

# 1st Nine Weeks

**Matter and energy.** The student knows that matter has measurable physical properties that determine how matter is identified, classified, changed, and used. The student is expected to:

**3.6B** describe and classify samples of matter as solids, liquids, and gases and demonstrate that solids have a definite shape, and that liquids and gases take the shape of their container

**3.6C** predict, observe, and record changes in the state of matter caused by heating or cooling in a variety of substances such as ice becoming liquid water, condensation forming on the outside of a glass, or liquid water being heated to the point of becoming water vapor (gas)

## **Changes to the TEKS In Matter and Energy:**

- This is a priority TEKS. There are no major changes except for 6D.
- 3.6D focuses on how materials can be combined based on their physical properties to create or modify objects such as building a tower or adding clay to sand to make a stronger brick and the **justification** for the selection of materials based on their physical properties. It is no longer about mixtures only.

## **Additional TEKS to be taught:**

**3.6A** measure, test, and record physical properties of matter, including temperature, mass, magnetism, and the ability to sink or float in water

**3.6D** demonstrate that materials can be combined based on their physical properties to create or modify objects such as building a tower or adding clay to sand to make a stronger brick and justify the selection of materials based on their physical properties.

**Describe and classify physical properties of matter.**

Yearly Target	Nine Weeks Target	TEKS	Priority Topic: Describe and classify physical properties of matter.
<b>Extension</b>			<ul style="list-style-type: none"> <li>Use inferences and applications that go beyond the standard.</li> </ul>
<b>3.0</b>	1st	Content: 3.6BC SEPs: 3.1CDEF 3.2A, 3.3AB RTC: 3.5ABE	I can: <ul style="list-style-type: none"> <li>Classify samples of matter as solids, liquids, and gases.</li> <li>Demonstrate that liquids and gases take the shape of their containers.</li> <li>Communicate thinking using diagrams/illustrations, labels, and sentences.</li> </ul>
<b>2.5</b>			<ul style="list-style-type: none"> <li>In addition to 2.0 content, partial knowledge of 3.0 is evident.</li> </ul>
<b>2.0</b>		Content: 3.6BC SEPs: 3.1CDEF 3.2A, 3.3AB RTC: 3.5ABE	I can: <ul style="list-style-type: none"> <li>Describe samples of matter as solids, liquids, and gases.</li> <li>Demonstrate that solids have a definite shape.</li> <li>Predict, observe, and record changes caused by cooling.</li> <li>Communicate observations and data using diagrams/illustrations and labels.</li> </ul>
<b>1.5</b>			<ul style="list-style-type: none"> <li>In addition to 1.0 content, partial knowledge of 2.0 is evident.</li> </ul>
<b>1.0</b>		Content: 3.6BC SEPs: 3.1CDEF 3.2A, 3.3AB RTC: 3.5ABE	I can: <ul style="list-style-type: none"> <li>Observe properties of solids, liquids, and gases.</li> <li>Predict, observe, and record changes caused by heating.</li> <li>Communicate observations.</li> </ul>
<b>0.5</b>			<ul style="list-style-type: none"> <li>With help, a partial understanding of the 1.0 content is evident</li> <li>With help, communicate observations.</li> </ul>

## 2nd Nine Weeks

**Force, motion, and energy.** The student knows the nature of forces and the patterns of their interactions. The student is expected to:

**3.7A** demonstrate and describe forces acting on an object in contact or at a distance, including magnetism, gravity, and pushes and pulls

**3.7B** plan and conduct a descriptive investigation to demonstrate and explain how position and motion can be changed by pushing and pulling objects such as swings, balls, and wagons

### **Changes to the TEKS In Force, Motion, and Energy:**

- This is a priority TEKS. The TEKS and the progression have changed.
- Students will apply what they have learned by planning and conducting an investigation. The students will need guidance and support as they plan and conduct a descriptive investigation. A descriptive investigation does not have a hypothesis and focuses on making observations and measuring. An example of this type of investigation might be: Does the height of an object affect the distance an object moves?
- There is an emphasis on mechanical energy and how it relates to speed in the new TEKS.

### **Additional TEKS to be taught:**

**3.8A** identify everyday examples of energy, including light, sound, thermal, and mechanical

**3.8B** plan and conduct investigations that demonstrate how the speed of an object is related to its mechanical energy (NEW)

## Demonstrate and explain force, motion, and energy

Yearly Target	Nine Weeks Target	TEKS	Demonstrate and explain force, motion, and energy
<b>Extension</b>			<ul style="list-style-type: none"> <li>Use inferences and applications that go beyond the standard.</li> </ul>
<b>3.0</b>	2nd	Content: 3.7AB 3.8A SEPs: 3.1ABCDEG 3.2ABC 3.3ABC RTC: 3.5ABG	I can: <ul style="list-style-type: none"> <li>Plan and conduct a descriptive investigation to demonstrate and explain how position and motion can be changed by pushing and pulling objects such as swings, balls, and wagons.</li> <li>Explore and identify everyday examples of mechanical energy.</li> <li>Communicate thinking using diagrams/illustrations, labels, and sentences.</li> </ul>
<b>2.5</b>			<ul style="list-style-type: none"> <li>In addition to 2.0 content, partial knowledge of 3.0 is evident.</li> </ul>
<b>2.0</b>		Content: 3.7AB 3.8A SEPs: 3.1ABCDEG 3.2ABC 3.3ABC RTC: 3.5ABG	I can: <ul style="list-style-type: none"> <li>Describe forces acting on an object in contact or at a distance, including magnetism, gravity, and pushes and pulls.</li> <li>Explore and identify everyday examples of thermal energy.</li> <li>Communicate observations and data using diagrams/illustrations and labels.</li> </ul>
<b>1.5</b>			<ul style="list-style-type: none"> <li>In addition to 1.0 content, partial knowledge of 2.0 is evident.</li> </ul>
<b>1.0</b>		Content: 3.7AB 3.8A SEPs: 3.1ABCDEG 3.2ABC 3.3ABC RTC: 3.5ABG	I can: <ul style="list-style-type: none"> <li>Demonstrate forces acting on an object in contact or at a distance, including magnetism, gravity, and pushes and pulls.</li> <li>Explore and identify everyday examples of light and sound energy.</li> <li>Communicate observations.</li> </ul>
<b>0.5</b>			<ul style="list-style-type: none"> <li>With help, partial understanding of the 1.0 content is evident</li> <li>With help, communicate observations.</li> </ul>

## 3rd Nine Weeks

**Earth and space.** The student knows there are recognizable objects and patterns in Earth's solar system. The student is expected to:

**3.9A** construct models and explain the orbits of the Sun, Earth, and Moon in relation to each other

**Earth and space.** The student knows that there are recognizable processes that change Earth over time. The student is expected to:

**3.10C** model and describe rapid changes in Earth's surface such as volcanic eruptions, earthquakes, and landslides.

### **Changes to the TEKS In Earth and Space:**

- This is a priority TEKS. This progression has additions to it.
- There is more rigor in the standards. In most TEKS, the students explain the phenomena they are experiencing.
- Not only do students construct a Sun, Earth, and Moon model, but they have to explain the orbits of the objects as well.
- As students study the rapid changes that occur on Earth, they model and describe, not just investigate.
- Students do not describe and illustrate the Sun.

### **Additional TEKS to be taught:**

**3.9B** Identify the order of the planets in Earth's solar system in relation to the Sun

**3.10A** Compare and describe day-to-day weather in different locations at the same time, including air temperature, wind direction, and precipitation

**3.10B** Investigate and explain how soils such as sand and clay are formed by weathering of rock and by decomposition of plant and animal remains

**3.11A** Explore and explain how humans use natural resources such as in construction, in agriculture, in transportation, and to make products

**3.11B** explain why the conservation of natural resources is important; and

**3.11C** identify ways to conserve natural resources through reducing, reusing, or recycling.

**Model and describe the relationship of Sun, Earth, and Moon and the rapid changes on Earth's surface**

Yearly Target	Nine Weeks Target	TEKS	Priority Topic: Model and describe the relationship of Sun, Earth, and Moon and the rapid changes on Earth's surface
<b>Extension</b>			<ul style="list-style-type: none"> <li>Use inferences and applications that go beyond the standards.</li> </ul>
<b>3.0</b>	3 <sup>rd</sup>	Content: 3.9A, 3.10C SEPs: 3.1CDEG 3.2AD, 3.3AB RTC: 3.5ABCD	I can: <ul style="list-style-type: none"> <li>Describe rapid changes in Earth's surface such as volcanic eruptions, earthquakes, and landslides.</li> <li>Construct models that demonstrate the orbits and positions of the Sun, Earth, and Moon.</li> <li>Communicate thinking using diagrams/illustrations, labels, and sentences.</li> </ul>
<b>2.5</b>			<ul style="list-style-type: none"> <li>In addition to 2.0 content, partial knowledge of 3.0 is evident.</li> </ul>
<b>2.0</b>		Content: 3.9A, 3.10C SEPs: 3.1CDEG 3.2AD,3.3AB RTC: 3.5ABCD	I can: <ul style="list-style-type: none"> <li>Model rapid changes in Earth's surface caused by volcanic eruptions.</li> <li>Construct models that demonstrate the relationship of the Sun, Earth, and Moon.</li> <li>Communicate observations and data using diagrams/illustrations and labels.</li> </ul>
<b>1.5</b>			In addition to 1.0 content, partial knowledge of 2.0 is evident.
<b>1.0</b>		Content: 3.9A, 3.10C SEPs: 3.1CDEG 3.2AD, 3.3AB RTC: 3.5ABCD	I can: <ul style="list-style-type: none"> <li>Model rapid changes in Earth's surface caused by earthquakes and landslides.</li> <li>Use models to show the movements of the Sun, Earth, and Moon.</li> <li>Communicate observations.</li> </ul>
<b>0.5</b>			<ul style="list-style-type: none"> <li>With help, partial understanding of the 1.0 content is evident</li> <li>With help, communicate observations.</li> </ul>

## 4th Nine Weeks

**Organisms and environments.** The student describes patterns, cycles, systems, and relationships within environments. The student is expected to:

**3.12B** identify and describe the flow of energy in a food chain and predict how changes in a food chain such as removal of frogs from a pond or bees from a field affect the ecosystem

**3.12C** describe how natural changes to the environment such as floods and droughts cause some organisms to thrive and others to perish or move to new locations

**Organisms and environments.** The student knows that organisms undergo similar life processes and have structures that function to help them survive within their environments. The student is expected to:

**3.13B** explore, illustrate, and compare life cycles in organisms such as beetles, crickets, radishes, or lima beans

### Changes to the TEKS In Earth and Space:

- This is a priority TEKS. The progression has changed.
- There are no major changes to the TEKS. The standards are more detailed. Be aware of the emphasis placed in the TEKS. For example: 3.12A has an emphasis on temperature and precipitation as well as hibernation, migration, and dormancy in plants.
- With structures and functions, 3<sup>rd</sup> grade students only study animals. 4<sup>th</sup> grade will cover plants.
- The “such as” statement in life cycles has changed to beetles, crickets, radishes, and lima beans. Students will explore, illustrate, and **compare** life cycles.

### Additional TEKS to be taught:

**3.12A** explain how temperature and precipitation affect animal growth and behavior through migration and hibernation and plant responses through dormancy

**3.12D** identify fossils as evidence of past living organisms and environments, including common Texas fossils (NEW)

**3.13A** explore and explain how external structures and functions of animals such as the neck of a giraffe or webbed feet on a duck enable them to survive in their environment

## Explain the Flow of Energy Through Ecosystems and Life Cycles of Organisms

Yearly Target	Nine Weeks Target	TEKS	Priority Topic: Explain the Flow of Energy Through Ecosystems and Life Cycles of Organisms
4.0			<ul style="list-style-type: none"> <li>• Use inferences and applications that go beyond the standards.</li> </ul>
3.0	4 <sup>th</sup>	Content: 3.12BC 3.13B SEPs: 3.1EF, 3.2B 3.3ABC RTC: 3.5ABCEG	I can: <ul style="list-style-type: none"> <li>• Describe how natural changes in the environment such as floods and droughts cause some organisms to thrive and others to perish or move to new locations.</li> <li>• Compare life cycles in organisms.</li> <li>• Communicate thinking using diagrams/illustrations, labels, and sentences.</li> </ul>
2.5			<ul style="list-style-type: none"> <li>• In addition to 2.0 content, partial knowledge of 3.0 is evident.</li> </ul>
2.0		Content: 3.12BC 3.13B SEPs: 3.1EF, 3.2B 3.3ABC, RTC: 3.5ABCEG	I can: <ul style="list-style-type: none"> <li>• Predict how changes in a food chain affect the ecosystem.</li> <li>• Illustrate life cycles in organisms.</li> <li>• Communicate observations and data using diagrams/illustrations and labels.</li> </ul>
1.5			<ul style="list-style-type: none"> <li>• In addition to 1.0 content, partial knowledge of 2.0 is evident</li> </ul>
1.0		Content: 3.12BC 3.13B SEPs: 3.1EF, 3.2B 3.3ABC RTC: 3.5ABCEG	I can: <ul style="list-style-type: none"> <li>• Identify and describe the flow of energy in a food chain.</li> <li>• Explore life cycles in organisms.</li> <li>• Communicate observations.</li> </ul>
0.5			<ul style="list-style-type: none"> <li>• With help, partial understanding of the 1.0 content is evident.</li> <li>• With help, communicate observations.</li> </ul>