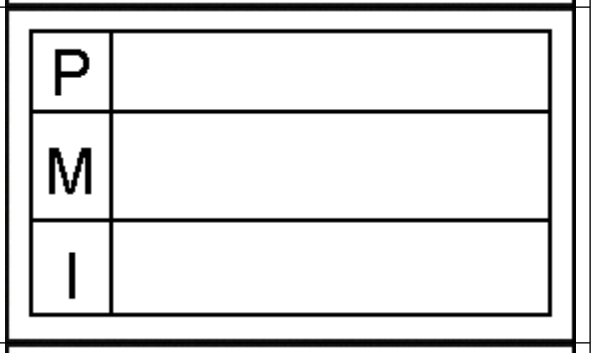
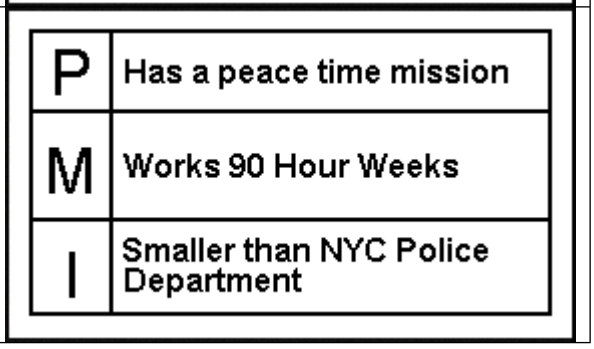
Pie Chart

Each segment of a circle represents a percentage or actual number of data points. For example, the pie could represent the total number of Cadets in the JROTC program in a given high school. The relative size of each slice of the pie would represent the percentage of first, second, third, and fourth year Cadets. Or each slice might represent the number of JROTC graduates that join a particular branch of the service.

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers.	
2	On a plain sheet of chart paper determine the topic and the breakdown of what you want to graphically display.	**Corps of Cadets** **First Year Cadets 50%** **Second Year Cadets 25%** **Third Year Cadets 13%** **Fourth Year Cadets 12%**
3	On a second piece of chart paper draw a circle and divide the circle equal to the percentages determined in the breakdown in step 2.	
4	Enter the descriptions in each of the segments of the pie. In some cases you may need to enter the descriptions outside of the pie and draw arrows to the appropriate segments. 	 You may also want to enter the actual percents.

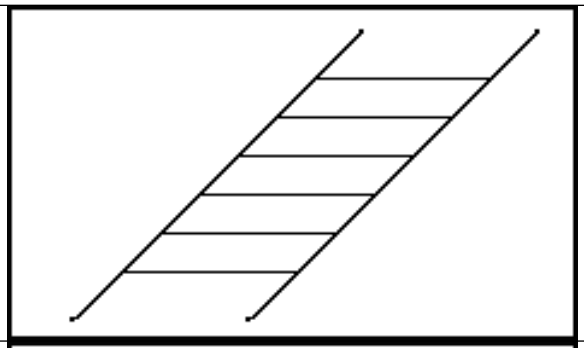
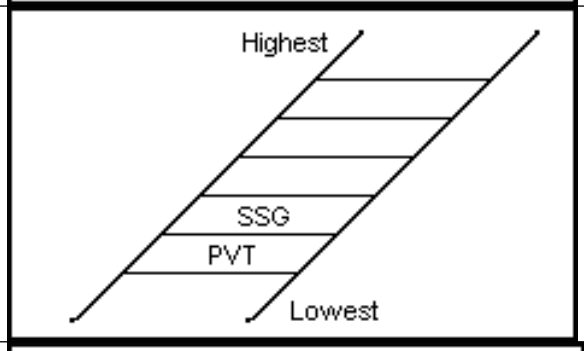
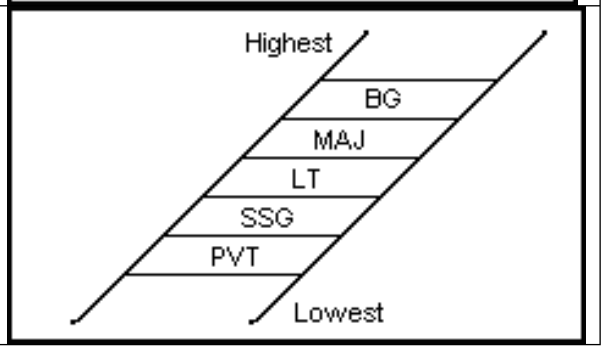
PMI Chart

What are the ***p****lusses* (positives)? What are the ***m****inuses* (negatives)? What else is ***i****nteresting* or ***i****ntriguing?* Cadets can use a PMI Chart to evaluate content, data, or results. For example, in a class on different military services, what is positive about the service? What is negative about the service? What are some interesting points about the service?

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers. If possible place the paper in a horizontal position.	
2	Draw a three-line table on the chart with the left column about 1/6th of the width of the page.	
3	Place the three letters in the appropriate boxes. P, M, and I. You may need to discuss whether the P stands for Plusses, or Positive; the M stands for Minuses or Negatives; and whether the "I" stands for interesting or intriguing.	
4	Using the Coast Guard as an example there is one item listed for each line. Note: You can actually have many different items on each line in this organizer.	

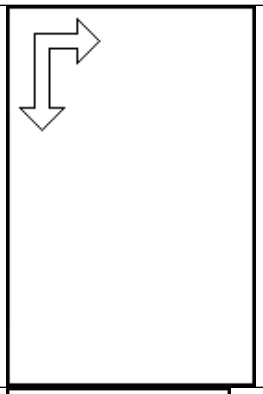
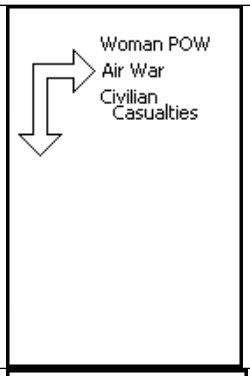
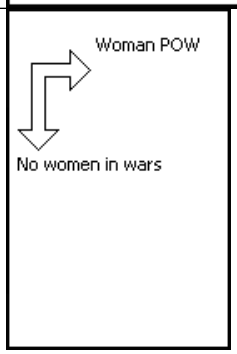
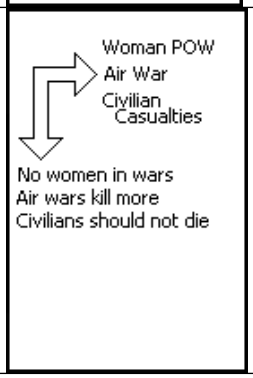
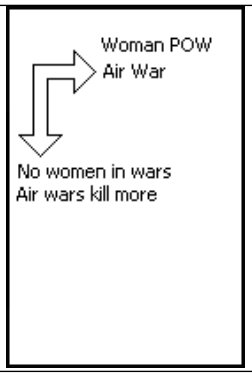
Ranking Ladder

The rungs on the ladder can represent priority or precedence such as steps in a process, hierarchy or position of components, relative importance of each data point, status of individuals, etc. For example, Cadets might use a Ranking Ladder to demonstrate the ranks in the chain of command, who are junior and who are senior. This tool is often used in conjunction with previously developed lists or answers. For example, Cadets may tell you all the ranks in Army JROTC and you list them in no specific order. You then create the ranking ladder to show the rank relationship.

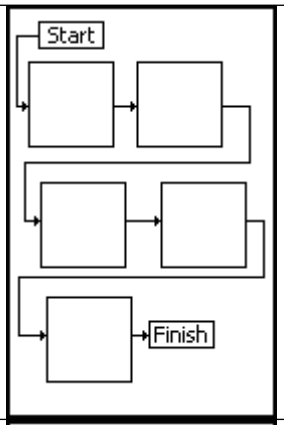
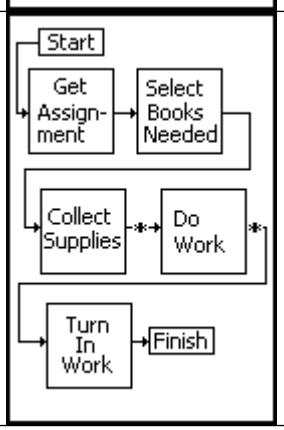
STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers. If possible place the paper in a horizontal position.	
2	Draw a ladder on an angle with the base at the lower left of the paper and sufficient rungs to address all the points you want to enter.	
3	Enter the information you need. In this case the Private is on the bottom and the Staff Sergeant is the next in the chain of command. You may want to add identifiers if it will make the intent of the ladder clearer.	
4	Complete filling in the rungs with additional information.	

Right Angle Chart

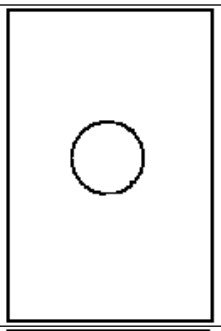
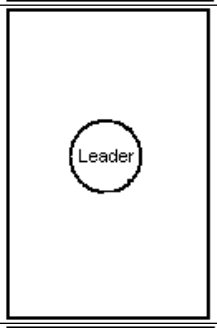
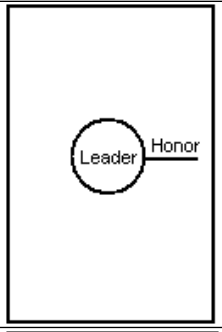
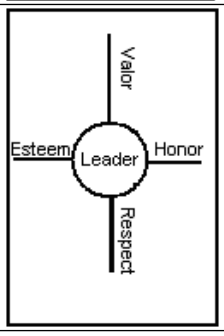
What are the *facts?* What are your *thoughts, opinions, feelings, expectations, and predictions* about those facts? Cadets can use this graphic organizer to identify facts beside the horizontal and to associate their thoughts and feelings about the facts below the vertical line. Cadets are asked to distinguish fact from hearsay or conjecture, to link facts with their thoughts about the facts and the resulting feelings and reactions to the facts, to change the direction of their thinking about the facts, and to use facts to predict. For example, in a JROTC class, Cadets can list facts about Desert Storm, and show some of the concerns the American people have about what happened.

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers.	
2	Draw a double-ended arrow in the upper left of the chart paper. Make sure you have room to add words to the left and at the bottom of the arrow.	
3	This organizer can be used two ways. The first way is to list all the facts first. The second way is to list a fact and then the related concerns.	 
4	Continue adding additional information to the facts arrow and to the concerns arrow following the method you chose in step 3.	 

Sequence Chart (Also known as Flow Chart or Bridging Snapshots)
Connected boxes show the progression, series, or succession of information. It doesn't focus on the priority or importance of information; rather it shows connections in the form of a timetable, cycle, or chain of events. For example, Cadets could identify the steps needed to complete a homework assignment from the time the assignment is made until it is turned in. Note: Travel is excluded in this example because Cadets may or may not actually take "homework" home. Asterisks in step 5 indicate where travel could be added.

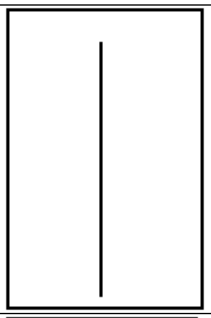
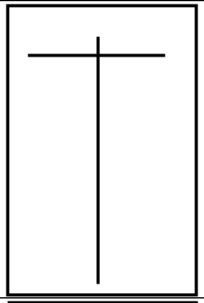
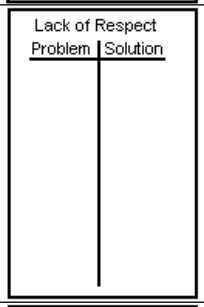
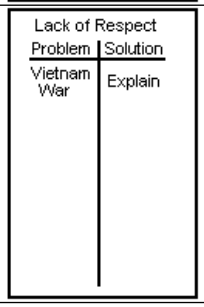
STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers.	
2	Create a list of all the actions needed to complete a task.	Turn in work Select books needed Get Assignment Collect supplies Do work
3	Decide the sequence the steps must follow and number accordingly. Remove the list and post it near the easel.	5. Turn in work 2. Select books needed 1. Get Assignment 3. Collect supplies 4. Do work
4	On another piece of chart paper draw a sufficient number of boxes to include all the points listed in step 3. You can place a start box and a finish box on the graphic organizer for clarity.	
5	Place the items from the sequenced list in the boxes you have created to graphically show the flow of the procedure.	

Sunshine Wheel
The center circle is the main idea and the lines extending out from the center circle represent the thoughts generated about the main idea. For example, the center circle could be leadership and the rays could be all the elements of leadership Cadets can recall.

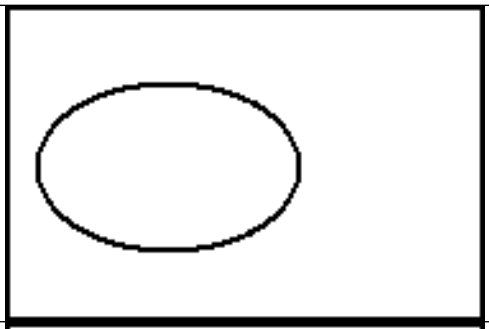
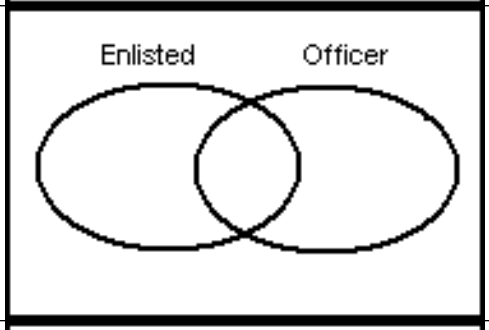
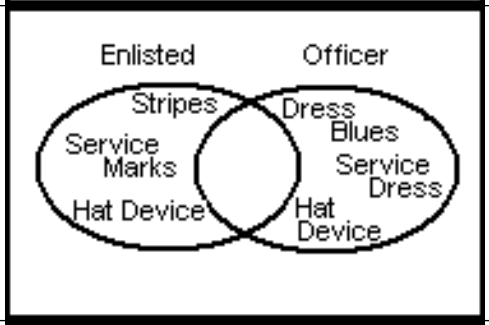
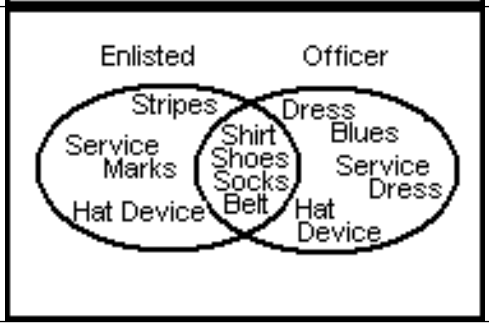
STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers.	
2	Draw a circle, with a diameter of half the width of the paper or less, in the center of the paper.	
3	Write the main idea in the center of the circle.	
4	Draw a ray out from the circle and place an element of leadership on the ray.	
5	Add additional rays as needed to cover all the elements.	

T-Chart

The possible headings for this two-column chart are limitless. Some suggested headings are “Joys and Challenges” or “Before and After” or “Pros and Cons” or “Cause and Effect” or “First and Second” or “Concepts and Examples” or “Short Term and Long Term” or ”Issue and Solution,” etc. For example, Cadets might use a T-Chart to brainstorm solutions to problems associated with lack of respect for the military. In the left column they identify the reasons why there exists a lack of respect and in the right column they brainstorm possible solutions.

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers.	
2	Leaving about 2 inches at the top and bottom of the page draw a vertical line down the middle of the paper. This will provide two distinct work areas.	
3	About 3 to 4 inches down from the top draw a horizontal line, forming a T.	
4	Instruct the Cadets to write the problem above the focusing points on the horizontal line.	
5	Instruct the Cadets to write their responses for the problem on the left and their response for a solution on the right. For example, add, “Vietnam War” under Problem and “Explain” under Solution.	

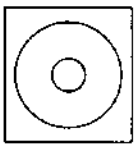
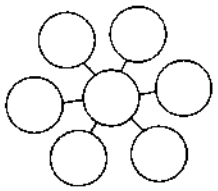
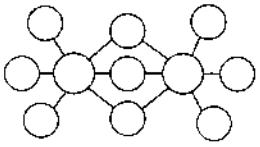
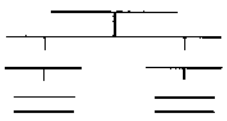
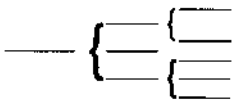
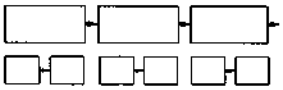
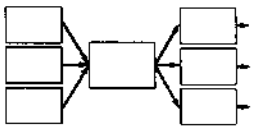
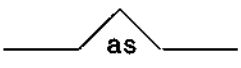
Venn Diagram
These overlapping circles are most useful for comparing and contrasting topics. The free parts of each circle contain the elements unique to each topic. The parts of the circle that overlap contain elements that are shared by each topic. For example, Cadets could compare enlisted uniforms with officer uniforms.

STEP	ACTION	GRAPHIC
1	Set up chart paper on easel and get the markers. If possible place the paper in a horizontal position.	
2	Draw a circle or ellipse on the left side of the paper, in about 1 inch from the edge and extending about 5/8 the width of the page.	
3	Draw a second circle or ellipse on the right side of the paper, in about 1 inch from the edge and extending to the left about 5/8 the width of the page. Identify each shape.	
4	Instruct the Cadets to write their responses for items unique to each uniform in the part of the circle that does not overlap.	
5	Instruct the Cadets to write their responses for common items in the middle where the shapes overlap.	

Identity Cards
Identity Cards identify leaders in the field, a step in a process, a part of a machine, or any identifiable characteristic. Identity cards can also be used as parts of instruments, functions or steps of a process, structure, definitions, etc. This Graphic Organizer can be used as a gathering tool by having the Cadets research a word or person on the front of the card and then put the important information on the back. They would then use these in the Process and Apply phases to act the part.

STEP	ACTION	NOTES
1	Display the identity card before the lesson begins.	If you are using the cards as a gather tool just have the information you need on the front.
2	Distribute the cards from the display or allow the Cadets to choose what subjects they would like to address.	
3	If using completed cards instruct the Cadet to wear the identity card – they become that person, step, function, part, or word.	If the card is being used as a gathering tool have the Cadets put the important information on the back of the card and then become that subject.
4	Learn about the person step, function, part, or word.	If the Cadets have filled out the back of the card make sure they have done additional research on the subject.
5	They are called by the name or function they have been assigned. For example: A person assigned to be a drive wheel will be called “Drive Wheel” and will act like a drive wheel.	
6	They are asked questions and respond as the item they represent, in the manner they think the item would function.	

Thinking Maps®

Questions from Texts, Teachers and Tests	Thinking Processes	Thinking Maps as Tools
How are you defining this thing or idea? What is the context? What is your frame of reference?	**DEFINING IN CONTEXT**	Circle Map 
How are you describing this thing? Which adjectives would best describe this thing?	**DESCRIBING QUALITIES**	Bubble Map 
What are the similar and different qualities of these things? Which qualities do you value most? Why?	**COMPARING and CONTRASTING**	Double Bubble Map 
What are the main ideas, supporting ideas, and details in this information?	**CLASSIFYING**	Tree Map 
What are the component parts and subparts of this whole physical object?	**PART-WHOLE**	Brace Map 
What happened? What is the sequence of events? What are the substages?	**SEQUENCING**	Flow Map 
What are the causes and effects of this event? What might happen next?	**CAUSE and EFFECT**	Multi-Flow Map 
What is the analogy being used? What is the guiding metaphor?	**SEEING ANALOGIES**	Bridge Map 

1-9

Part IV: Instructional Techniques

Carousel
Teams work together to respond to different problems by moving from station to station or send their problem around the teams so other teams can contribute to the solution by responding on the chart or paper they receive. This technique works best in the Process phase where the Cadets will get a more in depth understanding of what they have learned, or the apply phase where the Cadets will arrive at an application of the material they have learned.

STEP	ACTION	NOTES
1	Determine the assignment from the materials in the Gather phase of the lesson. Before class write the topic on the top of a piece of chart paper at each of the team stations.	
2	Allow the class to divide into teams by telling them to go to the flip chart with the topic they would like to address most.	Move Cadets to have equal size teams.
3	Have the teams discuss their topics and take notes on what they cover.	The responses of the first teams should be good since the Cadets chose to be at that station. The responses may also be narrower in focus. This is a good way to start the activity.
4	When the teams have exhausted their thoughts, there are two possible actions. Have the teams rotate to the next station or have the Cadet teams remain in one location and shift the charts.	Ideally you should have the Cadet teams shift. Physically moving will get the blood flowing and will psychologically shift the mindset of the teams as they move to a new topic.
5	Allow time for the teams to review the topic and the comments of the previous team(s). Cadets will add their new comments after discussing the previous ones on the charts.	Advise the Cadets to build and expand on the comments of the previous teams.
6	Shift stations and repeat Step 5 until each team has commented on each chart.	Each team should choose a presenter to pass the final result to the class.
7	At the end of the learning activity or in the reflection activity, review the results and focus responses as necessary.	If time allows, rotate the chart back to the original team. They then review the chart and make the final presentation.

Brainstorm
Brainstorming is a technique used in the generation of a variety of ideas and possibilities. This technique helps participants solve problems or discover new information through sharing. Brainstorming is effective when certain rules are followed:

- The task must be clearly understood by all participants.
- Each participant must contribute.
- Judgment or criticism is forbidden.
- Each suggestion should be recorded for all participants to see.

The strength of brainstorming rests in its use of the backgrounds and experiences of the participants in the generation of creative ideas and problem solving approaches.

Brainstorming works best in the Inquire phase of the lesson to establish a basic level of knowledge; it also works well in the Apply phase where the Cadets work to determine how to use what they have learned in the Inquire, Gather, and Process phases.

STEP	ACTION	NOTES
1	Determine a subject that can be clearly understood by all participants.	
2	Assign the basic topic to brainstorm. Tell the Cadets that every thought contributed is unique and when it is their turn they should add an independent idea to the discussion or build on another Cadet's idea.	Judging or criticizing is forbidden. Comments like, "That's the dumbest thing I ever heard!" should not be made.
3	Only allow one person to speak at a time. Record the response you receive on chart paper or the board.	
4	Continue until the Cadets stop having constructive or beneficial thoughts. Do not let one person dominate the session.	Many times if this goes on too long you will start hearing things like, "Yeah, we could hold the drill competition on the moon next week…"
5	If used in the Inquire phase, instruct the Cadets that in the following phases they will validate or dispel statements presented and will be able to organize them. In other phases pull the random thoughts together, and focus the Cadets in the last part of the learning activity or the reflection activity.	Use KWL chart to organize thoughts in the Inquire phase.
6	Have the Cadet's work to arrive at some conclusions from the points presented.	

Conversation Circles
Two circles are formed with one circle inside the other. One Cadet from each circle faces another Cadet. In these pairs, Cadets discuss questions posed by the instructor. Circles rotate two to four times in opposite directions so Cadets discuss questions with new partners. This technique can be used in the Apply phase, but would be best used in the Inquire phase or the Process phase.

STEP	ACTION	NOTES
1	Divide the class into two evenly divided teams of Cadets. Form one team into a circle facing out from the center.	If you have an odd number on one team, pair them off with someone on the outside circle. They will work as one person.
2	Form the second team into a circle around the first team.	The Cadets in the second team will face inward and will be looking at the members of the first team.
3	Determine the assignment and post it in view of the class.	
4	Instruct the Cadets facing each other to discuss the topic until signaled to stop.	You may have to tone down the volume of the discussions, as everyone will be fairly close together.
5	At your discretion, stop the discussion. Rotate one of the circles to change the partners.	Each pair should discuss only 3-4 points before rotation.
6	Have the new pairs discuss the topic, sharing and building on the points each established from the first session and adding new points.	As you continue with the shifting of partners the discussion should get stronger and more focused.
7	Complete step 4 an additional two or three times until the subject is covered in depth.	Cover in depth, but do not beat the subject into the ground.
8	At the end of the learning activity, or as part of the reflection activity randomly solicit responses from Cadets on what they have concluded from the discussions. Write answers on the board, computer, or chart paper for use in other phases.	You may need to focus the Cadets and dispel misconceptions.

Heads Together
Pairs of Cadets get together to answer a question, solve a problem, review an assignment, react to a video, generate a discussion, etc. This method is designed to create a synergy that will allow the results to build and be better than the input from the parts. This technique is best used in the Process or the Apply phases.

STEP	ACTION	NOTES
1	Separate the class into pairs. Distribute the pairs as far from others as possible to reduce the ability to listen to others and copy their thoughts.	Do not allow best friends to form the pairs. Attempt to create pairs that will create good discussions and reactions.
2	Determine the assignment(s) from the materials acquired in the Inquire and Gather phases. There are two ways to make these assignments: 1. Assign each pair a different topic or problem to discuss. 2. Assign all the pairs the same topic area.	Using choice: 1. Allows a great deal of material to be discussed but will require more time to pull the lesson together. 2. Allows a very in depth study of one topic problem.
3	Make the assignments to the pairs. If choice one is used the topics should be provided to the pairs on a sheet of paper. This will reduce the time it takes to get started on the lesson. If choice two is used display the question on the board, computer, overhead, or a piece of chart paper	
4	Allow time for the pairs to completely discuss the topic.	You will probably hear the class busily talking and then approach a calm as they determine if there is any other material that needs to be considered. It is at this point you need to focus the Cadets and allow them to continue, or cut off the session and reflect.
5	If choice one is used has the pairs present the important point or points from their discussion at the end of the Learning Activity. In either situation get responses from the pairs, note responses on chart paper, and refocus the Cadets on the objectives of the lesson if necessary.	

Jigsaw (And Expert Teams)
Each team member is assigned a segment to study and/or review. Each member assigned a segment will independently study the material and then meet with like assigned members from other teams. Each member returns to their original team and shares their expertise with the rest of the team. This method does not work with sequential topics, like the steps to folding an American flag. (Observe different teams during the presentation and clarify information if needed.)

STEP	ACTION	NOTES:
1	Divide Cadets into teams comprising at least one member for each segment of information to be studied or collected.	
2	Advise Cadets they should use some form of organizer, map, or outline so they will be able to present their results to the team after their expert sessions.	Materials for recording the information can be notebook paper because the teams will be small. A graphic organizer will display the discoveries better than words.
3	Assign each team member a segment topic to study or review.	If you use teams with more members than segments, duplicate assignments will be needed.
4	Cadets with the same segment topics will independently study their assigned segment.	
5	Cadets with the same segment topics will gather, review what they have learned and reinforce learning, clear up misunderstandings, and fill in gaps. They become “experts” on the subject.	Areas in the classroom will be needed to allow for open discussion and free exchange of information.
6	Each Cadet “expert” will return to their original team and share their expertise on his segment topic.	Since you separated the team members you will have to regroup them before you can complete this step. If more than one team member has been assigned a topic, chose one to present the information, and allow the others to provide additional information as needed.
7	Review findings during the reflection activity if needed.	

Jigsaw (As Teams)
Material, like a chapter in a book, different websites, several articles, etc., is segmented and each team is assigned a segment to study and/or review. Each team shares their segment topic with the rest of the class. This method does not work with sequential topics, like the steps to folding an American flag.
(Observe different teams during the presentation phase and clarify information if needed.)

STEP	ACTION	NOTES:
1	Divide into teams comprising at least one team for each segment of information to be studied or collected.	
2	Explain that at the completion of this phase the teams will have to choose a Cadet to present their information to the other teams.	
3	Advise teams they should use some form of organizer, map, or outline so they will be able to present their results to the class. (They will have to choose a spokesperson.)	Chart paper or electronic media for recording the information should be capable of allowing the material to be seen by the whole class. A graphic organizer will display the discovered information better than words.
4	Assign each team a segment topic to study or review.	If you have more teams than segments, duplicate assignments will be needed.
5	Members of the team will independently study their assigned segment topic and understand the subject.	The team area should be large enough to allow the independent study.
6	Team members will then join in discussing the segment topic and reaching a consensus on the important points.	Teams will need independent study areas to allow for open discussion and free exchange of information.
7	Members will assist the selected presenter with the preparation of materials to satisfactorily transfer the information to the other teams.	
8	A presenter from each team will present the material to the remainder of the class.	If more than one team has been assigned a segment topic, choose one to present the information, and allow the others to provide additional information as needed.

Jigsaw (**With Expert Teams**)

Each team member is assigned a segment to study and/or review. Each member assigned a segment will meet with like assigned members from other teams. Each member returns to his original team and shares his or her segment with the rest of the team. This method does not work with sequential topics, like the steps to folding an American flag. (Observe different teams during the presentation phase and clarify information if needed.)

STEP	ACTION	NOTES:
1	Divide Cadets into teams comprising at least one member for each segment of information to be studied or collected.	
2	Advise Cadets they should use some form of organizer, map, or outline so they will be able to present their results to the team.	Cadets may record the information on notebook paper. A graphic organizer will display the discoveries better than words.
3	Assign each team member a segment topic to study or review. Explain that they will have to present their information to the others in their team.	If you use teams with more members than segments, duplicate assignments will be needed.
4	Cadets with the same segment topics will gather and study their assigned segment, reach a consensus on the important points, and record the consensus to present to their initial team.	Teams will need independent study areas to allow for open discussion and free exchange of information.
5	Each Cadet “expert” will return to the initial team and teach his segment topic material to team members.	Since you separated the team members you will have to regroup before you can complete this step. If more than one team member has been assigned a topic, chose one to present the information, and allow the others to provide additional information as needed.
6	Review in Reflection activity if needed.	

Jigsaw (**Within Teams**)
Material, like a chapter in a book, different websites, several articles, etc., is segmented and each team member is assigned a segment to study and/or review. Each member shares his or her segment topic with the rest of the team. This method does not work with sequential topics, like the steps to folding an American flag. Observe different teams during the presentation phase and clarify information if needed.

STEP	ACTION	NOTES:
1	Divide Cadets into teams comprising at least one member for each segment of information to be studied or collected.	
2	Explain that they will have to present their information to the others in their team.	
3	Advise Cadets they should use some form of organizer, map, or outline so they will be able to present their results to the team.	Cadets may record the information on notebook paper. A graphic organizer will display the discoveries better than words.
4	Assign each team member a segment topic to study or review.	If you use teams with more members than segments, duplicate assignments will be needed.
5	Cadets will independently study their assigned segment topic and become an “expert” on the subject.	This usually works best if the team members return to their desks or independent study areas.
6	Each Cadet “expert” will present his material to the remainder of his team.	If you separated the team members you will have to regroup them before you can complete this step. If more than one team member has been assigned a topic, chose one to present the information, and allow the others to provide additional information as needed.
7	Lead a brief discussion of the key points of each segment.	This may be done in the reflection portion of the phase.

Numbered Heads Together
The class counts off (e.g., one, two, three, four…) until all Cadets are included. Pairs of Cadets get together to answer a question, solve a problem, review an assignment, react to a video, generate a discussion, etc. This method is designed to create a synergy that will allow the results to build and be better than the input from the parts. This technique is best used in the Process or the Apply phase. The instructor randomly will call one or more numbers for responses. This method requires all Cadets to be ready to answer.

STEP	ACTION	NOTES
1	Have the class count off. Advise the class that at the end of the paired session the instructor will ask questions by calling a number. Each Cadet should be ready to answer.	
2	Separate the class into pairs. Distribute the pairs as far from others as possible to reduce the ability to listen to others and copy their thoughts.	Do not allow best friends to form the pairs. Attempt to create pairs that will create good discussions and reactions.
3	Determine the assignment from the materials acquired in the Inquire and Gather phases of the lesson. Assign all the pairs the same topic area.	
4	Assign topics to the pairs. Display the question on the board or a chart paper	
5	Allow time for the pairs to completely discuss the topic.	You will probably hear the class busily talking and then approach a calm as they determine if there is any other material that needs to be considered. It is at this point you need to focus the Cadets and allow them to continue, or cut off the session.
6	Randomly call numbers for responses.	Focus the responses and correct misconceptions.

Partner Interviews (PI)
The Cadets will choose partners and take turns interviewing each other to determine their level of understanding of a concept. This cooperative learning technique may be used in the Inquire phase to broaden the discovery process. However, this method is better used in the Process phase to analyze the gathered information, and is best used in the Apply phase to promote understanding and application of the concept.

STEP	ACTION	NOTES
1	Have the Cadets choose a partner to discuss the material presented. If you are using this technique in the Process or Apply Phase, go to step 5.	
2	Present an area of inquiry to the partners for consideration.	The area of inquiry should be fairly narrow for the Inquire phase, as the Cadets may not have a great deal of experience or knowledge of the subject.
3	Allow the partners sufficient time to explore their understanding of the assigned area. Cadets should make notes for use in Reflection.	Display the area of inquiry on chart paper, the board, an overhead, or computer monitor to keep the Cadets focused.
4	Go to Step 7.	
5	If used in the Process phase or Apply phase let the Cadets select the important concept they wish to pursue. Check with the partners to insure they are discussing a concept, or concepts related to the materials garnered from the Gather Phase.	Try random partnering to arrive at a more in depth discussion of the concept or concepts.
6	Have the Cadets discuss their thoughts. Advise them to strive to understand the partner's thoughts and how they relate to understanding the concept.	Remind the Cadets that they should be good listeners as well as talkers. Take turns and respect the opinions of the partner.
7	During the reflection ask pairs to share experiences.	This team discussion can be instructor lead and include the whole class or addressed as part of the reflection phase of the lesson.

Round-Robin Brainstorm

Cadets take turns adding to a team brainstorm. This cooperative learning technique is best used in the Inquire phase and works well as the learning activity. This technique usually is conducted with the whole class. If used in the Process phase this technique is best used for a brief period early in the learning activity to bring out key points from the Gather phase. It should not be the whole learning activity but just a tool to identify key information needing to be processed. This is a variation on a standard brainstorm with an element of control introduced. The leader will Go Around the room in an orderly fashion and solicit responses. If a Cadet is unable to respond he/she can pass.

STEP	ACTION	NOTES
1	Situate the Cadets to allow rapid adding of thoughts to emerge in a structured environment.	Normally a circle or a plan to go up and down rows works in this technique.
2	Assign the basic topic to brainstorm. Tell the Cadets that every thought contributed is unique and when it is their turn they should add an independent idea to the discussion or build on another Cadets idea. Judging or criticizing is forbidden.	Comments like, "That's the dumbest thing I ever heard!" should not be made.
3	Cadets will present their thoughts in turn. The thoughts will be randomly written on a piece of chart paper or on the board. There are no right or wrong answers.	
4	Continue the pattern until the Cadets stop having constructive thoughts.	Many times if this goes on too long you will start hearing things like, "Yeah, we could hold the drill competition on the moon next week…"
5	If used in the Inquire phase, go to step 6. If used in the Process phase, the remainder of the phase activities should have the Cadet's work to arrive at some conclusions from the points presented. (Stop)	
6	In the last part of the learning activity or the first part of the reflection activity pull the random thoughts together, and focus the Cadets, or instruct the Cadets that in the following phases they will validate or dispel statements presented and will be able to organize their responses. (Stop)	

Round-Robin

Each team member takes a turn adding information or sharing an idea; each class member shares an insight or a new learning; each team member contributes to the creation of a writing project; etc.

This cooperative learning technique can be used in all phases of a lesson:

- If used in the Inquire phase, it will work well as the learning activity. This technique can be conducted with the whole class in smaller classes, and as a team activity in larger classes. If used as a team activity, a review should be conducted at the start of the reflection.
- If used in the Gather phase, it would best be used as part of the reflection as a summary.
- If used in the Process phase, this technique is best used as a learning activity by small teams to build an in depth understanding of the material from the Gather phase.
- If used in the Apply phase, make sure this technique supports, amplifies, or applies material from the Gather and Process phases. In this phase this technique would work best as a reflection tool, but could be used as a learning activity tool.

STEP	ACTION	NOTES
1	If no teams are used go to step 3.	
2	After determining the phase of the lesson where this technique will be used, divide the class into small teams.	It is important to have diversity on teams because this technique builds on the input from others.
3	Provide the whole class session, or the team sessions with the first piece of information to focus the Cadets.	Probably the hardest part of this step is to determine the initial input to provide. In the Process or Apply phase the Cadets may provide a starting point.
4	If teams are used go to step 7.	
5	Guide the class in adding information, sharing an idea, sharing an insight, or sharing new learning.	Focus comments as needed.
6	The whole class session is complete. (Stop)	
7	In teams, add information, share an idea, share an insight, or share new learning.	Some form of recording may be necessary to allow review in step 8.
8	Review what was discussed at the end of the learning activity or the beginning of the reflection.	

Squared-Shared-Partner-Interviews
The Cadets will choose partners and take turns interviewing each other to determine their level of understanding of a concept. A pair joins with another pair to form a square and share what they gathered from their previous interviews. This cooperative learning technique is better used in the Process phase to further analyze the gathered information, and is best used in the Apply phase to promote understanding and application of the concept.

STEP	ACTION	NOTES
1	Have the Cadets choose a partner to interview.	
2	Let the Cadets select the important concept they wish to pursue. Check with the partners to insure they are discussing a concept, or concepts related to the materials garnered from the Gather phase.	Try random partnering to arrive at a more in depth discussion of the concept or concepts. Normally allowing the Cadets to choose the concept will result in a more thorough discussion, however it may be necessary to assign concepts to insure all points are covered.
3	Have the Cadets discuss their concepts. Advise them to strive to understand the partner's thoughts and how they relate to understanding the concept. Cadets should take notes to prepare for the second phase.	Remind the Cadets that they should be good listeners as well as talkers; take turns and respect the opinions of the partner.
4	Have two Partner Interview pairs join and form a square.	The purpose of the square is to place all participants on equal footing, not as pair vs. pair arrangement.
5	Let the squares discuss the important concepts they pursued in step 3. Check with the squares to insure they continue to discuss a concept, or concepts related to the materials garnered from the Gather phase. Notes should be taken to assist in step 6.	Each pair will probably have a different concept they focused on. There should be sufficient time for all points to be addressed by the squares. If subjects were assigned in step 2 you can create the squares to allow similar concepts to be teamed together.
6	In the reflection portion of the phase, solicit comments from squares to share experiences.	This final discussion should be instructor lead and include the whole class.

Team Brainstorm

Team Brainstorming is a technique used within small teams of Cadets to generate a variety of ideas and possibilities. This technique helps participants solve problems or discover new information through sharing. Team Brainstorming is effective when certain rules are followed:

- The task must be clearly understood by all participants.
- Each participant must contribute.
- Judging or criticizing is forbidden.
- Each suggestion should be recorded for all participants to see.

Team Brainstorming works best in the Apply phase where the Cadet teams work to determine how to use what they have learned in the Inquire, Gather and Process phases. It can also be used in the Inquire phase of the lesson to establish a basic level of knowledge but will require tying the small team's thoughts together in the reflection phase.

STEP	ACTION	NOTES
1	Divide the class into small teams of no more than 5 people.	
2	Determine a subject that can be clearly understood by all participants.	
3	Assign the basic topic to each team to brainstorm. Tell the Cadets that every thought contributed is unique and when it is their turn they should add an independent idea to the discussion or build on another Cadets idea.	Judging or criticizing is forbidden. Comments like, "That's the dumbest thing I ever heard!" should not be made. In small teams this is harder to monitor.
4	Only allow one person to speak at a time. Record the response you receive on chart paper or the board.	
5	Continue until the teams stop having constructive or beneficial thoughts. Do not let one person dominate each session.	Many times if this goes on too long you will start hearing things like, "Yeah, we could hold the drill competition on the moon next week…"
6	In the last part of the learning activity or the reflection activity have each team present some of their responses to the complete class. Pull the random thoughts together, and focus the Cadets, or instruct the Cadets that in the following phases they will validate or dispel statements presented and will be able to organize them.	

Team Graphic Organizer

Together, a team prepares a single graphic organizer of information. This cooperative learning technique is normally used in conjunction with other techniques such as Jigsaw, Round Robin, or Brainstorming. Graphic organizers are excellent tools for teaching the structure of thinking. As Cadets are learning and making sense of what they are studying, graphic organizers are an excellent way to visually capture the thinking that is going on. When small teams of Cadets create a graphic organizer together, they will probably engage in a lively and important discussion of which graphic organizer to use, what information should be included, how the concepts are related, etc. All of this interaction is an important process in helping Cadets develop their own understanding. This cooperative learning technique can be used in any phase. The use of some organizers can be spread over 3 or 4 of the phases.

STEP	ACTION	NOTES
1	Form the class into teams.	
2	Each team prepares a graphic organizer of information assigned.	A description of graphic organizers may be found in Part 3 of this manual.
3	Team selects a spokesperson to present the organizer and information to the remainder of the class.	Graphic organizers should be almost self-explanatory, but a spokesperson can often explain the reasoning that went into the organizer and better clarify the concept being addressed.
4	At the end of the learning activity or the beginning of the reflection activity the spokesperson for each team will present their team's graphic organizer.	Information will be shared with the rest of the class and the instructor can clear-up misconceptions and focus Cadets on relevant materials as necessary.

Think-Pair-Share (TPS)
The Cadet will think about a topic or question posed by the instructor and then pair with another Cadet to discuss their thoughts. Finally pairs share their thoughts with a larger team or with the class. This cooperative learning technique is normally used in the Inquire phase to broaden the discovery process, or in the Process phase to analyze the gathered information.

STEP	ACTION	NOTES
1	Briefly review a concept or section of the training you want the Cadets to focus on. If additional information is available for the question you may want to allow the Cadets to rapidly review.	In your review you may want to write the key points on the board or chart paper. If additional information is used, be specific on a page, section, or paragraph to focus the Cadets.
2	Present a topic or question to the class for consideration.	Post the topic or question on chart paper, the board, an overhead, or computer projection.
3	Allow the Cadets sufficient time to independently establish some points they will want to address.	These points may be from the materials in step 1 or they may be completely independent thoughts.
4	Have the Cadet's pair off.	Try pairing randomly instead of allowing Cadets to form pairs. Normally Cadets who create their own pairs think more alike and the discussion may not be as beneficial or as broad.
5	Have the Cadets discuss their thoughts. Advise them to strive to understand the partner's thoughts.	Remind the Cadets that they should be good listeners as well as talkers. Take turns and respect the opinions of the partner.
6	As a team, discuss different pairs thoughts on the question.	This team discussion can be instructor lead and include the whole class, done in teams with instructor oversight, or addressed as part of the reflection phase of the lesson.

Part V: Integrative Learning Teaching Strategies

Learning-Style Characteristics of JROTC Cadets and Instructors

(This section is taken from the ” Learning-Style Characteristics of JROTC Cadets and Instructors: Implication for Training and Instruction Report,” which is located on the Unit CD-ROMs in the Toolbox section.)

Dear Colleagues:

In order to achieve the highest standards and quality for our Cadets, we have initiated several innovations in curriculum, instruction, and research. One key aspect of our "best practices" policy is to bring to our JROTC instructors the most well-established and validated models of learning.

This requires relying on existing research that predicts effectiveness. It also encourages original research about the JROTC Cadet population, as well as instructors.

This is an original research project conducted by internationally recognized leaders in the field of learning that examines, "How do our Cadets learn best?" and "How do our JROTC instructors learn best?" The study supports many of the curricular and instructional innovations we have made, along with the resources we are providing to instructors and Cadets.

There are many issues raised in this study that directly influence how we approach learning. For example, Cadets need variety in instruction and movement; whereas instructors tend to prefer lecturing without a lot of mobility. Young women are more auditory than their male counterparts, suggesting that males be engaged with many instructional strategies, other than lecturing with "overhead" presentations. Also, it was found that there are as many differences within a group category as between groups.

We expect you will find the results of this study of value. Clearly, additional training in Learning Styles strategies will be useful in addition to the many tools you now have for teaching Cadets with different learning needs.

Please let us know the value of this research for you, and let us know how you use it. Also, please feel free to e-mail me with any questions you might have.

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Executive Summary

According to the research, there are many strategies one can implement to improve Cadet-learning performance. But the one area of research that holds the most promise in documenting high Cadet outcomes is in the field of Learning Styles. Knowing how JROTC instructors and Cadets learn best and

knowing how to use Learning Styles information to dramatically improve the learning environment is the focus of this study.

During the year of 2000, 1,737 Cadets were randomly selected to represent 231,000 Cadets participating in 1,350 JROTC programs in three regions of the United States. Our intention was to identify whether a dominant learning-style preference would be revealed for this special Cadet population as compared to the learning style of the general population of high school students. We also examined variations in gender and ethnicity patterns that might contribute to the shaping of policies and programs to achieve the JROTC mission more effectively. Furthermore, we were interested in identifying whether a unique learning-style characterized the instructors who worked with JROTC Cadets and how their styles compared to the general population of secondary instructors. We also sought to determine whether gender or ethnic differences in learning styles existed within the group of participating JROTC instructors. Based on our findings and analyses of both JROTC Cadets and instructors learning-style portraits, we developed recommendations for enhancing curriculum and instruction for JROTC Cadets in harmony with the implementation of strategies and program course content initiated by Cadet Command.

As you read this report, you will learn about the concept “Learning Style ” and how significant it is in presenting new and difficult information to Cadets. You will also learn how people perceive and process information differently from each other. In addition, a survey of meaningful research findings on adolescents is presented to you, along with related research on “at-risk ” students. Moreover, you will learn about the general population of high school students, against which the sample JROTC population was compared. Differences in gender and ethnicity are discussed in accordance with our literature review. An overview of the “Dunn and Dunn Learning -Style Model ” is provided for your review and understanding.

The benefits from this research and future training in the Learning-Style Model, combined with implementing the newly revised curriculum and innovative instructional-learning tools, could dramatically increase individual JROTC performance by:

- Improving recruiting
- Reducing drop out rates
- Increasing graduation rates
- Obtaining higher grades and grade point averages in “other” classes
- Developing stronger persistence from freshman year to graduation
- Strengthening self-esteem
- Creating self-directed learning
- Expanding joy and enthusiasm for learning
- Broadening instructor capability and confidence
- Raising achievement standards
- Increasing leadership participation among male and female Cadets

Over the past 35 years, the Dunn and Dunn Learning-Style Model, which consists of four phases of strategic improvement processes, has been internationally validated and utilized by 116 institutions of higher education. The Model has won over 40 national and international doctoral dissertations awards proving the strength and predictability of students’ increased achievement when taught through learning styles strategies.

The four phases of the Dunn and Dunn Model are consistent with the Deming Quality processes for leadership and consistency of:

- Phase 1. Assessment Inventories and Strategies
- Phase 2. Planning and Diagnostic Processes
- Phase 3. Implementation Strategies, Tactics, and Tools
- Phase 4. Verification, Assessment, Evaluation, and Research

This research project was limited to phase 1, although related activities from Cadet Command on instructional design, training, and support follow the general topics in phases 2, 3, and 4. Based on this research project it is both recommended and anticipated that further training on specific learning style strategies, processes, tactics, and tools be conducted. This research addressed the following questions:

With respect to Cadets, “do they have different learning styles than reported in the general population of high school students; is there a difference in learning style by gender among Cadets; are there differences in learning style among varying ethnic groupings?” With respect to JROTC instructors, “do they have different

learning styles than the general population of high school teachers; do instructors have a variance in learning style according to gender; does the instructor profile differ according to ethnicity?"

As a general summary, we discovered several significant findings, which are of value to every JROTC instructor. However, the implications of the findings are discussed in the full document.

JROTC Cadets differ from other high school students on five learning style characteristics, which bear directly on facilitating higher achievement.

Male and female Cadets differed from each other on eleven variables. (This might help explain why females emerge to leadership positions, and what to do about fostering equity.)

Nine different variables affect JROTC as it relates to African Americans, Asian Americans, Caucasian Americans, Hispanic Americans, and Native Americans.

Instructors in JROTC differed on eight variables, compared with the general population, including the need for "less" mobility; whereas, Cadet's need or prefer more mobility when learning new and difficult information.

How JROTC instructors process and internalize learning can significantly impact the outcomes of regional and Cadet command training programs, as well as distance learning activities.

Instructor Learning Styles have more in common with female Cadet learning styles and less in common with male learning styles, raising questions about approaches and expectations in cultivating leadership.

As depicted in this report, specific learning style characteristics were unique to both JROTC instructors and Cadets as compared to the general population of students and teachers. Also, there were many similarities within and between groups of Cadets and instructors. To capitalize on these significant findings, this report should serve as the basis for expanding current instructors' knowledge of their JROTC Cadets' learning styles and how to base their instructional environments and methods to achieve high Cadet performance.

LDM, Hilton Head Island
South Carolina
November 2001

Instructor's Manual for Teachers

The material in this section is provided by:

Dr. Laurence A. Martel
Leo M. Wood

Climate in the Classroom
It is important that the teacher organize the classroom with a positive framework in a manner which Cadets feel comfortable, relaxed, and welcomed. The presence of flowers and attractive surroundings with music playing and a teacher smiling, while Cadets enter the classroom, creates a positive and happy atmosphere. Flip charts on easels with a welcome sign and a mind map of the day can be colorful and pleasant. Banners, pictures, posters, and identity cards on the wall ("The Wall of Learning"), which are changed regularly, implies that the teacher is creating a fresh environment, something new to look forward to, and that the teacher cares about the Cadets' learning. Relaxation is the ideal state in which to learn.

In this state of relaxed awareness, energy is liberated and the Cadets have more energy with which to learn. Following is a suggested and positive framework to help you, as the teacher, to organize a positive climate in the classroom:

Positive Attitude
The teacher should have a positive attitude demonstrating a positive Mental Model - smile a lot - be happy - enjoy what you are doing. It is suggested that you develop your own way to mentally prepare yourself before teaching a lesson. *Take a few moments and visualize your favorite landscape (like an ocean beach, a flower garden, a mountaintop, or a stream, lake, waterfall, etc.). See yourself and feel yourself in this beautiful and special place, sensing the feeling of being relaxed, peaceful, happy, content, and confident.* Visualize yourself as doing a fantastic job of teaching, making the learning session fun and exciting for yourself as well as for the Cadets. Dr. Martel likes to play tennis to help develop a positive attitude. Another person likes to listen to relaxing music and perform on a musical instrument to develop that positive and uplifting attitude.

Find your own way to mentally prepare yourself for being that positive and excited person that becomes involved in exciting other people's lives.

Tone of Voice
The teacher should display intonation and rhythm in their voice that is loving, supportive, non-threatening, and reassuring. Avoid using a nasal monotone voice - allow the voice to rise and lower in pitch.– Vary the volume of your voice from loud and pronounced to soft and impressive, making major points clear. Change the rhythm of the voice from fast to slow and- keep the voice interesting. – Always be positive and use uplifting and elegant language. – Avoid the authoritative voice that demands, "I am in charge here and you do what I say or else! " Avoid put downs, negative remarks, teasing, or joking around because the human brain takes all things seriously, even at a subconscious level. – Avoid the use of words like "difficult," "don't," "forget," "I'm just joking," etc. They give negative suggestions to the brain. – Use words like "fun," "easy," "joyful," "graceful," "gently," "you can do it," "remember when," "you have a fantastic memory," "I'm serious about you dong well." – Always be positive, caring, compassionate, and empathetic.

Humor
The use of appropriate jokes, cartoons, sayings of the famous, and funny stories always makes the classroom climate fun, enjoyable, and gives students a mental break. Use them frequently. When a person engages in laughter, learning increases, says Dr. Martel. Laughter forms "T and B" cells in the body, which ward off diseases. Laughter and humor allow the immune system to function more productively. Laugh a lot and stay healthy and learn more. Norman Cousins cured himself of a dreadful disease by watching funny movies and forcing himself to laugh. When you smile, the facial muscles send chemical messages to the brain. So smile a lot!

Enthusiasm
Be upbeat and enthusiastic about what you are doing. – Have fun and be alive. – Move around, change your position, and look into the eyes of the participants. – Look at everyone, especially those on the sides and in the back of the classroom. – Smile at them. – Shake their hand once in a while and tell them that you are glad they are here with you. Say: "It is fun to be here." "I really enjoy what I am doing." "I love what I am teaching." "I love working with people like you." Enjoy yourself!

Prestige
Demonstrate the following with confidence:

1. Knowledge of the subject matter.
2. Originality of ideas.
3. Mastery of the communication process.
4. Care toward the participants.
5. Personal integrity and honesty.

Dual Plane
Be a master as a communicator. – Become the masterful storyteller. Display the ability to project the maximum authenticity in your expression. Have confidence in the Cadets as well as in yourself. Always give maximum support. Treat your Cadets as intelligent human beings full of life, joy, and creativity. Be a coach more than an authoritative teacher. Do not point your finger at anyone. Always use open-handed gestures, which are more inviting and non-threatening. Eliminate fear, threat, and put-downs.

Dress
Always dress in a positive, uplifting, and supportive manner. Be professional, and always be modest.

Peripherals
"Any Act of Learning I Is an Act of Creating." This should be an ongoing theme during classroom sessions. Learning is creating in the mind. Creating is the making of connections between pieces of information that have never been made before. The teacher needs to create an environment in the classroom that is conducive to the creative condition of the mind. Create an environment to allow the learner to explore, and allow them the opportunity to make discoveries. Make use of their curiosity. Create opportunities for them to think, feel, and communicate their ideas and excitement. Intellearn uses peripherals to help create this creative condition in the classroom. The brain loves complexity. The brain takes in all information in the surrounding environment at once. The peripherals stimulate this information as the brain processes the information to obtain meaning. The power of peripheral stimulation is to determine, "What is next?" rather than, "How much more do I have to endure?" Always keep the peripherals positive, affirmative, and uplifting. Use banners, the classical artworks, pictures, landscapes, posters, affirmation statements, quotes or sayings of important people, identity cards, ceiling hangings, models, ongoing themes, etc. Be creative in your design and employ the help and creativity of your Cadets. "Create Awe and Wonder" in your classroom. Your mind is your most powerful resource.

Use of the Koosh ball
In the book "Lord of the Flies," the Conch Shell was used as a ritual. The leader had the Conch Shell and passed it around. The person who had the Conch Shell got to speak, the others listened. The Koosh ball is used in much the same way as the Conch Shell was used. The Koosh honors people in ways that they are not recognized in other ways. The use of the Koosh creates a new kind of dignity and honor for the person speaking in classroom activities.

> ***The Story of the Koosh***: One day, Scott Stillinger and his children began looking around for a rubber ball with training
> wheels. The three of them had become frustrated with the
> traditional tools of catch. Bean bags, tennis balls, foam-
> rubber balls... everything either bounced too much, offered no
> good grip, or hurt when it bopped you.

After a while, the qualities of the Ideal Catching Implement became pretty clear to Scott. It would have to be bounceless, ouchless, tactile, and highly grabbable. Slowly, the idea of something with rubber filaments began to form in Scott's mind; something like a ball of rubber spaghetti.
There followed months of engineering-type problems and general head scratching. Scott has a degree in mechanical engineering, but no previous experience in rubber spaghetti. The problems were eventually solved though, and in October 1987, the first Koosh ball squirmed off the production line.

The Koosh Ball

1. It has 120 uses. –The Koosh has a feel.
2. Provides a ritual for communication to satisfy the R-complex.
3. Use the Koosh to ask questions: you can give an answer or you can pass it.
4. When a person has the Koosh, other people respond. It gives a person dignity.
5. When a person does not have the Koosh he or she must keep quiet.
6. The Koosh adds a kinesthetic aspect to verbal communication.
7. The Cadets squeeze the Koosh and toss it back and forth from the left hand to the right hand as they are thinking and speaking. This coordinates the right and left-brain.
8. The Koosh creates a focus.
9. The Koosh breaks down bias.
10. The Cadets become more creative.
11. The Koosh provides comfort for the timid. – They can always pass it.
12. Everyone speaks once before any one speaks twice.

Pass-Rule with the Koosh
The timid will pass the Koosh from left to right - respect and honor.

If a person feels uncomfortable, or becomes mentally blocked, when a Koosh is passed to them, they can pass. The Pass-Rule states that a person can only pass one time. The person who passes can ask for the Koosh at a later time, when they have had time to become comfortable or the mental block has gone away. This takes the fear and threat out of being put on the spot at the moment and allows for a time to think and prepare for a response or a contribution.

When a person passes, always invite them to participate at a later time in a non-threatening manner.

Use of Chime, Bell, Bowl, or Waterglass
These devices are used to get the attention of Cadets in a pleasant and enjoyable manner without having to yell for their attention. The teacher / trainer can smile while ringing the chime, bell, bowl, or waterglass. This is not only a method of getting the Cadets attention but is also a demonstration of one of the beauties of life itself: the beauty of sound. It is enjoyable when the teacher allows a few moments of silence, after the attention of the group is attained, to allow the Cadets to listen and contemplate the beauty of the sounding device. It is most effective to use a variety of sounding devices during the course of the teaching period.

Thumb Placed on the Middle of the Forehead
This is a non-verbal indicator of, "I was just kidding." This technique is used by both the teacher and Cadets to indicate that, "I was just kidding."

Relevancy Triangle
This is another non-verbal indicator, formed by using the thumbs and forefingers of both hands to make a triangle, then sighting a person through the triangle who has either gotten off a subject or is straying away from the subject, without interrupting them. This technique was designed by Win Winger of Project Renaissance (located in Gaithersburg, Maryland). Whoever is thus challenged has to instantly demonstrate

the relevance of their remarks, or return to the topic, or yield the floor. Immediately the topic holds focus and moves forward. The time you save by this one technique is phenomenal. Make sure that all the Cadets know that this is what the relevancy sign means. Get an agreement from each Cadet that they know what this sign means and will respect its use.

Mind Maps
Mind maps are a technique to use when one has no idea of where to start on a project or what to do to begin a project. The mind map allows for that *"starting point"* when you don't know which direction to go. It is flexible and can be easily changed once a project is started or other ideas come forward. Items can be added, taken away or easily adjusted. Mind maps can be used for planning trips and other domestic activities such as shopping lists, errands, instructions for children or baby sitters, etc.

Ongoing Themes
Themes that keep repeating themselves as a class lesson is progressing are known as ongoing themes. Beethoven's Fifth Symphony has a very obvious repeating theme all the way through it. Intellearn also has redundant themes. Examples are the seven "Principles of Intellearn" (These are also called: "Intellearn Corecepts"). Also, “It is not how smart you are, but how you are smart.” Other ongoing themes include:

- The message received is the message sent.
- You get more of what you reinforce.
- Any act of learning is an act of creating.
- Diversity is a capacity.
- Our strength is in our connectedness
- Everyone is born a genius.

Concept of Anchor
Just as the bowler in a bowling alley will say, “Yes!” when he or she bowls a strike, you can use this as an affirmation in the classroom. This is a reinforcement to focus on the particular concept or information and seal it into memory. “The Bowler's YES!" anchors the knowledge that Cadets have just learned with the proper positive emotions and uplifted positive feelings.

Identity Cards
These identify leaders in the field, a step in a process, or a part of a machine or instrument.
Display the identity card before the unit begins. – Take it off the wall or bulletin board when ready to use.

1. The Cadet wears the identity card. They become that person, step, function, or part. They learn about that person, step, function, or part. They are called by that name. They are asked questions and respond as that person, step, function or part would respond.
2. Identity cards have interesting stories on the back. Read them aloud. Allow the Cadets to take on the role of a teacher and teach about that person, step, or part and the concept they represent.

Mental Environment

- Keep the Learning Environment free from fear, threat, intimidation, put-downs, and stress.
- Keep the mind alert by varying and alternating between active activities where everyone is actively involved (like a game or kinesthetic activity or song or skit) and passive activities where the body is relaxed and the mind is very active (like a story with music or a mini lecture).
- Keep the R-Complex of the brain happy, relaxed and satisfied -- no threat to survival –keep the R-Complex out of the survival mode. Avoid downshifting.
- Allow time for processing information and reflecting on what has been learned.
- Keep the Corecepts active at all times:
    - Message **Received** is the Message **Sent.**
    - You get **More** of what you **Reinforce.**
    - Any act of **Learning** is an act of **Creating.**
    - **Diversity** as a **Capacity.**
    - Our **Strength** is in our **Connectedness.**

- **Everyone** is Born a **Genius.**

Preparation
Have a good understanding of:

1. The mind maps of each unit and the mind maps of the concepts.
2. The objectives that are to be accomplished during the unit.
3. The vocabulary for each unit and the meaning of words in the glossary.
4. The materials that are to be used and have them organized and ready.

Storytelling
Become the masterful and magical storyteller. Practice in front of a mirror. Use emotion and intonation and rhythm of the voice. . The story creates a structure by which information is organized and is easily remembered and recalled. Using music with a story makes the story more powerful and emotional. Always use the music economically. Tell some stories without music at times to keep the brain active and alive. Baroque music is recommended. *The voice becomes a solo instrument with the orchestra as the accompaniment.*

"The voice floats on top of the music as if the voice is surfing."

Use of Music
"Music is the most powerful learning tool available." LMW

1. Music is a very powerful learning tool and is the easiest to ignore or neglect. Music generates positive and relaxed emotions, which are used to code information in the brain. Use music as much as you can, being careful not to overuse it. Music also relaxes.
2. The use of music for storytelling and reading selected text is very powerful, enjoyable, pleasant, and relaxing. Classical Baroque music is preferred for reading with music or storytelling. Information is invested into long-term memory with music.
3. Use of music for special moments is encouraged. Using suitable music while Cadets are assembling in the classroom, during breaks, or reassembling from breaks is very pleasant. Music can be a very useful way to signal people to return to their seats.
4. Don't forget nor neglect the singing of songs. This is always a joyful and pleasant activity. Make it fun and non-stressful. Use tape recordings in a "Sing-Along" fashion. Stress that quality of one's singing voice is not important; it is the quantity of sound. One must hear one's own voice. One will remember over 90% of what is learned by a song. Sing in small groups and allow for all combinations of people to sing. You can allow family groups to perform also. Encourage Cadets to make up their own songs. Have fun with the music, and be creative in its use.

"The voice being the surfer and the music being the wave." (Ivan Barzakov) Be alive with the voice varying the intonation and rhythm as the music moves along. Pause periodically so the brain can hear the music. Do not become hypnotic nor dramatic. Just speak as if you are telling a story. Five to seven minutes is a maximum time for both a story or reading with music.

Song Singing
This is an important aide to learning. It is a very powerful learning tool. Something happens around sixth or seventh grade where the joy and desire for singing is lost. This tool needs to be reinforced in all learning environments as well as in the family setting. Use tape recordings in a "Sing-Along" fashion when learning the songs, then use the tape recordings to "Sing-Along" for enjoyment. Remember that the learner will remember 90% of what they learn with a song. Feature the music people in your classrooms and lessons - especially the one's who are in the band, choir, or orchestra and can carry a tune." Encourage Cadets to organize into small groups (two or more) and work out actions or dances to go with the singing. Encourage them to perform, at

beginning of sessions, after breaks, or just before dismissal. Spontaneous performances can be a lot of fun! Look for and allow for opportunities for family and spouse involvement of performance of songs in the classroom. With some planning, performance of the songs could be accomplished during breaks, lunchtime, or other special moments.

Rituals
Rituals are used to eliminate fear, threat, intimidation and put-downs from the learning environment and allows the R-complex of the brain to be in a relaxed and satisfied mode with no threat to survival and no downshifting to the learner. Elimination of fear, threat, intimidation, and put-downs also allows for the development of a learning culture where honor, respect, and dignity prevail. Following are some of the suggested Intellearn rituals for a healthy learning environment.

Learning Environment:

Seating Arrangement
A preferred seating arrangement is chairs placed in a large horseshoe with a space in the middle for activities and presentations. Tables could be located around the walls for space to place books, materials, and displays. This seating arrangement allows for:

1. Quick and easy temporary removal and replacement of chairs for large group activities.
2. The position of the chairs can be changed and Cadets should be encouraged to sit in different locations.

Wall of Learning
Curriculum materials including posters, identity cards, banners, and other displays that will be used during class instruction can be displayed on the walls, hung from the ceiling, or put on tables in prominent locations. Classical art works, pictures of landscapes can also be displayed to offer an uplifting, relaxed and enhanced atmosphere in which to learn. Use common sense and good taste in setting up the room. All displays, posters, banners, and other materials should be uplifting, positive, relaxing, and encouraging to the learning environment.

Games, skits, and kinesthetic activities
It is always fun to integrate the subject matter to be taught with physical movement and joyfully fun activities. It is like getting the left-brain functions on the right side of the brain and the right-brain functions on the left side of the brain. This sets up whole-brain activation, which enhances the memory systems and stimulates the recall mechanisms.

Seven Intelligences
Try to keep as much intelligence active as you can. The brain loves variety. Our goal is keep the information being taught light and alive -like we are playing with the information. The brain loves surprise and discovery. It is always trying to figure out what is coming next. Using all of the seven intelligences allows for the surprises and the moments of discovery: LL - SBM -11.

1. Linguistic - clarify vocabulary, give opportunities to speak and write about the subject matter.
2. Logical - mathematical - reason through logic and math.
3. Spatial - visual images with posters, banners, mind mapping, and human sculptures.
4. Bodily Kinesthetic - dance, body movement, human sculptures, games, skits, performance with whole body, manipulation.
5. Musical - active and passive concerts, raps, songs, stories with music, dance music, special effects music and lots of singing.
6. Interpersonal - class interaction, discussion, Good-and-New.
7. Interpersonal - discover personal learning styles, relate to own preferences of learning, inner awareness, Think and Listen.

Learning Styles

Shift focus from transmission of material and information to Cadet synthesis, performance, and output. Each individual has their own learning style and learning preferences. The awareness of their learning style and learning preferences gives the learner a great advantage. A dramatic presentation with the participants as actors and actresses is very successful in presenting information in all learning styles. Use a script for the dramatic presentation and have a discussion after the presentation. The different Learning Styles can be remembered using the acronym: VIPAK

1. Visual Learner - mind maps, diagrams, pictures, banners.
2. Interactive Learner - have to be heard, test their perceptions and ideas in discussions.
3. Print-Oriented Learner- function on their own by reading.
4. Auditory Learner - good listeners - successful in traditional teaching methods.
5. Kinesthetic Learner - have to feel everything - slow in responding and have the hardest time in a traditional learning environment.

Elements of Structure

The “Elements of Structure” is a systematic format used to organize the activities of training materials that are to be used in any presentation or training session. There are ten easy steps to follow in organizing a unit. The “Elements of Structure” becomes the skeleton, while the materials and activities become the body of the lesson or training session. Listed are the ten elements of the “Elements of Structure:” MPVO - DSACAR

LESSON PREPARATION: develop in advance of training.

1. Mind Map or Whole Picture
2. Peripherals - identity cards, art works, posters, banners, models, affirmation statements, vocabulary word strips, flowers, potted plants, charts, maps, music, etc.
3. Vocabulary
4. Objectives

LESSON PRESENTATION*:*

5. Decoding Activities - take the mystery out - introduce themes. Ask: “What do you already know?”
6. Story - can be an active story or a passive story or both.
    a. Active Story -with or without music - dialogue or skit.
    b. Passive Story - with or without music - relaxed, quiet, story with Baroque music, visualizations, etc.
7. Activations - will require 85% of the total time.
8. Culminations / Celebration of what has been learned.
9. Assessment Activities - performances of all types, quizzes, exams, allow Cadets to show what they know, teach each other, games, whole picture drawings and diagrams, portfolios, storytelling, song-singing, skits, etc.
10. Reflections - reflect on what was done in the unit.
    a. What was liked? What was not liked?
    b. What improvements can be made?
    c. How do the Cadets feel about the teaching and learning of the unit?
    d. How does the teacher feel about the teaching and learning of the unit?

One of the goals of successful learning is to harmonize and integrate all of the factors of the learner’s being - the intellectual with the emotional, the physical and the spiritual - at different levels and in different ways. –This is so that the learner will enjoy learning, think freshly and freely in all situations, ask relevant questions, integrate answers, and develop their own personal strategies for the learning process in becoming an excited life-long learner. Good luck to you and have a joyful and rewarding experience in your teaching and learning efforts.

Above all, have fun in learning and teaching.

Integrative Learning Teaching Strategies

The material in this section is provided by:

Dr. Laurence A Martel
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The Good and New

Using the process of Good and New provides an excellent opportunity to set a tone of positive thinking for the rest of the day. This enhances opportunity for productive experiences. Emphasizing the good in our lives reduces stress and allows our energy to focus on finding solutions to problems or completing tasks. The Good and New may be seen as a therapeutic cleansing or stabilizing strategy. It provides an avenue to give oneself recognition for having provided something positive for oneself and for others. The idea of expressing something that has happened to you may start out as a simple act, but when you are talking about it to someone else, it can take on a more meaningful aspect. The fact of going home and having dinner with your family can seem more important as a result. In short, this exercise is a good stimulus to shape a positive self-image.

Objective: The participants will be able to demonstrate their feelings about something Good and New that happened to them recently. The purpose is for people in a group to feel good about themselves. Having each participant personally tell a large or small group his/her recent good experience helps to create an atmosphere that is positive and supportive in the classroom. This allows one to search his/her life for a short period of time and to come up with something that makes him/her feel worthy. The Good and New allows time for sharing and is great for a warm-up exercise. It also provides an opportunity for a non-verbal person to speak in a small group, when otherwise s/he might not do so. Further, we may associate this practice with the idea of “Give to the world the best that you have, and the best will come back to you. “ A positive attitude and an enriching environment are key attributes of the climate of accelerated learning. Method: The instructor or group leader announces that it is time for today’s “Good and New”. Each person who would like to speak stands and gives a short narrative of his/her good experience that took place in the past twenty-four hours. The Good and New is a valuable way of beginning or ending a class, because it offers a positive way of enriching self-esteem for the individual and the group. It also creates an attitude of learning expectancy. This exercise helps everyone to turn attention away from the negative thoughts within themselves and from those that bombard them from without. In a very real sense it is transforming.

The Go Around

Objective: The purpose of the Go Around is to enable each person in the group to speak and express his or her opinion without interruption from other group members.

Process: Group members sit in a circle. The allotted time is divided equally among them, with a share of time left for coming to consensus if necessary. Members may speak at random, but no one is to speak twice before each has spoken once, and no one is to speak four times until each has spoken twice. A person does not need to speak, and may use his/her time for silence should s/he so desire. Strengths: This technique encourages participation of all members by giving them their own uninterrupted time slot. It promotes active participation. It can be used with the Good and New and the Self-Estimation. It is important for a group to establish a feeling of sharing. In a situation where a group sits in a circle, the idea of wholeness is developed. Once that group has been established, each of its members should feel equal to the others, and not threatened to respond as one would if called upon to speak with the central figure in the front of the room. Sharing each other’s thoughts on a particular topic, or even free flowing thoughts, offers a great opportunity to expand knowledge, the ability to question, and the ability to think about something that one may not have thought about before. This is an excellent opportunity for them to take center stage and have everyone’s undivided attention in a relaxed, non-hostile, and non-threatening environment. If they know beforehand that they can share with others something good, regardless of its value, they are apt to feel better about themselves, and perhaps look forward to coming to school. Implementation: It’s possible with all age/grade levels. With younger children, the Think and Listen and the Good and New may be practiced before the Go Around.

Think and Listen

Since the solutions to many of our problems are already within us, the Think and Listen gives us a chance to examine various possible answers.

Objective: To sharpen listening skills while allowing participants to express themselves verbally.

For this activity you will need a partner. One person assumes the role of the speaker and the other the role of the listener. The first speaker may express any feeling that he or she may care to share about anything. The first speaker talks for no longer than a previously set period of time (whether three minutes, five minutes, fifteen minutes or an hour). This listener gives the speaker his/her undivided attention, fixing his/her eyes on the eyes of the speaker. The speaker may feel some difficulty at first continuing without feedback, but skill develops quickly. It's almost like writing an oral letter. At the end of the preset time period, the partners will switch roles, and the second speaker will begin speaking. The speakers are not to be interrupted at any time during their time to speak. At the end of the total time for both speakers, feedback may be shared if desired. (If a speaker does not wish to speak, but would rather remain quiet, or express emotion in some other way, s/he may do so until the time is up.) In the Think and Listen, the climate is established wherein each is comfortable and at ease. A non-threatening atmosphere of mutual respect encourages the free flow of words. This process allows both the thinker and the listener to grow at the same time. The listener is learning tolerance, patience, and respect for the ideas of others. He or she is also perfecting his or her listening skills. The thinker during this time is allowed to express him/herself in a non-threatening atmosphere. This allows the thinker to grow in confidence and the ability to express ideas. The listener shows awareness and acknowledges the speaker non-verbally, acting as a sounding board, encouraging the speaker to continue thinking through and refining his or her thoughts by body language or eye contact.

The process of the Think and Listen provides an opportunity to speak and listen within a framework that is mutually beneficial to participants. It helps to improve concentration and develops ones listening skills. It also helps develop intelligence. It is a powerful stimulator.

The Support Group

The support group is exactly what the title implies—support from the group. The formation of a support group may be to find some commonality of interest to make it easier to come together. Here we have a group of strangers or classmates who have come together, perhaps because they have a thirst for learning new ideas and techniques. They form as a group, not knowing what to expect from each other. Once the group is formed, the members can begin to share with each other concerns or ideas that will evolve with more clarity of understanding. There may not be any trust at first—merely respect for each other. In a sense those coming together are like infants—ready to learn as they go along with each meeting. The experience can be like starting anew in life—not knowing what is going to happen. Through warm-up activities like the Think and Listen, the Go Around, the Self-Estimation and the Good and New a barrier is broken. Hopefully, it will be replaced with trust and understanding. However, rules must be established at the outset that the group's purpose is to encourage a feeling of comfort rather than discomfort. Thus, as individuals feel more relaxed with each other, ideas become more creative and the task can be brought to early closure with little or no stress placed on any single person.

The role of each member in the group is to be a listener as well as a facilitator. Of course, each one is also a thinker. Each participant is allowed to share emotions without feeling intimidated. In the beginning only positive thoughts are shared, good things that have happened to the members of the group. Each person is allowed to talk uninterrupted for a specific period of time, knowing that their time doesn't need to be shared with anyone else. Each may talk the whole time, or use only a portion of the time, but the time remains entirely given to that person. This creates a sense of power, perhaps helping to stimulate the development of leadership skills. The support group allows each person to think about his/herself, how good s/he was in his/her accomplishments, regardless of how big or little they may seem to others. The tendency is to stop worrying about what others think of those accomplishments. This privilege is the result of only positive and constructive thoughts being given as feedback, which builds confidence and a sense of worth. The support creates in each member a feeling of belonging. Each becomes more aware of others and their need to share the same positive strokes. Giving and receiving feedback nurture each. Thus the support group can create a sense of fulfillment. A need that is present in everyone, however much it may fail to be identified, is satisfied to some degree by the experience of the support group.

The Self-Estimation

The Self-Estimation is probably the most important of the accelerated learning techniques, although none of the others should be left out. For the most part, people are their own worst critics. As a person tries to discover the qualities about her/himself, he/she usually gives a negative description. If the support group is formed of individuals who are supportive, it will bring out each person by saying encouraging things about him/her.

The purpose of the Self-Estimation is to provide people with a non-threatening method of rating each other's performance. By verbalizing to the group his/her successes, the individual provides the group with an opportunity to reinforce those behaviors with positive feedback, thus affirming and fixing the behaviors. it requires practice, however, as even in a small group it is often difficult to point out one's own good points. We are taught not to boast or brag, and because of that we often are embarrassed when we are forced to admit to doing something right or well. Without the ability to see and admit our good points we cannot grow.

Each person in the group is given the opportunity to go through the whole process. The first stage is that the selected person constructs a list of things s/he feels have been done well. In other words, the person states what s/he feels is good about his/her performance. Then each member of the group will use the Go Around method and state what's good about the selected person's performance. The second stage is an opportunity for the selected person to look at areas for possible improvement of performance. During this stage it is important to focus not on what is wrong, but on what is still missing to make the performance even better. Again, the selected person speaks first, after which the other members of the group give their opinion. It is important that the selected person ask for the second stage and initiate the Go Around to discuss what is missing and can be improved. Thus the selected person controls the amount of feedback that is given. This increases safety in the group. People have the opportunity to build up their confidence sufficiently so that they are ready and eager to ask for criticism. No one who is insecure need initiate this stage, and thus no one need feel threatened. The process forces one to consider what one is doing well, this causes one to focus on what s/he is doing at all. By forcing the participant to think about what's going on around her/him, and where s/he is in relation to the rest of the group, the participant is also forced into thinking where s/he want to end up. This "forced" consideration then improves the individual's participation in the group as a whole. Cadets are encouraged to think of positive aspects of their lives. No matter what his/her background, each Cadet is doing something well. Some Cadets are encouraged to think of positive aspects of their lives. No matter what his/her background, each Cadet is doing something well. This is sometimes stated verbally, and at other times is exhibited in unacceptable behavior. Stating what one is doing well will develop the habit and expectation of doing well. Much work may have to be done on the second stage of t the Self-Estimation to make sure that people are ready for it.

However, the first stage is very valuable and should be used as often as possible. The application of this technique may be focused upon increased improvement and awareness within all academic areas, as well as within one's personal and social behavior patterns. It could easily enhance guidance and counseling situations between individual Cadets and/or parents and professionals.

It allows active Cadet participation in the learning process, concentrating primarily upon introspection, while also allowing formation of awareness by each individual of how his/her work compares with that of the group as a whole. The focus is placed upon improvement within an environment conducive to positive self-exploration. Also, a social climate is created that encourages the individual; during stage two, to seek outside suggestions if they are desired. This fosters integrative responses between Cadets, teachers, community resource people, professionals, and others, with focus upon improving individual perceptions.

The Speak Out

The Speak Out provides the opportunity for any member of the group, without fear of reprisal, debate or criticism, to speak openly about something, which has affected him/her. Knowing that there will be no criticism allows the release from a sometimes-unconscious stress, which may affect positive reception of the ideas of others. In addition, the Speak Out may produce an attitudinal change in peers. The Speak Out is a release mechanism of the highest order. This method is used to get rid of any hostility or frustration an individual has built up over a period of time. It could be about any situation she/he heard, saw or encountered. It may or may not be commented on by others. The important thing is letting the individual feel others are not threatened by their way of thinking. The Speak Out is the catalyst that supports the other techniques of accelerated learning. It should be used as a culminating activity. It should only be used after the other techniques have all been introduced and practiced. It is important for the other techniques to be exposed and experienced within the setting, so that the participants can have an opportunity to learn how to listen, which is the most important

skill of all. The participants must also learn how to be supportive of others. When the facilitator feels that the Cadets have practiced the other techniques sufficiently, only then should the Speak Out take place in the learning setting.

110 Intellearn Tools - A Glossary

The material in this section is provided by:

Dr Laurence A Martel
Leo M. Wood

1. Ball Toss (Koosh Toss)

This technique involves the toss of a soft ball to each person to empower him or her to respond to a question. This stimulates kinesthetic intelligence and reduces fear of responding because of the need to concentrate on catching the ball at the same time as responding. Also, the Cadet chooses who will have the floor rather than the teacher.
Uses: Control flow of contributions (who has the floor); In an activation, giving each person a turn to participate in recall of terms or concepts, first in any order and then in the desired sequence; To solicit previous knowledge; For Q and A review of material (a culminating activity).

2. Think and Listen

Two people take turns; the first person speaks while second person listens without interrupting; then they switch. Listener provides non verbal attention. Confidentiality is imperative. The speaker may not attack the listener.
Uses: In the classroom, use to stimulate thought or generate ideas in a very small group (two people) before getting the ideas out in the large group; For conflict resolution; In a situation where emotions have been high, give each participant a chance to have air time; To review material helps a person synthesize and organize material as well as understand the material from another person's viewpoint; May be used for closure: a personal summary of learning; To take care of troublemakers. Either the instructor does a Think and Listen with one troublemaker, or two of them do a Think and Listen together.

3. Develop Visuals or Props

A prop is an object; a visual is an overhead transparency, wall hanging, chart, poster, etc., using words and/or pictures and heavily using color. These items enhance your ability to remember and make the environment beautiful and interesting. Also could include costuming that implies a role or other meaning when worn.
Use to make concepts concrete and stimulate the kinesthetic intelligence. Posters and pictures provide a place to focus on the symbols of relationships between important concepts. They stimulate the visual/spatial intelligence. Props and visuals provide peripheral stimuli in the classroom so that the eyes fall on them occasionally and people get additional input on the subject being studied.

4. Concert

This involves a dialogue guided imagery, story, etc., embodying the important concepts of a subject, read dramatically to music. Comes after a decode session and before an activation, to put core concepts into longterm memory.
Active concerts evoke an objective perspective (use Classical or Romantic music). Passive concert are used to create a subjective experience (use Baroque music).
Use to get across information, to motivate, to relax and heal, to inspire, to structure a concept, develop a concert, or to express values.

5. Reframing

This is the act of restating a negative/incorrect statement or idea as a positive statement.

Use to accept or give value to every contribution from a learner, recognizing that all responses are correct from a learner's perspective, to correct your own thinking and prevent misstatements or hurtful remarks in order to maintain self esteem, to explore and develop all ideas.

6. Guided Imagery

Creating an internal imagery experience that releases the mind and emotions and expands possibilities, using a story, which incorporates a relaxing setting, with optional background music. Participants are encouraged to relax in whatever way they want.
Uses: stress reduction, mood settings, learning concepts, creative writing, skill development, building self-esteem, healing, problem solving.

7. Mind Mapping

A form of graphic organizer used during brainstorming with a freeflowing documentation process where lines connect concepts to each other. The core subject is in the center; the main spokes are like sub parts of chapters. Related ideas can be color coded or circled or attached by lines. Pictures and words can both be used.
Use to organize thoughts either of an individual or of a group, to capture in a random way at first without the need for excessive structure and allow the flow of ideas to continue undisturbed, for preparing lesson plans, writing a book, planning a project, giving a speech, etc., to show yourself how much you actually know about a subject.

8. Memory Pegs

A mnemonic device symbol, picture, or acronym used to aid in recall, usually in sequence. Use to personally remember a list, in a classroom to teach several concepts often in sequential order.

9. Body Sculpting

Using one or more people to create a charade or dramatic pose/visual representation to convey a concept or thought.
Use as a kinesthetic activity in a classroom to convey and/or reinforce a concept, to give a team an opportunity to produce something together (team building).

10. Skits, Role Playing

Stories enacted, using either speech or mime.
Use to provide an opportunity for the Cadet to demonstrate his understanding of a concept, to teach a concept, either with instructors only or with Cadet participation, to provide an opportunity to exercise and develop creative and expressive abilities. Role-playing is a future state of reframing; demonstrating, acting to teach concepts, have a stronger impact. Example: See below, “Drama by Numbers.”

11. Expand-A-Story

Provide a narrative skeleton of a story (beginning, middle, and end) so Cadets can expand it to demonstrate their understanding of a situation or concepts. You might want to include some of the core concepts in the sentences.
Use to provide an opportunity for the Cadet to demonstrate his understanding of a concept, to provide an opportunity to exercise and develop creative and expressive abilities, as a problemsolving conflict resolution technique, to obtain buyin and generate interest, in planning the writing of concerts, documents, speeches, letters, etc.

12. Poetry

This involves any verbal/written communication that stimulates emotion. Use to put people in touch with what's inside them, to get people over the "cannot" barrier, to exercise their creative potential, to provide Cadet an opportunity to express his understanding of a subject matter in a creative way, to teach creativity as coming from a relaxed atmosphere.

13. Good and New

A process used to allow anyone in the group to voluntarily tell anything good or new that happened or will happen.
Use as an icebreaker to establish a positive atmosphere, to get to know one another better, to create/enable bonding.

14. Speak Out

This is a personal statement expressing a deep feeling or concern over an issue.
Uses: A wounded individual can stand up for his/her point of view, provides an opportunity for the group responding to offer support.

15. Drama by Numbers

At least two people participate in an emotional conversation using only numbers from 1100. Conversation starts as friendly, becomes argumentative by 50 and is resolved by 100.
Use to provide an opportunity to express conflict in a nonthreatening way, to demonstrate patterns of conflict, to show, the humor in a conflict situation, to think/focus attention on nonverbal forms of communication and intonation, to help people learn to read concerts, to show that how you say something and tone of voice is more important than the words chosen, used in team building.

16. Double Planning

Your body and your intonation gives its own message and if it's in conflict with your words, the group will believe the body before they'll believe the words. Double entendre such as sarcasm is an example.
Uses: Be aware of it as an instructor so you can be congruent and therefore, believable to the group 'Walking the talk," Be aware of the Cadets' bodylanguage, make sure verbal is congruent with onverbal.

17. Song Writing (By Cadet)

Any verbal communication set to music.
Use to exercise people's creative potential, to reinforce their understanding of concepts by expressing them in rap or song, as an activation, to reinforce understanding by singing someone else's song, as a memory device.

18. Small Group Work

Participants are doing the work by themselves with the presenter as a resource. This may be done as a subgroup of a larger group. Use in team building, to allow a less threatening opportunity to expression, to give support and anonymity to each individual in the group when reporting back, to take advantage of synergy of group vs., individual contributor, to allow for division of labor when broken into subgroups, allow Cadets to discover knowledge and teach each other, allows for a much greater generation of ideas and participation in a limited time frame, to make more effective use of the large group's time.

19. Feedback

Validate a person's comments. It should be positive; it should be immediate, even if it means promising to follow up later.
Use to improve or enhance an individual's performance and/or the content of the work, to provide needed reaction to the effort of the performer so he/she can understand his impact on the audience, can be used to reinforce.

20. Validation

This is the act of affirming an individual for his effort or intent, regardless of level of accuracy, etc. Use in conjunction with reframing and critiquing (feedback) to build self-esteem, to positively reinforce and encourage participation, to endorse/support/accept individual.

21. Birthday Circle (Other Special Occasions)

Birthday celebrant sits in middle of a circle of the group. Each group member takes a turn at saying why he/she is glad the person was born. Use to provide an opportunity at least once a year for the person to hear about his personal positive qualities and impacts on others.

22. Name Game

Individuals name all the members of a group, the name of the person to his/her left, and next person saying the name(s) already said plus one new name.
Uses: At the beginning of a group's life to learn everyone's name, for an icebreaker, provide an opportunity for success, helps focus attention on others. Use people's first names - builds a feeling of importance in an individual when you know his/her name.

23. Parking Lot

Method of noting concerns/questions people have so they can be addressed before the class ends. Keep on display in the room so items can be added/deleted as necessary.

24. Positive Thinking Tapes

Using tapes to play positive statements to oneself while in a relaxed state. Use as reinforcement.

25. Audience Participation

Cadets participate in their own learning, share knowledge with each other; this reinforces learning, aids in bonding with other class members, and encourages feedback.

26. Connective-ness

Sharing of a common experience, the feeling of cohesiveness group members feel as they form relationships with each other.

27. Clear Out Negatives

Eliminate negative language; learn to make statements in a positive way, avoiding the use of negatives. Importance of positive selftalk.
Example: Avoid using words such as "can't, won't, etc.

28. MultiCulturalism

Respect for everyone different cultures and ethnic diversity. The principle that everyone has something to contribute, viewing differences as strengths.

29. Brainstorming

A technique used for generating lots of ideas in a short period of time. Participants throw out any and all ideas, one person writes them all down. No judgments are made regarding the value of the idea, purpose is to generate a large number of ideas in a short period of time, determine feasibility later.

30. Writing Cadets Exact Words

Validates Cadet's remarks, you don't need to reword before recording their statements. There is no risk of changing the meaning they want to convey.

31. Inventory of People's Knowledge

Establish a baseline of the group's knowledge of a subject. Use to gather information on what people already know about a subject. Examples: Mind Map, brainstorm, decide what to emphasize, draw on parallel experience, determine focus and direction.

32. No Wrong Answer

A technique used for validating responses, recognizing the participant's connection to the subject matter. Moves participants to share ideas in a nonthreatening way. Uses: Reframing, building self-esteem, brainstorming, creating climate for risk, mind mapping, helps overcome learning barriers.

33. Show Appreciation

Recognizing and acknowledging the capabilities of people. Use to build self-esteem, validate, encourage participation, sensitive listening.

34. Repeating Questions

Ensures that everyone hears the question and allows check for understanding.

35. Turning Over Teaching to the Class

Ask class to share knowledge, help answer Cadet's questions, and encourage them to teach each other. Opens up the learning process, empowers the learner, the learners support each other, reduces stress on the instructor.
Use for modeling, in creating an agenda, establishing breaks, determining the process to do an exercise, etc.

36. Progressive Disclosure

Unfolding the material in the minds of the Cadets. A gradual evolution of understanding of the material allows Cadets to arrive at closure based on their understanding. Discuss the why after Cadets have discovered the way.

37. Model What You Present

"Walk the Talk," means to show congruence between words and behavior. "Read my feet, not my lips."
Uses: Instructor behavior, both in and outside of class.

38. Globally

Presenting information in a way that gives the "big picture;" fill in the details later. Example: Teach from the back of the book.

39. Excite All 7 Intelligences

Teach the same material in several different ways so all forms of intelligences are used. Greatly increases the chances that everyone will understand and retain the information. Also helps participants strengthen all their intelligences.

40. Enhance SelfEsteem

Validate everyone's feelings of self-worth so their confidence level is increased and they are open to learning.

41. Say Three Nice Things

When an individual is unhappy and having a difficult time or doesn't have anything "Good and New" to share; three people say something they like about him/her. The comments must be true and must be sincere. Use to enhance a person's feelings of worth and esteem.

42. Decode, Concert, Activation

The three steps in the teaching cycle. Use to teach any kind of information.

43. Trigger Words (Negative And Positive)

These words are words that either stop a person's involvement or encourage it. "Antecedent." Examples: 'Yes, but...' 'Thank you +...' 'Interesting +...' Pay attention to the use of words and their effect.

44. Teach Concepts

Focus instruction on broader concepts before specific facts. Use in presenting new material. Core concepts are the main or essential ideas that are part of a subject.

45. Empowerment

Giving ownership of learning to Cadets. Letting the Cadets become their own teachers. Instructor becomes a facilitator, not "sage on the stage."
Uses: Set up a format like small groups where Cadets do their own work and teacher oversees. Cadets take on the authority of the instructor.

46. Use Examples

Find ways to compare new teaching to aspects of everyday life that have meaning for Cadets (analogies). Use in presenting new material, in the entire teaching cycle.

47. Make It Fun

This technique is based on the belief that learning and productivity increases when participants are having fun.
Uses: Humor, fun, games, stories, ice breaker, in driving activations.

48. Brain Models

The 5 theories of the brain: split, triune, regenerative, holographic, 7 intelligences.
Uses: "Present" to learners as theory and to refer to during learning experiences, for designing activities for a class. Use scientific research to validate techniques.

49. Grammar Game

This is a bodilykinesthetic way of teaching the relationships between parts of a sentence. Use as a fun way to model learning, to put meaning and life into our language structure, as a model for the 7 intelligences in a short session, input, synthesis, output.

50. Repetition

This technique calls for a method of presenting the same material in another way. Learners activate previous learning so that they can continue that learning and it's a way for the instructor to get feedback on what the learner is taking away from the session. Use at the beginning of each successive workshop day, checking for understanding on something that was taught, and use in guided practice.

51. Learning Barriers

Things that restrict learning for the participants, e.g., logical ethical, feel good. Use sensitivity to situations in classroom that could create barriers, design courses and materials accordingly, understand resistance and working effectively.

52. Eliminate The Bell Curve

Instruct so that all learners are working toward success rather than a distribution. Promote teamwork, expectancy that everyone can learn. Avoid competition in learning use.

53. Honest and Open

Presenters are up front with the agenda and open to the group's thoughts and ideas.
Use in-group agenda setting, adjustments to agenda, helping to keep agenda fluid, building trust, encouraging participants, confidentiality.

54. Time for Pressing Issues

Altering time/plans to include opportunities to deal with other issues.
Examples: Teaching science: California Earthquake, change in job situation, leaving from a workshop to do what you need to do. The "teaching moment."
Use to create environment that allows for issue to use, build flex time into agenda.

55. Pass The Test (Teacher)

Cadets will put the teacher through a test to see how you handle it. It's the way they give you respect and establish credibility. Use for self-awareness, it will happen; they will challenge you.

56. Rhymes, Limericks, and Jingles

Ways of putting words (information) into music/rhythm. It makes learning fun and increases learning memory. Use current commercials because they are good learning models. Use during decoding and activations, introductions, modeling, marketing. Use as a model of effective use of the intelligences good learning models. Cadet constructs for activation.

57. Use SelfDisclosure

Presenter chooses to share personal stories that show both success/struggles in relationship to teaching. Use throughout training to create credibility and teacher authority. Makes teacher and teaching more real. Uses this technique to make a point, clarify it, and harmonize.

58. Establish A Comfortable Environment

Within the limits that you are "living in," provide for variety as much as possible to accommodate learning styles.
Use to reduce stress, help participants relax, create a nonthreatening atmosphere so people are free to learn. Examples: Comfortable chairs, floor space, tables; also taking breaks, etc. Re appearance, encourage people to dress comfortably.. Set ground rules: casual instructor behavior, get up for coffee at your leisure, etc. Instructor: walk around the class; use first names, smile, etc.

59. Encourage Individuality

Use during introductions; for example, "What is your symbol?" Give positive feedback to all answers, opinions, etc. It teaches that each person is unique and those individualities are strengths, not deficits. People learn differently.

60. Mental Context Building

Referring to something you already know or relating something new to a goal you already have. Putting information into your own mental images.
Use home examples, metaphors, and storytelling.

61. Build Exercise Out of Problems

Could be planned or spontaneous exercises. Can be related to the content and pre planned or may be spontaneous relating to something that happens during class.
Uses: Reframing, problem solving, Cadets interpretations of something used to clarify.

62. Discussion Rule

No one speaks twice until everyone has spoken once (OK to pass). Gives everyone a chance. Cadets can invoke this rule.
Uses: Diffusing emotion, draw out quiet people.

63. Questions and Answer Period

This calls for setting aside specific periods for questions at appropriate times. Also, creating an environment where questions can be voiced as they arise. Give the class an opportunity to answer their own questions. Use this technique to address concerns and issues, to deal with learning barriers and parking lot issues. Creates opportunity for people to get involved, allows fullest exploration of material, allows everyone to come to same point before moving on.

64. Plan Ahead

Do it, but be flexible. Use discussion rule. Be flexible re: time, content, and techniques. Expect the unexpected.
Fill in or delete exercises as needed.

65. Don't Assume

Sensitive listening; avoid preconceived notions. Example: Repeat someone's statement, using your own words to make sure you both mean the same thing. Write comments or note using person's exact words. Use in brainstorming.

66. Positive SelfTalk

Use as an instructor to increase your self-esteem.
Example: If your self-esteem is high, you will pass it on to your class, also, to change your belief around the capability of your Cadets.

67. Don't Put People on the Spot

Avoid win/lose situations.
Examples: Reframe, ask for volunteers, use teams, allow people to "pass."

68. Open Up The Learning, Process

Adults need more information about learning how to learn. What you learn with Intellearn will help you process information better in all parts of your life. Example: Learning with your body. An expectation is that a course will help the corporation; the Intellearn part may also help the individual in their personal life; as the person makes it part of his/her life, the corporation will continue to improve.

69. Humor

Use it but with sensitivity. Engage the emotion to help with retention. Connect it to everyday life. Examples: Cartoons, film clips, in concerts.

70. Expectancy

A positive atmosphere yields the anticipation of a positive experience. A positive feeling that can be transmitted to the class. Links to positive self talk and don't assume. The mindset you take into any situation. You get what you expect; preconceived notions.

71. Group Can Proceed at Their Own Pace

Allow enough flexibility in your curriculum to allow for this. Needs to be monitored so you know where the group is at all times (Checkpoints). Sometimes you need to go slow to go fast.

72. Video Tape Technology

Use as an instructional tool, decode. Videotape activations for later use.

73. Cross Crawl

An exercise used to get both sides of the brain working together. Hit right knee with left hand, Hit left knee with right hand. Use for revitalization. Requires a high degree of communication between the two sides of the brain through the Corpus Calosum.

74. Paradox

Contradiction of words, actions, feelings both true but conflicting form of balance. Have mindset that real learning occurs in paradox.
Example: People who are excellent leaders have authority but let it go and allow others (Cadets) to internalize their own authority. The challenge, as teachers, is to understand the paradox.

75. Reduce Stress

Establish physical comfort and casual atmosphere by relaxing muscles; induces state of calm and inner peace.
Uses: Minimizes competition, concerts, infinity sip (focus on thumbs), OK to pass, classroom environment.

76. Be Flexible

Accepting ideas, being adaptable, pliable, accepting changing moods, free up expectations, encourage insights and spontaneity, group energy determines direction.

77. New View About Homework

The educational value is not in assigning homework. Individuals can develop their own thoughts/ideas without structure.
Uses: Seeds are planted via concerts, group work self empowerment.

78. Conflict Resolution/Reconciliation

Resolve for clarification, refocusing, proceed without learning barriers, listen impartially, consensus.
Examples: Tell the truth as fast as you can, and Think and Listen, can put in parking lot, expanda-story, and 1100.

79. Metaphors

Comparison analogy.
Use new skills to relate to past experiences. Use in body sculpting, decoding, concerts, accelerated learning.

80. Nurture the Genius in Everyone

Everyone has the capability to learn at far greater levels if provided with proper material and environment. Have respect for the potential of every person. All thoughts have value and everyone's contribution is important, everyone makes a difference. Help people believe they can do it.
Examples: Look for the good in everyone, accept and reinforce their contributions.

81. Group Sensitivity

Reading the group. Identifying the unique characteristics of individuals. Recognizing leaders for their awareness and responsiveness.
Uses: Allow people to be in their own space.

82. Risk

Allowing for unknown possibilities and ambiguities in learning. Examples: Self-disclosure, dare to be dumb (ask questions), sharing and revealing in a group structure support so people can take risks.

83. Team Teaching

Two or more people teaching together - cofacilitating, sharing, learning, and playing off one another.
Examples: Piloting program, apprenticing, feedback and and reinforcement.

84. Continuous Improvement

This involves the ongoing evaluation and development through the upgrading of products. Examples: Allow time to act on feedback, share, debrief, communicate, change module during use based on continuous improvement.

85. Internalize vs. StandAlone Process

Cultural integration vs. onedimension experience; modeling, living it, value, and ownership. Examples: Body sculpting vs. flow chart; read script vs. brainstorm vs. overhead.

86. Encourage the Use of Tools Outside of Class

LIVE IT! Use all 5 senses with it. Model it by incorporating it in everyday living and demonstrate behavior. Use at work for team planning, idea sharing, acceptance, and encouragement, change. Some examples: Culture change tools, lifelong learning.

87. I'll Take Two More Questions

Adding structure, drawing closure YET, leave open.

88. Help Your Partner Back to Class

This is a technique to get the group back together. It places the accountability on the Cadets. Use after breaks, after lunch, after activities.

89. Mobility and Comfort

Use relaxation techniques allowing freedom for Cadets to make themselves comfortable. Also used in body sculptures. Can be used during concerts, class discussions and activities. Allow people to physically experience concepts. This appeals to global learners, learning in a nonstructural environment.
Use during concerts, discussions, and activities, in body sculptures.

90. Okay to Wander and Daydream

Technique for recognizing that people learn in many ways, allowing the Cadet to learn at their pace and in their comfort zone. Peripheral stimuli, share with individuals they will learn anyway; repeat information, get in the second time around. Recognize when Cadets are on overload. Something you might say during the class intro as an icebreaker, put class at ease.

91. React to Numbness

Recognize when people are overloaded. Acknowledge it and allow Cadets time to absorb material. Physical activity, cross crawl, breaks.

92. Doodling

Builds the ability to think in visual symbols. Allow individuals to draw their own relationship and meaning.
Use to help people capture concepts in their own way. Build relationship between words and pictures (how we store things in our mind).
Examples: Memorization technique, teach people to mind map, review concepts.

93. Okay to Pass

Use this technique that creates comfort in class. No one is put on the spot. Avoids embarrassment; allows individual to participate without fear of failure. Enhances self-esteem.

94. Put Up Game

This technique is a skit in which two people pretend to be carrying groceries. Bump into each other, attack each other verbally (put down). Then do the scene again but model positive helpful behavior (put up) toward the other person. Group members practice being polite and helpful toward each other.
Use to build relationships, learn to give/receive. Advantages of communication feedback link can be stressed.

95. Multiple Senses

Bringing one more sense into the learning experience. Use to show links in a body sculpture. Be careful not to alienate some Cadets.

96. Trading Coins

Test concepts of equality and fairness. Using coins of equal value, trade coins, that is, "I'll give you one of mine if you give me one of yours." That makes the trade equal. Then try unequal trades. How does this feel? What is fair? Why should one person have more than the other? Explore feelings in situations where less is received versus benefits of equal sharing. . Also, helps people understand how customer feels when they get poor products.

97. Hand Touch Exercise

Communicate the basics. Face each other, play handclap game. Each time your hands touch - pick up one coin. Shows how you can sequence together and collect coins at the same rate. Helps a child experiment with ideas of sequence, balance, forward motion, accumulation of wealth, fairness, sharing, equality, number, and other things that may occur to either of you as you play. Later, expand the activity; introduce coins of different values into the exercise. Establish why one coin may be equal in value to many others. Perhaps begin with something else, for example, cakes of different sizes. Show how one large piece of cake may be exchanged for two smaller sized pieces.

98. When Is One Worth More Than Two?

This technique teaches price and value concepts. See if it is possible to set up a consistent value system. Let the other person make the value judgment. Does their evaluation change from time to time? This is preparation for understanding fluctuating prices in a store. The ability to make one thing equivalent in value to several others may become clear as a basis for understanding how the monetary system works, also synergy.

99. The Number Line

Experience addition, subtraction, and signed numbers. Mark on floor, (+) and () numbers, 0 in center. Players take steps in + or directions, based on the number called out. Helps to feel the process.

100. Read Till You Miss

Take advantage of testing and improving abilities in a safe, enjoyable way. Teach Cadets to help each other learn, team environment.

101. Self-Estimation

State what you do well on task. Others give their view of work when done. Focus on the positive. What's missing you/others tell, too!

102. The NewUse for Objects Game

This technique helps to build creativity. It makes individuals practice seeing new possibilities. It's a different form of brainstorming. No criticism.

103. One Complaint, Then Only Positive Comments

Allow only one complaint then offer only positive comments. Leading concern section warms way to overcome pet peeves, and keep class moving. Change focus of meetings from negative to positive.

104. That's a Likely Story

Telling tall tales for fun and profit. Use to relieve tension or concern about the possibility of giving wrong answers.

105. Support Your Position

Teaching people to be persuasive involves teaching Cadets don't back down until you have presented you side and have received a fair hearing. Use to build confidence. Examples: Use in a class by having participants present/stand up for a particular point of view. Let them argue for that position (they don't have to agree with it personally).

106. Your Own Symbol

Finding symbols that describe you. Helps others get to know you. Use in warmup exercises, introductions, discovers things about people, self-clarification.

107. Acceleration Versus Velocity

Learn differences by tossing ball.
Use to teach science concepts. Pass ball around small group at a constant speed. Speed up and slow down. Lays the foundation.

108. What's a Tuffet?

Allows Cadets to develop their own interpretation of words; words get their meaning from a context. Expands people's thinking.

109. Add Music to the Mix

This allows for new possibilities for stories.
Use music when reading or telling a story. Read to cadence of music. Let the Cadet finish the story. Expandastory.
Use during concerts, before/during breaks, as background.

110. Sensitive LISTENING

Listening without being intrusive. Letting someone clarify his or her needs, being mindful about the point the other person is trying to make. Providing feedback, if required, in a way that the speaker "hears" it. Use during and Think and Listen.

Part VI: Glossary of Terms Used in Lesson Plans

Cooperative Learning Strategies:
Use the following strategies in your classroom to enhance team learning and attitude.

Carousel - See Part IV - Instructional Techniques.

Conversation Circles - See Part IV - Instructional Techniques.

Heads Together - See Part IV - Instructional Techniques.

Jigsaw AS Teams - See Part IV - Instructional Techniques.

Jigsaw AND Expert Teams - See Part IV - Instructional Techniques.

Jigsaw WITH Expert Groups - See Part IV - Instructional Techniques.

Numbered Heads Together - See Part IV - Instructional Techniques.

Partner Interviews (PI) - See Part IV - Instructional Techniques.

Round-Robin - See Part IV - Instructional Techniques.

Round-Robin Brainstorm - See Part IV - Instructional Techniques.

Squared-Shared-Partner-Interviews - See Part IV - Instructional Techniques.

Team Cheer - Team creates a cheer for the group to be used when the group has accomplished a task and is celebrating.

Team Color - Team chooses a color that represents the personality of the group members.

Team Excellence Symbol - Team decides on a physical symbol formed by the group that indicates they have finished an assigned task and that they fulfilled the requirements of the task.

Team Food - Team selects a food (candy, fruit, gum, etc.) that the whole group enjoys and can be used as part of their celebrations.

Team Logo - Team designs a logo that visually represents the team.

Think-Pair-Share (TPS) - See Part IV - Instructional Techniques.

Team Graphic Organizer - Together, a team prepares a single graphic organizer of information.

Team Brainstorm - Team members randomly and rapidly contribute many ideas.

Team Name - Group decides on an appropriate name for the team.

Team Product or Project - Teams produce a product or engage in a project as a culminating activity.

Team Performance - Teams prepare a performance or presentation based on a synthesis of what they learned.

Team Song - Team creates a song or selects a song that reflects the team's personality.

Energizers and Icebreakers: See Part I - Lesson Overview.

Graphic Organizers: See Part I - Lesson Overview.

Learning Logs:
Learning Logs are useful for keeping track of a variety of learning activities. Cadets can use learning logs as a record of what they are anticipating, accomplishing, experiencing, learning, monitoring, observing, predicting, questioning, thinking, etc. They are useful tools during science experiments, reading assignments, group experiences, projects, field studies, homework, and service learning activities. Cadets can write in their learning logs during the same times suggested for journal writing. They can respond to questions and/or complete sentence starters that you provide them. Assessing the learning logs can be accomplished in the same way you assess journals. Create a rubric that can be used to determine if Cadets have responded to all required questions, if their responses address the questions specifically, if the answers are complete statements of original thoughts, if there is evidence of thoughtful observations and critical thinking, and if the log is completed in a timely manner.

You can also select different times for Cadets to write in their learning logs. The timing is flexible but you may assign some specific writing times to help Cadets with the process. The questions that you write can have their basis in both Bloom's taxonomy and in the Socratic questioning model. For example:

a. Before
   - What is the current plan?
   - What resources are needed?
   - "The hypothesis we will be testing is . . ."
   - "I predict that the following will . . ."

b. During
   - What have you observed up to this point?
   - How have things changed from what you expected?
   - "In order to improve the . . ."
   - "This incident has taught me that . . ."

c. After
   - What have you learned?
   - What was most successful?
   - "I can apply the outcomes to . . ."
   - "I think the challenge now is . . ."

Multiple Intelligences: See Part I - Lesson Overview.

Notebook Entries:
Notebook entries are written narratives of Cadets' responses to experiences, activities, and lessons. Cadets explore their feelings, reactions, attitudes, and opinions in their notebook entries. Notebook entries provide Cadets with an opportunity to process what they are learning and experiencing. Metacognitive processing time helps Cadets make sense of their experiences. Have Cadets make notebook entries daily, during a lesson, at the end of a lesson, or assigned as homework. Cadets may keep notebook entries along with a learning log. Assess notebook entries by using a rubric to determine if Cadets have responded to all required questions, if their responses address the questions specifically, if the answers are complete statements of original thoughts, if there is evidence of thoughtful processing and self-reflection, and if the notebook entry is completed in time.

You can help Cadets write in their notebook entries by providing prompts and sentence stems at different times throughout a lesson. The prompts can incorporate the Metacognitive questions, What, So What, and Now What as well as Glenn's E-I-A-G processing model. For example:

a. Before starting a lesson
   - How are you feeling as we begin this particular lesson?

- What key information that you already know will help you with this lesson?
- "I'll be trying to . . ."
- "I hope this happens . . ."

b. During the lesson
- What is frustrating you at this point?
- What do you need to do to help yourself understand better?
- "I wish the instructor would . . ."
- "I need more information about . . ."

c. After the lesson
- How can you use this information both inside and outside class?
- What was easiest for you today? Hardest?
- "I was surprised when . . ."
- "I thought what we learned today was similar to . . ."

Observation Checklists:
Checklists include two elements - the observable skills and the standards or criteria to assess skill level and competency. For example, if you are going to assess a speech or oral presentation, you and your Cadets might create the following observation checklist to assess or grade the speech and to provide Cadets specific feedback on their performance:

SPEECH/ORAL PRESENTATION **Behaviors to Observe Assessment Standard**	
(A) *Vocal Qualities*	
	❑ Pace is even
	❑ Volume is appropriate
	❑ Tone and intonation are interesting
	❑ Diction and pronunciation are clear
(B) *Use of Resources*	
	❑ Visuals are effective and appealing
	❑ Examples reinforce concepts
	❑ Citations come from credible sources
	❑ Notes are used infrequently
(C) *Physical Characteristics*	
	❑ Eye contact is frequent and inclusive
	❑ Gestures are relaxed and inviting
	❑ Facial expressions reflect the content
	❑ Movements are purposeful and compelling
(D) *Content*	
	❑ Information is interesting and sufficient
	❑ Examples are appropriate and numerous
	❑ Organized, logical, and well-developed
	❑ Topic is relevant and compelling

Portfolios:
Portfolios are a practical way for Cadets to collect samples of their work in order to document what they are learning and how they are improving and changing. You and the Cadets can organize and prepare portfolio guidelines so that Cadets can compile their documentation from the beginning of each course. A portfolio guideline should contain the following:

- **WHAT** - a list, table of contents, of the required and recommended documents and a collection of the specified items;
- **HOW** - the assessment rubrics which include the specific performance evaluation criteria;
- **WHEN** - the collection timeframe and assessment dates; and
- **WHO** - who will assess the portfolios: self, peer(s), and instructor.

Consider these guidelines to help your Cadets create effective portfolios.

- **Step 1 -** Cadets continuously collect their works-in-progress and finished works.
- **Step 2 -** Cadets decide on appropriate examples they will include in the final portfolio to accurately show their growth, skill development, understanding, and level of achievement.
- **Step 3** - Cadets reflect on their portfolios, record their thoughts in a journal, and respond.

Rubrics:
A matrix includes the detailed performance elements to evaluate and the specific criteria to assess those elements. Rubrics give Cadets a clear picture of what is excellent, good, adequate, and insufficient. You and your Cadets can create rubrics for anything that might be graded or assessed including tests, skills, knowledge, projects, performances, etc.

Tests and Quizzes:
You can design tests and quizzes to assess more accurately each Cadet's understanding and knowledge. Create tests that are:

- Varied in types of questions
- Include rubrics
- Utilize thoughtful outcomes
- Provide choice
- Arranged from easy to hard and simple to complex
- Contain a variety of tasks from visual to auditory to kinesthetic
- Incorporate a grading scale

Thinking Skills – Sternberg's PAC, , Bloom's Taxonomy, Structured Reflection: See Part I - Lesson Overview.

Bloom's Taxonomy: See Part I - Lesson Overview.

Metacognition: See Part I - Lesson Overview.

Socratic Dialogue: See Part I - Lesson Overview.

Stephen Glenn's E-I-A-G: See Part I - Lesson Overview.

Units:
Units are based on the competencies and learning objectives identified by state and national standards.