

We will be working in this guide every day at the beginning of our science block in to get prepared for the Milestones Science Test in April. You may write on this but only work on questions for that day. Make notes in the area titled “Notes” and be ready to discuss your answers.

Milestones Questions

Engage with Dissection of
Questions

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DAY 1:

Q1. At which temperature does pure water boil?

- A. 0°C
- B. 50°C
- C. 100°C
- D. 150°C

NOTES:

Q2. How is the temperature of a star determined?

- A. by its color
- B. by its mass
- C. by its volume.
- D. by its distance

NOTES:

DAY 2

Q3. A student places a large chunk of ice in a pan and heats it on a stove.

Which of these shows the correct order of changes that take place when ice is heated?

- A. solid to gas to liquid because heat is added
- B. solid to liquid to gas because heat is added
- C. liquid to solid to gas because heat is removed
- D. gas to liquid to solid because heat is removed

NOTES:

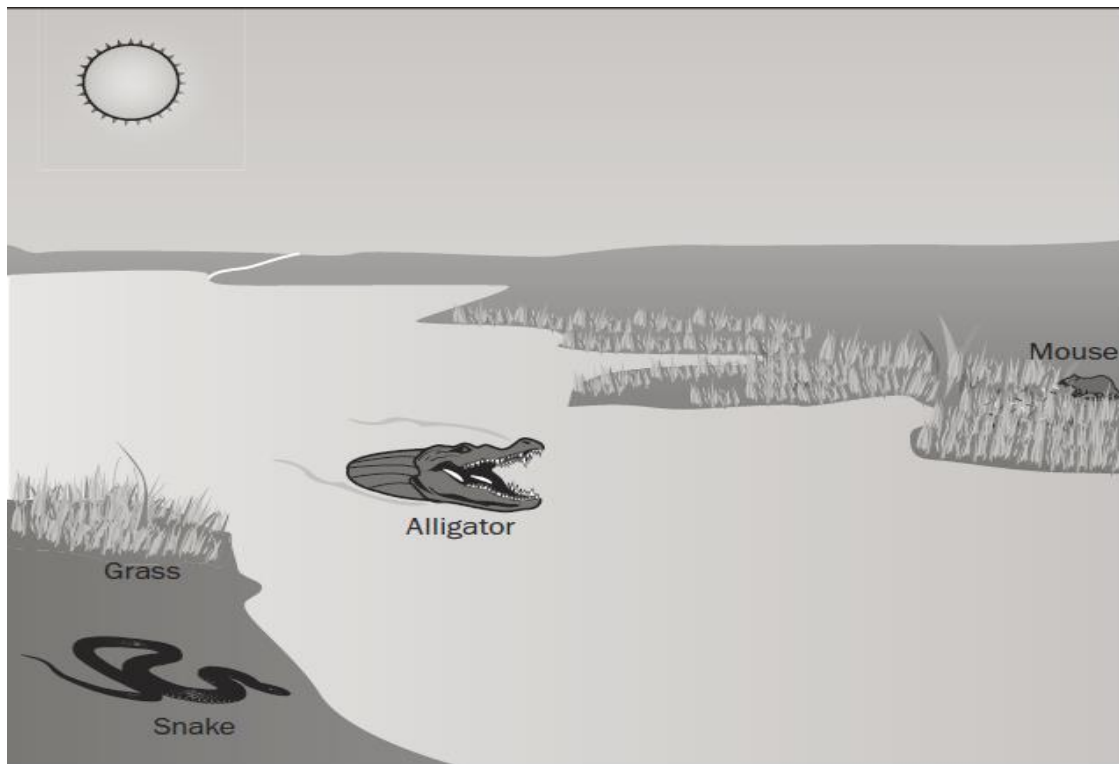
Q4. The Northern Hemisphere experiences winter in January. Which season is the Southern Hemisphere experiencing in January?

- A. fall
- B. spring
- C. summer
- D. winter

NOTES:

DAY 3

This is a food web that can be found in a wetland habitat.



Q5. Which of these shows the correct flow of energy through the food chain?

- A. Sun → mouse → grass → alligator → snake
- B. Sun → grass → mouse → snake → alligator
- C. Sun → alligator → snake → mouse → grass
- D. Sun → grass → snake → mouse → alligator

NOTES:

DAY 4

Q6. The table shows the changes in the state of water.

Day	Change of State
1	Liquid to solid
2	Gas to liquid

Which of these correctly describes the change in the temperature of the water on one of the days?

- A. from 0°C to 50°C on day 1
- B. from 50°C to 0°C on day 1
- C. from 30°C to 50°C on day 2
- D. from 90°C to 0°C on day 2

NOTES:

DAY 5:

Q7. Which length of string would produce the sound with the highest pitch?

- A. a string that is $\frac{1}{4}$ meter long
- B. a string that is $\frac{1}{2}$ meter long
- C. a string that is $\frac{3}{4}$ meter long
- D. a string that is 1 meter long

NOTES:

1. A stick insect looks just like a twig. How does this help the stick insect to survive?

- A. It helps the insect find food.
- B. It helps the insect reproduce.
- C. It helps the insect avoid being seen by predators.
- D. It helps the insect dig into its home inside the tree trunk.

NOTES:

DAY 6:

Q8. One student holds up a piece of paper with an apple behind it. Another student shines a flashlight on the apple so that the flashlight, apple, and paper are in a straight line. A third student observes the paper. She is able to see the outline of the apple behind the piece of paper. Next, the students try the same experiment using a book, instead of paper.

What will MOST LIKELY happen when the light hits the book?

- A.** The student will not see the apple because the book is opaque.
- B.** The student will not see the apple because the apple is opaque.
- C.** The student will see the apple because the apple is translucent.
- D.** The student will clearly see the apple because the book is transparent.

NOTES:

DAY 7:

1. A student states that the moon is always visible to Earth. Which of these explains why the student is incorrect?

- A.** The Moon is usually invisible to earth during its full moon phase.
- B.** The Moon is usually invisible to earth during its new moon phase.
- C.** The Moon is usually invisible to earth during its first quarter phase.
- D.** The Moon is usually invisible to earth during its third quarter phase.

NOTES

DAY 8:

8. In an investigation for his science class, Sam used a drinking cup to collect precipitation. He attached a ruler to the cup. Which weather instrument has Sam made?
- A. wind vane
 - B. rain gauge
 - C. barometer
 - D. thermometer

NOTES:

9. Four students looked at this list of organisms. Each student plans to draw a food chain that includes the Sun.

- | |
|---|
| <ul style="list-style-type: none">• water insect• algae• fish• shark |
|---|

In which order should the students draw the organisms to show the correct flow of energy through the food chain?

- A. shark → water insect → fish → sun → algae
- B. algae → sun → fish → water insect → shark
- C. shark → fish → water insect → algae → sun
- D. sun → algae → water insect → fish → shark

NOTES:

DAY 9:

- 6. A student is charting the position of a constellation and the planet Venus for a month. Each week Venus moves its location, but the stars in the constellation stay the same. Why does Venus move differently?**
- A. Earth orbits Venus.
 - B. Venus orbits the sun.
 - C. Earth orbits the constellation.
 - D. Venus orbits the constellation.

NOTES:

- 10. Maria needs to move a large, heavy box from the ground to her tree house. She will use a simple machine that was invented long ago to help her move the box.**

Which simple machine would be the MOST helpful to move the box?

- A. lever
- B. pulley
- C. screw
- D. wedge

NOTES:

DAY 10:

- 4. Stan left a container of warm water on the table. The container held exactly 160 milliliters of water. The next day, he noticed that the container held 150 milliliters. What is the BEST explanation for what happened?**
- A. Some of the liquid water turned into gas.
 - B. A decrease in temperature caused the volume to change.
 - C. Some of the water formed condensation on the sides of the container.
 - D. An ice cube was added to the container increasing the amount of water.

NOTES:

- 5. A student holds a soft drink bottle that is half-full of water. She blows across the top of the bottle, producing a sound. If the student wants to produce a sound with a higher pitch, what can she do?**
- A. Blow softer.
 - B. Blow longer.
 - C. Add water to the bottle.
 - D. Use a bottle with a longer opening.

NOTES:

DAY 11:

7. A scientist studies tiny organisms in a lake to find out if the habitat is healthy. These tiny organisms, called plankton and algae, are eaten by small fish in the lake, and the small fish are eaten by big fish.

Which of these would **MOST LIKELY** happen in the lake if a rainstorm washes pollution into the water?

- A. The number of plankton and algae would increase, and the number of fish would also increase.
- B. The number of plankton and algae would stay the same, and the number of fish would decrease
- C. The number of plankton and algae would decrease, and the number of fish would also decrease
- D. The number of plankton and algae would stay the same, and the number of fish would stay the same.

NOTES:

DAY 12

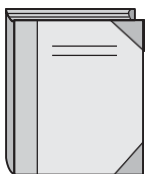
A student labeled each of the items shown as transparent, translucent, or opaque. One of the items is incorrectly labeled.



Water— transparent



Limestone— opaque



Book— opaque



Butter— translucent

2. Which of the items is incorrectly labeled, and what is its correct label?

- A. Water—opaque
- B. Limestone—transparent
- C. Book—translucent
- D. Butter—opaque

NOTES:

