7th Grade Science Curriculum Map
(Grade and Subject)

	GPS - #	Content and Skills
August	S7CS1 S7CS2 S7CS3 S7CS4 S7CS5 b S7CS6 S7CS7 S7CS8 S7CS9	**Scientific Inquiry/SCIENCE FAIR BEGINS** Students will define, explain and apply the scientific method. Students define, identify and use SI units. Students identify correct tools for determining mass, volume, temperature, density, and length. Students will collect and organize data. Students will make inferences and predictions from data provided from observations, graphs, and tables. Students will identify and apply safety procedures **Assessments/Activities:** **Vocabulary:** 1. Unit pre-test (1 Scientific Method 2. Unit post-test (1) Metric System 3. Labs: Scientific Method/Safety/Metric Method 4. Lab quizzes Science Process Skills 5. Performance Tests 6. Paper and Pencil Test
September	S7L2 a, b, c S7CS2 a, b, c S7CS4 a, b, c S7CS5 a, b S7CS6 a, b, c S7CS9 a, b, c, d S7CS10 *Complementary* *S7L4 d*	**Structure & Function of Cells** Continuation of Scientific Investigation Skills Students will explain the basic functions (purpose) of cells and cell structures. Students will use the microscope to observe and identify various cells and cell structures. Students will explain how cells are organized into larger systems (cells to tissue, tissue to organs, etc.) **Assessment/Activites:** **Vocabulary** 1. Unit pre-test (1) Cell organells 2. Unit post-test (1) Cell membrane organism 3. Cell Model Chloroplast tissue 4. Cell function brochure Cytoplasm nutrients 5. Animal & Plant cell lab mitochondria 6. Lab quizzes nucleus 7. Paper and Pencil Test 8. Diffusion/Osmosis Egg & Potato Lab 9. Cell Play 10. Classroom Cell/City Project 11. Microscope Lab Cells nutrients 12. Dissection Lab

October	S7L2 c, d, e S7CS1 S7CS2 S7CS4 S7CS6 S7CS8 S7CS9 Complementary S7L2 a, b S7L3 a	**Body Organs & Systems:** Students will explain the purpose of tissues, organs, and organ systems serve the need for oxygen, food, and waste removal. Students will explain the roles of the major organ systems in the human body. **Assessment/Activities:** **Vocabulary** 1. Paper and Pencil Test organs 2. Ultimate Guide to the Human Body organ systems 3. Frog Dissection 4. Alien Lab 5. Organ Debate
November	S7L3 a, b, c S7CS1a, b S7CS2 a, b, c S7CS4 a, b, c S7CS5 a, b S7CS6 a, b, c S7CS8 b, c S7CS9 a, b, c, d, e, f, g	**Genetics:** Roles of genes Roles of chromosomes Inheritance of specific traits Asexual and sexual reproduction of organisms Students will be able to explain the role of genes and chromosomes in the process of inheriting a specific trait. **Assessment/Activities:** **Vocabulary:** 1. Unit pre-test (1) Allels 2. Unit post-test (1) asexual/sexual reproduction 3. Build DNA Model chromosomes 4. Lab: chromosomes/Mitosis DNA 5. Mitosis Flow Chart gene 6. Asexual vs. Sexual Reproduction Venn Diagram genotype/phenotype 7. Selective Breeding Lesson heredity 8. Genetic Creature heterozygous/homozygous
December	Same as above	**Genetics continued-** See above for sequence of activities and lessons **Science Fair Concludes:** Students will have their research papers completed, triboard done, and will enter the school fair!!!!!!

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January	S7L2 a, b, c S7CS2 a, b, c S7CS4 a, b, c S7CS5 a, b S7CS6 a, b, c S7CS9 a, b, c, d S7CS10 *Complementary* *S7L4 d* S7L1 a, b S7L4 c, d, e S7CS1 a, b S7CS2 a, b, c S7CS3 a, b, c S7CS4 a, b S6CS5 a, b, c, d S7CS6 a, b, c, d, e, f, g *Complementary* *S7L5 a*	**Classification:** Comparison between six kingdoms How does the hierarchy of organization result in the complexity and diversity of organisms? Students will demonstrate the process of how living things are classified according to similar characteristics and apply these characteristics to classify common organisms using a dichotomous key. Students will describe how organisms in each kingdom reproduce. Students will demonstrate how organisms in each kingdom obtain energy. **Assessment/Activities:** **Vocabulary:** 1. Taxonomy Project dichotomous key hierarchy 2. Paper and Pencil Test characteristics taxonomy 3. Identification and Classification labs of specimens in different kingdoms classify 4. Dichotomous Key Project Kingdoms **Ecology:** Environmental conditions Characteristics of biomes and communities Categories of interdependence Factors effecting survival of organisms Interdependence of organisms Students will understand that the sun is the major source of energy for all living things. Students will understand that energy is transferred from one organism to another. **Assessment/Activities:** **Vocabulary:** 1. Students will understand that abiotic factors can influence the a biotic/biotic food web survival of individuals and entire species. Producer host 2. Students will be able to identify the characteristics of the Earthôs major biomes carnivore parasite 3. Unit pre-test herbivore predator 4. Unit post-test omnivore prey 5. Paper and Pencil Test competition scavenger 6. Food Webs consumer repiration 7. Owl Pellet Lab decomposer photosynthesis 8. Energy in Biomes Project

		energy symbiosis
February	Continued from above	Ecology Continued.....
March	S7L5 a, b, c S7CS1 S7CS2 S7CS3 S7CS6 S7CS8 S7CS10 *Complementary* *S7L3 a* *S7L4 c*	**Evolution:** Organisms change over time Natural selection Environmental conditions Fossils Evidence of change Students will be able to explain how physical characteristics of organisms have changed over successive generations. Students will be able to describe how species have evolved due to natural selection. Students will investigate fossils and make conclusions about our environment. **Assessment/Actities:** **Vocabulary:** 1. Unit pre-test adaptation 2. Unit post-test Charles Darwin 3. Natural Selection Lab evolution 4. Fossil Lab natural selection 5. Peppered Moth Lab species 6. Natural Selection Role Play fossil record 7. Natural Selection Beak Lab genetic traits Survival of the Fittest
April	Continued	Evolution Continued..... **CRCT TIME----------**

May	S7L1-5	**Review and Expand Stream Ecology:** Spend some time down at our onsite stream doing a unit on Adopt a steam. Students will collect data (water and speicies) from our stream Analyze the data Write it up in a report and go online to report findings.