

**Wayne Central School District
Ontario Center, NY 14519**

Science
Science
Curriculum

FIRST GRADE
Draft

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I. District Philosophy

The Wayne Central School District believes that the goal of education is the all-around development of each student. The role of the school is to enable individuals to develop to their fullest potential.

The school, in cooperation with the home and community, will assist the student with intellectual, social, cultural, emotional, physical and moral growth. The school should help create within each student an awareness of civic responsibilities and respect for authority to assist the student in becoming a well-integrated, responsible person capable of assuming a vital role in an evolving civilization.

The Wayne Central School District subscribes to the general theory of individual differences; namely, that each student is an individual and has innate abilities, ambitions, and emotions. In the process of educating this individual, the program should provide a challenge while reflecting a concern for needs based on individual capabilities.

The Wayne Central School District further subscribes to the following fundamental principles:

- 1. Children, regardless of potential, are capable of learning and acquiring the skill and knowledge needed to function to the best of their ability in our society,**
- 2. Our responsibility is to see that children learn. The energies of all participants should be focused on achieving the desired outcomes. Accountability does not end with following established rules and procedures; its essence is found in results,**
- 3. Minimum competence, while necessary, is not enough. Successful participation in our society demands much more. All children are entitled to approved curriculum, to instructional methods, and to expectations that challenge them to perform at their best, and help them to become truly proficient in knowledge and skills,**
- 4. Every child in New York State is entitled to the resources necessary to provide the sound, basic education that the state constitution requires,**
- 5. Each participant in the educational system should have the opportunity to effectively discharge his or her responsibility, and each participant should be held accountable for achieving desired results. This principle applies to all participants in the educational process – students, parents, teachers, counselors, librarians, administrators, the Board of Education, and others,**
- 6. Achievement of desired results by individuals and groups should be rewarded. Creativity in our students needs to be nurtured and encouraged. Occasional failure in a large and diverse system is probably unavoidable. However, failure should not be permitted to persist. When it occurs, with either individuals or groups, help should be provided and the situation changed.**

II. District Mission Statement:

Based upon the belief that all students can learn, the staff of Wayne Central School district accepts the responsibility to teach all students regardless of differences, the fundamental skills. We further accept the responsibility to challenge all students to attain higher levels of achievement. Wayne Central will provide the opportunity, environment, and encouragement to meet this goal while developing the whole child physically, emotionally, and culturally.

III. NYS Learning Standards:

Health, Physical Education, and Home Economics

1. Personal Health and Fitness – Students will have the necessary knowledge and skills to establish and maintain physical fitness, participate in physical activity, and maintain personal health.
2. A Safe and Healthy Environment – Students will acquire the knowledge and ability necessary to create and maintain a safe and healthy environment
3. Resource Management – Students will understand and be able to manage their personal and community resources.

Mathematics, Science, and Technology

1. Analysis, Inquiry, and Design – Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.
2. Information Systems – Students will access, generate, process, and transfer information using appropriate technologies
3. Mathematics – Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, data analysis, probability, and trigonometry.
4. Science – Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.
5. Technology – Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.
6. Interconnectedness: Common Themes – Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.
7. Interdisciplinary Problem Solving – Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.

English Language Arts

1. Students will listen, speak, read and write for information and understanding. As listeners and readers, students will collect data, facts and ideas; discover relationships, concepts, and generalizations; and use knowledge generated from oral, written, and electronically produced texts. As speakers and writers, they will use oral and written language that follows the accepted conventions of the English language to acquire, interpret, apply, and transmit information.
2. Language for Literary Response and Expression – Students will read and listen to oral, written, and electronically produced texts and performances from American and world literature; relate texts and performances to their own lives; and develop an understanding of the diverse social, historical, and cultural dimensions the texts and performances represent. As speakers and writers. Students will use oral and written language that follows the accepted conventions of the English language for self-expression and artistic creation.
3. Language for Critical Analysis and Evaluation – Students will listen, speak, read and write for critical analysis and evaluation. As listeners and readers, students will analyze experiences, ideas, information, and issues presented by others using a variety of established criteria. As speaker and writers, they will use oral and written language that follows the accepted conventions of the English language to present, from a variety of perspectives, their opinions and judgements on experiences, ideas, information and issues.
4. Language for Social Interaction – Students will listen, speak, read, and write for social interaction. Students will use oral and written language that follows the accepted conventions of the English language for effective social communication with a wide variety of people. As reader and listeners, they will use the social communications of others to enrich their understanding of people and their views.

Languages Other Than English

1. Communication Skills – Students will be able to use a language other than English for communication.
2. Cultural Understanding – Students will develop cross-cultural skills and understandings.

The Arts

1. Creating, Performing, and Participating in the Arts – Students will actively engage in the processes that constitute creation and performance in the arts (dance, music, theatre, and visual arts) and participate in various roles in the arts.
2. Knowing and Using arts materials and Resources – Students will be knowledgeable about and make use of the materials and resources available for participation in the arts in various roles.
3. Responding to and Analyzing Works of Art – Students will respond critically to a variety of works in the arts, connecting the individual work to other works and to other aspects of human endeavor and thought.
4. Understanding the Cultural Contributions of the Arts – Students will develop an understanding of the personal and cultural forces that shape artistic communication and how the arts in turn shape the diverse cultures of past and present society.

Career Development and Occupational Studies

1. Career Development – Students will be knowledgeable about the world of work, explore career options, and relate personal skills, aptitudes, and abilities to future career decisions.
2. Integrated Learning – Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings.
3. Universal Foundation Skills – Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace.
4. Career Majors – Students who choose a career major will acquire the career-specific technical knowledge/skills necessary to progress toward gainful employment, career advancement, and success in postsecondary programs.

Social Studies

1. History of the United States and New York – Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in the history of the United States and New York.
2. World History – Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments and turning points in world history and examine the broad sweep of history from a variety of perspectives.
3. Geography – Students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live – local, national and global – including the distribution of people, places, and environments over the Earth’s surface.
4. Economics – Students will use a variety of intellectual skills to demonstrate their understanding of how the United States and other societies develop economic systems and associated institutions to allocate scarce resources, how major decision-making units function in the United States and other national economies, and how an economy solves the scarcity problem through market and nonmarket mechanisms.
5. Civics, Citizenship, and Government – Students will use a variety of intellectual skills to demonstrate their understanding of the necessity for establishing governments; the governmental system of the United States Constitution; the basic civil values of American constitutional democracy; and the roles, rights, and responsibilities of citizenship including avenues of participation.

IV. Commencement Outcomes

"Adult Roles, Skills & Knowledge"

CITIZEN

A citizen is a responsible, law-abiding member of society who:

- Has a strong sense of values;
- Knows right from wrong;
- Is aware of community news, issues and norms;
- Accepts diversity in ethnicity and belief;
- Has knowledge of government at all levels and issues relative to each;
- Associates with others in positive and productive ways.

LIFE - LONG LEARNER

A life-long learner is one who perseveres, is self-motivated, is innately curious, focused and:

- Is able to set goals;
- Adheres to deadlines/due-dates, has time management skills and abilities;
- Is a problem solver, can define problems, analyze information and task analyze/prioritize potential solutions, has the ability to select the best "tool/strategy" for the situation, and can enlist others in the process of evaluation and refocusing.

LEADER

A leader is a problem solver with effective communication skills. He/she has an ability to motivate others and:

- Is a strong willed person with vision, beliefs and convictions to carry out each.
- Is able to recognize and effectively use all resources, such as material, time and human
- Is responsible and accountable for self and others.

WORKER/WAGE EARNER/BUSINESS OWNER

A worker/wage earner is an individual who is trust worthy, moral and ethical, and who:

- Possess basic job skills with a willingness to change, grow and develop new skills;
- Is a good communicator;
- Demonstrates leadership skills and initiative and the ability to work as a team player;
- Is responsible, reliable and respectful to others;
- Has the ability to make sound decisions.

CONSUMER

A consumer is an individual who has knowledge of the global economy and:

- Utilizes and applies budgeting skills and credit awareness;
- Maintains long-terms personal financial planning (savings, banking, retirement);
- Understand one's rights, responsibilities and risks.

COUNSELOR/TEACHER/MENTOR

A counselor/teacher/mentor is an individual who is patient, self-confident, assertive leader who:

- Is a problem solver and can guide others to solve problems;
- Is an active listener;
- Is aware of issues, societal, family, religious differences and different customs;
- Has interpersonal skills and values others opinions.

PARENT/FAMILY MEMBER

A parent/family member is an individual who:

- Is nurturing and loving;
- Displays flexibility;
- Has high character and morals;
- Is accountable and consistent with respect to expectations and follow through;
- Becomes actively involved in their children and family's education and other pursuits.

FRIEND

A friend is an individual who shows great interest and respect for others, and who:

- Is non-judgmental and available when a time of need arises;
- Is unselfish, honest, supportive, caring and genuine;
- Is an open-minded listener who seeks to understand before being understood;
- Give him/herself to other without expectations of compensation or return of favor.

V. Scope and Sequence

Wayne Central School District

SCIENCE K-5 SCOPE & SEQUENCE

**MST PLANNING DOCUMENT FOR STANDARD 4
LIVING ENVIRONMENT**

Key Idea 1: Living things are both similar to and different from each other and nonliving things.

Living Environment Performance Indicator 1.1 *Describe the characteristics of and variations between living and nonliving things.*

Major Understandings

	PK	K	1	2	3	4	5
1.1a Animals need air, water, and food in order to live and thrive .	I	T	M	R	R	R	R
1.1b Plants require air, water, nutrients , and light in order to live and thrive .	I	M	R	R	R	R	R
1.1c Nonliving things do not live and thrive .		I	I	I	T	M	R
1.1d Nonliving things can be human-created or naturally occurring .				I	T	M	R

Living Environment Performance Indicator 1.2 *Describe the life processes common to all living things.*

Major Understandings

	PK	K	1	2	3	4	5
1.2a Living things grow, take in nutrients, breathe, reproduce, eliminate waste , and die.	I	I	I	T	E	M	R

Key:

- I** Skill is introduced but not benchmarked
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- E** Expand

Key Idea 2: Organisms inherit genetic information in a variety of ways that result in continuity of structure and function between parents and offspring.

Living Environment Performance Indicator 2.1 *Recognize that traits of living things are both inherited and acquired or learned.*

Major Understandings	PK	K	1	2	3	4	5
2.1a Some traits of living things have been inherited (e.g., color of flowers and number of limbs of animals).			I	I	I	M	R
2.1b Some characteristics result from an individual's interactions with the environment and cannot be inherited by the next generation (e.g., having scars; riding a bicycle).			I	I	I	M	R

Living Environment Performance Indicator 2.2 *Recognize that for humans and other living organisms there is genetic continuity between generations.*

Major Understandings	PK	K	1	2	3	4	5
2.2a Plants and animals closely resemble their parents and other individuals in their species .		I	T	M	R	R	R
2.2b Plants and animals can transfer specific traits to their offspring when they reproduce.			I	I	I	M	R

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Key Idea 3: Individual organisms and species change over time.

Living Environment Performance Indicator 3.1 *Describe how the structures of plants and animals complement the environment of the plant or animal.*

Major Understandings

	PK	K	1	2	3	4	5
3.1a Each animal has different structures that serve different functions in growth, survival , and reproduction. <ul style="list-style-type: none"> • Wings, legs, or fins enable some animals to seek shelter and to escape predators. • The mouth, including teeth, jaws, and tongue, enables some animals to eat and drink. • Eyes, nose, ears, tongue, and skin of some animals enable the animals to sense their surroundings. • Claws, shells, spines, feathers, fur, scales, and color of body covering enable them to obtain food. • Some animals have parts that are used to produce sounds and smells to help the animal meet its needs. • The characteristics of some animals change as seasonal conditions change (e.g., fur grows and is shed to help regulate body heat; body fat is a form of stored food energy as the season changes). 	I	I	T	T	T	M	R

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Major Understandings

	PK	K	1	2	3	4	5
<p>3.1b Each plant has different structures that serve different functions in growth, survival, and reproduction.</p> <ul style="list-style-type: none"> • Roots help support the plant and take in water and nutrients. • Leaves help plants utilize sunlight to make food for the plant. • Stems, stalks, trunks, and other similar structures provide support for the plant. • Some plants have flowers. • Flowers are reproductive structures of plants that produce fruit which contains seeds. • Seeds contain stored food that aids in germination and the growth of young plants. 		I	T	T	E	M	
<p>3.1c In order to survive in their environment, plants and animals must be adapted to that environment.</p> <ul style="list-style-type: none"> • Seeds disperse by a plant’s own mechanism and/or in a variety of ways that can include wind, water, and animals. • Leaf, flower, stem, and root adaptations may include variations in size, shape, thickness, color, small, and texture. • Animal adaptations include: coloration for warning or attraction, camouflage, defense mechanisms, movement, hibernation, and migration. 	-	-	I	T	T	M	R

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Living Environment Performance Indicator 3.2 *Observe that differences within a species may give individuals an advantage in surviving and reproducing.*

Major Understandings

	PK	K	1	2	3	4	5
3.2a Individuals within a species may compete each other for food, mates, space, water, and shelter in their environment.			I	I	M	R	R
3.2b All individuals have variations , and because of these variations, individuals of a species may have an advantage in surviving and reproducing.				I	M	R	R

Key Idea 4: The continuity of life is sustained through reproduction and development.

Living Environment Performance Indicator 4.1 *Describe the major stages in the life cycles of selected plants and animals.*

Major Understandings

	PK	K	1	2	3	4	5
4.1a Plants and animals have life cycles . These may include beginning of a life, developing into an adult, reproduction as an adult, and eventually death.		I	I	T	M	R	R
4.1b Each kind of a plant goes through its own stages of growth and development that may include seed, young plant, and mature plant.		I	I	T	E	M	
4.1c The length of time from beginning of development to death of the plant is called its life span .		I	I	T	E	M	R
4.1d Life cycles of some plants include changes from seed to mature plant.		I	I	T	E	M	
4.1e Each generation of animals goes through changes in form from young to adult. This completed sequence of changes in form is called a life cycle. Some insects change from egg to larva to pupa to adult.			I	T	M	R	R

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Major Understandings	PK	K	1	2	3	4	5
4.1f Each kind of animal goes through its own stages of growth and development during its life span.			I	T	M	R	R
4.1g The length of time from an animal's birth to its death is called its life span. Life spans of different animals vary.			I	T	M	R	R

Living Environment Performance Indicator 4.2 *Describe evidence of growth, repair, and maintenance, such as nails, hair, and bone, and the healing of cuts and bruises.*

Major Understandings	PK	K	1	2	3	4	5
4.2a Growth is the process by which plants and animals increase in size.	I	M	R	R	R	R	R
4.2b Food supplies the energy and materials necessary for growth and repair.	I	T	E	E	E	M	R

Key Idea 5: Organisms maintain a dynamic equilibrium that sustains life.

Living Environment Performance Indicator 5.1 *Describe the basic life functions of common living specimens (e.g., guppies, mealworms, gerbils).*

Major Understandings	PK	K	1	2	3	4	5
5.1a All living things grow, take in nutrients, breathe, reproduce, and eliminate waste.		I	I	T	M	R	R
5.1b An organism's external physical features can enable it to carry out life functions in its particular environment.			I	I	T	M	R

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Living Environment Performance Indicator 5.2 *Describe some survival behaviors of common living specimens.*

Major Understandings

	PK	K	1	2	3	4	5
5.2a Plants respond to changes in their environment. For example, the leaves of some green plants change positions as the direction of light changes; the parts of some plants undergo seasonal changes that enable the plant to grow; seeds germinate, and leaves form and grow.		T	E	M	R	R	R
5.2b Animals respond to change in their environment, (e.g., perspiration , heart rate, breathing rate, eye blinking, shivering and salivating).			I	T	M	R	R
5.2c Senses can provide essential information (regarding danger, food, mates, etc.) to animals about their environment.	I	T	T	T	M	R	R
5.2d Some animals, including humans, move from place to place to meet their needs.		I	T	T	M	R	R
5.2e Particular animal characteristics are influenced by changing environmental conditions including: fat storage in winter, coat thickness in winter, camouflage, shedding of fur.		I	T	T	M	R	
5.2f Some animal behaviors are influenced by environmental conditions. These behaviors may include: nest building, hibernating , hunting, migrating , and communicating .		I	T	T	M	R	R
5.2g The health, growth, and development of organisms are affected by environmental conditions such as the availability of food, air, water, space, shelter, heat, and sunlight.		I	T	M	R	R	R

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Living Environment Performance Indicator 5.3 *Describe the factors that help promote good health and growth in humans.*

Major Understandings	PK	K	1	2	3	4	5
5.3a Humans need a variety of healthy foods, exercise and rest in order to grow and maintain good health.	I	T	M	R	R	R	R
5.3b Good health habits include hand washing and personal cleanliness; avoiding harmful substances (including alcohol, tobacco, illicit drugs); eating a balanced diet; engaging in regular exercise.	I	T	T	T	M	R	R

Key Idea 6: Plants and animals depend on each other and their physical environment.

Living Environment Performance Indicator 6.1 *Describe how plants and animals, including humans, depend upon each other and the nonliving environment.*

Major Understandings	PK	K	1	2	3	4	5
6.1a Green plants are producers because they provide the basic food supply for themselves and animals.			I	T	T	M	R
6.1b All animals depend on plants. Some animals (predators) eat other animals (prey).		I	T	T	M	R	R
6.1c Animals that eat plants for food may in turn become food for other animals. This sequence is called a food chain .		I	T	T	M	R	R
6.1d Decomposers are living things that play a vital role in recycling nutrients.					T	M	R
6.1e An organism's pattern of behavior is related to the nature of that organism's environment, including the kinds and numbers of other organisms present, the availability of food and other resources, and the physical characteristics of the environment.			I	T	M	R	R

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Living Environment Performance Indicator 6.2 *Describe the relationship of the Sun as an energy source for living and nonliving cycles.*

Major Understandings	PK	K	1	2	3	4	5
6.2a Plants manufacture food by utilizing air, water, and energy from the Sun.				T	E	M	R
6.2b The Sun’s energy is transferred on Earth from plants to animals through the food chain.				T	E	M	R
6.2c Heat energy from the Sun powers the water cycle (see Physical Science Key Idea 2)			I	T	E	M	

Key Idea 7: Human decisions and activities have had a profound impact on the physical and living environments.

Living Environment Performance Indicator 7.1 *Identify ways in which humans have changed their environments and the effects of those changes.*

Major Understandings	PK	K	1	2	3	4	5
7.1a Humans depend on their natural and constructed environments .		I	T	M	R	R	R
7.1b Over time humans have changed their environment by cultivating crops and raising animals, creating shelter, using energy, manufacturing goods, developing means of transportation, changing populations , and carrying out other activities.			I	I	T	M	R
7.1c Humans, as individuals or communities , change the environments in ways that can either be helpful or harmful for themselves and other organisms.			I	I	T	M	R

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SCIENCE K-5 SCOPE & SEQUENCE

**MST PLANNING DOCUMENT FOR STANDARD 4
THE PHYSICAL SETTING**

Key Idea 1: The Earth and celestial phenomena can be described by principles of relative motion and perspective.

Physical Setting Performance Indicator 1.1 *Describe patterns of daily, monthly, and seasonal changes in their environment.*

Major Understandings

	PK	K	1	2	3	4	5
1.1a Natural cycles and patterns include:							
• Earth spinning around once every 24 hours (rotation) resulting in day and night			I	I	M	R	R
• Earth moving in a path around the Sun (revolution), resulting in one earth year			I	I	M	R	R
• The length of daylight and darkness varying with the seasons		I	T	T	M	R	
• Weather changing from day to day and through the seasons	I	T	T	M	R	R	R
• The appearance of the Moon changing as it moves in a path around Earth to complete a single cycle.		I	I	I	M	R	

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Major Understandings	PK	K	1	2	3	4	5
<ul style="list-style-type: none"> • Second, minute, hour 			I	I	M	R	R
<ul style="list-style-type: none"> • Week, month 		I	I	I	M		
1.1c The Sun and other stars appear to move in a recognizable pattern both daily and seasonally .			I	I	M		

Key Idea 2: Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land.

Physical Setting Performance Indicator 2.1 *Describe the relationship among air, water and land on Earth.*

Major Understandings	PK	K	1	2	3	4	5
2.1a Weather is the condition of the outside air at a particular moment.	I	I	I	M	R		
2.1b Weather can be described and measured by: <ul style="list-style-type: none"> • Temperature • Wind speed and direction • Form and amount of precipitation • General sky conditions (cloudy, sunny, partly cloudy) 	I	I	T	M	R		

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Major Understandings	PK	K	1	2	3	4	5
2.1c Water is recycled by natural processes on Earth.							
<ul style="list-style-type: none"> • Evaporation: changing of water (liquid) into water vapor (gas) 				M	R		
<ul style="list-style-type: none"> • Condensation: changing of water vapor (gas) into water (liquid) 				M	R		
<ul style="list-style-type: none"> • Precipitation: rain, sleet, snow, hail 				M	R		
<ul style="list-style-type: none"> • Run-off: water flowing on the Earth’s surface 				T	M		R
<ul style="list-style-type: none"> • Groundwater: water that moves downward into the ground. 				T	M		R
2.1d Erosion and deposition result from the interaction among air, water, and land. <ul style="list-style-type: none"> • Interaction between air and water breaks down earth materials • :Pieces of earth material may be moved by air, water, wind, and gravity • Pieces of earth material will settle or deposit on land or in the water in different places • Soil is composed of broken-down pieces of living and non-living earth material 					M		R
2.1e Extreme natural events (floods, fires, earthquakes, volcanic eruptions, hurricanes, tornadoes, and other severe storms) may have positive or negative impacts on living things.				I	M		R

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- E** Expand

Key Idea 3: Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity

Physical Setting Performance Indicator 3.1 *Observe and describe properties of materials using appropriate tools.*

Major Understandings

	PK	K	1	2	3	4	5
3.1a Matter takes up space and has mass (weight) . Two objects cannot occupy the same place at the same time.			T	M	R	R	R
3.1b Matter has properties that (color, hardness, odor, sound, taste, etc.) that can be observed through the senses.		I	T	M		R	R
3.1c Objects have properties that can be observed, described and/or measured: length, width, volume , size, shape, mass or weight, temperature, texture, reflectiveness of light .		I	T	T	T	M	R
3.1d Measurements can be made with standard metric units and non-standard units (<i>Note: Exceptions to the metric system usage are found in meteorology.</i>)		I	T	T	T	M	R
3.1e The material(s) an object is made up of determine some specific properties of the object (sink/float, conductivity, magnetism). Properties can be observed or measured with tools such as hand lenses, metric rulers , thermometers, balances, magnets, circuit testers and graduated cylinders .			I	T	T	M	
3.1f Objects and/or materials can be sorted or classified according to their properties.	I	T	E	E	E	M	R
3.1g Some properties of an object are dependent on the conditions of the present surroundings in which the object exists. <ul style="list-style-type: none"> • temperature – hot or cold • lighting – shadows, color • moisture – wet or dry 		I	T	M	R	R	R

Key:

- I** Skill is introduced but not benchmarked
- T** Skill receives considerable instruction (taught but not benchmarked)
- M** Concept is mastered and benchmarked. Note that a skill may be introduced and benchmarked in one year. In those cases, only an M appears
- R** Concept is reviewed
- E** Expand

Physical Setting Performance Indicator 3.2 *Describe chemical and physical changes, including changes in state of matter.*

Major Understandings

	PK	K	1	2	3	4	5
3.2a Matter exists in three states: solid, liquid, gas		I	T	M	R	R	R
<ul style="list-style-type: none"> solids have a definite shape and volume 			I	T	T	M	R
<ul style="list-style-type: none"> liquids do not have a definite shape but have a definite volume 			I	T	T	M	R
<ul style="list-style-type: none"> gases do not hold their shape or volume 			I	T	T	M	R
3.2b Temperature can affect the state of matter of a substance		I	I	T	M	R	R
3.2c Changes in the properties or materials of objects can be observed and described.	I	I	T	T	M	R	R

Key Idea 4: Energy exists in many forms, and when these forms change energy is conserved.

Physical Setting Performance Indicator 4.1 *Describe a variety of forms of energy (e.g., heat, chemical, light) and the changes that occur in objects when they interact with those forms of energy.*

Major Understandings

	PK	K	1	2	3	4	5
4.1a Energy exists in various forms: heat, electric, sound, chemical, mechanical, light			I	I	T	M	R
4.1b Energy can be transferred from one place to another.				I	T	M	R
4.1c Some materials transfer energy better than others (heat and electricity).				I	T	M	R

Key:

- I** Skill is introduced but not benchmarked
- T** Skill receives considerable instruction (taught but not benchmarked)
- M** Concept is mastered and benchmarked. Note that a skill may be introduced and benchmarked in one year. In those cases, only an M appears
- R** Concept is reviewed
- E** Expand

Major Understandings	PK	K	1	2	3	4	5
4.1d Energy and matter interact: water is evaporated by the Sun's heat; a bulb is lighted by means of electrical current ; a musical instrument is played to produce sound; dark colors may absorb light , light colors may reflect light .	I	I	T	T	M	M	R
4.1e Electricity travels in a closed circuit .				T		M	
4.1f Heat can be released in many ways, for example, by burning, rubbing (friction) or combining one substance with another.			I	I	T	M	R
4.1g Interactions with forms of energy can either be helpful or harmful.	T	T	E	E	E	M	R

Physical Setting Performance Indicator 4.2 *Observe the way one form of energy can be transferred into another form of energy present in common situations (e.g., mechanical to heat energy, mechanical to electrical energy, chemical to heat energy).*

Major Understandings	PK	K	1	2	3	4	5
4.2a Every day events involve one form of energy being changed to another. <ul style="list-style-type: none"> Animals convert food to heat and motion The Sun's energy warms the air and water 		I	I	T	M	R	R
4.2b Humans utilize interactions between matter and energy.							
<ul style="list-style-type: none"> Chemical to electrical, light, and heat: battery and bulb 				I	T	M	
<ul style="list-style-type: none"> Electrical to sound (e.g. doorbell buzzer) 				T		M	
<ul style="list-style-type: none"> Mechanical to sound (e.g. musical instruments, clapping) 				T	M	R	
<ul style="list-style-type: none"> Light to electrical (e.g. solar-powered calculator) 					T	M	

Key:

- I** Skill is introduced but not benchmarked
- T** Skill receives considerable instruction (taught but not benchmarked)
- M** Concept is mastered and benchmarked. Note that a skill may be introduced and benchmarked in one year. In those cases, only an M appears
- R** Concept is reviewed
- E** Expand

Physical Setting Performance Indicator 5.1 *Describe the effects of common forces (pushes and pulls) of objects, such as those caused by gravity, magnetism, and mechanical forces.*

Major Understandings

	PK	K	1	2	3	4	5
5.1a The position of an object can be described by locating it relative to another object or the background (e.g., on top of, next to, over, under, etc.).	I	T	T	M	R	R	
5.1b The position or direction of motion of an object can be changed by pushing or pulling.		I	I	T	M	R	
5.1c The force of gravity pulls objects toward the center of the Earth.		I	I	I	M	R	
5.1d The amount of change in the motion of an object is affected by friction.			I	I	M	R	
5.1e Magnetism is a force that may attract or repel certain materials.	I	I	M	R			
5.1f Mechanical energy may cause change in motion through the application of force and through the use of simple machines such as pulleys, levers, and inclined planes.					M		

Physical Setting Performance Indicator 5.2 *Describe how forces can operate across distances.*

Major Understandings

	PK	K	1	2	3	4	5
5.2a The forces of gravity and magnetism can affect objects through gases, liquids, and solids.			I	I	M	R	R
5.2b The forces of magnetism on objects decreases as distance increases.		I	M	R	R		

Key:

- I** Skill is introduced but not benchmarked
- T** Skill receives considerable instruction (taught but not benchmarked)
- M** Concept is mastered and benchmarked. Note that a skill may be introduced and benchmarked in one year. In those cases, only an M appears
- R** Concept is reviewed
- E** Expand

VI. Course Overview

The first grade science program is based on a series of classifications and discoveries. Students learn most effectively when they are actively engaged in the discovery process through scientific inquiry. Students will be able to explain, analyze, and interpret scientific processes and phenomena that make interconnections with key ideas and apply them to real life situations. Through this course of study students will practice problem-solving skills, develop positive science attitudes, learn new science content, and increase their scientific literacy in our physical setting and living environment. Safety's techniques and strategies are taught through "Kids and Company" and the district character education program.

The science units are aligned with the New York State Standards. The eight units taught are:

1. Properties
2. Magnets
3. Seasons/Weather
4. Life Cycle
5. Nutrition/Health
6. Animals
7. Plants
8. Energy/Interactions

Italicized bold vocabulary words should be defined and understood by students.

Key Terms: skill introduced = introduce
 skill taught = understand
 skill mastered = master the understanding
 skill expanded = expand the understanding

INQUIRY AND PROCESS SKILLS BASED ON ALL STANDARDS

It should be a goal of the instructor to foster the development of science process skills. The application of these skills allows students to investigate important issues in the world around them.

Inquiry-based units will include many or most of the following process skills. These process skills should be incorporated into students' instruction as developmentally appropriate.

Classifying – arranging or distributing objects, events, or information representing objects or events in classes according to some method or system

Communicating – giving oral and written explanations or graphic representations of observations

Creating models – displaying information, using multisensory representations

Gathering and organizing data – collecting information about objects and events which illustrate a specific situation

Generalizing – drawing general conclusion from particulars

Identifying variables – recognizing the characteristics of objects or factors in events that are constant or change under different conditions

Inferring – drawing a conclusion based on prior experiences

Interpreting data – analyzing data that have been obtained and organized by determining apparent patterns or relationships in the data

Making decisions – identifying alternatives and choosing a course of action from among the alternatives after basing the judgement for the selection on justifiable reasons

Manipulating materials – handling or treating materials and equipment safely, skillfully, and effectively

Measuring – making quantitative observations by comparing to a conventional or nonconventional standard

Observing – becoming aware of an object or event by using any of the senses (or extensions of the senses) to identify properties

Predicting – making a forecast of future events or conditions expected to exist.

VII. Instructional Outline

A. Scientific Inquiry

1. The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process.
 - a. ask "why" questions in attempts to seek greater understanding concerning objects and events they have observed and heard about
 - b. question the explanations they hear from others and read about, seeking clarification and comparing them with their own observations and understandings
 - c. develop relationships among observations to construct descriptions of objects and events and to form their own tentative explanations of what they have observed
2. Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity.
 - a. develop written plans for exploring phenomena or for evaluating explanations guided by questions or proposed explanations they have helped formulate.
 - b. share their research plans with others and revise them based on their suggestions
 - c. carry out their plans for exploring phenomena through direct observation and through the use of simple instruments that permit measurements of quantities (i.e. length, mass, volume, temperature, and time)

B. Properties Unit – Physical Setting

1. Observe and describe properties of materials using appropriate tools.
 - a. understand that matter takes up space and has **mass** (two objects cannot occupy the same place at the same time)
 - b. understand that matter has properties(color, hardness, odor, sound, taste, etc.) that can be observed through the senses
 - c. understand that objects have **properties** that can be observed, described, and/or measured: length, width, **volume**, size, shape, mass or weight, **temperature**, **texture**, flexibility, **reflectiveness of light**
 - d. introduce that the material(s) an object is made up of determine some specific properties of the object (sink/float, conductivity, **magnetism**). Properties can be observed or measured with tools such as **hand lenses**, metric rulers, thermometers, **balances**, **magnets**, **circuit testers**, and **graduated cylinders**
 - e. extend the understanding that objects and/or materials can be sorted or classified according to their properties
 - f. understand some properties of an object are dependent on the **conditions of the present surroundings** in which the object exists (i.e. temperature - hot or cold, lighting - shadows, color, moisture - wet or dry)
2. Describe chemical and physical changes, including **changes in states of matter**.
 - a. understand that matter exists in three states: solid(has definite shape and volume), liquid(do not have definite shape but have definite volume), and gas(do not hold their shape or volume)
 - b. introduce that temperature can affect the state of matter of a substance
 - c. understand that changes in the **properties** or materials of objects can be observed and described

C. Magnet Unit – Physical Setting

1. Observe and describe properties of materials using appropriate tools.
 - a. Introduce that the material(s) an object is made up of determine some specific properties of the object (sink/float, conductivity, magnetism). Properties can be observed or measured with tools such as *hand lenses*, *metric rulers*, thermometers, *balances*, *magnets*, *circuit testers*, and *graduated cylinders*
2. Describe the effects of common forces (pushes and pulls) of objects, such as those caused by gravity, magnetism, and *mechanical forces*.
 - a. master the understanding magnetism is a force that may attract or *repel* certain materials
3. Describe how forces can operate across distances.
 - a. introduce the forces of gravity and magnetism can affect objects through gases, liquids, and solids
 - b. master the understanding that the force of magnetism on objects decreases as a distance increases
4. Describe the effects of common forces (pushes and pull) of objects, such as those caused by gravity, magnetism, and *mechanical forces*.
 - a. understand the position of an object can be described by locating it relative to another object or the background (i.e. on top of, next to, over, under, etc.)
 - b. introduce the *position* or *direction of motion* of an object can be changed by pushing or pulling
 - c. introduce the force of gravity pulls objects toward the center of the earth
 - d. introduce that the amount of change in the motion of an object is affected by friction

D. Seasons/Weather Unit – Physical Setting & Living Environment

1. Observe and describe properties of materials using appropriate tools.
 - a. understand some properties of an object are dependent on the *conditions of the present surroundings* in which the object exists (i.e. temperature - hot or cold, lighting - shadows, color, moisture - wet or dry)
2. Describe chemical and physical changes, including *changes in states of matter*.
 - a. introduce that temperature can affect the state of matter of a substance
3. Describe patterns of daily, monthly, and seasonal changes in their environment.
 - a. understand that natural cycles and patterns include:
 - introduce the earth spins around once every 24 hours(*rotation*), resulting in day and night
 - introduce the earth moving in a path around the sun(*revolution*), resulting in one *earth year*
 - understand the length of daylight and darkness vary with the seasons
 - understand that weather changes from day to day and through the seasons
 - introduce the appearance of the moon changing as it moves in a path around earth to complete a single cycle
 - b. introduce the sun and other stars appear to move in a *recognizable pattern* both daily and *seasonally*
4. Describe the relationship among air, water, and land on earth.
 - a. introduce that weather is the condition of the outside air at a particular moment
 - b. understand that weather can be described and measured by:
 - temperature
 - *wind speed* and direction
 - form and amount of *precipitation*
 - general sky conditions (cloudy, sunny, partly cloudy)

5. Describe some survival behaviors of common living *specimens*.
 - a. extend the understanding that plants *respond* to changes in their environment (i.e. the leaves of some green plants change position as the direction of light changes, the parts of some plants undergo seasonal changes that enable the plant to grow, seeds germinate, and leaves form and grow)
 - b. understand that particular animal characteristics are influenced by changing environmental conditions including: fat storage in winter, coat thickness in winter, camouflage, and shedding of fur
 - c. understand that some animal behaviors are influenced by environmental conditions (may include - nest building, *hibernating*, hunting, *migrating*, and *communicating*)
6. Describe the relationship of the sun as an *energy source* for living and nonliving cycles.
 - a. introduce that *heat energy* from the sun powers the water cycle

E. Life Cycle Unit – Living Environment

1. Recognize that traits of living things are both *inherited* and *acquired* or learned.
 - a. introduce that some *traits* of living things have been inherited (i.e. color of flowers and # of limbs of animals)
 - b. introduce that some *characteristics* result from an individual's *interactions* with the environment and cannot be inherited by the next *generation* (i.e. having scars, riding a bicycle)
2. Recognize that for humans and other living things there is genetic continuity between generations.
 - a. understand that plants and animals closely *resemble* their parents and other individuals in their *species*
 - b. introduce that plants and animals can *transfer* specific traits to their *offspring* when they reproduce
3. Describe the major stages in the life cycles of selected plants and animals.
 - a. introduce that plants and animals have *life cycles* (may include beginning of a life, development into an adult, reproduction as an adult, and eventually death)
 - b. introduce that each kind of plant goes through its own stages of growth and development that may include seed, young plant, and *mature* plant
 - c. introduce the length of time from beginning of development to death of the plant is called its life span
 - d. introduce that *life cycles* of some plants include changes from seed to mature plant
 - e. introduce that each *generation* of animals goes through changes in form from young to adult (completed *sequence of changes*= *life cycle* - egg tadpole frog)
 - f. introduce that each kind of animal goes through its own stages of growth and development during its life span
 - g. introduce that length of time from an animal's birth to its death is called its life span (life spans vary for different animals)
4. Describe some survival behaviors of common living *specimens*.
 - a. understand that health, growth, and development of organisms are affected by environmental conditions such as the availability of food, air, water, space, shelter, heat, and sunlight
5. Describe how plants and animals, including humans, depend upon each other and the nonliving environment.
 - a. introduce that green plants are producers because they provide the *basic food supply* for themselves and animals
 - b. understand that all animals depend on plants; some animals (predators) eat other animals (prey)
 - c. understand that animals that eat plants for food may in turn become food for other animals (*food chain*)
 - d. introduce that an organism's *pattern of behavior* is related to the nature of that organism's environment, including the kinds and numbers of other organisms present, the availability of food and other resources, and the physical characteristics of the environment

F. Nutrition/Health Unit – Living Environment

1. Describe the basic life functions of common living specimens (i.e. guppies, mealworms, gerbils).
 - a. introduce that all living things grow, take in **nutrients**, breathe, **reproduce**, and **eliminate waste**
2. Describe the factors that help **promote** good health and growth in humans.
 - a. master the understanding that humans need a variety of healthy foods, exercise, and rest in order to grow and maintain good health
 - b. understand that good health habits include hand washing and personal cleanliness; avoiding **harmful substances** (including alcohol, tobacco, illicit drugs); eating a balanced diet; **engaging in** regular exercise
3. Describe the **life processes** common to all living things.
 - a. introduce that living things grow, take in nutrients, breathe, **reproduce**, **eliminate waste**, and die
4. Describe some survival behaviors of common living **specimens**.
 - a. understand that health, growth, and development of organisms are affected by environmental conditions such as the availability of food, air, water, space, shelter, heat, and sunlight

G. Animal Unit – Living Environment

1. Describe the characteristics of and variations between living and nonliving things.
 - a. master the understanding that animals need air, water, and food to live and **thrive**
 - b. introduce that **nonliving** things do not live and **thrive**
2. Describe the **life processes** common to all living things.
 - a. introduce that living things grow, take in nutrients, breathe, **reproduce**, **eliminate waste**, and die
3. Describe how the **structures** of plants and animals **compliment** the environment of the plant or animal.
 - a. understand that each animal has different **structures** that serve different **functions in growth, survival**, and reproduction:
 - wings, legs, or fins enable some animals to seek shelter and escape predators
 - the mouth, including teeth, jaws, and tongue, enables some animals to eat and drink
 - eyes, nose, ears, tongue, and skin of some animals enable the animals to sense their surroundings
 - claws, shells, spines, feathers, fur, scales, and color of body covering enable some animals to protect themselves from predators and other environmental conditions, or enable them to **obtain** food
 - some animals have parts that are used to produce sounds and smells to help the animal meet its needs
 - the characteristics of some animals change as **seasonal conditions** change (i.e. fur grows and is shed to help **regulate** body heat, body fat is a form of **stored food energy** and it changes as the seasons change)
 - b. introduce that in order to survive in their environment, plants and animals must be **adapted** to that environment:
 - seeds **disperse** by a plant's own mechanism and/or in a **variety** of ways that can include wind, water, and animals
 - animal **adaptations** include **coloration for warning** or **attraction, camouflage, defense mechanisms**, movement, **hibernation**, and migration
4. Observe that differences within a species may give individuals and advantage in surviving and reproducing.
 - a. introduce that individuals within a species may compete with each other for food, mates, space, water, and shelter in their environment
5. Describe the basic life functions of common living specimens (i.e. guppies, mealworms, gerbils).
 - a. introduce that all living things grow, take in nutrients, breathe, **reproduce**, and **eliminate waste**
 - b. introduce that an **organism's external physical features** can enable it to carry out life functions in its particular environment

6. Describe some survival behaviors of common living *specimens*.
 - a. introduce that animals respond to change in their environment (i.e. *perspiration*, heart rate, breathing rate, eye blinking, *shivering*, and *salivating*)
 - b. understand that some animals, including humans (S.S. unit), move from place to place to meet their needs
 - c. understand that particular animal characteristics are influenced by changing environmental conditions including: fat storage in winter, coat thickness in winter, camouflage, and shedding of fur
 - d. understand that some animal behaviors are influenced by environmental conditions (may include - nest building, *hibernating*, hunting, *migrating*, and *communicating*)
 - e. understand that health, growth, and development of organisms are affected by environmental conditions such as the availability of food, air, water, space, shelter, heat, and sunlight
 - f. understand that senses can provide essential information (regarding danger, food, mates, etc) to animals about their environment
7. Describe how plants and animals, including humans, depend upon each other and the nonliving environment.
 - a. introduce that green plants are producers because they provide the *basic food supply* for themselves and animals
 - b. understand that all animals depend on plants; some animals (predators) eat other animals (prey)
 - c. understand that animals that eat plants for food may in turn become food for other animals (*food chain*)
 - d. introduce that an organism's *pattern of behavior* is related to the nature of that organism's environment, including the kinds and numbers of other organisms present, the availability of food and other resources, and the physical characteristics of the environment

H. Plant Unit – Living Environment

1. Describe the characteristics of and variations between living and nonliving things.
 - a. introduce that *nonliving* things do not live and *thrive*
2. Describe the *life processes* common to all living things.
 - a. introduce that living things grow, take in nutrients, breathe, *reproduce*, *eliminate waste*, and die
3. Describe how the *structures* of plants and animals *compliment* the environment of the plant or animal.
 - a. understand that each plant has different structures that serve different functions in growth, survival, and reproduction
 - roots help support the plant and take in water and nutrients
 - leaves help plants *utilize* sunlight to make food for the plant
 - stems, stalks, trunks, and other similar structures provide support for the plant
 - some plants have flowers
 - flowers are *reproductive structures* of plants that produce fruit which contains seeds
 - seeds contain stored food that aids in *germination* and growth of young plants
 - b. introduce that in order to survive in their environment, plants and animals must be adapted to that environment:
 - seeds *disperse* by a plant's own mechanism and/or in a variety of ways that can include wind, water, and animals
 - leaf, flower, stem, and root *adaptations* may include *variations* in size, shape, thickness, color, smell, and texture
4. Observe that differences within a species may give individuals an advantage in surviving and reproducing.
 - a. introduce that individuals within a species may compete with each other for food, mates, space, water, and shelter in their environment
5. Describe the basic *life functions* of common living *specimens* (i.e. guppies, mealworms, gerbils).
 - a. introduce that all living things grow, take in nutrients, breathe, reproduce, and eliminate waste

6. Describe some survival behaviors of common living *specimens*.
 - a. extend the understanding that plants *respond* to changes in their environment (i.e. the leaves of some green plants change position as the direction of light changes, the parts of some plants undergo seasonal changes that enable the plant to grow, seeds germinate, and leaves form and grow)
7. Describe how plants and animals, including humans, depend upon each other and the nonliving environment.
 - a. introduce that green plants are producers because they provide the *basic food supply* for themselves and animals
 - b. understand that all animals depend on plants; some animals (predators) eat other animals (prey)
 - c. understand that animals that eat plants for food may in turn become food for other animals (*food chain*)
 - d. introduce that an organism's *pattern of behavior* is related to the nature of that organism's environment, including the kinds and numbers of other organisms present, the availability of food and other resources, and the physical characteristics of the environment

I. Energy/Interactions Unit – Physical Setting

1. Describe a variety of forms of energy (i.e. heat, chemical, light) and the changes that occur in objects when they interact with those forms of energy.
 - a. introduce that energy exists in various forms: heat, electric, sound, chemical, mechanical, light
 - b. understand that energy and matter interact: water is evaporated by the sun's heat; a bulb is lighted by means of *electrical current*; a musical instrument is played to produce sound; dark colors may *absorb light*, light colors may *reflect light*
 - c. introduce that heat can be released in many ways, for example, by burning, rubbing (*friction*), or combining one substance with another
 - d. extend the understanding that interactions with *forms of energy* can be either helpful or harmful
2. Observe the way *one form of energy can be transferred into another form of energy present in common situations* (i.e. mechanical to heat energy, mechanical to electric energy, chemical to heat energy).
 - a. introduce that everyday events involve one form of energy being changed into another
 - animals convert food to heat and motion
 - the sun's energy warms the air and water
3. Describe the effects of common forces (pushes and pull) of objects, such as those caused by gravity, magnetism, and *mechanical forces*.
 - a. understand the position of an object can be described by locating it relative to another object or the background (i.e. on top of, next to, over, under, etc.)
 - b. introduce the *position or direction of motion* of an object can be changed by pushing or pulling
 - c. introduce the force of gravity pulls objects toward the center of the earth
 - d. introduce that the amount of change in the motion of an object is affected by friction

VIII. Course Benchmarks

IX. Units of Study

Unit One

Properties

A. Unit Benchmarks

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

B. Unit Assessment

C. Rubric

D. Activities

1. Teacher Constructed Activities:

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

2. Textbook with Teaching Strategies

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

3. Computer Assisted Instruction

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

4. Cross Disciplinary

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

5. Miscellaneous

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

E. Vocabulary

mass
properties
volume
temperature
texture
reflectiveness of light
magnetism
hand lenses
balances
magnets
circuit testers
graduated cylinders
conditions of the present surroundings

F. References and Resources

Unit Two

Magnets

A. Unit Benchmarks

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

B. Unit Assessment

C. Rubric

D. Activities

1. Teacher Constructed Activities:

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

2. Textbook with Teaching Strategies

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

3. Computer Assisted Instruction

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

4. Cross Disciplinary

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

5. Miscellaneous

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

E. Vocabulary

hand lenses
metric rulers
balances
magnets
circuit testers
graduated cylinders
repel
mechanical forces

F. References and Resources

Unit Three

Seasons/Weather

A. Unit Benchmarks

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

B. Unit Assessment

C. Rubric

D. Activities

1. Teacher Constructed Activities:

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

2. Textbook with Teaching Strategies

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

3. Computer Assisted Instruction

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

4. Cross Disciplinary

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

5. Miscellaneous

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

E. Vocabulary

conditions of the present surroundings
changes in states of matter
rotation
revolution
seasonally
recognizable pattern
wind speed
precipitation
specimens
respond
hibernating
migrating
communicating
energy source
heat energy

F. References and Resources

Unit Four

Life Cycle

A. Unit Benchmarks

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

B. Unit Assessment

C. Rubric

D. Activities

1. Teacher Constructed Activities:

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

2. Textbook with Teaching Strategies

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

3. Computer Assisted Instruction

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

4. Cross Disciplinary

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

5. Miscellaneous

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

E. Vocabulary

inherited
acquired
traits
characteristics
interactions
generation
resemble
species
transfer
offspring
life cycles
mature
specimens
sequence of changes (life cycle)
basic food supply
food chain
pattern of behavior

F. References and Resources

Unit Five

Nutrition/Health

A. Unit Benchmarks

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

B. Unit Assessment

C. Rubric

D. Activities

1. Teacher Constructed Activities:

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

2. Textbook with Teaching Strategies

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

3. Computer Assisted Instruction

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

4. Cross Disciplinary

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

5. Miscellaneous

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

E. Vocabulary

reproduce
life functions
eliminate waste
specimens
nutrients
reproduce
promote
harmful substances
engaging in
life processes

F. References and Resources

Unit Six

Animals

A. Unit Benchmarks

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

B. Unit Assessment

C. Rubric

D. Activities

1. Teacher Constructed Activities:

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

2. Textbook with Teaching Strategies

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

3. Computer Assisted Instruction

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

4. Cross Disciplinary

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

5. Miscellaneous

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

E. Vocabulary

thrive
non-living
life processes
reproduce
structures
eliminate waste
compliment
functions and growth
survival
obtain
seasonal conditions
regulates

F. References and Resources

Unit Seven

Plants

A. Unit Benchmarks

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

B. Unit Assessment

C. Rubric

D. Activities

1. Teacher Constructed Activities:

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

2. Textbook with Teaching Strategies

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

3. Computer Assisted Instruction

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

4. Cross Disciplinary

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

5. Miscellaneous

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

E. Vocabulary

non-living
thrive
life processes
reproduce
structures
eliminate waste
compliment
utilize
germination
reproductive structures
disperse
adaptations
variations
life functions
specimens
respond
basic food supply
food chain
pattern of behavior

F. References and Resources

Unit Eight

Energy/Interactions

A. Unit Benchmarks

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

B. Unit Assessment

C. Rubric

D. Activities

1. Teacher Constructed Activities:

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

2. Textbook with Teaching Strategies

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

3. Computer Assisted Instruction

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge**
- 2: Apply in Discipline**
- 3: Apply Across Disciplines**

- 4: Apply to Real World Predictable Situations**
- 5: Apply to Real World Unpredictable Situations**

4. Cross Disciplinary

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

5. Miscellaneous

Activity	Benchmark	Standard	Application Level
<p>a.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>b.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>c.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	
<p>d.</p> <p><i>Materials:</i></p>		HPEHE: MST: ELA: Arts: LOTE: CDOS: SS:	

Application Level:

- 1: Knowledge
- 2: Apply in Discipline
- 3: Apply Across Disciplines

- 4: Apply to Real World Predictable Situations
- 5: Apply to Real World Unpredictable Situations

E. Vocabulary

electrical current

absorb light

reflect light

friction

energy

mechanical forces

position

direction of motion

one form of energy can be transferred into another form of energy present in common situations

F. References and Resources

X. Course Assessment

XI. Curriculum Review Process