Effective Teaching Strategies
Nonlinguistic Representations

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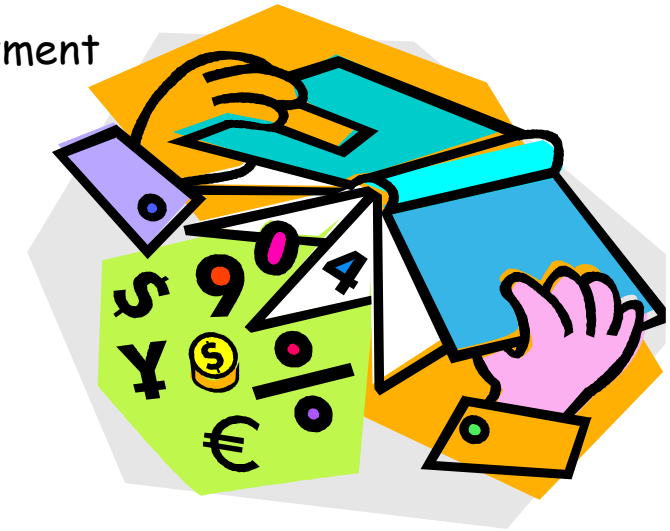


As a result of this workshop, participants will be able to:

- Understand how nonlinguistic representations enhance students' understanding and ability to use knowledge

- Know how to apply this instructional strategy in your classroom.

Meta-analysis Results for Categories of Learning Strategies

Category	Average Effect Size	Average Percentage Gain	Number of Studies
1. Similarities & Differences	1.61	45	31
2. Summarizing & Note Taking	1.00	34	179
3. Reinforcing Effort & Providing Recognition	.80	29	21
4. Practice & Homework	.77	28	134
5. Nonlinguistic Representation	.75	27	246
6. Cooperative Learning	.73	27	122
7. Setting Objectives & Providing Feedback	.61	23	408
8. Generating & Testing	.61	23	63

Classroom Instruction that Works for English Language Learners (2008)

Nonlinguistic Representation

Enhance a student's ability to represent and elaborate on knowledge using mental images.

Generalization from the Research

- Nonlinguistic representation should elaborate on knowledge using **mental images.**

- There are **five** main types of nonlinguistic representations.

Recommendation for Classroom Practice

Student should use:

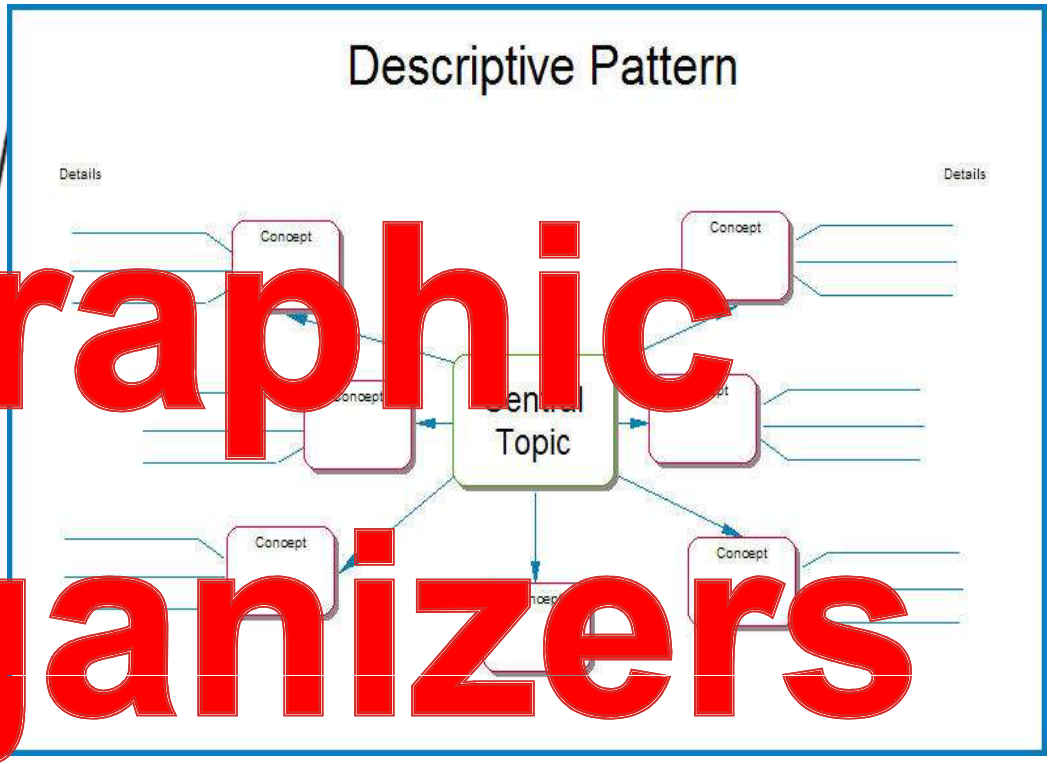
- graphic organizers
- pictographic representations
- mental images
- physical models, and
- kinesthetic representations

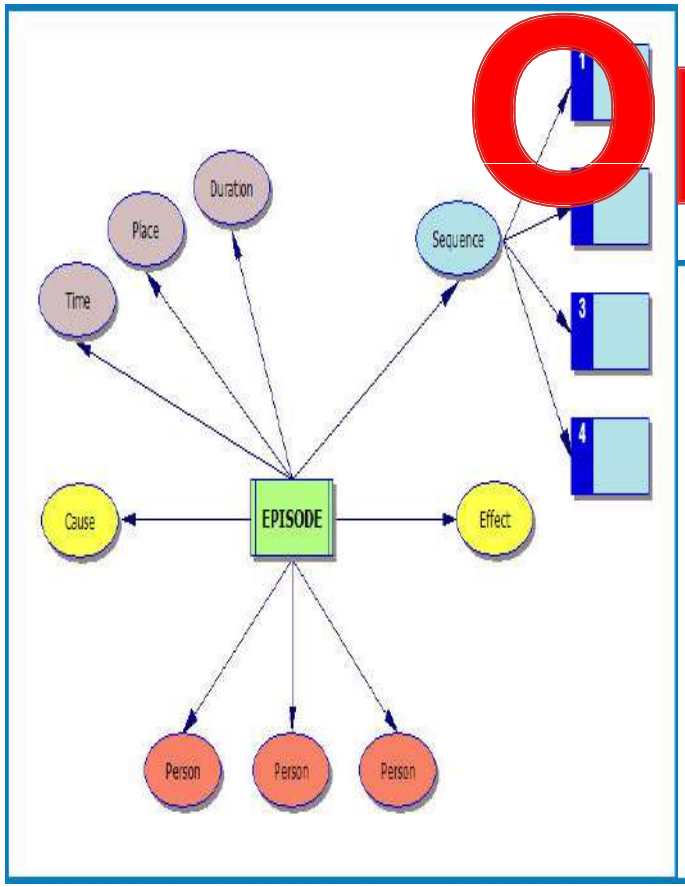
Recommendation for Classroom Practice

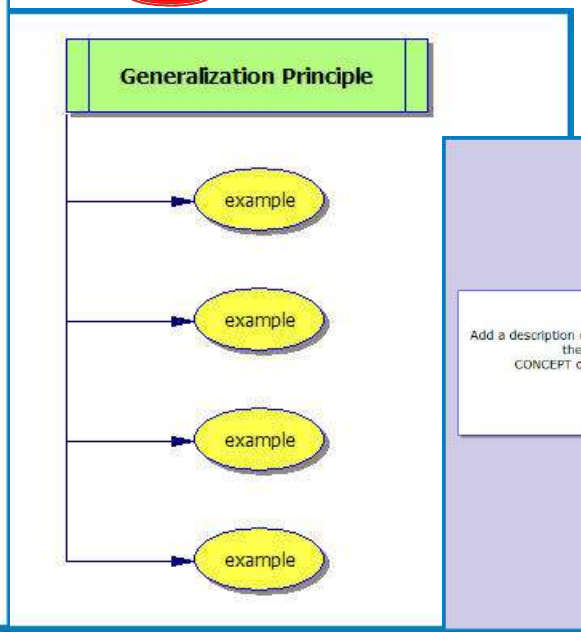
- Students should apply nonlinguistic representations to **enhance their content understanding** and talk about their choices to increase academic language.

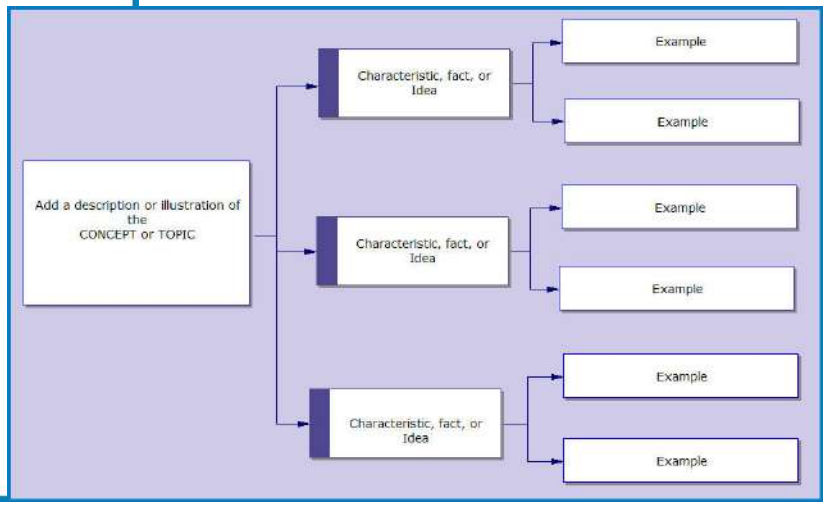
- Nonlinguistic representations can be **tools for language development.**

Graphic Organizers









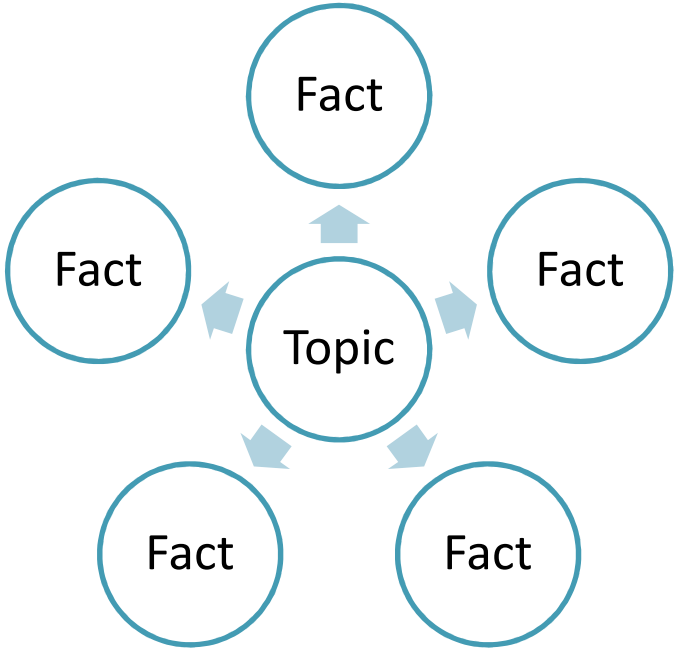
Graphic Organizers

Common patterns used to organize information are:

- descriptions
- time sequence
- generalizations/principles

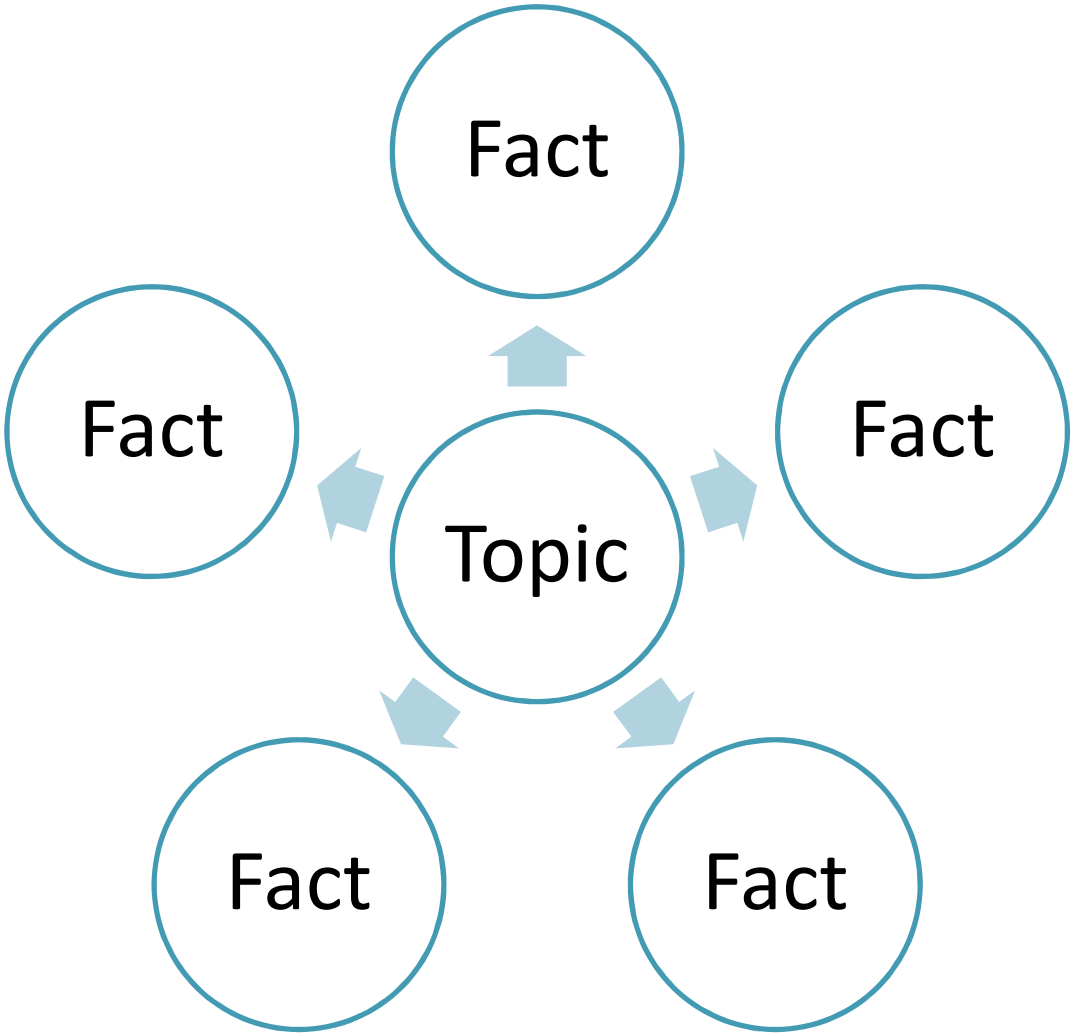
Description Pattern Organizer

Questions
1. What specific person, place, thing, or event is being described? 2. What are the most important attributes or characteristics? 3. Why are these particular attributes important or significant? 4. Why is the description important? Use your answers to these questions to form a summary.



Signal Words			
above	across	along	appears to be
as in	behind	below	beside
between	down	in back of	In front of
looks like	near	next to	on top of

Description Pattern Organizer

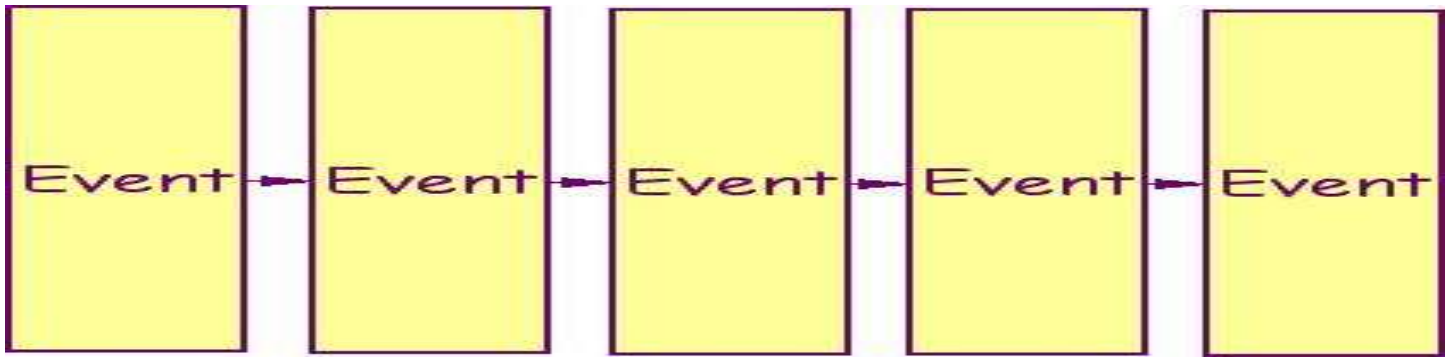


Time Sequence Pattern Organizer

Questions
1. What sequence is being described? 2. What are the major incidents that occur? Use your answers to these questions to form a summary.

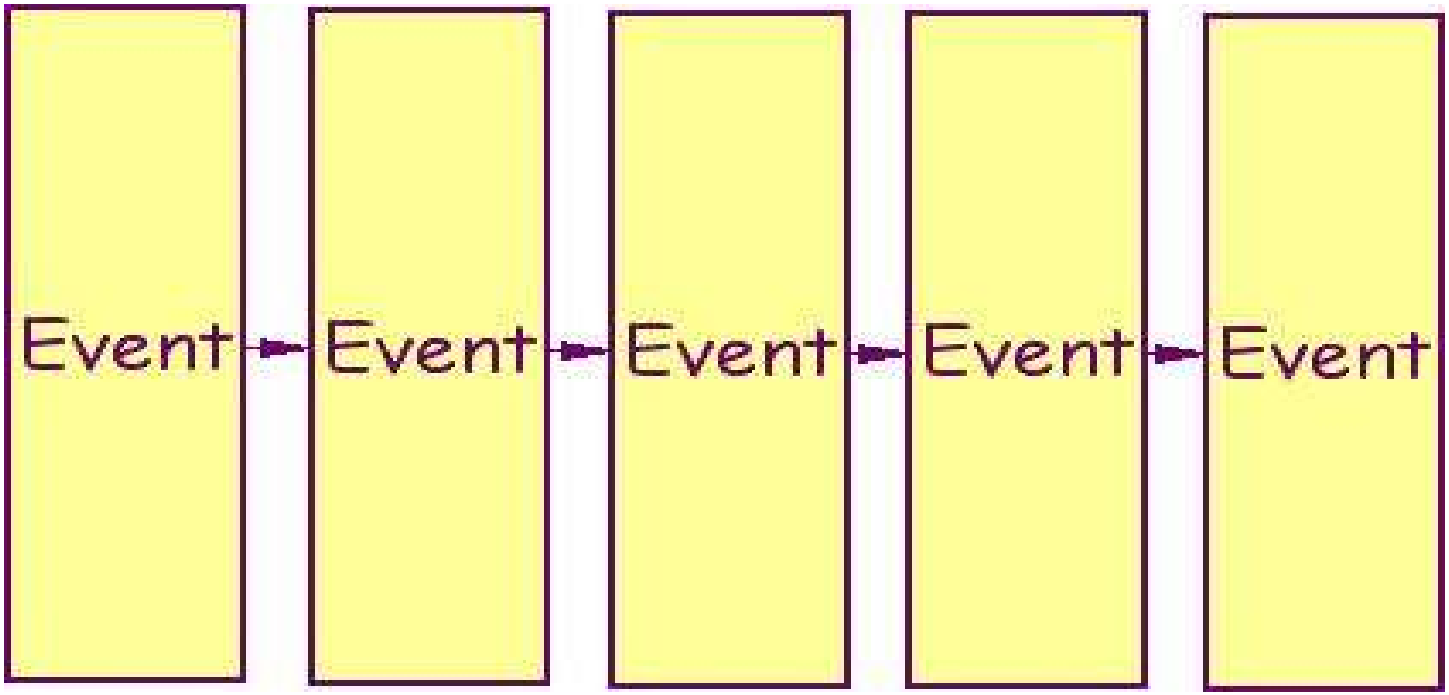
Signal Words				
after	afterward	as soon as	before	during
finally	first	following	for (duration)	immediately
initially	later	meanwhile	next	not longer after
now	on (date)	preceding	second	soon
then	third	today	until	when

Topic:



Time Sequence Pattern Organizer

Topic:



Time Sequence Pattern Organizer

Highlights of the Apollo Space Program

May 1961
President John F. Kennedy initiates the program

January 1967 Apollo 1
Crew dies during simulation

December 1968 Apollo 8
First manned mission to achieve lunar orbit

July 1969 Apollo 11
First lunar landing mission

November 1969 Apollo 12
First mission to make a pinpoint landing on the moon

April 1970 Apollo 13
Explosion on board aborts mission

January 1971 Apollo 14
Third mission to land on the moon

December 1972
Third extended scientific exploration of the moon

Final mission of formal Apollo program

1) Life Cycle

1-4

samples and details supporting details

First the egg

Then

First

Egg

laid on

A butterfly starts life as an egg laid on a leaf

Then

The Larva or caterpillar

hatches from an egg and eat leaves from flowers It looses its old skin as it grows. It increases many times before pupating

Next

Pupa or Crysalis

It turns into a pupa a resting stage

Finally

Adult Butterfly

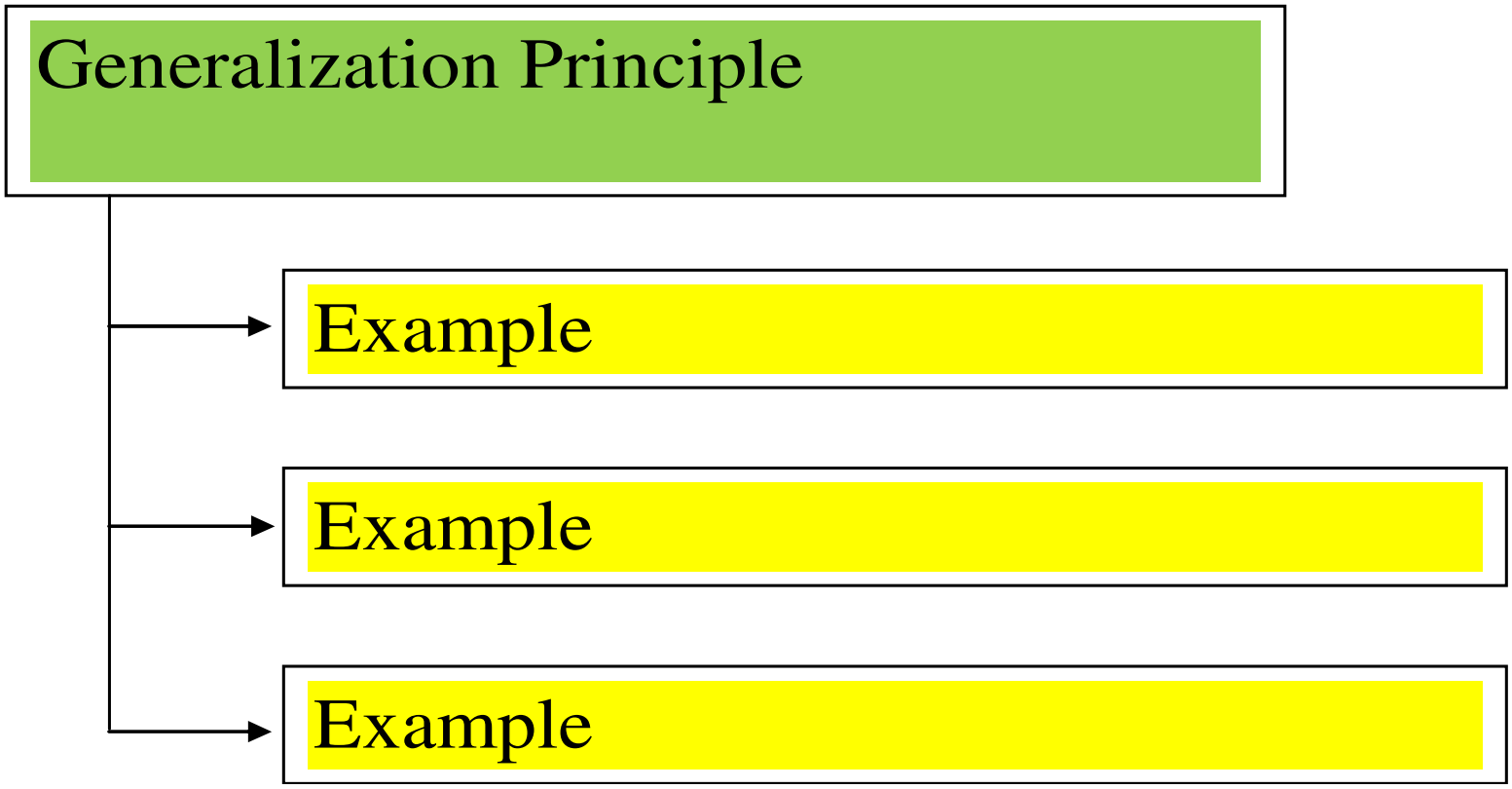
As an adult continues the cycle

Generalization/Principle Pattern Organizer

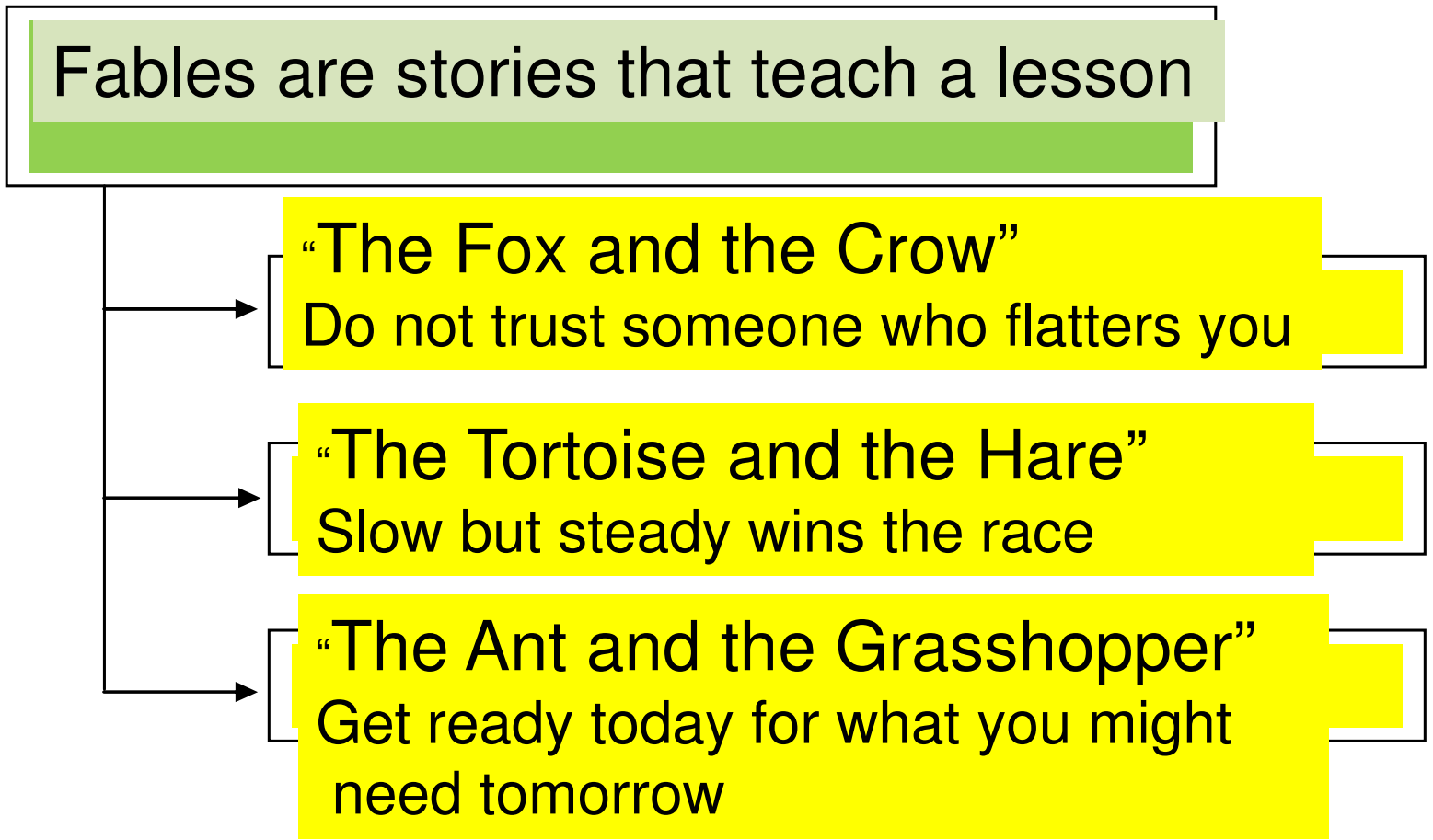
Questions
1. What generalization is the author making or what principle is being explained? 2. What facts, examples, statistics, and expert opinions are given that support the generalization or that explain the principle? 3. Are these details written in a logical order? Why or why not? 4. Are these enough facts, examples, statistics, and expert opinions to clearly support or explain the generalization/principle? Why or why not? Use your answers to these questions to form a summary.

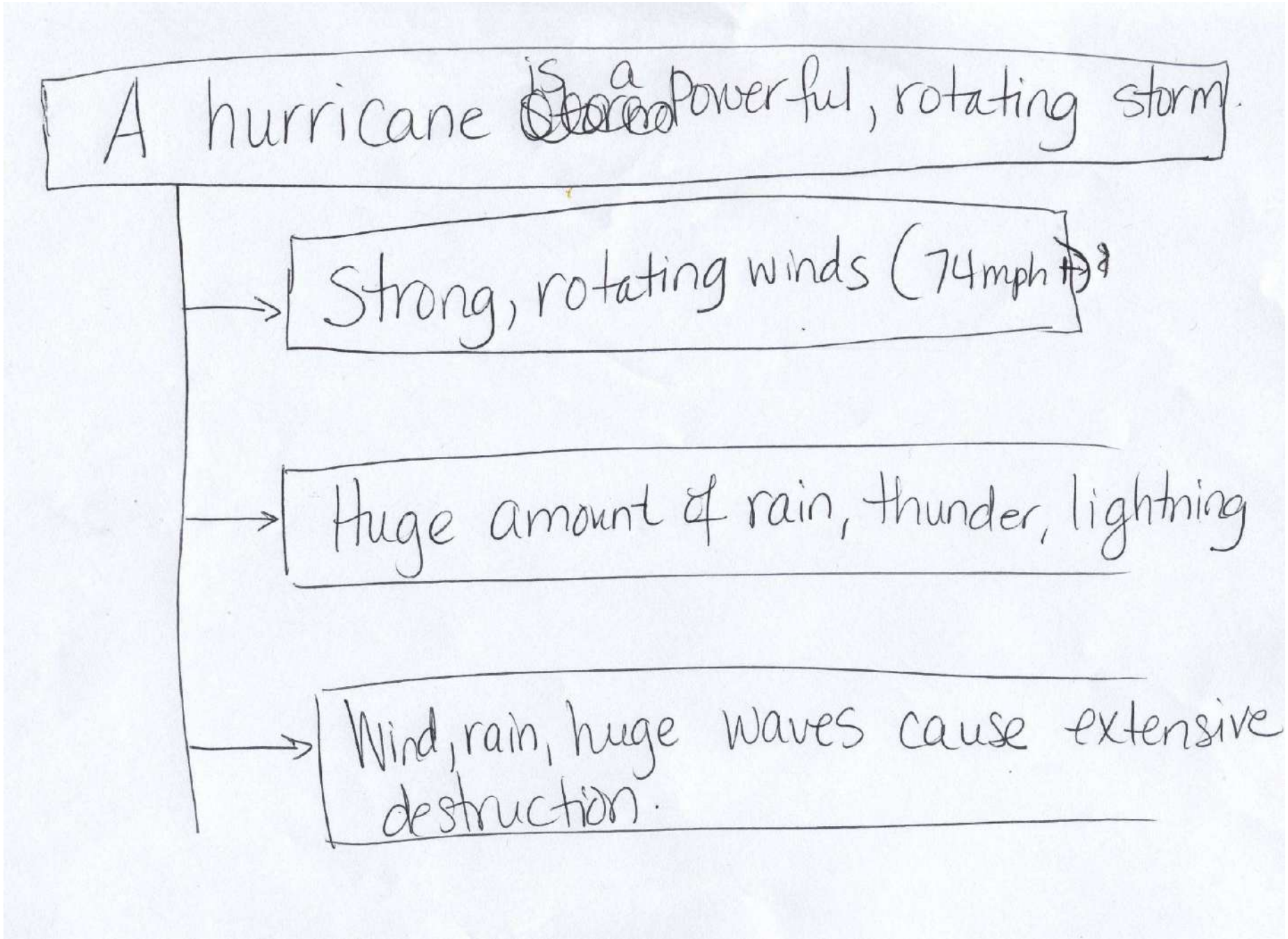
Signal Words			
additionally	although… nevertheless	always	because of
clearly	conclusively	first	for instance
for example	furthermore	generally	however
if… then	In fact	it could be argued that	moreover
most convincing	never	not only… but also	often
second	therefore	third	truly

Generalization/Principle Pattern Organizer



Generalization/Principle Pattern Organizer - Fables




A hurricane is a powerful, rotating storm.
Strong, rotating winds (74mph+)
Huge amount of rain, thunder, lightning
Wind, rain, huge waves cause extensive destruction.

Using Other Nonlinguistic Representations

- Making Physical Models
- Generating Mental Pictures
- Drawing pictures and pictographs
- Engaging in Kinesthetic Activity

Pictographs

absolute monarchy

aristocracy

bureaucracy

communism

coup d'etat

dictatorship

nationalism

Plebiscite

sultan

totalitarian state

sage

guile

insolence

clarion

unshorn

shroud

tarry

dissemble

pillage

wanton

Show, Don't Tell

ACTIVITY

Show, Don't Tell

- Get in groups and appoint a group leader.
- Get some markers, blank sheet of paper for the group, and one of the vocabulary words.
- Share the word with your group only!
- Draw a visual of the word and figure out a motion for the word.
- Show your visual and motion for the rest of the participants to guess your vocabulary word.
- Then the rest of the class does the motion.

Show, Don't Tell

divergent

going away from the accepted norm

Pictograph Activity

- In your groups, work quietly to select an event that is currently in the news and represent it using a pictograph.
- Remember that the goal is to form a mental image of the event so you can recall information about it in the future. You will have about five minutes to work on your pictograph.
- Groups will share their product and other groups will guess what event the pictograph represents.

Kinesthetic Activity

Use your arms to demonstrate the following:

- The radius of a circle
- The diameter of a circle
- The circumference of a circle
- An acute angle
- An obtuse angle
- A right angle

ACTIVITY

Implications for the Classroom

- Think: What is one example of a nonlinguistic representation strategy that you have used successfully in your classroom?
- Pair: Talk with the person sitting next to you, and share the strategy that you have had success with.
- Share: Volunteers to share with the entire group.

Nonlinguistic Representation Rubric

4	The student's representation indicates a detailed understanding of the information important to the topic.
3	The student's representation indicates a complete understanding of the information important to the topic.
2	The student's representation indicates an incomplete understanding of the topic or misconceptions about some of the information. However, the student shows basic understanding of the topic.
1	The student's representation indicates an understanding of the topic that is so incomplete or has so many misconceptions that the student cannot be said to understand the topic.
0	Not enough information to make a judgment.

Nonlinguistic Representation Rubric

4	The student's picture shows that she/he understands all of the important information. The picture include some details.
3	The student's picture shows that she/he understands all of the important information.
2	The student's picture shows that she/he does not really understand the topic. The picture shows some mistakes about the topic.
1	The student's picture shows that she/he does not understand the topic. The picture shows many mistakes about the topic.
0	The student does not try to make a picture.

Planning for Representing Knowledge Worksheet

What knowledge will student be learning?

Will I provide a representation for them or ask them to create their own?

What representing knowledge strategy will I ask students to use?

- graphic organizers
- pictographic representations
- mental images
- physical models, and
- kinesthetic representations
- Other

Do I need to set time aside to teach students the strategy I want them to use?

How will I teach them the strategy?

How will I monitor how well students are doing with the creation and use of nonlinguistic representations?

What will I do to help students who are not using nonlinguistic representations effectively?