Monday - Process Skill of the Week

A student did an experiment to find out if the temperature affects the rate of growth of a particular plant. What should the student do to accurately communicate the results of the experiment?

O A. Write a story about a favorite plant.
O B. Make a list of materials used in the experiment.
O C. Draw a picture of the equipment used in the experiment.
O D. Display all the recorded measurements in a table or a graph.

Tuesday - Vocabulary Term of the Week

Making imprints of objects in clay is most useful for learning about -

O A. weathering
O B. fossils
O C. renewable resources
O D. the rock cycle

Wednesday - Misconception of the Week

What is wrong with the following statement? Metamorphic rock was once melted, but then it cooled and hardened into rock form.

O A. There is nothing wrong with this statement.
O B. Sedimentary rock forms from melting, cooling, and hardening.
O C. Igneous rock forms from melting, cooling, and hardening.
O D. Metamorphic rock has noticeable layers of settled material.

Thursday - Graphic of the Week

If the person in the picture lets go of the rope, the weight (w) will fall to the ground. What force is acting to pull the weight to the ground?

O A. friction
O B. gravity
O C. collision
O D. magnetism
1. Evidence of what once lived in a habitat a long time ago can be found in ________________.

2. A ________________________ or table can be used to display and/or compare data that is collected in an experiment.

3. ________________________ is the force that pulls objects toward each other.

4. ________________________ rocks are formed deep in the Earth’s crust when they have been heated and squeezed with a great deal of pressure.

Forces inside and outside the Earth cause one type of rock to change into another type of rock. This process is called the rock cycle. Describe and/or illustrate the rock cycle and how these changes occur between different types of rocks. Be sure to label any illustrations.
Monday - Process Skill of the Week

An experiment that measures the daily growth of bacteria would require which of the following to occur daily?

O  A. observations  
O  B. form new hypotheses  
O  C. draw a conclusion  
O  D. change the variable

Tuesday - Vocabulary Term of the Week

Some students have gathered a collection of rock samples from the school yard to study. They scraped the rocks against a piece of quartz from the school lab. What were they trying to investigate?

O  A. texture  
O  B. hardness  
O  C. color  
O  D. streak

Wednesday - Misconception of the Week

What is wrong with the following statement? The way rocks are broken down into smaller pieces is called weathering.

O  A. Erosion is what causes rocks to be broken into smaller pieces.  
O  B. Glaciers are what cause rocks to be broken into smaller pieces.  
O  C. Both A and B.  
O  D. There is nothing wrong with the statement.

Thursday - Graphic of the Week

This diagram represents

O  A. a food chain  
O  B. the transfer of energy  
O  C. a life cycle  
O  D. photosynthesis
1. Water and wind can cause ____________________, which allows rocks to be broken down into smaller pieces.

2. The life cycle of most animals begins as a(n)_______________ and ends with a(n)______________.

3. When conducting an experiment, it is important to make_________________________ regularly so that changes in data can be monitored and documented.

4. Determining the_________________________ of a mineral requires one to find whether or not the mineral can resist (avoid) being scratched by another material.

Butterflies, like other animals, go through different stages in their life cycle. Draw a diagram showing four stages in the life cycle of a butterfly. Label each stage of your diagram.
Monday - Process Skill of the Week

Which of these tools are needed to measure the length and mass of a seashell?

O A a ruler and a balance  
O B a ruler and a microscope  
O C a balance and a stopwatch  
O D a microscope and a magnet

Tuesday - Vocabulary Term of the Week

Which adaptation allows a walrus to float and sleep on top of water?

O A. reddish skin  
O B. bristly mustache  
O C. three-foot ivory tusks  
O D. air sacs under its throat

Wednesday - Misconception of the Week

What is wrong with the following statement? All animals get oxygen by breathing air.

O A. There is nothing wrong with this statement.  
O B. Some animals get oxygen through their skin.  
O C. Some animals get oxygen from the water.  
O D. Both B and C are correct.

Thursday - Graphic of the Week

The figure shows the same container at three different times. The container is shown with water and salt at 45 degrees, 60 degrees, and 75 degrees. Which statement best describes what happens to the salt?

O A. More salt is dissolving at higher temperatures.  
O B. More salt is visible at higher temperatures.  
O C. Salt is completely dissolved at 10 degrees.  
O D. Salt does not dissolve in hot water.
1. __________________ is the gas that is given off by plants and taken in by animals so they can grow and survive.

2. Traits that enable animals to survive in their surroundings are called ____________________.

3. A ____________________ is used to measure the amount of mass an object has by placing the object on one side and weights (mg, g, kg) on the other.

4. ____________________ temperatures cause minerals to dissolve (disappear) in a liquid.

Thomas was doing an experiment to determine how Miracle Grow affects the growth of a bean plant. He used the same amount of water, soil, and light for both plants. The only variable he changed was Plant A received Miracle Grow, as well. Each day he wanted to measure the length and mass of his plants to chart their growth. Identify two tools he should use and explain how Thomas should use them to take these measurements daily. Use words and/or pictures to explain your answer.
Monday - Process Skill of the Week
Shanise was testing the hardness of minerals. She created a table for her results. After testing a mineral, she should...
O A form a hypothesis
O B draw a conclusion
O C design an experiment
O D record her findings

Tuesday - Vocabulary Term of the Week
When animals stay hidden in the environment because of their colors, shapes, or patterns, they use...
O A. metamorphosis
O B. camouflage
O C. hibernation
O D. migration

Wednesday - Misconception of the Week
What is wrong with the following statement? Minerals are made of rocks.
O A. There is nothing wrong with this statement.
O B. Rocks and minerals are not different in any way.
O C. Minerals are alive and growing.
O D. Rocks are made of minerals.

Thursday - Graphic of the Week
A student uses the fulcrum and board shown below to move a large rock. Friends suggest ways to revise the design. Which suggestion would help the student move the rock while using less force?
O A. put the fulcrum on top of the board
O B. move the fulcrum closer to the rock
O C. experiment at a different time of day
O D. increase the size of the rock
1. If an object is non-living, solid, has a crystal form, and was created in nature, it is likely to be a _____________.

2. The mass of an object, as well as the ________________ and _______________ of the force affect the motion of an object.

3. When animals try to disguise themselves for protection against predators, they are using _________________.

4. Streak and _________________ are two ways to identify minerals.

Some animals have ways to mask themselves when in danger. Identify one animal that uses this strategy for protection and describe how it goes about “hiding” from predators. Use pictures and/or words to explain your answer.
### Daily Science Review #5 (GP1)

**Name _________________________________   Date ___________________**

### Monday - Process Skill of the Week

Joshua has decided that he wants to test the effect of acid rain on the growth of plants. What does Joshua need to do before doing any experimenting?

- O A. draw a conclusion
- O B. form a hypothesis
- O C. design an experiment
- O D. record his findings

### Tuesday - Vocabulary Term of the Week

Which is an example of a predator?

- O A. a cat eating from its bowl
- O B. a guinea pig eating lettuce
- O C. a cardinal eating a worm
- O D. a squirrel eating a nut

### Wednesday - Misconception of the Week

What is wrong with the following statement?

The thinnest layer of the earth is called the mantle.

- O A. There is nothing wrong with this statement.
- O B. The outer core is the thinnest layer.
- O C. The inner core is the thinnest layer.
- O D. The crust is the thinnest layer.

### Thursday - Graphic of the Week

Rocks formed in areas once covered by oceans often contain the fossil remains of animals that lived in the sea. Which of these was once covered by ocean waters?

- [A] [B] [C] [D]
1. One can learn about organisms from the past when they observe _______________ that were left behind when rock hardened around the plant or animal remains.

2. Earth has four layers. They are inner core, __________________________, crust, and _______________.

3. A ______________________ is an animal that hunts, catches, and eats another animal.

4. After deciding on a question and doing some research, one must _______________________________ before conducting an experiment.

Earth has four layers. Draw a diagram that clearly shows each of the layers and the thickness of those layers. Be sure to label each of the four layers.
Monday - Process Skill of the Week
Jamel has been recording data on the growth of two bean plants for a month. What does Jamel need to do now with his findings?
O A. draw a conclusion
O B. form a hypothesis
O C. design an experiment
O D. record his findings

Tuesday - Vocabulary Term of the Week
Which is an example of reusing?
O A. turning used worksheets into new white paper
O B. planting fruits and vegetables in a garden
O C. turning the water off while you are brushing your teeth
O D. using an empty pop bottle to hold your drinking water

Wednesday - Misconception of the Week
What is wrong with the following statement?
All nonliving things interact with living things in an environment to create a community.
O A. There is nothing wrong with this statement.
O B. These things create an ecosystem.
O C. These things create a habitat.
O D. All three statements are correct.

Thursday - Graphic of the Week
Which diagram shows an example of metamorphosis?

A   B   C   D
1. When Keisha decided to put her pencils in the old Crystal Light container, she was helping the environment by ________________ items.

2. A(n) ____________________________ is formed when all living and nonliving organisms interact in an environment.

3. ____________________________ is the term used when an insect changes form completely during its life cycle.

4. When testing an idea, one must do research, form a hypothesis, conduct an experiment, record data, and finally ____________________________.

In an effort to make you more concerned about your environment, your teacher has asked you to find some type of “trash” and turn it into a “treasure”. In other words, your teacher wants you to discover another use for some trash. Use pictures and/or words to describe your new “treasure” and how it was changed from trash. Be sure to label any pictures.
Monday - Process Skill of the Week

Which tool would Micah use to observe extremely small objects?

- A. a balance
- B. a telescope
- C. a magnifying glass
- D. a microscope

Tuesday - Vocabulary Term of the Week

Which specific trait defines a mammal?

- A. They feed their young milk.
- B. They have some type of hair.
- C. They breathe with lungs.
- D. A, B and C are correct.

Wednesday - Misconception of the Week

What is wrong with the following statement? Friction is the force which slows down a baseball rolling on a field.

- A. There is nothing wrong with this statement.
- B. Magnetism is the force.
- C. A push is the force.
- D. A pull is the force.

Thursday - Graphic of the Week

What is the mass of these rocks?

- A. 10 grams
- B. 17 grams
- C. 19 grams.
- D. 22 grams.
1. When determining the ________________ of an object, one should measure the object with a scale.

2. A ______________________ allows one to observe anything with closer detail, while a ______________________ allows one to see things that cannot be seen well with the eye alone.

3. A ______________________ is an animal that has a backbone and hair or fur, breathes with lungs, gives birth to live young, and feeds milk to its young.

4. ________________ is a force that slows an object in motion.

Diversity in the world exists not only among people, but also among different kinds of animals. Identify two characteristics that scientists use to classify animals.
Monday - Process Skill of the Week

When checking on apples that had been placed in the room, Tommy touched the apples. Which skill was he using?

O A. prediction  
O B. observation  
O C. inference  
O D. experimenting

Tuesday - Vocabulary Term of the Week

Resources that nature produces over and over again are called...

O A. reusable resources  
O B. growing resources  
O C. renewable resources  
O D. nonrenewable resources

Wednesday - Misconception of the Week

What is wrong with the following statement? The weaker the force, the greater the change in motion.

O A. Stronger forces cause greater change.  
O B. The larger the mass of an object, the easier it is to move.  
O C. Heavier objects require less force.  
O D. There is nothing wrong with the statement.

Thursday - Graphic of the Week

Sedimentary rocks have visible layers of small pieces of other rocks. Based on the information in the rock sample table, which is a sedimentary rock?

<table>
<thead>
<tr>
<th>Rock Samples</th>
<th>Observations</th>
<th>Sketch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>tiny grains arranged in layers</td>
<td>![Limestone Sketch]</td>
</tr>
<tr>
<td>Obsidian</td>
<td>looks like black glass</td>
<td>![Obsidian Sketch]</td>
</tr>
<tr>
<td>Pumice</td>
<td>light gray, has tiny holes like a sponge</td>
<td>![Pumice Sketch]</td>
</tr>
<tr>
<td>Conglomerate</td>
<td>small rocks and pebbles of different colors stuck together</td>
<td>![Conglomerate Sketch]</td>
</tr>
</tbody>
</table>

O A. pumice  
O B. granite  
O C. obsidian  
O D. limestone
1. When ________________ forces act in opposite directions, there will be no movement because the forces cancel each other out and the resulting force is zero.

2. __________________ are resources that can be replaced during a person’s lifetime.

3. ______________________ and ______________________ are tools that can be used to allow one to view items more closely than can be seen with one’s eyes alone.

4. Observations are made by using our sense of taste, __________, __________, __________, and __________.

A scientist collected samples of rocks. When arriving at the lab, she discovered she had 8 sedimentary rocks, 5 igneous rocks and 3 metamorphic rocks. Construct a graph that displays her data. Be sure to appropriately label your graph and give it a title.
### Monday - Process Skill of the Week

To measure the capacity (volume) of a liquid, you would use which tool?

- A. a meter stick
- B. a graduated cylinder
- C. a timer
- D. a balance scale

### Tuesday - Vocabulary Term of the Week

When insects change their appearance completely from birth to death, it is called?

- A. life cycle
- B. camouflage
- C. complete metamorphosis
- D. inherited

### Wednesday - Misconception of the Week

What is wrong with the following statement?

Hibernation is when animals move from one place to another during various seasons.

- A. Migration is the seasonal movement of animals.
- B. Mimicry is the seasonal movement of animals.
- C. There is nothing wrong with the statement.
- D. Animals do not move during different seasons.

### Thursday - Graphic of the Week

What happens to the dead leaves and animals that fall to the forest floor?

- A. They disintegrate into the atmosphere.
- B. They remain preserved in the rainforest.
- C. They decay and become part of the soil.
- D. They are washed into the oceans by heavy rains.
1. Butterflies and darkling beetles go through ____________________________ because they completely change the way they look during their life cycle.

2. The amount of space that an object or substance takes up is known as its ____________________.

3. When animals move from one place to another during different seasons, it is called ____________________.

4. Humus is the part of soil that is made up of parts of __________  _______________ and _______________.

Not all soils are the same. Identify the type of soil that primarily exists in the top layer (topsoil). Explain what that layer of soil generally consists of and what could be found in that soil. Use words and/or pictures to explain your answer. Label all pictures.
Monday - Process Skill of the Week

A student did an experiment to find out if the temperature affects the rate of growth of a particular plant. What should the student do to accurately communicate the results of the experiment?

O A. Write a story about a favorite plant.
O B. Make a list of materials used in the experiment.
O C. Draw a picture of the equipment used in the experiment.
O D. Display all the recorded measurements in a table or a graph.

Tuesday - Vocabulary Term of the Week

Making imprints of objects in clay is most useful for learning about -

O A. weathering
O B. fossils
O C. renewable resources
O D. the rock cycle

Wednesday - Misconception of the Week

What is wrong with the following statement? Metamorphic rock was once melted, but then it cooled and hardened into rock form.

O A. There is nothing wrong with this statement.
O B. Sedimentary rock forms from melting, cooling and hardening.
O C. Igneous rock forms from melting, cooling and hardening.
O D. Metamorphic rock has noticeable layers of settled material.

Thursday - Graphic of the Week

If the person in the picture lets go of the rope, the weight (w) will fall to the ground. What force is acting to pull the weight to the ground?

O A. friction
O B. gravity
O C. collision
O D. magnetism
1. Evidence of what once lived in a habitat a long time ago can be found in _fossils_________.

2. A _______graph____________ or table can be used to display and/or compare data that is collected in an experiment.

3. __Gravity________ is the force that pulls objects toward each other.

4. __Metamorphic______ rocks are formed deep in the Earth’s crust when they have been heated and squeezed with a great deal of pressure.

Forces inside and outside the Earth cause one type of rock to change into another type of rock. This process is called the rock cycle. Describe and/or illustrate the rock cycle and how these changes occur between different types of rocks. Be sure to label any illustrations.
Monday - Process Skill of the Week
An experiment that measures the daily growth of bacteria would require which of the following to occur daily?

O A. observations
O B. form new hypotheses
O C. draw a conclusion
O D. change the variable

Tuesday - Vocabulary Term of the Week
Some students have gathered a collection of rock samples from the school yard to study. They scraped the rocks against a piece of quartz from the school lab. What were they trying to investigate?

O A. texture
O B. hardness
O C. color
O D. streak

Wednesday - Misconception of the Week
What is wrong with the following statement? The way rocks are broken down into smaller pieces is called weathering.

O A. Erosion is what causes rocks to be broken into smaller pieces.
O B. Glaciers are what cause rocks to be broken into smaller pieces.
O C. Both A and B.
O D. There is nothing wrong with the statement.

Thursday - Graphic of the Week
This diagram represents

O A. a food chain
O B. the transfer of energy
O C. a life cycle
O D. photosynthesis
1. Water and wind can cause _weathering____, which allows rocks to be broken down into smaller pieces.

2. The life cycle of most animals begins as a(n)_egg____ and ends with a(n)_adult____.

3. When conducting an experiment, it is important to make ___observations_____ regularly so that changes in data can be monitored and documented.

4. Determining the __hardness____ of a mineral requires one to find whether or not the mineral can resist (avoid) being scratched by another material.

Butterflies, like other animals, go through different stages in their life cycle. Draw a diagram showing four stages in the life cycle of a butterfly. Label each stage of your diagram.
### Monday - Process Skill of the Week

Which of these tools are needed to measure the length and mass of a seashell?

- A. a balance and a stopwatch
- B. a ruler and a microscope
- C. a ruler and a balance
- D. a microscope and a magnet

**3.SI.A.1**

### Tuesday - Vocabulary Term of the Week

Which adaptation allows a walrus to float and sleep on top of water?

- A. reddish skin
- B. bristly mustache
- C. three-foot ivory tusks
- D. air sacs under its throat

**3.LS.B.2**

### Wednesday - Misconception of the Week

What is wrong with the following statement? All animals get oxygen by breathing air.

- A. There is nothing wrong with this statement.
- B. Some animals get oxygen through their skin.
- C. Some animals get oxygen from the water.
- D. Both B and C are correct.

**3.LS.B.2**

### Thursday - Graphic of the Week

The figure shows the same container at three different times. The container is shown with water and salt at 45 degrees, 60 degrees and 75 degrees. Which statement best describes what happens to the salt?

- A. More salt is dissolving at higher temperatures.
- B. More salt is visible at higher temperatures.
- C. Salt is completely dissolved at 10 degrees.
- D. Salt does not dissolve in hot water.

**3.SI.B.3**
1. **Oxygen** is the gas that is given off by plants and taken in by animals so they can grow and survive.

2. Traits that enable animals to survive in their surroundings are called **adaptations**.

3. A **balance scale** is used to measure the amount of mass an object has by placing the object on one side and weights (mg, g, kg) on the other.

4. **Increasing (hot) (heated), etc.** temperatures can cause minerals to dissolve (disappear) in a liquid.

Thomas was doing an experiment to determine how Miracle Grow affects the growth of a bean plant. He used the same amount of water, soil, and light for both plants. The only variable he changed was Plant A received Miracle Grow, as well. Each day he wanted to measure the length and mass of his plants to chart their growth. Identify two tools he should use and explain how Thomas should use them to take these measurements daily. Use words and/or pictures to explain your answer. Label all pictures.
Monday - Process Skill of the Week

Shanise was testing the hardness of minerals. She created a table for her results. After testing a mineral, she should...

- A. form a hypothesis
- B. draw a conclusion
- C. design an experiment
- D. record her findings

Tuesday - Vocabulary Term of the Week

When animals stay hidden in the environment because of their colors, shapes, or patterns, they use...

- A. metamorphosis
- B. camouflage
- C. hibernation
- D. migration

Wednesday - Misconception of the Week

What is wrong with the following statement? Minerals are made of rocks.

- A. There is nothing wrong with this statement.
- B. Rocks and minerals are not different in any way.
- C. Minerals are alive and growing.
- D. Rocks are made of minerals.

Thursday - Graphic of the Week

A student uses the fulcrum and board shown below to move a large rock. Friends suggest ways to revise the design. Which suggestion would help the student move the rock while using less force?

- A. put the fulcrum on top of the board
- B. move the fulcrum closer to the rock
- C. experiment at a different time of day
- D. increase the size of the rock
1. If an object is non-living, solid, has a crystal form, and was created in nature, it is likely to be a __mineral__.

2. The mass of an object, as well as the __strength____ and __direction__ of the force affect the motion of an object.

3. When animals try to disguise themselves for protection against predators, they are using __camouflage____.

4. Streak and __hardness____ are two ways to identify minerals.

Some animals have ways to mask themselves when in danger. Identify one animal that uses this strategy for protection and describe how it goes about “hiding” from predators. Use pictures and/or words to explain your answer. Label all pictures.
### Monday - Process Skill of the Week
Joshua has decided that he wants to test the effect of acid rain on the growth of plants. What does Joshua need to do before doing any experimenting?
- A. draw a conclusion
- B. **form a hypothesis**
- C. design an experiment
- D. record his findings

---

### Tuesday - Vocabulary Term of the Week
Which is an example of a predator?
- A. a cat eating from its bowl
- B. a guinea pig eating lettuce
- C. **a cardinal eating a worm**
- D. a squirrel eating a nut

---

### Wednesday - Misconception of the Week
What is wrong with the following statement?
The thinnest layer of the earth is called the mantle.
- A. There is nothing wrong with this statement.
- B. The outer core is the thinnest layer.
- C. The inner core is the thinnest layer.
- D. **The crust is the thinnest layer.**

---

### Thursday - Graphic of the Week
Rocks formed in areas once covered by oceans often contain the fossil remains of animals that lived in the sea. Which of these was once covered by ocean waters?

- A
- B
- C
- D

**Columbus City Schools**

Grade 4
1. One can learn about organisms from the past when they observe __fossils__ that were left behind when rock hardened around the plant or animal remains.

2. Earth has four layers. They are inner core, __outer core__, crust, and __mantle__.

3. A __predator__ is an animal that hunts, catches, and eats another animal.

4. After deciding on a question and doing some research, one must __form a hypothesis__ before conducting an experiment.

Earth has four layers. Draw a diagram that clearly shows each of the layers and the thickness of those layers. Be sure to label each of the four layers.
Monday - Process Skill of the Week

Jamel has been recording data on the growth of two bean plants for a month. What does Jamel need to do now with his findings?

O A. draw a conclusion
O B. form a hypothesis
O C. design an experiment
O D. record his findings

Tuesday - Vocabulary Term of the Week

Which is an example of reusing?

O A. turning used worksheets into new white paper
O B. planting fruits and vegetables in a garden
O C. turning the water off while you are brushing your teeth
O D. using an empty pop bottle to hold your drinking water

Wednesday - Misconception of the Week

What is wrong with the following statement? All nonliving things interact with living things in an environment to create a community.

O A. There is nothing wrong with this statement.
O B. These things create an ecosystem.
O C. These things create a habitat.
O D. All three statements are correct.

Thursday - Graphic of the Week

Which diagram shows an example of metamorphosis?
1. When Keisha decided to put her pencils in the old Crystal Light container, she was helping the environment by __reusing__ items.

2. A(n) **ecosystem** is formed when all living and nonliving organisms interact in an environment.

3. ____ **Metamorphosis** ____ is the term used when an insect changes form completely during its life cycle.

4. When testing an idea, one must do research, form a hypothesis, conduct an experiment, record data, and finally _**draw a conclusion**_.

In an effort to make you more concerned about your environment, your teacher has asked you to find some type of “trash” and turn it into a “treasure”. In other words, your teacher wants you to discover another use for some trash. Use pictures and/or words to describe your new “treasure” and how it was changed from trash. Be sure to label any pictures.
Monday - Process Skill of the Week

Which tool would Micah use to observe extremely small objects?

O A  a balance
O B  a telescope
O C  a magnifying glass
O D  a microscope

Tuesday - Vocabulary Term of the Week

Which specific trait defines a mammal?

O A.  They feed their young milk.
O B.  They have some type of hair.
O C.  They breathe with lungs.
O D.  A, B and C are correct.

Wednesday - Misconception of the Week

What is wrong with the following statement? Friction is the force which slows down a baseball rolling on a field.

O A.  There is nothing wrong with this statement.
O B.  Magnetism is the force.
O C.  A push is the force.
O D.  A pull is the force.

Thursday - Graphic of the Week

What is the mass of these rocks?

O A.  10 grams
O B.  17 grams
O C.  19 grams.
O D.  22 grams.
1. When determining the **mass** of an object, one should measure the object with a scale.

2. A **magnifying glass (hand lens)** allows one to observe anything with closer detail, while a **microscope** allows one to see things that cannot be seen well with the eye alone.

3. A **mammal** is an animal that has a backbone and hair or fur, breathes with lungs, gives birth to live young, and feeds milk to its young.

4. **Friction** is a force that slows an object in motion.

Diversity in the world exists not only among people, but also among different kinds of animals. Identify two characteristics that scientists use to classify animals.
Monday - Process Skill of the Week

When checking on apples that had been placed in the room, Tommy touched the apples. Which skill was he using?

O A. prediction
O B. observation
O C. inference
O D. experimenting

Tuesday - Vocabulary Term of the Week

Resources that nature produces over and over again are called...

O A. reusable resources
O B. growing resources
O C. renewable resources
O D. nonrenewable resources

Wednesday - Misconception of the Week

What is wrong with the following statement? The weaker the force, the greater the change in motion.

O A. Stronger forces cause greater change.
O B. The larger the mass of an object, the easier it is to move.
O C. Heavier objects require less force.
O D. There is nothing wrong with the statement.

Thursday - Graphic of the Week

Sedimentary rocks have visible layers of small pieces of other rocks. Based on the information in the rock sample table, which is a sedimentary rock?

<table>
<thead>
<tr>
<th>Sample</th>
<th>Observations</th>
<th>Sketch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>• tiny grains arranged in layers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• fossils gritty</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• reddish tan or gray</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• has a fish fossil</td>
<td></td>
</tr>
<tr>
<td>Conglomerate</td>
<td>• small rocks and pebbles of different colors stuck together</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• fossils kumpy</td>
<td></td>
</tr>
<tr>
<td>Obsidian</td>
<td>• looks like black glass</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• cannot see parts of other things</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• feels smooth</td>
<td></td>
</tr>
<tr>
<td>Pumice</td>
<td>• light gray</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• has tiny holes like a sponge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• very lightweight</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• feels very rough</td>
<td></td>
</tr>
<tr>
<td>Granite</td>
<td>• tiny specks that are black, white and gray</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• specks are about the same size</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• feels rough</td>
<td></td>
</tr>
</tbody>
</table>

O A. pumice
O B. granite
O C. obsidian
O D. limestone
1. When **equal** forces act in opposite directions, there will be no movement because the forces cancel each other out and the resulting force is zero.

2. **Renewable resources** are resources that can be replaced during a person’s lifetime.

3. **Microscopes** and **magnifying glasses** are tools that can be used to allow one to view items more closely than can be seen with one’s eyes alone.

4. Observations are made by using our sense of taste, **taste**, **smell**, **hearing**, and **sight**.

A scientist collected samples of rocks. When arriving at the lab, she discovered she had 8 sedimentary rocks, 5 igneous rocks and 3 metamorphic rocks. Construct a graph that displays her data. Be sure to appropriately label your graph and give it a title.
Monday - Process Skill of the Week

To measure the capacity (volume) of a liquid, you would use which tool?

O A. a meter stick
O B. a graduated cylinder
O C. a timer
O D. a balance scale

Tuesday - Vocabulary Term of the Week

When insects change their appearance completely from birth to death, it is called?

O A. life cycle
O B. camouflage
O C. complete metamorphosis
O D. inherited

Wednesday - Misconception of the Week

What is wrong with the following statement?

Hibernation is when animals move from one place to another during various seasons.

O A. Migration is the seasonal movement of animals.
O B. Mimicry is the seasonal movement of animals.
O C. There is nothing wrong with the statement.
O D. Animals do not move during different seasons.

Thursday - Graphic of the Week

What happens to the dead leaves and animals that fall to the forest floor?

O A. They disintegrate into the atmosphere.
O B. They remain preserved in the rainforest.
O C. They decay and become part of the soil.
O D. They are washed into the oceans by heavy rains.
1. Butterflies and darkling beetles go through __**complete metamorphosis**___ because they completely change the way they look during their life cycle.

2. __**Mass**____ is the amount of matter in an object.

3. When animals move from one place to another during different seasons, it is called __**migration**________.

4. Humus is the part of soil that is made up of parts of __**dead**__ __**plants**___ and __**animals**__.  

Not all soils are the same. Identify the type of soil that primarily exists in the top layer (topsoil). Explain what that layer of soil generally consists of and what could be found in that soil. Use words and/or pictures to explain your answer. Label all pictures.
Monday - Process Skill of the Week

Which tools are needed to measure the speed of a rolling ball?

O A. stopwatch, ruler  
O B. spring scale, ruler  
O C. thermometer, balance  
O D. thermometer, stopwatch

Tuesday - Vocabulary Term of the Week

A car will skid more on a wet road than on a dry road. This happens because between the tires and the dry road, there is more -

O A. gravity  
O B. magnetism  
O C. friction  
O D. heat

Wednesday - Misconception of the Week

What is wrong with the following statement? Plants need oxygen to make food.

O A. Plants need nitrogen to make food.  
O B. Plants need sunlight to make food.  
O C. Plants need sugar to make food.  
O D. There is nothing wrong with this statement.

Thursday - Graphic of the Week

The illustration shows four different parts of a plant. Which part of the plant transports water from the roots to the leaves?

O A. 1  
O B. 2  
O C. 3  
O D. 4
1. The force that slows down a baseball on a field is known as _______________________________.

2. A plant uses _________________ to make its own food through a process called photosynthesis.

3. The function of a plant’s _______________ is to absorb water from the soil.

4. _______________ and _______________ are tools that can be used to measure speed and distance.

Some people think that friction is good, while others believe that friction acts as a negative force. Identify one positive and one negative effect that friction has in daily life. Then, provide one example to illustrate each type of effect.
Monday - Process Skill of the Week

Which of the following would be safe to do during a lab activity?

- O A. running in the classroom
- O B. leaving a water spill on the floor
- O C. touching hot surfaces
- O D. following lab rules

Tuesday - Vocabulary Term of the Week

Leaves use sunlight, water, and carbon dioxide to make glucose (sugar), which serves as a plant’s food source. This process is known as –

- O A. photosynthesis
- O B. phloem
- O C. chloroplasts
- O D. xylem

Wednesday - Misconception of the Week

What is wrong with the following statement? The effect of the force of friction is strengthened when the floor is wet.

- O A. There is nothing wrong with this statement.
- O B. The effect of gravity is strengthened
- O C. The effect of gravity is lessened
- O D. The effect of friction is lessened

Thursday - Graphic of the Week

What best completes the blank line in the diagram above?

- O A. sleep
- O B. move about freely
- O C. need water
- O D. have stiff cell walls
1. _______ act like pipelines in plants to allow water and nutrients travel between the roots and leaves.

2. To be safe when “doing” science, it is very important to _____________________________________, work cooperatively with others and ask your teacher for help if you are uncertain about safety.

3. __________________ is the force between two surfaces rubbing against each other.

4. Plants and animals have some similar needs that have to be met for them to survive: space (room to grow) and ________________.

Plants and animals have different structures to help them survive and reproduce. Identify one plant structure and describe its function. Then, identify one animal structure and describe its function.
Monday - Process Skill of the Week

Two students wanted to find out which of their toy trucks would go farthest. They decided to let each truck roll down a ramp and then measure how far it rolled on the ground. What condition must be held constant if they want a fair test?

O  A. the time of day  
O  B. the incline of the ramp  
O  C. the weight of the ramp  
O  D. the temperature of the room

Tuesday - Vocabulary Term of the Week

Plants that have a system of tubes that transport water are called -

O  A. gymnosperms  
O  B. angiosperms  
O  C. vascular  
O  D. nonvascular

Wednesday - Misconception of the Week

What is wrong with the following statement?
Soil that is dark and spongy probably contains a lot of silt.

O  A. There is nothing wrong with this statement.  
O  B. This soil probably contains a lot of sand.  
O  C. This soil probably contains a lot of humus.  
O  D. This soil probably contains a lot of clay.

Thursday - Graphic of the Week

Many plants produce seeds. Often these seeds are spread by the wind. Which of the seed types below is likely to be spread farthest by the wind?
1. _________________ contains decayed biotic (living) material and is dark and spongy.

2. When bees drink nectar from flowers, they help plants to _____________________.

3. Carefully designing an experiment requires all but one condition to remain ________________; only one variable should be changed.

4. Mosses are _________________ plants because they do not have a true root system that carries nutrients from one place to another inside the plant.

Living things need to have certain conditions in their environment in order to survive. Choose one living thing and describe four necessary characteristics existing in its environment that allow it to grow and thrive. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week

A scientist writes an article for a scientific journal describing an experiment he has conducted. Why is it important that he clearly describe all the steps he followed in conducting the experiment?

- A. Scientists should be able to repeat the experiment.
- B. Comparisons between experiments are often unfair.
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- D. His conclusions should prove/disprove his hypothesis.

Tuesday - Vocabulary Term of the Week

Plants give off __________ during photosynthesis.

- A. oxygen
- B. carbon dioxide
- C. nitrogen
- D. sunlight

Wednesday - Misconception of the Week

What is wrong with the following statement?
Igneous rock was once melted, but then it cooled and hardened into rock form.

- A. There is nothing wrong with this statement.
- B. Sedimentary rock forms from melting, cooling and hardening.
- C. Metamorphic rock forms from melting, cooling and hardening.
- D. Igneous rock has noticeable layers of settled material.

Thursday - Graphic of the Week

Which seed has structures that allow animals to transport the seed on their fur?

- A. corn
- B. cocklebur
- C. maple seed
- D. acorn
1. ___________ rock is formed above ground when lava from a volcano cools and hardens.

2. For plants to reproduce, they rely on specific ________________ that will help them travel from one place to another.

3. Animals give off ________________ to assist plants, while plants give off ____________ to assist animals.

4. To prove the reliability of experimentation, scientists should be able to ____________ the study.

Plants and animals in an ecosystem interact in a variety of ways. Identify two types of interactions that take place in an ecosystem.
Monday - Process Skill of the Week

Which of the following statements expresses an opinion?

- A. Marie Curie discovered radium.
- B. A textbook is about 30 centimeters long.
- C. Our universe may not last forever.
- D. The experiment ended at 12:35 p.m.

Tuesday - Vocabulary Term of the Week

The layer of Earth that is the hottest is -

- A. crust
- B. mantle
- C. inner core
- D. outer core

Wednesday - Misconception of the Week

What is wrong with the following statement? When a plant’s roots grow into the cracks of a rock, the cracks widen and eventually split the rock. This is known as erosion.

- A. There is nothing wrong with this statement.
- B. This is known as deposition.
- C. This is known as a landslide.
- D. This is known as weathering.

Thursday - Graphic of the Week

What characteristic has been used to classify these animals into groups?

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<td>Goldfish</td>
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<tr>
<td>Bumble bees</td>
<td>Cats</td>
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</table>

- A. whether they can fly
- B. whether they need food
- C. whether they have a backbone
- D. whether they live on land or in the water
1. A(n) ________________________ states something that one believes, while a(n) ____________ states something that is, in deed, true.
2. The grouping of organisms into various categories is known as ________________________.
3. The ___________________________ of Earth is by far the hottest, measuring at an estimated 6000 degrees Celsius.
4. _________________ occurs each year when water seeps into concrete, freezes, and then widens spaces because ice takes up more space. This, many times, results in pot holes.

Scientists must use a classification system to organize living and nonliving organisms. Demonstrate how a scientist could classify the following: a black widow, a lady bug, a grasshopper, a butterfly, an ant, a fly, a bee, a cricket, a moth, a daddy long leg, a tarantula, a darkling beetle, a brown recluse, water bug, roach, and a wasp. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week

<table>
<thead>
<tr>
<th>Activity Stage</th>
<th>Heart Rate of Person A (beats per min)</th>
<th>Heart Rate of Person B (beats per min)</th>
<th>Heart Rate of Person C (beats per min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before exercise</td>
<td>75</td>
<td>62</td>
<td>70</td>
</tr>
<tr>
<td>After exercise</td>
<td>120</td>
<td>110</td>
<td>130</td>
</tr>
</tbody>
</table>

Which of the following statements is the best conclusion for this experiment?

O A. Exercise triples a person’s heart rate.
O B. Exercise decreases a person’s heart rate.
O C. Heart rate is not affected by exercise.
O D. Heart rate is increased by exercise.

Tuesday - Vocabulary Term of the Week

The Artic hare’s brown fur turns white in winter. This adaptation helps the Artic hare -

O A. look for food after dark.
O B. hide from enemies in snow.
O C. live in cold temperatures.
O D. get along with other animals.

Wednesday - Misconception of the Week

What is wrong with the following statement? An example of a conifer tree is a pine tree because its seeds are in cones, instead of fruit.

O A. There is nothing wrong with this statement.
O B. A rose bush is an example of a conifer.
O C. A pine tree is an example of a deciduous tree.
O D. A lemon tree is an example of a conifer.

Thursday - Graphic of the Week

Examine the rock layers pictured below. Which of these layers is the youngest?

O A. 2
O B. 7
O C. 4
O D. 5
1. Lions have strong legs for chasing animals and sharp claws and teeth for grabbing them. This is an example of a(n) _________________.

2. ___________________ is an important part of doing science; it requires one to examine the data closely and make judgments about the results.

3. The age of a layer of rock can be determined by its ________________ in the ground.

4. A conifer can be identified by the ________________ it produces.

Examine the rock layers pictured below. Identify which of these layers is the oldest. Explain how you know that layer is the oldest.
Monday - Process Skill of the Week

This experiment was probably set up to answer which of the following questions?

O A. What is the mass of the ants?
O B. Will ants go to a dark or light area?
O C. How many kinds of ants are there?
O D. Where do ants get food?

Tuesday - Vocabulary Term of the Week

Animals that get their energy by eating the flesh of other animals are known as -

O A. Omnivores
O B. Herbivores
O C. Carnivores
O D. Consumers

Wednesday - Misconception of the Week

What is wrong with the following statement?
Plants use the sun’s energy captured by chlorophyll to turn water and oxygen into a sugar substance for the plant.

O A. There is nothing wrong with this statement.
O B. Water and carbon dioxide are what is transformed.
O C. Water and soil are what is transformed.
O D. The sun’s energy is captured by chlorine.

Thursday - Graphic of the Week

The rock column above shows the layers in a rock formation. The three diagrams above show the positions of fossils in different rock layers. According to this information, which fossil is the youngest?
1. When designing an experiment, it is important to identify ______________ question that tests ______________ variable.

2. A spider is a(n) ______________ because it eats insects to gain energy.

3. ______________ is the green pigment in leaves that captures sunlight and allows photosynthesis to occur.

4. One must look in rocks to search for the ______________ of organisms that lived long ago.

Identify three parts of a plant and describe their function. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week
William wants to see how much his lima bean plant has grown over the past week. Which tool would be most appropriate to take this type of measurement?

O A. A measuring cup
O B. A graduated cylinder
O C. A thermometer
O D. A ruler

Tuesday - Vocabulary Term of the Week
A Venus flytrap eats insects and makes its own food through photosynthesis. What kind of organism is a Venus flytrap?

O A. plant
O B. animal
O C. herbivore
O D. omnivore

Wednesday - Misconception of the Week
What is wrong with the following statement? Fossils are abundant in all types of rocks.

O A. There is nothing wrong with this statement.
O B. Fossils are found primarily in sedimentary rock.
O C. Fossils are found primarily in igneous rock.
O D. Fossils are found primarily in metamorphic rock.

Thursday - Graphic of the Week
Which of these objects would require the most force to move a distance of 5 meters?

O A. marble
O B. tennis ball
O C. wooden box
O D. small boulder
1. To determine the amount of force required to move an object, one would have to find the object’s ________________.

2. Metamorphic rock is formed when the rock undergoes tremendous ____________ and ____________.

3. Any organism that acquires nutrients through ________________ can be classified as a plant.

4. A _______________ measures the length of any object, while a ________________ measures temperature.

Rocks can change many times over the years. Describe how a sedimentary rock can be transformed into a metamorphic rock and then change from a metamorphic rock into an igneous rock. Use words and/or pictures to explain your answer. Label all pictures.
### Monday - Process Skill of the Week
Sarah adds vinegar to a container of baking soda in her science class. Bubbles of carbon dioxide form. What safety precaution should Sarah take while conducting this experiment?

- A. wear safety goggles
- B. wash her eyes with eyewash
- C. list the materials at the end of the experiment
- D. leave her materials for the next class to clean

### Tuesday - Vocabulary Term of the Week
Which of the following is most likely to increase friction?

- A. wax on wood floors
- B. snow on a roadway
- C. wheels on roller skates
- D. grooved rubber soles on shoes

### Wednesday - Misconception of the Week
What is wrong with the following statement? When rain falls on a plant, it directly helps the plant make new seeds.

- A. There is nothing wrong with this statement.
- B. When bees drink nectar from flowers, it directly helps make new seeds.
- C. Trimming trees directly helps make new seeds.
- D. When animals eat the flowers, it directly helps make new seeds.

### Thursday - Graphic of the Week
What is the correct order of development for this frog?

- A. 4,2,3,1
- B. 3,1,4,2
- C. 2,1,4,3
- D. 2,4,1,3
1. The life cycle of a frog includes: 1) __________, 2) __________, 3) tadpole with legs, 4) __________.

2. For plants to reproduce, they need some way for pollen to ______________ from the stamens to the pistil. This is known as pollination.

3. Whenever scientists work with potentially harmful ingredients, it is important to take precautions such as wearing ___________________________ and ______________________________.

4. ________________ is decreased if there is an oil spill covering a roadway.

Describe two ways that plants spread their seeds so they can reproduce. Use pictures and/or words to explain your answer. Label all pictures.
### Monday - Process Skill of the Week

Which tools are needed to measure the speed of a rolling ball?

- **A. stopwatch, ruler**
- **B. spring scale, ruler**
- **C. thermometer, balance**
- **D. thermometer, stopwatch**

### Tuesday - Vocabulary Term of the Week

A car will skid more on a wet road than on a dry road. This happens because between the tires and the dry road, there is more -

- **A. gravity**
- **B. magnetism**
- **C. friction**
- **D. heat**

### Wednesday - Misconception of the Week

What is wrong with the following statement? Plants need oxygen to make food.

- **A. Plants need nitrogen to make food.**
- **B. Plants need sunlight to make food.**
- **C. Plants need sugar to make food.**
- **D. There is nothing wrong with this statement.**

### Thursday - Graphic of the Week

The illustration shows four different parts of a plant. Which part of the plant transports water from the roots to the leaves?

- **A. 1**
- **B. 2**
- **C. 3**
- **D. 4**
1. The force that slows down a baseball on a field is known as __friction__.

2. A plant uses __sunlight__ to make its own food through a process called photosynthesis.

3. The function of a plant’s __roots__ is to absorb water from the soil.

4. ___A stopwatch_____ and ___a ruler (meter stick)___ are tools that can be used to measure speed and distance.

Some people think that friction is good, while others believe that friction acts as a negative force. Identify one positive and one negative effect that friction has in daily life. Then, provide one example to illustrate each type of effect.
Monday - Process Skill of the Week
Which of the following would be safe to do during a lab activity?

O A. running in the classroom
O B. leaving a water spill on the floor
O C. touching hot surfaces
O D. following lab rules

Tuesday - Vocabulary Term of the Week
Leaves use sunlight, water, and carbon dioxide to make glucose (sugar), which serves as a plant’s food source. This process is known as –

O A. photosynthesis
O B. phloem
O C. chloroplasts
O D. xylem

Wednesday - Misconception of the Week
What is wrong with the following statement? The effect of the force of friction is strengthened when the floor is wet.

O A. There is nothing wrong with this statement.
O B. The effect of gravity is strengthened
O C. The effect of gravity is lessened
O D. The effect of friction is lessened

Thursday - Graphic of the Week

What best completes the blank line in the diagram above?

O A. sleep
O B. move about freely
O C. need water
O D. have stiff cell walls
1. **Stems** act like pipelines in plants to allow water and nutrients to travel between the roots and leaves.

2. To be safe when “doing” science, it is very important to follow all directions, work cooperatively with others and ask your teacher for help if you are uncertain about safety.

3. **Friction** is the force between two surfaces rubbing against each other.

4. Plants and animals have some similar needs that have to be met for them to survive: space (room to grow) and **water**.

Plants and animals have different structures to help them survive and reproduce. Identify one plant structure and describe its function. Then, identify one animal structure and describe its function.
### Monday - Process Skill of the Week

Two students wanted to find out which of their toy trucks would go farthest. They decided to let each truck roll down a ramp and then measure how far it rolled on the ground. What condition must be held constant if they want a fair test?

- O A. the time of day
- O B. the incline of the ramp
- O C. the weight of the ramp
- O D. the temperature of the room

### Tuesday - Vocabulary Term of the Week

Plants that have a system of tubes that transport water are called -

- O A. gymnosperms
- O B. angiosperms
- O C. vascular
- O D. nonvascular

### Wednesday - Misconception of the Week

What is wrong with the following statement? Soil that is dark and spongy probably contains a lot of silt.

- O A. There is nothing wrong with this statement.
- O B. This soil probably contains a lot of sand.
- O C. This soil probably contains a lot of humus.
- O D. This soil probably contains a lot of clay.

### Thursday - Graphic of the Week

Many plants produce seeds. Often these seeds are spread by the wind. Which of the seed types below is likely to be spread farthest by the wind?

- A
- B
- C
- D
1. **Humus** contains decayed biotic (living) material and is dark and spongy.

2. When bees drink nectar from flowers, they help plants to **reproduce (produce new seeds)**.

3. Carefully designing an experiment requires all but one condition to remain **constant**; only one variable should be changed.

4. Mosses are **nonvascular** plants because they do not have a true root system that carries nutrients from one place to another inside the plant.

Living things need to have certain conditions in their environment in order to survive. Choose one living thing and describe four necessary characteristics existing in its environment that allow it to grow and thrive. Use pictures and/or words to explain your answer. Label all pictures.
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### Tuesday - Vocabulary Term of the Week

Plants give off ____________ during photosynthesis.

- **O A.** oxygen
- **O B.** carbon dioxide
- **O C.** nitrogen
- **O D.** sunlight

### Wednesday - Misconception of the Week

What is wrong with the following statement? Igneous rock was once melted, but then it cooled and hardened into rock form.

- **O A.** There is nothing wrong with this statement.
- **O B.** Sedimentary rock forms from melting, cooling and hardening.
- **O C.** Metamorphic rock forms from melting, cooling and hardening.
- **O D.** Igneous rock has noticeable layers of settled material.

### Thursday - Graphic of the Week

Which seed has structures that allow animals to transport the seed on their fur?

- A. corn
- B. cocklebur
- C. maple seed
- A. acorn

---

4.SI.C.3
4.LS.B.5
3.ES.C.1
4.LS.B.5
1. **Igneous** rock is formed above ground when lava from a volcano cools and hardens.

2. For plants to reproduce, they rely on specific **structures** that will help them travel from one place to another.

3. Animals give off **carbon dioxide** to assist plants, while plants give off **oxygen** to assist animals.

4. To prove the reliability of experimentation, scientists should be able to **repeat (replicate)** the study.

Plants and animals in an ecosystem interact in a variety of ways. Identify two types of interactions that take place in an ecosystem.
Monday - Process Skill of the Week

Which of the following statements expresses an opinion?

O A. Marie Curie discovered radium.
O B. A textbook is about 30 centimeters long.
O C. Our universe may not last forever.
O D. The experiment ended at 12:35 p.m.

Tuesday - Vocabulary Term of the Week

The layer of Earth that is the hottest is -

O A. crust
O B. mantle
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O D. outer core

Wednesday - Misconception of the Week

What is wrong with the following statement? When a plant’s roots grow into the cracks of a rock, the cracks widen and eventually split the rock. This is known as erosion.

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O D. This is known as weathering.

Thursday - Graphic of the Week

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What characteristic has been used to classify these animals into groups?

O A. whether they can fly
O B. whether they need food
O C. whether they have a backbone
O D. whether they live on land or in the water
1. A(n) **opinion** states something that one believes, while a(n) **fact** states something that is, in deed, true.

2. The grouping of organisms into various categories is known as _**classification**_.

3. The **inner core** of Earth is by far the hottest, measuring at an estimated 6000 degrees Celsius.

4. **Weathering** occurs each year when water seeps into concrete, freezes, and then widens spaces because ice takes up more space. This, many times, results in pot holes.

Scientists must use a classification system to organize living and nonliving organisms. Demonstrate how a scientist could classify the following: a black widow, a lady bug, a grasshopper, a butterfly, an ant, a fly, a bee, a cricket, a moth, a daddy long leg, a tarantula, a darkling beetle, a brown recluse, water bug, roach, and a wasp. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week

<table>
<thead>
<tr>
<th>Activity Stage</th>
<th>Heart Rate of Person A (beats per min)</th>
<th>Heart Rate of Person B (beats per min)</th>
<th>Heart Rate of Person C (beats per min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before exercise</td>
<td>75</td>
<td>62</td>
<td>70</td>
</tr>
<tr>
<td>After exercise</td>
<td>120</td>
<td>110</td>
<td>130</td>
</tr>
</tbody>
</table>

Which of the following statements is the best conclusion for this experiment?
O A. Exercise triples a person’s heart rate.
O B. Exercise decreases a person’s heart rate.
O C. Heart rate is not affected by exercise.
O D. Heart rate is increased by exercise.

Tuesday - Vocabulary Term of the Week

The Artic hare’s brown fur turns white in winter. This adaptation helps the Artic hare -
O A. look for food after dark.
O B. hide from enemies in snow.
O C. live in cold temperatures.
O D. get along with other animals.

Wednesday - Misconception of the Week

What is wrong with the following statement? An example of a conifer tree is a pine tree because its seeds are in cones, instead of fruit.
O A. There is nothing wrong with this statement.
O B. A rose bush is an example of a conifer.
O C. A pine tree is an example of a deciduous tree.
O D. A lemon tree is an example of a conifer.

Thursday - Graphic of the Week

Examine the rock layers pictured below. Which of these layers is the youngest?
O A. 2
O B. 7
O C. 4
O D. 5
1. Lions have strong legs for chasing animals and sharp claws and teeth for grabbing them. This is an example of a(n) _adaptation___.

2. _Forming___ _conclusions____ is an important part of doing science; it requires one to examine the data closely and make judgments about the results.

3. The age of a layer of rock can be determined by its__position__ in the ground.

4. A conifer can be identified by the__cones____ it produces.

Examine the rock layers pictured below. Identify which of these layers is the oldest. Explain how you know that layer is the oldest.
Monday - Process Skill of the Week

This experiment was probably set up to answer which of the following questions?

O A. What is the mass of the ants?
O B. Will ants go to a dark or light area?
O C. How many kinds of ants are there?
O D. Where do ants get food?

Tuesday - Vocabulary Term of the Week

Animals that get their energy by eating the flesh of other animals are known as -

O A. Omnivores
O B. Herbivores
O C. Carnivores
O D. Consumers

Wednesday - Misconception of the Week

What is wrong with the following statement?
Plants use the sun’s energy captured by chlorophyll to turn water and oxygen into a sugar substance for the plant.

O A. There is nothing wrong with this statement.
O B. Water and carbon dioxide are what is transformed.
O C. Water and soil are what is transformed.
O D. The sun’s energy is captured by chlorine.

Thursday - Graphic of the Week

The rock column above shows the layers in a rock formation. The three diagrams above show the positions of fossils in different rock layers. According to this information, which fossil is the youngest?

A
B
C
D
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When designing an experiment, it is important to identify <em>one</em> question that tests <em>one</em> variable.</td>
<td></td>
</tr>
<tr>
<td>2. A spider is a(n) <em>carnivore</em> because it eats insects to gain energy.</td>
<td></td>
</tr>
<tr>
<td>3. <em><strong>Chlorophyll</strong></em>__ is the green pigment in leaves that captures sunlight and allows photosynthesis to occur.</td>
<td></td>
</tr>
<tr>
<td>4. One must look in rocks to search for the <em>fossils</em> of organisms that lived long ago.</td>
<td></td>
</tr>
</tbody>
</table>

Identify three parts of a plant and describe their function. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week
William wants to see how much his lima bean plant has grown over the past week. Which tool would be most appropriate to take this type of measurement?

- A. A measuring cup
- B. A graduated cylinder
- C. A thermometer
- D. A ruler

Tuesday - Vocabulary Term of the Week
A Venus flytrap eats insects and makes its own food through photosynthesis. What kind of organism is a Venus flytrap?

- A. Plant
- B. Animal
- C. Herbivore
- D. Omnivore

Wednesday - Misconception of the Week
What is wrong with the following statement? Fossils are abundant in all types of rocks.

- A. There is nothing wrong with this statement.
- B. Fossils are found primarily in sedimentary rock.
- C. Fossils are found primarily in igneous rock.
- D. Fossils are found primarily in metamorphic rock.

Thursday - Graphic of the Week
Which of these objects would require the most force to move a distance of 5 meters?

- A. Marble
- B. Tennis ball
- C. Wooden box
- D. Small boulder

3.S.L.1
4.L.S.3
3.P.S.1
3.P.S.4
1. To determine the amount of force required to move an object, one would have to find the object’s __**weight (mass)**__.

2. Metamorphic rock is formed when the rock undergoes tremendous __**heat**__ and __**pressure**__.

3. Any organism that acquires nutrients through __**photosynthesis**__ can be classified as a plant.

4. A __**ruler**__ measures the length of any object, while a __**thermometer**__ measures temperature.

Rocks can change many times over the years. Describe how a sedimentary rock can be transformed into a metamorphic rock and then change from a metamorphic rock into an igneous rock. Use words and/or pictures to explain your answer. Label all pictures.
Monday - Process Skill of the Week
Sarah adds vinegar to a container of baking soda in her science class. Bubbles of carbon dioxide form. What safety precaution should Sarah take while conducting this experiment?

O A. wear safety goggles
O B. wash her eyes with eyewash
O C. list the materials at the end of the experiment
O D. leave her materials for the next class to clean

Tuesday - Vocabulary Term of the Week
Which of the following is most likely to increase friction?

O A. wax on wood floors
O B. snow on a roadway
O C. wheels on roller skates
O D. grooved rubber soles on shoes

Wednesday - Misconception of the Week
What is wrong with the following statement?
When rain falls on a plant, it directly helps the plant make new seeds.

O A. There is nothing wrong with this statement.
O B. When bees drink nectar from flowers, it directly helps make new seeds.
O C. Trimming trees directly helps make new seeds.
O D. When animals eat the flowers, it directly helps make new seeds.

Thursday - Graphic of the Week
Which is the correct order of development for this frog?

O A. 4,2,3,1
O B. 3,1,4,2
O C. 2,1,4,3
O D. 2,4,1,3
1. The life cycle of a frog includes: 1) __egg__, 2) __tadpole__, 3) tadpole with legs, 4) __frog__. 

2. For plants to reproduce, they need some way for pollen to _transfer (transport)___ from the stamens to the pistil. This is known as pollination.

3. Whenever scientists work with potentially harmful ingredients, it is important to take precautions such as wearing _safety goggles___ and _protective clothing (gloves, apron, etc.)___.

4. __Friction____ is decreased if there is an oil spill covering a roadway.

Describe two ways that plants spread their seeds so they can reproduce. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week
To predict weather patterns, meteorologists use special tools. Tim noticed there was a drop in air pressure on the barometer reading. This drop in air pressure most likely indicates -

O  A. a warm front is approaching.
O  B. a cold front is approaching.
O  C. a blizzard is approaching.
O  D. a hurricane is approaching.

Tuesday - Vocabulary Term of the Week
On a hike through the Big Green Forest, you see rocks, soil, trees, smaller plants and flowers, birds, worms, insects and mice. What do you call all the living and non-living things in this forest?

O  A. a species
O  B. a habitat
O  C. a food chain
O  D. an ecosystem

Wednesday - Misconception of the Week
What is wrong with the following statement?
In the water cycle, water has to fall as precipitation before water condenses in clouds.

O  A. There is nothing wrong with this statement.
O  B. Water has to evaporate before water condenses in clouds.
O  C. Water dissolves salt before water condenses in clouds.
O  D. Water vapor changes to a gas before water condenses in clouds.

Thursday - Graphic of the Week
The principal’s chair has wheels. It sits on her office floor next to her desk. She pulls the chair away from her desk. What makes the chair move?

O  A. the force of gravity on the chair
O  B. the force of her pull on the chair
O  C. friction between her hand and the chair
O  D. friction between her wheels and the floor
1. Direct __________________ applied to any object can cause movement of the object.

2. A __________________ is a weather tool that measures changes in air pressure.

3. Water moves from the Earth’s surface to the air and then back to the surface of the Earth again using an on-going process called the ______________________________.

4. All the living and nonliving things that interact with each other in an environment form a(n)__________________.

Jordyn and William were taking their brother on a wagon ride. What are the two forces that they could use to move the wagon? Draw a diagram of the movement that these forces would produce. Label your diagram.
Monday - Process Skill of the Week

Amanda’s class wanted to determine the amount of rainfall that fell in Columbus over the weekend. Which tool would they use to find the correct amount of rainfall?
O A. thermometer
O B. anemometer
O C. rain gauge
O D. barometer

Tuesday - Vocabulary Term of the Week

Groups of African elephants can journey hundreds of miles in search of food and water. Sometimes, the only water lies underground. The elephants use their tusks to dig for water. These long tusks are a(n)-
O A. experiment
O B. exploration
O C. adaptation
O D. acceptation

Wednesday - Misconception of the Week

What is wrong with the following statement? An environment includes everything in one’s surroundings: all the plants, people, animals, as well as air, climate, water and soil.
O A. There is nothing wrong with this statement.
O B. This describes an ecosystem.
O C. This describes a population.
O D. An environment only includes living things.

Thursday - Graphic of the Week

This diagram shows some stages in the termite life cycle. Which of these is supported by the information in the diagram?
O A. Some nymphs have wings.
O B. Some larvae lay eggs.
O C. Eggs develop into three kinds of larvae.
O D. The queen produces the eggs.
1. The life cycle of a reproductive termite begins as a(n) _________________, turns into a ____________ and then into an adult.

2. _________________ are adjustments that animals make in their bodies to assist in their survival.

3. All living and nonliving things in one’s surroundings in known as the __________________________; whereas all living and nonliving things interacting in an area is known as the ecosystem.

4. A _________________ should be placed out in the open and not under a tree or building so that one can determine the correct amount of rainfall without including excess water that may fall from the tree or building.

Describe your own environment. What would one observe (see, hear, feel, taste, smell) in your surroundings? Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week

Which statement is an opinion?

O A. The universe may collapse one day.
O B. The moon has both a day and a night.
O C. Earth orbits the sun once every 365 days.
O D. Stars are made up of gases that are super heated.

Tuesday - Vocabulary Term of the Week

As water moves continuously through the environment, it changes form. This is known as -

O A. precipitation
O B. evaporation
O C. air mass
O D. water cycle

Wednesday - Misconception of the Week

What is wrong with the following statement?
A plant needs sunlight, water, and dirt to make its own food.

O A. There is nothing wrong with this statement.
O B. It needs sugar, water and carbon dioxide.
O C. It needs sugar, sunlight and dirt.
O D. It needs sunlight, water, and carbon dioxide.

Thursday - Graphic of the Week

A scientist wants to find out which toy car rolls the fastest. She rolls each car down a slope as shown. What is wrong with this experiment?

O A. There are not enough variables.
O B. There are too many variables changing.
O C. There are not enough cars
O D. The slopes should be steeper.
1. Earth is the coolest planet because we know it inhabits life is an example of a(n) ___________.

2. For photosynthesis to occur, plants need __________________________, as well as water and light.

3. When doing an experiment, students must make sure they keep all but one _________________ the same so the test is fair.

4. Precipitation, condensation, evaporation, ground water, runoff, etc. are all included in the _________________.

Scientific statements cannot be based on one’s opinion. Scientists only consider claims or conclusions when they are backed by observations and data collection. Write two statements, one opinion and one fact. Identify each as either the fact or the opinion and explain how you know the statement falls under that category.
Monday - Process Skill of the Week
Some students were studying properties of water. One student placed a cup containing 80 ml of water in a freezer. Another student placed an identical cup containing 40 ml of water in a different freezer. Which of the following will be the same for both cups of water?

O A. The temperature at which the water freezes.  
O B. The mass of the frozen water.  
O C. The time it takes the water to freeze.  
O D. The volume of the frozen water.

Tuesday - Vocabulary Term of the Week
Sandstone is a rock that is soft and made of grains of sand that are stuck together. Sandstone is-

O A. igneous  
O B. volcanic  
O C. metamorphic  
O D. sedimentary

Wednesday - Misconception of the Week
What is wrong with the following statement? Deborah was planning to measure the wind’s speed so she used a speedometer.

O A. There is nothing wrong with this statement.  
O B. She should use an anemometer.  
O C. She should use a barometer.  
O D. She should use a wind vane.

Thursday - Graphic of the Week
In the diagram above, the label Z represents-

O A. sugar  
O B. carbon dioxide  
O C. nitrogen  
O D. water vapor
1. ____________________rocks are formed when pieces of rock, sand, shells, plants and animals are buried underground and cemented together over a very long period of time.

2. Food production by plants involves combining carbon dioxide with __________ and __________.

3. The freezing point for water is ________ degrees Celsius and/or __________ degrees Fahrenheit.

4. A(n) ____________________measures wind speed, while a(n) measures ____________________measures wind direction.

The water cycle plays an important role in determining weather. Identify two processes in the water cycle. Then explain how each process you selected can have an impact on the weather.
Monday - Process Skill of the Week

You want to measure the mass of an animal. Which unit could you measure it in?

- A. degrees
- B. square inches
- C. kilometers
- D. kilograms

Tuesday - Vocabulary Term of the Week

What role does photosynthesis have in a plant?

- A. It helps the plant to grow flowers.
- B. It provides the plant with the ability to move.
- C. It provides the reproductive organs of a plant.
- D. It is the main source of food energy for the plant.

Wednesday - Misconception of the Week

What is wrong with the following statement? The moon supplies the major source of energy required to make the changes that occur in the water cycle.

- A. There is nothing wrong with this statement.
- B. The sun supplies the energy.
- C. The oceans supply the energy.
- D. The eight planets supply the energy.

Thursday - Graphic of the Week

Which of the following is most like the pair shown?

- A. egg - seed
- B. branch - tree
- C. worm - snake
- D. caterpillar - butterfly
1. Caterpillar is to butterfly as ______________ is to darkling beetle.

2. Mass can be measured in milligrams, ______________ or ______________, depending on the size of the object.

3. Plants use ______________ to create a form of sugar that provides them with food.

4. The sun’s energy causes ______________ of water, so that water seems to disappear into thin air.

Some insects go through a complete metamorphosis as they progress through their life cycle. Some insects go through incomplete metamorphosis. Illustrate the life cycle of an insect that goes through complete metamorphosis. Label all pictures.
Monday - Process Skill of the Week
When deciding to investigate a question, which should the scientist do first?

O A. Complete research  
O B. Draw conclusions  
O C. Form an hypothesis  
O D. Record observations

Tuesday - Vocabulary Term of the Week
The weather forecast says a heavy snowstorm is coming later today. Which weather observation is likely just before the snow?

O A. Cirrus clouds  
O B. Cumulus clouds  
O C. Stratus clouds  
O D. Cumulonimbus clouds

Wednesday - Misconception of the Week
What is wrong with the following statement?
The Earth’s magnetic field causes sharp, rough mountains to become rounded and smooth over time.

O A. There is nothing wrong with this statement. 
O B. The sun’s rays cause these changes. 
O C. Wind and rain cause these changes. 
O D. Light and darkness cause these changes.

Thursday - Graphic of the Week
Which part of the water cycle came before the X in the diagram?

O A. Cloud formation 
O B. Rain 
O C. Snowfall 
O D. Light and darkness cause these changes.
1. ____________ clouds usually bring light rain and drizzle, while ________________ clouds accompany thunderstorms.

2. The ________________ of rocks causes them to change in size, shape and texture.

3. After water falls in the form of precipitation, some of it joins other bodies of water. Over time, the sun’s energy causes water to ________________ into the atmosphere and become water vapor.

4. ________________ is an important part of doing science because it allows one to make a prediction about what will likely happen in the investigation.

Rocks are constantly undergoing change from weathering. Describe two forces that cause rocks to weather.
### Monday - Process Skill of the Week
Xzavier wanted to test how the type of soil would affect the growth of a tomato plant. Which is the only variable that Xzavier should change in his experiment?

<table>
<thead>
<tr>
<th>A. the amount of water given</th>
<th>B. the amount of light provided</th>
<th>C. the type of soil in the planters</th>
<th>D. the amount of soil in the planters</th>
</tr>
</thead>
</table>

**Monday - Process Skill of the Week**

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- D. the amount of soil in the planters

### Tuesday - Vocabulary Term of the Week
Owls eat mice and other small animals to survive. Owls fly and hunt in the dark. Which adaptation helps owls hunt for their next meal?

<table>
<thead>
<tr>
<th>A. white eggs</th>
<th>B. large eyes</th>
<th>C. strong voice</th>
<th>D. feathers around eyes</th>
</tr>
</thead>
</table>

**Tuesday - Vocabulary Term of the Week**

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### Wednesday - Misconception of the Week
What is wrong with the following statement? When scientists observe weather patterns in the United States, they generally observe patterns moving from north to south.

- A. There is nothing wrong with this statement.
- B. Weather usually moves south to north.
- C. Weather usually moves east to west.
- D. Weather usually move west to east.

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### Thursday - Graphic of the Week
How are the erosion of rock by running water and a landslide different?

<table>
<thead>
<tr>
<th>A. Water erosion is a slower process.</th>
<th>B. Landslides can affect human activity.</th>
<th>C. Water erosion changes Earth’s surface.</th>
<th>D. Landslides move materials to a new place.</th>
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**Thursday - Graphic of the Week**

How are the erosion of rock by running water and a landslide different?

- A. Water erosion is a slower process.
- B. Landslides can affect human activity.
- C. Water erosion changes Earth’s surface.
- D. Landslides move materials to a new place.
1. When testing the effect of light on the growth of grass seeds, each plant should get the same type and amount of soil, seed, and water; only the amount of __________ should change.

2. Gills are a(n) __________________ that allow fish to live under water.

3. During a landslide, the land is quickly ______________ from one area and, just as quickly, deposited into another area.

4. When determining the type of weather we should expect to see in Ohio, we should look ________.

When wind, water or ice erodes rock or soil in one area, it deposits these materials in a different area. Identify two types of landforms often produced by this process of deposition.
Monday - Process Skill of the Week
Which of the senses must be protected when doing an activity concerning a solar eclipse?

O A. touch
O B. taste
O C. sight
O D. smell

Tuesday - Vocabulary Term of the Week
Theresa is visiting the desert for the first time. She is surprised to see the hills of sand formed by the action of the wind. What do scientists call these hills?

O A. deltas
O B. dunes
O C. moraines
O D. volcanoes

Wednesday - Misconception of the Week
What is wrong with the following statement?
Cumulus clouds are puffy and white with flat bottoms. They usually are accompanied by lots of rain, thunder and lightening.

O A. There is nothing wrong with this statement.
O B. Cumulus clouds are “fair weather” clouds.
O C. Cirrus clouds are puffy and white.
O D. Stratus clouds puffy and white.

Thursday - Graphic of the Week
Which instrument can be used to measure air pressure?

A  B  C  D
1. _______________ clouds are high, feathery clouds that sometimes indicate cool weather and a possibility for rain or snow in a few hours.

2. Scientists use ______________ to measure air pressure and make predictions about weather.

3. Observations include using your five senses, but ________ always must be ensured with the use of protective clothing and scientific tools.

4. Deltas and dunes form by the movement of sand and sediment. ___________ form at the end of rivers, while ___________ form in dry areas or along sandy coasts.

There are many types of clouds. Identify two types of clouds. Then, describe the kind of weather each cloud type is likely to accompany. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week

Which piece of laboratory equipment should be used to find the volume of a small stone?

O A. a graduated cylinder  
O B. a thermometer  
O C. a meter stick  
O D. a spring scale

Tuesday - Vocabulary Term of the Week

A student looks outside her window after it has rained and sees puddles of water. Later that same day, the puddles are gone. What process explains why the puddles have disappeared?

O A. runoff  
O B. evaporation  
O C. precipitation  
O D. condensation

Wednesday - Misconception of the Week

What is wrong with the following statement? Some plants in the forest depend on animals to make sure the plants receive enough water.

O A. There is nothing wrong with this statement.  
O B. Plants depend on animals to provide sunlight.  
O C. Plants depend on animals to secure the roots in the soil.  
O D. Plants depend on animals to carry the plant’s pollen of spread their seeds.

Thursday - Graphic of the Week

According to this information, what kind of weather is related to low air pressure?

<table>
<thead>
<tr>
<th>Day</th>
<th>Air Pressure (in. of mercury)</th>
<th>Weather</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7.67</td>
<td>Fair: mild temperatures</td>
</tr>
<tr>
<td>2</td>
<td>7.67</td>
<td>Fair: mild temperatures</td>
</tr>
<tr>
<td>3</td>
<td>7.65</td>
<td>Cloudy: mild temperatures</td>
</tr>
<tr>
<td>4</td>
<td>7.66</td>
<td>Rainy: windy; cool temperatures</td>
</tr>
<tr>
<td>5</td>
<td>7.68</td>
<td>Rainy: cool temperatures</td>
</tr>
<tr>
<td>6</td>
<td>7.64</td>
<td>Fair: mild temperatures</td>
</tr>
<tr>
<td>7</td>
<td>7.65</td>
<td>Sunny: mild temperatures</td>
</tr>
</tbody>
</table>

O A. Sunny  
O B. Fair  
O C. Rainy  
O D. Mild
1. When a barometer shows air pressure rising, a ________ front is approaching, while air pressure that is falling indicates a ________ front is approaching.

2. ________________, the process of water changing from a gas to a liquid, can be seen when water droplets form on the outside of a glass.

3. Water levels will ________ in a graduated cylinder to show the volume of an object when it is placed in the cylinder.

4. Many animals depend on plants for food and ________________.

Because water moves continuously from the surface of the Earth to the air and back to the surface of the Earth, we use water that existed many, many years ago. Describe at least three of the processes involved in the water cycle that allows us to use the same water that dinosaurs used long ago.
### Monday - Process Skill of the Week

To predict weather patterns, meteorologists use special tools. Tim noticed there was a drop in air pressure on the barometer reading. This drop in air pressure most likely indicates -

- A. a warm front is approaching.
- B. a cold front is approaching.
- C. a blizzard is approaching.
- D. a hurricane is approaching.

### Tuesday - Vocabulary Term of the Week

On a hike through the Big Green Forest, you see rocks, soil, trees, smaller plants and flowers, birds, worms, insects and mice. What do you call all the living and non-living things in this forest?

- A. a species
- B. a habitat
- C. a food chain
- D. an ecosystem

### Wednesday - Misconception of the Week

What is wrong with the following statement?

In the water cycle, water has to fall as precipitation before water condenses in clouds?

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### Thursday - Graphic of the Week

The principal's chair has wheels. It sits on her office floor next to her desk. She pulls the chair away from her desk. What makes the chair move?

- A. the force of gravity on the chair
- B. the force of her pull on the chair
- C. friction between her hand and the chair
- D. friction between her wheels and the floor
1. Direct ___force________ applied to any object can cause movement of the object.

2. A _____barometer_________ is a weather tool that measures changes in air pressure.

3. Water moves from the Earth’s surface to the air and then back to the surface of the Earth again using an on-going process called the _water cycle_____.

4. All the living and nonliving things that interact with each other in an environment form a(n)__ecosystem_____.

Jordyn and William were taking their brother on a wagon ride. What are the two forces that they could use to move the wagon? Draw a diagram of the movement that these forces would produce. Label your diagram.
Amanda’s class wanted to determine the amount of rainfall that fell in Columbus over the weekend. Which tool would they use to find the correct amount of rainfall?

- A. thermometer
- B. anemometer
- **C. rain gauge**
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Groups of African elephants can journey hundreds of miles in search of food and water. Sometimes, the only water lies underground. The elephants use their tusks to dig for water. These long tusks are a(n)-

- A. experiment
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What is wrong with the following statement? An environment includes everything in one’s surroundings: all the plants, people, animals, as well as air, climate, water and soil.

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This diagram shows some stages in the termite life cycle. Which of these is supported by the information in the diagram?

- A. Some nymphs have wings.
- B. Some larvae lay eggs.
- C. Eggs develop into three kinds of larvae.
- **D. The queen produces the eggs.**
1. The life cycle of a reproductive termite begins as a(n) **egg**, turns into a **nymph** and then into an adult.

2. **Adaptations** are adjustments that animals make in their bodies to assist in their survival.

3. All living and nonliving things in one’s surroundings is known as the **environment**; whereas all living and nonliving things interacting in an area is known as the ecosystem.

4. A **rain gauge** should be placed out in the open and not under a tree or building so that one can determine the correct amount of rain fall without including excess water that may fall from the tree or building.

Describe your own environment. What would one observe (see, hear, feel, taste, smell) in your surroundings? Use pictures and/or words to explain your answer. Label all pictures.
**Monday - Process Skill of the Week**

Which statement is an opinion?

- **O A.** The universe may collapse one day.
- **O B.** The moon has both a day and a night.
- **O C.** Earth orbits the sun once every 365 days.
- **O D.** Stars are made up of gases that are super heated.

**Tuesday - Vocabulary Term of the Week**

As water moves continuously through the environment, it changes form. This is known as -

- **O A.** precipitation
- **O B.** evaporation
- **O C.** air mass
- **O D.** water cycle

**Wednesday - Misconception of the Week**

What is wrong with the following statement?
A plant needs sunlight, water, and dirt to make its own food.

- **O A.** There is nothing wrong with this statement.
- **O B.** It needs sugar, water and carbon dioxide.
- **O C.** It needs sugar, sunlight and dirt.
- **O D.** It needs sunlight, water, and carbon dioxide.

**Thursday - Graphic of the Week**

A scientist wants to find out which toy car rolls the fastest. She rolls each car down a slope as shown. What is wrong with this experiment?

- **O A.** There are not enough variables.
- **O B.** There are too many variables changing.
- **O C.** There are not enough cars
- **O D.** The slopes should be steeper.
1. Earth is the coolest planet because we know it inhabits life is an example of a(n) **opinion**.

2. For photosynthesis to occur, plants need **carbon dioxide**, as well as water and light.

3. When doing an experiment, students must make sure they keep all but one **variable** the same so the test is fair.

4. Precipitation, condensation, evaporation, ground water, runoff, etc. are all included in the **water cycle**.

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Scientific statements cannot be based on one’s opinion. Scientists only consider claims or conclusions when they are backed by observations and data collection. Write two statements, one opinion and one fact. Identify each as either the fact or the opinion and explain how you know the statement falls under that category.
Monday - Process Skill of the Week
Some students were studying properties of water. One student placed a cup containing 80 ml of water in a freezer. Another student placed an identical cup containing 40 ml of water in a different freezer. Which of the following will be the same for both cups of water?

- O A. The temperature at which the water freezes.
- O B. The mass of the frozen water.
- O C. The time it takes the water to freeze.
- O D. The volume of the frozen water.

Tuesday - Vocabulary Term of the Week
Sandstone is a rock that is soft and made of grains of sand that are stuck together. Sandstone is:

- O A. igneous
- O B. volcanic
- O C. metamorphic
- O D. sedimentary

Wednesday - Misconception of the Week
What is wrong with the following statement? Deborah was planning to measure the wind’s speed so she used a speedometer.

- O A. There is nothing wrong with this statement.
- O B. She should use an anemometer.
- O C. She should use a barometer.
- O D. She should use a wind vane.

Thursday - Graphic of the Week
In the diagram above, the label Z represents:

- O A. sugar
- O B. carbon dioxide
- O C. nitrogen
- O D. water vapor
1. **Sedimentary** rocks are formed when pieces of rock, sand, shells, plants, and animals are buried underground and cemented together over a very long period of time.

2. Food production by plants involves combining carbon dioxide with **water** and **sunlight**.

3. The freezing point for water is **0** degrees Celsius and/or **32** degrees Fahrenheit.

4. A(n) **anenometer** measures wind speed, while a(n) **wind vane** measures wind direction.

The water cycle plays an important role in determining weather. Identify two processes in the water cycle. Then explain how each process you selected can have an impact on the weather.
Monday - Process Skill of the Week

You want to measure the mass of an animal. Which unit could you measure it in?

- A. degrees
- B. square inches
- C. kilometers
- D. kilograms

Tuesday - Vocabulary Term of the Week

What role does photosynthesis have in a plant?

- A. It helps the plant to grow flowers.
- B. It provides the plant with the ability to move.
- C. It provides the reproductive organs of a plant.
- D. It is the main source of food energy for the plant.

Wednesday - Misconception of the Week

What is wrong with the following statement? The moon supplies the major source of energy required to make the changes that occur in the water cycle.

- A. There is nothing wrong with this statement.
- B. The sun supplies the energy.
- C. The oceans supply the energy.
- D. The eight planets supply the energy.

Thursday - Graphic of the Week

Which of the following is most like the pair shown?

- A. egg - seed
- B. branch - tree
- C. worm - snake
- D. caterpillar - butterfly
1. Caterpillar is to butterfly as mealworm______ is to darkling beetle.

2. Mass can be measured in milligrams, _______grams____ or _____kilograms____, depending on the size of the object.

3. Plants use _____light____ to create a form of sugar that provides them with food.

4. The sun’s energy causes __evaporation____ of water, so that water seems to disappear into thin air.

Some insects go through a complete metamorphosis as they progress through their life cycle. Some insects go through incomplete metamorphosis. Illustrate the life cycle of an insect that goes through complete metamorphosis. Label all pictures.
Monday - Process Skill of the Week
When deciding to investigate a question, which should the scientist do first?

O A. Complete research  
O B. Draw conclusions  
O C. Form an hypothesis  
O D. Record observations  

Tuesday - Vocabulary Term of the Week
The weather forecast says a heavy snowstorm is coming later today. Which weather observation is likely just before the snow?

O A. Cirrus clouds  
O B. Cumulus clouds  
O C. Stratus clouds  
O D. Cumulonimbus clouds  

Wednesday - Misconception of the Week
What is wrong with the following statement? The Earth’s magnetic field causes sharp, rough mountains to become rounded and smooth over time.

O A. There is nothing wrong with this statement.  
O B. The sun’s rays cause these changes.  
O C. Wind and rain cause these changes.  
O D. Light and darkness cause these changes.  

Thursday - Graphic of the Week
Which part of the water cycle came before the X in the diagram?
1. **Stratus** clouds usually bring light rain and drizzle, while **cumulonimbus** clouds accompany thunderstorms.

2. The **weathering** of rocks causes them to change in size, shape and texture.

3. After water falls in the form of precipitation, some of it joins other bodies of water. Over time, the sun’s energy causes water to **evaporate** into the atmosphere and become water vapor.

4. **Forming an hypothesis** is an important part of doing science because it allows one to make a prediction about what will likely happen in the investigation.

Rocks are constantly undergoing change from weathering. Describe two forces that cause rocks to weather.
### Monday - Process Skill of the Week
Xzavier wanted to test how the type of soil would affect the growth of a tomato plant. Which is the only variable that Xzavier should change in his experiment?

- A. the amount of water given
- B. the amount of light provided
- C. the type of soil in the planters
- D. the amount of soil in the planters

**3LS.B.2**

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### Tuesday - Vocabulary Term of the Week
Owls eat mice and other small animals to survive. Owls fly and hunt in the dark. Which adaptation helps owls hunt for their next meal?

- A. white eggs
- B. large eyes
- C. strong voice
- D. feathers around eyes

**3LS.B.2**

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### Wednesday - Misconception of the Week
What is wrong with the following statement? When scientists observe weather patterns in the United States, they generally observe patterns moving from north to south.

- A. There is nothing wrong with this statement.
- B. Weather usually moves south to north.
- C. Weather usually moves east to west.
- D. Weather usually moves west to east.

**4ES.D.6**

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### Thursday - Graphic of the Week
How are the erosion of rock by running water and a landslide different?

- A. Water erosion is a slower process.
- B. Landslides can affect human activity.
- C. Water erosion changes Earth’s surface.
- D. Landslides move materials to a new place.

**4ES.B.10**
1. When testing the effect of light on the growth of grass seeds, each plant should get the same type and amount of soil, seed, and water; only the amount of light should change.

2. Gills are a(n) adaptation that allow fish to live under water.

3. During a landslide, the land is quickly eroded from one area and, just as quickly, deposited into another area.

4. When determining the type of weather we should expect to see in Ohio, we should look west.

When wind, water or ice erodes rock or soil in one area, it deposits these materials in a different area. Identify two types of landforms often produced by this process of deposition.
Monday - Process Skill of the Week
Which of the senses must be protected when doing an activity concerning a solar eclipse?

O  A. touch  
O  B. taste  
O  C. sight  
O  D. smell

Tuesday - Vocabulary Term of the Week
Theresa is visiting the desert for the first time. She is surprised to see the hills of sand formed by the action of the wind. What do scientists call these hills?

O  A. deltas  
O  B. dunes  
O  C. moraines  
O  D. volcanoes

Wednesday - Misconception of the Week
What is wrong with the following statement? Cumulus clouds are puffy and white with flat bottoms. They usually are accompanied by lots of rain, thunder and lightning.

O  A. There is nothing wrong with this statement.  
O  B. Cumulus clouds are “fair weather” clouds.  
O  C. Cirrus clouds are puffy and white.  
O  D. Stratus clouds puffy and white.

Thursday - Graphic of the Week
Which instrument can be used to measure air pressure?

O  A. Microscope  
O  B. Thermometer  
O  C. Barometer  
O  D. Spring scale
1. __Cirrus___ clouds are high, feathery clouds that sometimes indicate cool weather and a possibility for rain or snow in a few hours.

2. Scientists use _barometers_____ to measure air pressure and make predictions about weather.

3. Observations include using your five senses, but _safety_ always must be ensured with the use of protective clothing and scientific tools.

4. Deltas and dunes form by the movement of sand and sediment. __Deltas___ form at the end of rivers, while __dunes___ form in dry areas or along sandy coasts.

There are many types of clouds. Identify two types of clouds. Then, describe the kind of weather each cloud type is likely to accompany. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week

Which piece of laboratory equipment should be used to find the volume of a small stone?

O A. a graduated cylinder
O B. a thermometer
O C. a meter stick
O D. a spring scale

Tuesday - Vocabulary Term of the Week

A student looks outside her window after it has rained and sees puddles of water. Later that same day, the puddles are gone. What process explains why the puddles have disappeared?

O A. runoff
O B. evaporation
O C. precipitation
O D. condensation

Wednesday - Misconception of the Week

What is wrong with the following statement?
Some plants in the forest depend on animals to make sure the plants receive enough water.

O A. There is nothing wrong with this statement.
O B. Plants depend on animals to provide sunlight.
O C. Plants depend on animals to secure the roots in the soil.
O D. Plants depend on animals to carry the plant’s pollen of spread their seeds.

Thursday - Graphic of the Week

According to this information, what kind of weather is related to low air pressure?

<table>
<thead>
<tr>
<th>Day</th>
<th>Air Pressure (mm of mercury)</th>
<th>Weather</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7.07</td>
<td>Fair; mild temperatures</td>
</tr>
<tr>
<td>2</td>
<td>7.67</td>
<td>Fair; mild temperatures</td>
</tr>
<tr>
<td>3</td>
<td>7.95</td>
<td>Cloudy; mild temperatures</td>
</tr>
<tr>
<td>4</td>
<td>7.88</td>
<td>Rainy; windy; cool temperatures</td>
</tr>
<tr>
<td>5</td>
<td>7.54</td>
<td>Rainy; cool temperatures</td>
</tr>
<tr>
<td>6</td>
<td>7.64</td>
<td>Fair; mild temperatures</td>
</tr>
<tr>
<td>7</td>
<td>7.65</td>
<td>Sunny; mild temperatures</td>
</tr>
</tbody>
</table>

O A. Sunny
O B. Fair
O C. Rainy
O D. Mild
1. When a barometer shows air pressure rising, a **cold** front is approaching, while air pressure that is falling indicates a **warm** front is approaching.

2. **Condensation**, the process of water changing from a gas to a liquid, can be seen when water droplets form on the outside of a glass.

3. Water levels will **rise** in a graduated cylinder to show the volume of an object when it is placed in the cylinder.

4. Many animals depend on plants for food and **shelter**.

Because water moves continuously from the surface of the Earth to the air and back to the surface of the Earth, we use water that existed many, many years ago. Describe at least three of the processes involved in the water cycle that allows us to use the same water that dinosaurs used long ago.
Monday - Process Skill of the Week
A group of fifth graders are doing a science experiment at their work stations during science class. Which of these students is NOT practicing good laboratory safety?

Tuesday - Vocabulary Term of the Week
As water vapor elevates, it condenses in the atmosphere. Which of these will be a result of that condensation?

- A. wind tunnels
- B. deltas
- C. clouds
- D. ground water

Wednesday - Misconception of the Week
What is wrong with the following statement?
When the color changed on the steel wool after it had been placed in water, Jade said it was a chemical change.

- A. There is nothing wrong with this statement.
- B. This was a physical change.
- C. Painting the steel wool would have caused a chemical change.
- D. Cutting the steel wool would have caused a chemical change.

Thursday - Graphic of the Week
Use the chart below to answer the question.

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>Time for 1 inch of Water to Drip Through</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>0.5 hours</td>
</tr>
<tr>
<td>Loam</td>
<td>2.0 hours</td>
</tr>
<tr>
<td>Silt</td>
<td>2.25 hours</td>
</tr>
<tr>
<td>Clay</td>
<td>5.0 hours</td>
</tr>
</tbody>
</table>

A scientist tested four types of soils to find out which type was best at holding water. The results of the investigation are recorded in the table above. According to the table, which soil type was best at retaining water?

- A. sand
- B. loam
- C. silt
- D. clay
1. A _______ _______ is apparent when a new substance is formed.

2. ________ has various layers of rock, minerals, and decayed plant and animal matter. Each layer has different properties.

3. Ensuring science safety includes removing loose jewelry and clothing, pulling back hair, and wearing _________________ and/or _________________.

4. Water droplets from __________________ form clouds that will eventually create precipitation.

Students study how water changes from liquid to gas. These are the steps in the class investigation.

**Materials:** electric heating coil, beaker, and thermometer

**Procedure:** 1. Pour one liter of water into the beaker. 2. Place the thermometer in the water. 3. Record the temperature of the water. 4. Place the beaker on the heating coil. 5. Turn on the heating coil. 6. Record the temperature of the water every minute for 10 minutes.

Identify one possible safety hazard in this investigation. Also describe one way to make sure this is a safe investigation.
Monday - Process Skill of the Week

After you do an experiment, what’s one way to communicate your results?

O A. make a chart
O B. make a graph
O C. write a paragraph to explain your conclusion
O D. all of the above

Tuesday - Vocabulary Term of the Week

Katie was in her backyard drinking a glass of water on a sunny day. She placed her glass on the backyard table and went inside. When she returned, the ice in the glass had melted. What type of change took place?

O A. refraction
O B. photosynthesis
O C. a reversible physical change
O D. a reversible chemical change

Wednesday - Misconception of the Week

What is wrong with the following statement?

Coniferous trees lose their leaves in the fall and the leaves grow back in the spring.

O A. There is nothing wrong with this statement.
O B. Deciduous trees lose and regain leaves.
O C. Pine trees lose and regain leaves.
O D. Palm trees lose and regain leaves.

Thursday - Graphic of the Week

In this picture, the nail is pulled by object X, but the wood block next to it does not move. What property does object X have that attracts the nail?

O A. density
O B. solid state
O C. magnetism
O D. high temperature
1. After experimenting, communicating results can be done by making a graph or chart, or by ________________.

2. The property of ________________ can be detected in metal objects that are attracted to magnets.

3. Changes in the state of matter (e.g., liquid to a solid) are classified as ________________ changes.

4. Many ________________ trees produce seeds in fruit and they lose their leaves in the fall.

When water is heated, the liquid boils and becomes a gas. If the water vapor cools, it will then turn back into tiny drops of water because of condensation. What kind of change (physical or chemical) is the water undergoing through these processes? Explain how you know the changes are physical or chemical. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week
Alice places a magnet next to a metal fork. She then records what happens. Next, she places the same magnet next to a fork made of plastic. She records what happens next. Which question is Alice most likely exploring with this experiment?

O A. How do different materials react to magnets?
O B. What causes magnets to be attracted to metal objects?
O C. Does the size of the magnet affect the magnet’s power?
O D. Do some objects other than magnets have magnetic power?

Tuesday - Vocabulary Term of the Week
Fossils are formed when plants or animals are -

O A. buried under a tarp.
O B. preserved in oceans, lakes and rivers.
O C. buried under mud.
O D. swallowed by other living creatures.

Wednesday - Misconception of the Week
What is wrong with the following statement?
An object is placed on a desk. When a magnet is placed nearby, the object slowly moves toward the magnet. The object is made of copper.

O A. There is nothing wrong with this statement.
O B. The object is made of iron.
O C. The object is made of glass.
O D. The object is made of gray plastic.

Thursday - Graphic of the Week
What is responsible for shaping this arch?

O A. plate tectonics
O B. earthquakes
O C. deposition
O D. erosion
1. For fossils to form, the plant or animal matter must usually be hard and covered with ________________.

2. When developing a question for investigation, one must ensure that the ________________ tests that question only.

3. A ________________ is any object that attracts iron and a few other ________________ materials.

4. ________________ carries materials away from a location, while ________________ drops the materials in a new location.

Scientists often sort objects based on their physical properties. Identify two physical properties of a piece of iron. Use words and/or pictures to explain your answer. Label all pictures.
Monday - Process Skill of the Week
Which of the following questions is testable in a scientific investigation?

- A. Are dogs better pets than cats?
- B. Are dogs happy when they are walked?
- C. Are cats more active at night than during the day?
- D. Are cats easier to take care of than dogs?

Tuesday - Vocabulary Term of the Week
When Jaylen threw the basketball through the hoop, it fell to the ground. What caused the ball to hit the ground?

- A. friction
- B. air
- C. magnetic field
- D. gravity

Wednesday - Misconception of the Week
What is wrong with the following statement?
Dwayne decides to investigate seed germination. He plants several seeds in his garden. He said that once the seeds germinate, they will conduct photosynthesis.

- A. There is nothing wrong with this statement.
- B. Once they germinate, they will grow seeds.
- C. Once they germinate, they will attract bees.
- D. Once they germinate, they will start to sprout.

Thursday - Graphic of the Week
A teacher put a beaker of water on a hot plate. The beaker is shown before and after the hot plate is turned on.

What is the evidence that water is changing state?

- A. The hot plate is turned on.
- B. The temperature increases.
- C. The water bubbles and the steam are visible.
- D. The mass of water in the beaker increases.
1. Food production in plants is primarily supported by its ____________ which can absorb sunlight.

2. When water boils, it forms steam which is due to the __________________ of the water.

3. When playing kick ball, the ball shot in the air and then began falling before another student caught it. The ball coming down is due to ________________________.

4. Testable questions seek answers that can be __________________________.

A typical flowering plant goes through four main stages in its life cycle. Make a diagram showing the four stages in the life cycle of a typical flowering plant. Use pictures and/or words to explain your answer. Label all pictures.
### Monday - Process Skill of the Week

Which statement is a testable hypothesis?

- O A. Apples are good for you.
- O B. Soup tastes better when eaten with salt.
- O C. Sound travels faster through water than air.
- O D. There are many good designs for paper airplanes.

**4.SI.C.3**

### Tuesday - Vocabulary Term of the Week

Which is an example of a chemical change?

- O A. A scientist melts ice to create water.
- O B. A scientist shapes melted glass into a cylinder.
- O C. A scientist grinds an iron rod to make iron filings.
- O D. A scientist mixes chlorine gas and sodium to make salt.

**4.PSA.2**

### Wednesday - Misconception of the Week

What is wrong with the following statement? Caleb noticed that water droplets formed on the outside of his glass of lemonade. He said that his glass was perspiring.

- O A. There is nothing wrong with this statement.
- O B. Precipitation caused the water droplets.
- O C. Evaporation caused the water droplets.
- O D. Condensation caused the water droplets.

**4.ESA.2**

### Thursday - Graphic of the Week

A student added a small ball to a graduated cylinder containing 10 ml of water. What is the volume of the ball?

- O A. 5 ml
- O B. 10 ml
- O C. 15 ml
- O D. 20 ml

**4.SI.A.1**
1. Ms. Smith boiled water in her teakettle and then noticed water on the glass microwave door. These droplets of water are due to __________________________.

2. Testable hypotheses have to be based on obtaining ________________, not developing opinions.

3. To determine the volume of an object, one must find the ________________ between the water level before and after the object is placed in the container.

4. Clues in recognizing chemical change include: ________________, ________________, new physical property, substance given off, or heat given off.

When a candle is lit, the wick turns black and smoke flutters into the air. What kind of change (physical or chemical) is the wick undergoing through this process? Explain how you know the change is physical or chemical. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week
Which of these would be the best way to find whether a softball will roll down a hill faster than a basketball?

O A. Determining which of the balls has the greater mass.
O B. Observing the balls rolling down the same section of a hill at the same time.
O C. Throwing the balls into the air at the same time to see which goes higher.
O D. Dropping the balls from the same height and observing which hits the ground first.

Tuesday - Vocabulary Term of the Week
In which state of matter are atoms moving further apart (more space between atoms)?

O A. solid
O B. liquid
O C. gas
O D. Bose-Einstein condensate

Wednesday - Misconception of the Week
What is wrong with the following statement?
Making food is the most important job for the leaves of plants.

O A. There is nothing wrong with this statement.
O B. Collecting water is the most important job.
O C. Protecting animals is the most important job.
O D. Shading roots is the most important job.

Thursday - Graphic of the Week
Shown below are four different patterns found in the western garter snake.

The patterns most likely reflect differences in the snake’s -

O A. life cycle.
O B. food source.
O C. size.
O D. habitat.
1. Some animals hide naturally in their habitat due to the colors, shapes and patterns existing on their bodies. This is known as ____________________________.

2. A solid has tightly packed atoms, a liquid has atoms that are slightly spaced and move around a little, and gases have atoms that are ____________ ____________ and move ________________.

3. To test an hypothesis, recording _______________________ is the key before analyzing results.

4. _______________ transport nutrients from roots to leaves, while _______________ mostly make food.

Animals meet their needs for survival in a number of ways. Identify two structures that animals use to help them survive. Then explain how each structure functions to help them survive. Use words and/or pictures to explain your answer. Label all pictures.
Monday - Process Skill of the Week
Students mixed a spoonful of vinegar with a small amount of baking soda in a bowl. They wrote a description of what they observed.

Which of these should the students avoid while doing this activity?
O A. Using a metal teaspoon
O B. Using a plastic bowl
O C. Stirring the vinegar
O D. Tasting the mixture

Tuesday - Vocabulary Term of the Week
Solids, liquids and gases all have different properties. Which of the following will change shape to match its container?
O A. only solids
O B. only liquids
O C. solids and liquids
O D. liquids and gases

Wednesday - Misconception of the Week
What is wrong with the following statement?
James wanted to determine what to wear for school the next day in Columbus. He watched the news and looked to the weather in Pennsylvania to make predictions about the Columbus weather the following day.

O A. There is nothing wrong with this statement.
O B. He should have looked north in Canada.
O C. He should have looked south in Kentucky.
O D. He should have looked west in Indiana.

Thursday - Graphic of the Week
Based on the weather map, what will tomorrow’s weather be in Columbus?

O A. cold and dry
O B. cool and rainy
O C. cold and snowy
O D. warm and sunny
1. Observing with your senses is very important when doing science; the sense that is used least for safety reasons is _______________________.

2. ____________ have their own shape, whereas ____________ and ____________ take the shape of the container.

3. Because weather generally moves _________ to _________ in the U.S., one should look at Ohio’s weather to determine what the forecast will be in Pennsylvania.

4. The symbol for a warm front is a ___________ line with half circles, while a ___________ line with triangles represents a cold front.

There are three different states that matter can take. Identify two of these states of matter. Then, describe a characteristic of each state.
Monday - Process Skill of the Week
The seed that is planted in fertilized soil will grow larger than the seed that is planted in ordinary topsoil. This statement is an example of a(n) -
O A. experiment
O B. conclusion
O C. hypothesis
O D. observation

Tuesday - Vocabulary Term of the Week
Trunk is to tree as a ________ is to plant.
O A. leaf
O B. root
O C. stem
O D. seed

Wednesday - Misconception of the Week
What is wrong with the following statement? When Jane was doing her science homework, she wrote that she knew air was matter because it takes the shape of its container.
O A. There is nothing wrong with this statement.
O B. Air is matter because it is invisible.
O C. Air is matter because it takes up space and has mass.
O D. Air is matter because people need it to breath.

Thursday - Graphic of the Week
The picture shows the process of -
O A. melting
O B. boiling
O C. condensing
O D. freezing
1. A(n) ________________ is an guess about what you think might happen during your experiment.

2. The roots of trees and the roots of flowers serve the same purpose of ____________________________.

3. When water transforms from a gas back to a liquid it is ________________________.

4. Matter is anything that ___________ _____________ and ____________ _____________ _____________.

Identify at least three things that could be classified as matter. Then, explain how you know each of those things is matter. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week
Jerome wants to measure the depth of a large river. Which tool would be most appropriate to find the correct measurement?

O A. a centimeter ruler
O B. a meterstick
O C. a graduated cylinder
O D. a balance scale

Tuesday - Vocabulary Term of the Week
A student rubs two wooden sticks together very hard and fast. What effect will this friction have?

O A. The sticks will begin to melt.
O B. The sticks will become magnets.
O C. The temperature of the sticks will increase.
O D. The sound of the rubbing will become lower.

Wednesday - Misconception of the Week
What is wrong with the following statement? Travis was stirring a spoonful of sugar in a glass of water. When the sugar disappeared, he was sure it evaporated.

O A. There is nothing wrong with this statement.
O B. The sugar turned into water.
O C. The sugar dissolved and made a solution.
O D. The sugar was destroyed by the water.

Thursday - Graphic of the Week
Which animals give birth to live young?

O A. hawk and black bear
O B. beaver and black bear
O C. hawk and potato beetle
O D. beaver and potato beetle
1. __________ is the force that slows down a baseball rolling on a field.

2. ______________ are the units that should be used to measure the length of smaller things, ______________ should be used to measure bigger things, and ______________ should be used to measure the length of really large things.

3. ______________ is a force that can cause objects to come to a stop; it can also increase the temperature in objects.

4. ______________ have hair or fur, breath with lungs, and give birth to live young.

A fourth grade class had three containers that were each filled with 300 ml of water. They put two tablespoons of sugar in one container, two tablespoons of salt in one container, and two tablespoons of baking soda in one container. They stirred each container until the sugar, salt, and baking soda disappeared. They observed what happened over a three-week period. After three weeks, all of the water was gone, but the salt, sugar, and baking soda reappeared. Explain what happened to the sugar, salt, and baking soda when they disappeared. Next, explain what happened to the water when it disappeared. Finally, determine if the changes were physical or chemical and how you know that to be true.
Monday - Process Skill of the Week
A group of fifth graders are doing a science experiment at their work stations during science class. Which of these students is NOT practicing good laboratory safety?

A) B) C) D) 

Tuesday - Vocabulary Term of the Week
As water vapor elevates, it condenses in the atmosphere. Which of these will be a result of that condensation?

O A. wind tunnels  
O B. deltas  
O C. clouds  
O D. ground water

Wednesday - Misconception of the Week
What is wrong with the following statement?

When the color changed on the steel wool after it had been placed in water, Jade said it was a chemical change.

O A. There is nothing wrong with this statement.  
O B. This was a physical change.  
O C. Painting the steel wool would have caused a chemical change.  
O D. Cutting the steel wool would have caused a chemical change.

Thursday - Graphic of the Week
Use the chart below to answer the question.

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>Time for 1 inch of Water to Drip Through</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>0.5 hours</td>
</tr>
<tr>
<td>Loam</td>
<td>2.0 hours</td>
</tr>
<tr>
<td>Silt</td>
<td>2.25 hours</td>
</tr>
<tr>
<td>Clay</td>
<td>5.0 hours</td>
</tr>
</tbody>
</table>

A scientist tested four types of soils to find out which type was best at holding water. The results of the investigation are recorded in the table above. According to the table, which soil type was best at retaining water?

O A. sand  
O B. loam  
O C. silt  
O D. clay
1. A __chemical__ _change__ is apparent when a new substance is formed.

2. _Soil____ has various layers of rock, minerals, and decayed plant and animal matter. Each layer has different properties.

3. Ensuring science safety includes removing loose jewelry and clothing, pulling back hair, and wearing _goggles____ and/or _gloves (or other protective clothing)____.

4. Water droplets from ___condensation____ form clouds that will eventually create precipitation.

Students study how water changes from liquid to gas. These are the steps in the class investigation.

**Materials:** electric heating coil, beaker, and thermometer

**Procedure:** 1. Pour one liter of water into the beaker. 2. Place the thermometer in the water. 3. Record the temperature of the water. 4. Place the beaker on the heating coil. 5. Turn on the heating coil. 6. Record the temperature of the water every minute for 10 minutes.

Identify one possible safety hazard in this investigation. Also describe one way to make sure this is a safe investigation.
Monday - Process Skill of the Week

After you do an experiment, what’s one way to communicate your results?

O A. make a chart  
O B. make a graph  
O C. write a paragraph to explain your conclusion  
O D. all of the above  

Tuesday - Vocabulary Term of the Week

Katie was in her backyard drinking a glass of water on a sunny day. She placed her glass on the backyard table and went inside. When she returned, the ice in the glass had melted. What type of change took place?

O A. refraction  
O B. photosynthesis  
O C. a reversible physical change  
O D. a reversible chemical change  

Wednesday - Misconception of the Week

What is wrong with the following statement?

Coniferous trees lose their leaves in the fall and the leaves grow back in the spring.

O A. There is nothing wrong with this statement.  
O B. Deciduous trees lose and regain leaves.  
O C. Pine trees lose and regain leaves.  
O D. Palm trees lose and regain leaves.

Thursday - Graphic of the Week

In this picture, the nail is pulled by object X, but the wood block next to it does not move. What property does object X have that attracts the nail?

O A. density  
O B. solid state  
O C. magnetism  
O D. high temperature
1. After experimenting, communicating results can be done by making a graph or chart, or by __writing a report of what was concluded__.

2. The property of __magnetism__ can be detected in metal objects that are attracted to magnets.

3. Changes in the state of matter (e.g., liquid to a solid) are classified as __physical__ changes.

4. Many __deciduous__ trees produce seeds in fruit and they lose their leaves in the fall.

When water is heated, the liquid boils and becomes a gas. If the water vapor cools, it will then turn back into tiny drops of water because of condensation. What kind of change (physical or chemical) is the water undergoing through these processes? Explain how you know the changes are physical or chemical. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week
Alice places a magnet next to a metal fork. She then records what happens. Next, she places the same magnet next to a fork made of plastic. She records what happens next. Which question is Alice most likely exploring with this experiment?
O A. How do different materials react to magnets?
O B. What causes magnets to be attracted to metal objects?
O C. Does the size of the magnet affect the magnet’s power?
O D. Do some objects other than magnets have magnetic power?

Tuesday - Vocabulary Term of the Week
Fossils are formed when plants or animals are -
O A. buried under a tarp.
O B. preserved in oceans, lakes and rivers.
O C. buried under mud.
O D. swallowed by other living creatures.

Wednesday - Misconception of the Week
What is wrong with the following statement?
An object is placed on a desk. When a magnet is placed nearby, the object slowly moves toward the magnet. The object is made of copper.
O A. There is nothing wrong with this statement.
O B. The object is made of iron.
O C. The object is made of glass.
O D. The object is made of gray plastic.

Thursday - Graphic of the Week
The landform below is a sea arch.
What is responsible for shaping this arch?
O A. plate tectonics
O B. earthquakes
O C. deposition
O D. erosion
1. For fossils to form the plant or animal matter must usually be hard and covered with ___mud (or sediment)___.

2. When developing a question for investigation, one must ensure that the ___experiment___ tests that question only.

3. A ___magnet___ is any object that attracts iron and a few other ___magnetic___ materials.

4. ___Erosion___ carries materials away from a location, while ___deposition___ drops the materials in a new location.

Scientists often sort objects based on their physical properties. Identify two physical properties of a piece of iron. Use words and/or pictures to explain your answer. Label all pictures.
Monday - Process Skill of the Week
Which of the following questions is testable in a scientific investigation?

O A. Are dogs better pets than cats?
O B. Are dogs happy when they are walked?
O C. Are cats more active at night than during the day?
O D. Are cats easier to take care of than dogs?

4.SI.C.3

Tuesday - Vocabulary Term of the Week
When Jaylen threw the basketball through the hoop, it fell to the ground. What caused the ball to hit the ground?

O A. friction
O B. air
O C. magnetic field
O D. gravity

3.PS.C.3

Wednesday - Misconception of the Week
What is wrong with the following statement?
Dwayne decides to investigate seed germination. He plants several seeds in his garden. He said that once the seeds germinate, they will conduct photosynthesis.

O A. There is nothing wrong with this statement.
O B. Once they germinate, they will grow seeds.
O C. Once they germinate, they will attract bees.
O D. Once they germinate, they will start to sprout.

4.LSA.1

Thursday - Graphic of the Week
A teacher put a beaker of water on a hot plate. The beaker is shown before and after the hot plate is turned on.

What is the evidence that water is changing state?

O A. The hot plate is turned on.
O B. The temperature increases.
O C. The water bubbles and the steam are visible.
O D. The mass of water in the beaker increases.

4.PS.B.4
1. Food production in plants is primarily supported by its _leaves_ which can absorb sunlight.

2. When water boils, it forms steam which is due to the _evaporation_ of the water.

3. When playing kick ball, the ball shot in the air and then began falling before another student caught it. The ball coming down is due to _gravity_.

4. Testable questions seek answers that can be _measured_.

A typical flowering plant goes through four main stages in its life cycle. Make a diagram showing the four stages in the life cycle of a typical flowering plant. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week

Which statement is a testable hypothesis?

O A. Apples are good for you.
O B. Soup tastes better when eaten with salt.
O C. **Sound travels faster through water than air.**
O D. There are many good designs for paper airplanes.

Tuesday - Vocabulary Term of the Week

Which is an example of a chemical change?

O A. A scientist melts ice to create water.
O B. A scientist shapes melted glass into a cylinder.
O C. A scientist grinds an iron rod to make iron filings.
O D. A scientist mixes chlorine gas and sodium to make salt.

Wednesday - Misconception of the Week

What is wrong with the following statement? Caleb noticed that water droplets formed on the outside of his glass of lemonade. He said that his glass was perspiring.

O A. There is nothing wrong with this statement.
O B. Precipitation caused the water droplets.
O C. Evaporation caused the water droplets.
O D. **Condensation caused the water droplets.**

Thursday - Graphic of the Week

A student added a small ball to a graduated cylinder containing 10 ml of water.

What is the volume of the ball?

O A. 5 ml
O B. 10 ml
O C. 15 ml
O D. 20 ml
1. Ms. Smith boiled water in her teakettle and then noticed water on the glass microwave door. These droplets of water are due to **condensation**.

2. Testable hypotheses have to be based on obtaining **facts**, not developing opinions.

3. To determine the volume of an object, one must find the **difference** between the water level before and after the object is placed in the container.

4. Clues in recognizing chemical change include: **color change**, **smell**, new physical property, substance given off, or heat given off.

When a candle is lit, the wick turns black and smoke flutters into the air. What kind of change (physical or chemical) is the wick undergoing through this process? Explain how you know the change is physical or chemical. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week
Which of these would be the best way to find whether a softball will roll down a hill faster than a basketball?

O A. Determining which of the balls has the greater mass.
O B. Observing the balls rolling down the same section of a hill at the same time.
O C. Throwing the balls into the air at the same time to see which goes higher.
O D. Dropping the balls from the same height and observing which hits the ground first.

Tuesday - Vocabulary Term of the Week
In which state of matter are atoms moving further apart (more space between atoms)?

O A. solid
O B. liquid
O C. gas
O D. Bose-Einstein condensate

Wednesday - Misconception of the Week
What is wrong with the following statement?

Absorbing sunlight to make food is the most important job for the leaves of plants.

O A. There is nothing wrong with this statement.
O B. Collecting water is the most important job.
O C. Protecting animals is the most important job.
O D. Shading roots is the most important job.

Thursday - Graphic of the Week
Shown below are four different patterns found in the western garter snake.

The patterns most likely reflect differences in the snake's -

O A. life cycle.
O B. food source.
O C. size.
O D. habitat.
1. Some animals hide naturally in their habitat due to the colors, shapes and patterns existing on their bodies. This is known as **camouflage**.

2. A solid has tightly packed atoms, a liquid has atoms that are slightly spaced and move around a little, and gases have atoms that are _more_ _spaced_ and move _rapidly_.

3. To test an hypothesis, recording **observations** is the key before analyzing results.

4. **Stems** transport nutrients from roots to leaves, while **leaves** mostly make food.

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Animals meet their needs for survival in a number of ways. Identify two structures that animals use to help them survive. Then explain how each structure functions to help them survive. Use words and/or pictures to explain your answer. Label all pictures.
Monday - Process Skill of the Week
Students mixed a spoonful of vinegar with a small amount of baking soda in a bowl. They wrote a description of what they observed.

Which of these should the students avoid while doing this activity?
O  A. Using a metal teaspoon
O  B. Using a plastic bowl
O  C. Stirring the vinegar
O  D. Tasting the mixture

Tuesday - Vocabulary Term of the Week
Solids, liquids and gases all have different properties. Which of the following will change shape to match its container?
O  A. only solids
O  B. only liquids
O  C. solids and liquids
O  D. liquids and gases

Wednesday - Misconception of the Week
What is wrong with the following statement?

James wanted to determine what to wear for school the next day in Columbus. He watched the news and looked to the weather in Pennsylvania to make predictions about the Columbus weather the following day.

O  A. There is nothing wrong with this statement.
O  B. He should have looked north in Canada.
O  C. He should have looked south in Kentucky.
O  D. He should have looked west in Indiana.

Thursday - Graphic of the Week
Based on the weather map, what will tomorrow’s weather be in Columbus?

O  A. cold and dry
O  B. cool and rainy
O  C. cold and snowy
O  D. warm and sunny
1. Observing with your senses is very important when doing science; the sense that is used least for safety reasons is __**taste**__.  

2. __**Solids**__ have their own shape, whereas __**liquids**__ and __**gases**__ take the shape of the container.  

3. Because weather generally moves __**west**__ to __**east**__ in the U.S., one should look at Ohio’s weather to determine what the forecast will be in Pennsylvania.  

4. The symbol for a warm front is a __**red**__ line with half circles, while a __**blue**__ line with triangles represents a cold front.  

| There are three different states that matter can take. Identify two of these states of matter. Then, describe a characteristic of each state. |
**Monday - Process Skill of the Week**
The seed that is planted in fertilized soil will grow larger than the seed that is planted in ordinary topsoil. This statement is an example of a(n) -

- A. hypothesis
- B. conclusion
- C. experiment
- D. observation

**Tuesday - Vocabulary Term of the Week**
Trunk is to tree as a ______ is to plant.

- A. leaf
- B. root
- C. stem
- D. seed

**Wednesday - Misconception of the Week**
What is wrong with the following statement? When Jane was doing her science homework, she wrote that she knew air was matter because it takes the shape of its container.

- A. There is nothing wrong with this statement.
- B. Air is matter because it is invisible.
- C. Air is matter because it takes up space and has mass.
- D. Air is matter because people need it to breath.

**Thursday - Graphic of the Week**
The picture shows the process of -

- A. melting
- B. boiling
- C. condensing
- D. freezing
1. A(n) **hypothesis** is an educated guess about what you think might happen during your experiment.

2. The roots of trees and the roots of flowers serve the same purpose of **taking in water from the soil**.

3. When water transforms from a gas back to a liquid it is **condensing**.

4. Matter is anything that **has** mass and **takes up** space.

Identify at least three things that could be classified as matter. Then, explain how you know each of those things is matter. Use pictures and/or words to explain your answer. Label all pictures.
Monday - Process Skill of the Week
Jerome wants to measure the depth of a large river. Which tool would be most appropriate to find the correct measurement?

O A. a centimeter ruler
O B. a meterstick
O C. a graduated cylinder
O D. a balance scale

Tuesday - Vocabulary Term of the Week
A student rubs two wooden sticks together very hard and fast. What effect will this friction have?

O A. The sticks will begin to melt.
O B. The sticks will become magnets.
O C. The temperature of the sticks will increase.
O D. The sound of the rubbing will become lower.

Wednesday - Misconception of the Week
What is wrong with the following statement?
Travis was stirring a spoonful of sugar in a glass of water. When the sugar disappeared, he was sure it evaporated.

O A. There is nothing wrong with this statement.
O B. The sugar turned into water.
O C. The sugar dissolved and made a solution.
O D. The sugar was destroyed by the water.

Thursday - Graphic of the Week
Which animals give birth to live young?

O A. hawk and black bear
O B. beaver and black bear
O C. hawk and potato beetle
O D. beaver and potato beetle
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<td><strong>Centimeters</strong> are the units that should be used to measure the length of smaller things, <strong>meters</strong> should be used to measure bigger things, and <strong>kilometers</strong> should be used to measure the length of really large things.</td>
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<td><strong>Friction</strong> is a force that can cause objects to come to a stop; it can also increase the temperature in objects.</td>
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<td><strong>Mammals</strong> have hair or fur, breath with lungs, and give birth to live young.</td>
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A fourth grade class had three containers that were each filled with 300 ml of water. They put two tablespoons of sugar in one container, two tablespoons of salt in one container, and two tablespoons of baking soda in one container. They stirred each container until the sugar, salt, and baking soda disappeared. They observed what happened over a three-week period. After three weeks, all of the water was gone, but the salt, sugar, and baking soda reappeared. Explain what happened to the sugar, salt, and baking soda when they disappeared. Next, explain what happened to the water when it disappeared. Finally, determine if the changes were physical or chemical and how you know that to be true.