Physical Science Comes Alive
Energy Systems for 2nd / 3rd grade (Fantastic Elastic)

Alignments to State Science Standards

Table of Contents

California State Science Content Standards
Physical Science Comes Alive Energy Systems for 2nd / 3rd grade (Fantastic Elastic)

Lesson #	California Science Content Standards – Grade Two	California Science Content Standards – Grade Three
1. What is a Wind-up?	2: PS 1a-d 2: IE 4a, c, d, g	3: IE 5a, b, d, e
2. Make a Wind-up	2: PS 1a-d 2: IE 4a, c, d, g	3: IE 5a, b, d, e
3. Troubleshooting Wind-ups	2: PS 1a-d 2: IE 4a, c, d, g	3: IE 5a, b, d, e
4. How to Build a Wind-up	2: PS 1a-d 2: IE 4a, c, d, g	3: IE 5a, b, d, e
5. Redesign your Wind-up	2: PS 1a-d 2: IE 4a, c, d, g	3: IE 5a, b, d, e
6. How a Wind-up Works	2: PS 1a-d 2: IE 4a, c, d, g	2: PS 1b-d 3: IE 5a, b, d, e
7. How could a Balloon Power a Car?	2: PS 1a-d 2: IE 4a, c, d, g	3: IE 5a, b, d, e
8. Make a Balloon Car	2: PS 1a-d 2: IE 4a, c, d, g	3: IE 5a, b, d, e
9. Troubleshooting Balloon Cars	2: PS 1a-d 2: IE 4a, c, d, g	3: IE 5a, b, d, e
10. How to Build a Balloon Car	2: PS 1a-d 2: IE 4a, c, d, g	3: IE 5a, b, d, e
11. How a Balloon Car Works	2: PS 1a-d 2: IE 4a, c, d, g	2: PS 1b-d 3: IE 5a, b, d, e
12. The Auto Show		
Key	California Science Standards K-5: Grade PS (Physical Science) IE (Investigation and Experimentation)	California Science Standards K-5: Grade PS (Physical Science) IE (Investigation and Experimentation)

Full Description of Standards

California Science Content Standards – Grade Two
Physical Science
2: PS 1. The motion of objects can be observed and measured. As a basis for understanding this concept: 2: PS 1a. Students know the position of an object can be described by locating it in relation to another object or to the background. 2: PS 1b Students know an object's motion can be described by recording the change in position of the object over time. 2: PS 1c. Students know the way to change how something is moving is by giving it a push or a pull. The size of the change is related to the strength, or the amount of force, of the push or pull. 2: PS 1d. Students know tools and machines are used to apply pushes and pulls (forces) to make things move.
Investigation and Experimentation
2: IE 4. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will: 2: IE 4a. Make predictions based on observed patterns and not random guessing. 2: IE 4b. Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. 2: IE 4c. Compare and sort common objects according to two or more physical attributes (e.g., color, shape, texture, size, weight). 2: IE 4d. Write or draw descriptions of a sequence of steps, events, and observations. 2: IE 4g. Follow oral instructions for a scientific investigation.
California Science Standards K-5: Grade PS (Physical Science) IE (Investigation and Experimentation)

California Science Content Standards – Grade Three
Physical Sciences
3: PS 1. The motion of objects can be observed and measured. As a basis for understanding this concept: 3: PS 1a Students know the position of an object can be described by locating it in relation to another object or to the background. 3: PS 1b Students know an object's motion can be described by recording the change in position of the object over time. 3: PS 1c Students know the way to change how something is moving is by giving it a push or a pull. The size of the change is related to the strength, or the amount of force, of the push or pull. 3: PS 1d Students know tools and machines are used to apply pushes and pulls (forces) to make things move.
Investigation and Experimentation
3: IE 5. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will: 3: IE 5a. Repeat observations to improve accuracy and know that the results of similar scientific investigations seldom turn out exactly the same because of differences in the things being investigated, methods being used, or uncertainty in the observation. 3: IE 5b. Differentiate evidence from opinion and know that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed. 3: IE 5c. Use numerical data in describing and comparing objects, events, and measurements. 3: IE 5d. Predict the outcome of a simple investigation and compare the result with the prediction. 3: IE 5e. Collect data in an investigation and analyze those data to develop a logical conclusion.
California Science Standards K-5: Grade PS (Physical Science) IE (Investigation and Experimentation)

District of Columbia Science Content Standards
Physical Science Comes Alive Energy Systems for 2nd / 3rd grade (Fantastic Elastic)

Lesson #	District of Columbia Science Content Standards – Grade Two	District of Columbia Science Content Standards – Grade Three
1. What is a Wind-up?	2: SI 1.1, 2, 3, 4, 6	3: SI 1.2, 3, 4, 5, 7, 8, 9, 10 3: ST.2.1, 3
2. Make a Wind-up	2: SI 1.1, 2, 3, 4, 6	3: SI 1.2, 3, 4, 5, 7, 8, 9, 10 3: ST.2.1, 3
3. Troubleshooting Wind-ups	2: SI 1.1, 2, 3, 4, 6,	3: SI 1.2, 3, 4, 5, 7, 8, 9, 10 3: ST.2.1, 3
4. How to Build a Wind-up	2: SI 1.1, 2, 3, 4, 6	3: SI 1.2, 3, 4, 5, 7, 8, 9, 10 3: ST.2.1, 3
5. Redesign your Wind-up	2: SI 1.1, 2, 3, 4, 6	3: SI 1.2, 3, 4, 5, 7, 8, 9, 10 3: ST.2.1, 3
6. How a Wind-up Works	2: SI 1.1, 2, 3, 4, 6,	3: SI 1.2, 3, 4, 5, 7, 8, 9, 10 3: ST.2.1, 3
7. How could a Balloon Power a Car?	2: SI 1.1, 2, 3, 4, 6	3: SI 1.2, 3, 4, 5, 7, 8, 9, 10 3: ST.2.1, 3
8. Make a Balloon Car	2: SI 1.1, 2, 3, 4, 6	3: SI 1.2, 3, 4, 5, 7, 8, 9, 10 3: ST.2.1, 3
9. Troubleshooting Balloon Cars	2: SI 1.1, 2, 3, 4, 6,	3: SI 1.2, 3, 4, 5, 7, 8, 9, 10 3: ST.2.1, 3
10. How to Build a Balloon Car	2: SI 1.1, 2, 3, 4, 6	3: SI 1.2, 3, 4, 5, 7, 8, 9, 10 3: ST.2.1, 3
11. How a Balloon Car Works	2: SI 1.1, 2, 3, 4, 6	3: SI 1.2, 3, 4, 5, 7, 8, 9, 10 3: ST.2.1, 3
12. The Auto Show		
Key	District of Columbia Science Standards K-5: Grade SI (Scientific Thinking and inquiry) ST (Science and Technology)	District of Columbia Science Standards K-5: Grade SI (Scientific Thinking and inquiry) ST (Science and Technology)

Full Description of Standards

District of Columbia Science Content Standards – Grade Two **Scientific Thinking and Inquiry**
2: SI 1. Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students: 2: SI 1.1. Describe objects as accurately as possible and compare observations with those made and reported by others. 2: SI 1.2. Make new observations when there is disagreement among observers or among successive observations. 2: SI 1.3. Demonstrate the ability to work with a team, but still reach and communicate one's own conclusions about findings. 2: SI 1.4. Use tools — such as thermometers, magnifiers, rulers, or balances — to investigate, observe, measure, design, and build things. 2: SI 1.6. Draw pictures and write brief, coherent descriptions that correctly portray key features of an object.
District of Columbia Science Standards K-5: Grade SI (Scientific Thinking and inquiry) ST (Science and Technology)

District of Columbia Science Content Standards – Grade Three
Scientific Thinking and Inquiry

3: SI.1. Broad Concept: Scientific progress is made by asking relevant questions and conducting careful investigations. As a basis for understanding this concept, and to address the content in this grade, students should develop their own questions and perform investigations. Students:

3: SI.1.1. Recognize and explain that when a scientific investigation is repeated, carefully and under the same conditions, a similar (but not necessarily identical) result is expected.

3: SI.1.2. Participate in different types of guided scientific investigations (related to content in this grade), such as observing objects and events and collecting specimens for analysis, including longer-term investigations that take place over several days, weeks, or months.

3: SI.1.3. Keep and report records of investigations and observations using tools, such as journals, charts, graphs, and computers.

3: SI.1.4. Discuss the results of investigations and consider the explanations of others.

3: SI.1.5. Demonstrate the ability to work cooperatively while respecting the ideas of others and communicating one's own conclusions about findings.

3: SI.1.7. Keep a notebook that describes ongoing observations and that is still understandable weeks or months later.

3: SI.1.8. Appropriately use simple tools — such as clamps, rulers, scissors, hand lenses, and other technology (e.g., calculators and computers) — to help solve problems.

3: SI.1.9. Make sketches and write descriptions to aid in explaining procedures or ideas.

3: SI.1.10. Ask, "How do you know?" in appropriate situations, and attempt reasonable answers when others ask the same question.

District of Columbia Science Content Standards – Grade Three
Science and Technology

3: ST.2. Broad Concept: Although each of these human enterprises of science and technology has a character and history of its own, each is dependent on and reinforces the other. As a basis for understanding this concept, students:

3: ST.2.1. Define technology as the application of human ingenuity and skill to the solution of practical problems (e.g., typewriter, computer).

3: ST.2.2. Identify and demonstrate how an invention can be used in different ways, such as a radio that can be used to get information and for entertainment.

3: ST.2.3. Construct something used for performing a task out of commonly available materials, such as paper, cardboard, wood, plastic, metal, or from existing objects.

District of Columbia Science Standards
K-5: Grade
SI (Scientific Thinking and inquiry)
ST (Science and Technology)

Minnesota Science Content Standards
Physical Science Comes Alive Energy Systems for 2nd / 3rd grade (Fantastic Elastic)

Lesson #	Minnesota Science Content Standards – Grade Two	Minnesota Science Content Standards – Grade Three
1. What is a Wind-up?	2: PS 2.1.1, 2 2: PS 2.2.1 2: NSE 2.2.1, 3	3: NSE 1.1.1 3: NSE 1.2.1, 2, 3, 4 3: NSE 3.2.2 3: NSE 3.4.1
2. Make a Wind-up	2: PS 2.1.1, 2 2: PS 2.2.1 2: NSE 2.2.1, 3	3: NSE 1.1.1 3: NSE 1.2.1, 2, 3, 4 3: NSE 3.4.1
3. Troubleshooting Wind-ups	2: PS 2.1.1, 2 2: PS 2.2.1 2: NSE 2.2.1, 3	3: NSE 1.1.1 3: NSE 1.2.1, 2, 3, 4 3: NSE 3.4.1
4. How to Build a Wind-up	2: PS 2.1.1, 2 2: PS 2.2.1 2: NSE 2.2.1, 3	3: NSE 1.1.1 3: NSE 1.2.1, 2, 3, 4 3: NSE 3.4.1
5. Redesign your Wind-up	2: PS 2.1.1, 2 2: PS 2.2.1 2: NSE 2.2.1, 3	3: NSE 1.1.1 3: NSE 1.2.1, 2, 3, 4 3: NSE 3.4.1
6. How a Wind-up Works	2: PS 2.1.1, 2 2: PS 2.2.1 2: NSE 2.2.1, 3	3: NSE 1.1.1 3: NSE 1.2.1, 2, 3, 4 3: NSE 3.4.1
7. How could a Balloon Power a Car?	2: PS 2.1.1, 2 2: PS 2.2.1 2: NSE 2.2.1, 3	3: NSE 1.1.1 3: NSE 1.2.1, 2, 3, 4 3: NSE 3.4.1
8. Make a Balloon Car	2: PS 2.1.1, 2 2: PS 2.2.1 2: NSE 2.2.1, 3	3: NSE 1.1.1 3: NSE 1.2.1, 2, 3, 4 3: NSE 3.4.1
9. Troubleshooting Balloon Cars	2: PS 2.1.1, 2 2: PS 2.2.1 2: NSE 2.2.1, 3	3: NSE 1.1.1 3: NSE 1.2.1, 2, 3, 4 3: NSE 3.4.1
10. How to Build a Balloon Car	2: PS 2.1.1, 2 2: PS 2.2.1 2: NSE 2.2.1, 3	3: NSE 1.1.1 3: NSE 1.2.1, 2, 3, 4 3: NSE 3.4.1
Key	NSE (The Nature of Science and Engineering) PS (Physical Science)	NSE (The Nature of Science and Engineering)

Lesson #	Minnesota Science Content Standards – Grade Two	Minnesota Science Content Standards – Grade Three
11. How a Balloon Car Works	2: PS 2.1.1, 2 2: PS 2.2.1 2: NSE 2.2.1, 3	3: NSE 1.1.1 3: NSE 1.2.1, 2, 3, 4 3: NSE 3.4.1
12. The Auto Show		
Key	NSE (The Nature of Science and Engineering) PS (Physical Science)	NSE (The Nature of Science and Engineering)

Full Description of Standards

Minnesota Science Content Standards – Grade Two
Physical Science
2: PS 2. Motion 2: PS 2.1. The motion of an object can be described by a change in its position over time. 2: PS 2.1.1 Describe an object's change in position relative to other objects or a background. 2: PS 2.1.2 Demonstrate that objects move in a variety of ways, including a straight line, a curve, a circle, back and forth, and at different speeds. 2: PS 2.2. The motion of an object can be changed by push or pull forces. 2: PS 2.2.1 Describe how push and pull forces can make objects move.
Minnesota Science Content Standards – Grade Two **The Nature of Science and Engineering**
2: NSE 2. The Practice of Engineering 2: NSE 2.2 Engineering design is the process of identifying problems and devising a product or solution. 2: NSE 2.2.1 Identify a need or problem and construct an object that helps to meet the need or solve the problem. 2: NSE 2.2.3 Explain how engineered or designed items from everyday life benefit people.
Minnesota Science Content Standards – Grade Three **The Nature of Science and Engineering**
3: NSE 1. The Practice of Science 3: NSE 1.1. Scientists work as individuals and in groups, emphasizing evidence, open communication and skepticism. 3: NSE 1.1.1 Provide evidence to support claims other than saying “Everyone knows that,” or “I just know,” and question such reasons when given by others. 3: NSE 1.2. Scientific inquiry is a set of interrelated processes incorporating multiple approaches that are used to pose questions about the natural world and investigate phenomena. 3: NSE 1.2.1 Generate questions that can be answered when scientific knowledge is combined with knowledge gained from one's own observations or investigations. 3: NSE 1.2.2 Recognize that when a science investigation is done the way it was done before, even in a different place, a similar result is expected. 3: NSE 1.2.3 Maintain a record of observations, procedures and explanations, being careful to distinguish between actual observations and ideas about what was observed. 3: NSE 1.2.4 Construct reasonable explanations based on evidence collected from observations or experiments. 3: NSE 3.4. Tools and mathematics help scientists and engineers see more, measure more accurately, and do things that they could not otherwise accomplish. 3: NSE 3.4.1 Use tools, including rulers, thermometers, magnifiers and simple balances, to improve observations and keep a record of the observations made.
Minnesota Science Standards K-5: Grade NSE (The Nature of Science and Engineering) PS (Physical Science)

NY New York State Core Curriculum Science (updated)
Physical Science Comes Alive Energy Systems for 2nd / 3rd grade (Fantastic Elastic)

Lesson #	NY New York State Core Curriculum Science (updated) Elementary
1. What is a Wind-up?	4: P3.1c 4: P4.1a-c, 4.2a-b 4: P5.1b, d, f 1: T1.1a, b, c, 1.2a, b, c, 1.3a, b, c, 1.4a, b, 1.5a, b, c
2. Make a Wind-up	4: P3.1c 4: P4.1a-c, 4.2a-b 4: P5.1b, d, f 1: T1.1a, b, c, 1.2a, b, c, 1.3a, b, c, 1.4a, b, 1.5a, b, c
3. Troubleshooting Wind-ups	4: P3.1c 4: P4.1a-c, 4.2a-b 4: P5.1b, d, f 1: T1.1a, b, c, 1.2a, b, c, 1.3a, b, c, 1.4a, b, 1.5a, b, c
4. How to Build a Wind-up	4: P3.1c 4: P4.1a-c, 4.2a-b 4: P5.1b, d, f 1: T1.1a, b, c, 1.2a, b, c, 1.3a, b, c, 1.4a, b, 1.5a, b, c
5. Redesign your Wind-up	4: P3.1c 4: P4.1a-c, 4.2a-b 4: P5.1b, d, f 1: T1.1a, b, c, 1.2a, b, c, 1.3a, b, c, 1.4a, b, 1.5a, b, c
6. How a Wind-up Works	4: P3.1c 4: P4.1a-c, 4.2a-b 4: P5.1b, d, f 1: T1.1a, b, c, 1.2a, b, c, 1.3a, b, c, 1.4a, b, 1.5a, b, c
7. How could a Balloon Power a Car?	4: P3.1c 4: P4.1a-c, 4.2a-b 4: P5.1b, d, f 1: T1.1a, b, c, 1.2a, b, c, 1.3a, b, c, 1.4a, b, 1.5a, b, c
8. Make a Balloon Car	4: P3.1c 4: P4.1a-c, 4.2a-b 4: P5.1b, d, f 1: T1.1a, b, c, 1.2a, b, c, 1.3a, b, c, 1.4a, b, 1.5a, b, c
9. Troubleshooting Balloon Cars	4: P3.1c 4: P4.1a-c, 4.2a-b 4: P5.1b, d, f 1: T1.1a, b, c, 1.2a, b, c, 1.3a, b, c, 1.4a, b, 1.5a, b, c
10. How to Build a Balloon Car	4: P3.1c 4: P4.1a-c, 4.2a-b 4: P5.1b, d, f 1: T1.1a, b, c, 1.2a, b, c, 1.3a, b, c, 1.4a, b, 1.5a, b, c

11. How a Balloon Car Works	4: P3.1c 4: P4.1a-c, 4.2a-b 4: P5.1b, d, f 1: T1.1a, b, c, 1.2a, b, c, 1.3a, b, c, 1.4a, b, 1.5a, b, c
12. The Auto Show	
Key	New York State Core Curriculum (Science) 1: Standard T (Engineering) S (Scientific Inquiry) P (Physical Science) M (Mathematical Analysis)

Full Description of Standards

NY New York State Core Curriculum (updated) Elementary Standards Description
Physical Science
4: P3.1c 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.
4: P4.1a Energy exists in various forms: heat, electric, sound, chemical, mechanical, light. 4: P4.1b Energy can be transferred from one place to another. 4: P4.1c Some materials transfer energy better than others (heat and electricity).
4: P5.1b The position or direction of motion of an object can be changed by pushing or pulling. 4: P5.1d The amount of change in the motion of an object is affected by friction. 4: P5.1f 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.
Science and Technology
1: T1.1 Describe objects, imaginary or real, that might be modeled or made differently and suggest ways in which the objects can be changed, fixed, or improved. 1: T1.1a Identify a simple/common object which might be improved and state the purpose of the improvement 1: T1.1b Identify features of an object that help or hinder the performance of the object 1: T1.1c Suggest ways the object can be made differently, fixed, or improved within given constraints 1: T1.3 Generate ideas for possible solutions, individually and through group activity; apply age-appropriate mathematics and science skills; evaluate the ideas and determine the best solution; and explain reasons for the choices.
1: T1.2 Investigate prior solutions and ideas from books, magazines, family, friends, neighbors, and community members. 1: T1.2a Identify appropriate questions to ask about the design of an object 1: T1.2b Identify the appropriate resources to use to find out about the design of an object 1: T1.2c Describe prior designs of the object
1: T1.3 Generate ideas for possible solutions, individually and through group activity; apply age-appropriate mathematics and science skills; evaluate the ideas and determine the best solution; and explain reasons for the choices. 1: T1 3a List possible solutions, applying age-appropriate math and science skills 1: T1.3b Develop and apply criteria to evaluate possible solutions 1: T1.3c Select a solution consistent with given constraints and explain why it was chosen
New York State Core Curriculum (Science) 1: Standard T (Engineering) S (Scientific Inquiry) P (Physical Science) M (Mathematical Analysis)

NY New York State Core Curriculum (updated) Elementary Standards Description
Science and Technology (Continued)
1: T1.4 Plan and build, under supervision, a model of the solution, using familiar materials, processes, and hand tools. 1: T1.4a Create a grade-appropriate graphic or plan listing all materials needed, showing sizes of parts, indicating how things will fit together, and detailing steps for assembly 1: T1.4b Build a model of the object, modifying the plan as necessary 1: T1.5 Discuss how best to test the solution; perform the test under teacher supervision; record and portray results through numerical and graphic means; discuss orally why things worked or didn't work; and summarize results in writing, suggesting ways to make the solution better. T1.5a Determine a way to test the finished solution or model T1.5b Perform the test and record the results, numerically and/or graphically 1: T1.5c Analyze results and suggest how to improve the solution or model, using oral, graphic, or written formats
New York State Core Curriculum (Science) 1: Standard T (Engineering) S (Scientific Inquiry) P (Physical Science) M (Mathematical Analysis)
STANDARD 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. **Area:** Systems Thinking **Key Idea:** Key Idea 1: Through systems thinking, people can recognize the commonalities that exist among all systems and how parts of a system interrelate and combine to perform specific functions. **Indicator:** observe and describe interactions among components of simple systems **Indicator:** identify common things that can be considered to be systems (e.g., a plant, a transportation system, human beings) **Area:** Models **Key Idea:** Key Idea 2: Models are simplified representations of objects, structures, or systems, used in analysis, explanation, or design. **Indicator:** analyze, construct, and operate models in order to discover attributes of the real thing **Indicator:** discover that a model of something is different from the real thing but can be used to study the real thing **Indicator:** use different types of models, such as graphs, sketches, diagrams, and maps, to represent various aspects of the real world

NY New York State Core Curriculum (updated) Elementary Standards Description

STANDARD 7- Interdisciplinary Problem Solving 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.

Area: Connections

Key Idea: Key Idea 1: The knowledge and skills of mathematics, science, and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/technology/society, consumer decision making, design, and inquiry into phenomena.
Indicator: analyze science/technology/society problems and issues that affect their home, school, or community, and carry out a remedial course of action
Indicator: make informed consumer decisions by applying knowledge about the attributes of particular products and making cost/benefit trade-offs to arrive at an optimal choice
Indicator: design solutions to problems involving a familiar and real context, investigate related science concepts to determine the solution, and use mathematics to model, quantify, measure, and compute
Indicator: observe phenomena and evaluate them scientifically and mathematically by conducting a fair test of the effect of variables and using mathematical knowledge and technological tools to collect, analyze, and present data and conclusions

Area: Strategies

Key Idea: Key Idea 2: Solving interdisciplinary problems involves a variety of skills and strategies, including effective work habits; gathering and processing information; generating and analyzing ideas; realizing ideas; making connections among the common themes of mathematics, science, and technology; and presenting results.
Indicator: work effectively
Indicator: gather and process information
Indicator: generate and analyze ideas
Indicator: observe common themes
Indicator: realize ideas
Indicator: present results

PROCESS SKILLS BASED ON STANDARD 4

Area: General Skills

Process Skill: i. follow safety procedures in the classroom, laboratory, and field
Process Skill: ii. Safely and accurately use the following tools: hand lens, ruler (metric), balance, gram weights, spring scale, thermometer (C°, F°), measuring cups, graduated cylinder, timepiece(s)
Process Skill: iii. Develop an appreciation of and respect for all learning environments (classroom, laboratory, field, etc.)
Process Skill: iv. Manipulate materials through teacher direction and free discovery
Process Skill: v. use information systems appropriately
Process Skill: vi. Select appropriate standard and nonstandard measurement tools for measurement activities
Process Skill: vii. Estimate, find, and communicate measurements, using standard and nonstandard units
Process Skill: viii. Use and record appropriate units for measured or calculated values
Process Skill: ix. Order and sequence objects and/or events
Process Skill: x. classify objects according to an established scheme
Process Skill: xi. Generate a scheme for classification
Process Skill: xii. Utilize senses optimally for making observations
Process Skill: xiii. Observe, analyze, and report observations of objects and events
Process Skill: xiv. Observe, identify, and communicate patterns
Process Skill: xv. Observe, identify, and communicate cause-and-effect relationships
Process Skill: xvi. Generate appropriate questions (teacher and student based) in response to observations, events, and other experiences
Process Skill: xvii. Observe, collect, organize, and appropriately record data, then accurately interpret results
Process Skill: xviii. Collect and organize data, choosing the appropriate representation: journal entries, graphic representations, drawings/pictorial representations
Process Skill: xix. Make predictions based on prior experiences and/or information
Process Skill: xx. Compare and contrast organisms/objects/events in the living and physical environments
Process Skill: xxi. Identify and control variables/factors
Process Skill: xxii. Plan, design, and implement a short-term and long-term investigation based on a student- or teacher-posed problem
Process Skill: xxiii. Communicate procedures and conclusions through oral and written presentations