

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. Which of these BEST describes the function of the cell membrane?

- A. It produces energy for cell functions.
- B. It is responsible for cell reproduction.
- C. It controls what enters and leaves the cell.
- D. It stores water and nutrients until needed by the cell.

NOTES:

Q2. Which of these landforms is formed by deposition?

- A. A mountain near a lake
- B. A canyon between two cliffs
- C. A delta near the mouth of a river
- D. A pool at the bottom of a waterfall

NOTES:

DAY 2

Q3. A scientist uses a microscope to compare tiny multi-celled and single-celled organisms.

Which statement about multi-celled and single-celled organisms is true?

- A. Multi-celled organisms can reproduce, but single-celled organisms cannot
- B. Multi-celled organisms have cell membranes, but single-celled organisms do not
- C. Multi-celled organisms can move within their environment, but single-celled organisms cannot.
- D. Multi-celled organisms have different cells for different jobs, but single-celled organisms do not.

NOTES:

Q4. A teacher is demonstrating physical and chemical changes to her class.

Which action should she use to demonstrate a chemical change?

- A. cutting a piece of paper
- B. folding a piece of paper
- C. tearing a piece of paper
- D. burning a piece of paper

NOTES:

DAY 3

Students observed as small drops of water collected on the outside of a glass.



Q5. Which statement BEST describes why the water vapor in the air formed liquid water on the outside of the glass?

- A.** The humidity outside the glass turns the vapor to liquid water.
- B.** The water vapor pulls the water from inside the glass to outside the glass.
- C.** The temperature of the water inside the glass is colder than the air outside the glass.
- D.** The temperature of the water inside the glass is warmer than the air outside the glass.

NOTES:

DAY 4

Q6. A group of students is performing an experiment in science class. The students drop an antacid tablet into a glass of water. The antacid tablet begins to dissolve and bubbles start to form.

Which would MOST LIKELY explain why bubbles are formed?

- A. The antacid tablet is chemically changing because gas is being released.
- B. The antacid tablet is chemically changing because a solid is changing shape.
- C. The antacid tablet is physically changing because the water becomes cloudy.
- D. The antacid tablet is physically changing because the water is getting very warm

NOTES:

DAY 5:

Q7. A scientist is going to conduct research in the forest. She will bring a magnet as one of her research supplies.

Which magnet would be BEST for the scientist to bring on her trip to the forest and why?

- A. A bar magnet because it has two different poles
- B. An electromagnet because its strength is constant
- C. A bar magnet because it does not need a power source
- D. An electromagnet because it can attract more materials

NOTES:

DAY 6:

2. Microorganisms were discovered after the microscope was invented in the 1600s. Since then scientists have found ways that microorganisms can be harmful.

Which of these describes one way that some microorganisms are harmful?

- A. They are used to make certain types of food
- B. They are used to make certain fuels for energy
- C. They cause diseases that can be spread to others
- D. They break down waste matter in the environment

NOTES:

DAY 7:

4. A group of students investigated physical and chemical changes using paper. The students recorded their observations in a table.

Student	Folding	Burning	Cutting	Tearing
1	Physical	Chemical	Chemical	Physical
2	Chemical	Physical	Chemical	Chemical
3	Physical	Physical	Physical	Chemical
4	Physical	Chemical	Physical	Physical

Which student correctly recorded all the changes that took place?

- A. Student 1
- B. Student 2
- C. Student 3
- D. Student 4

NOTES:

DAY 8:

- 6. A student reads that electromagnets are used in devices such as car motors and toasters.**

Which of these BEST describes why electromagnets are used in these devices instead of bar magnets?

- A. Electromagnets are permanent magnets.
- B. Electromagnets can be turned on and off.
- C. Electromagnets last longer than bar magnets.
- D. Electromagnets are usually smaller than bar magnet.

NOTES:

- 7. A dam constructed on a river can store large amounts of water behind it. Which of these describes another reason for building a dam?**

- A. Dams help prevent forest fires.
- B. Dams help prevent floods near rivers.
- C. Dams help prevent erosion along riverbanks.
- D. Dams help prevent pollution from getting into rivers

NOTES:

DAY 9:

1. A student grouped his classmates based on certain characteristics. The table shows the characteristic used to describe each group.

Student Characteristics

Group	Characteristic
1	Tall height
2	Brown eyes
3	Ride bicycles
4	Like spaghetti

Which two groups are described by an inherited characteristic?

- A. Group 1 and Group 2
- B. Group 1 and Group 4
- C. Group 2 and Group 3
- D. Group 3 and Group 4

NOTES:

3. A student walks on a carpet while wearing a pair of rubber shoes. He touches a metal doorknob and feels a small shock.

Which of these BEST explains what causes the student to experience the shock?

- A. The flow of energy due to gravity acting on the pair of shoes.
- B. The flow of charges due friction between the carpet and the pair of shoes.
- C. The flow of charges due to friction between the student's fingers and the doorknob.
- D. The flow of heat due to a difference in temperature between the student's fingers and the doorknob

NOTES:

DAY 10:

5. The table shows data collected by a scientist about two geologic processes.

Geologic Processes

Process	Rate of Increase in Thickness of Earth's Surface	Amount of Heat Produced
1	Fast	Alot
2	Slow	Very little

Which processes are MOST LIKELY described in the table?

- A. Process 1 is a volcanic eruption, and process 2 is deposition.
- B. Process 1 is deposition, and process 2 is a volcanic eruption.
- C. Process 1 is a volcanic eruption, and process 2 is an earthquake.
- D. Process 1 is an earthquake, and process 2 is a volcanic eruption

NOTES:

8. A student went to a river in the mountains and observed that some rocks were smooth and round, while others were rough and jagged. She noticed that the rocks were all made from the same type of mineral.

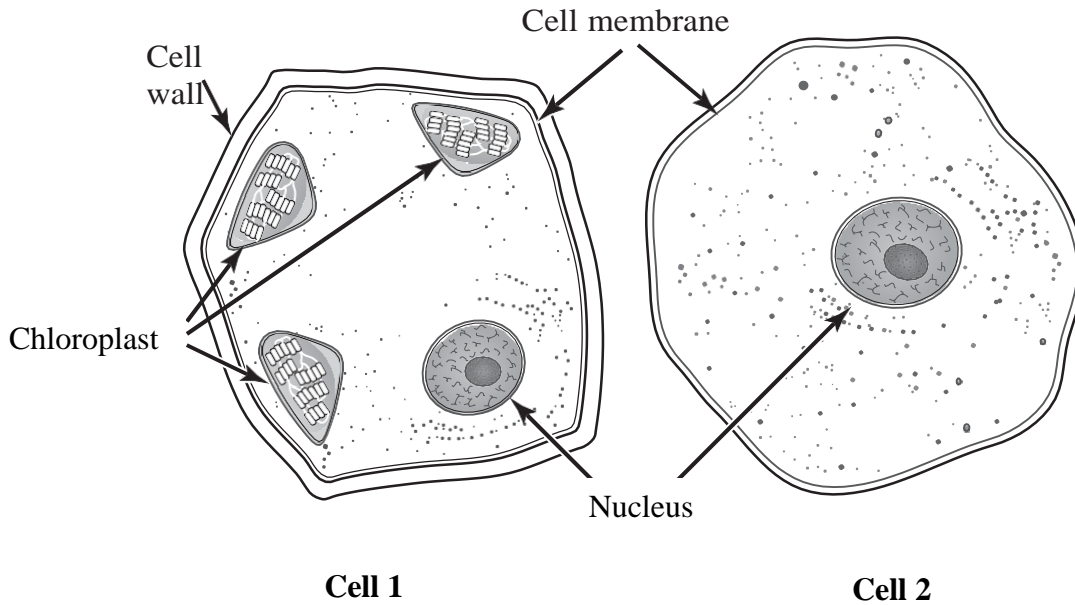
Which of these BEST explains the student's observations?

- A. The rough, jagged rocks are from a volcanic eruption far away.
- B. The rough, jagged rocks were blown into the water by wind erosion.
- C. The smooth, round rocks are much newer than the rough, jagged rocks.
- D. The smooth, round rocks have been weathered longer than the rough, jagged rocks.

NOTES:

DAY 11:

Four students examined the cells shown.



9. Each student made an observation about one of the cells.

Student 1: Cell 1 is a plant cell because it has a cell wall.

Student 2: Cell 2 is an animal cell because it has a nucleus.

Student 3: Cell 1 is a plant cell because it has chloroplasts.

Student 4: Cell 2 is an animal cell because it has a cell membrane.

Which students are correct?

- A. Student 1 and student 2
- B. Student 2 and student 3
- C. Student 1 and student 3
- D. Student 2 and student 4

DAY 12

10. A teacher takes his class on a field trip to a park to study plants and sort them into groups. The students create a table that contains their observations about each plant. One plant, labeled x, is unknown.

Plant	Amount of Light for Best Growth	Method of Reproduction	Height (in centimeters)	Soil Conditions
1	Sunny	Spores	61	Damp
2	Sunny	Seeds	914	Wet
3	Sunny	Seeds	4	Dry
4	Shady	Seeds	46	Damp
X	Shady	Spores	3	Wet

Based on the information in the table, which plant is MOST LIKELY related to plant x?

- A. Plant 1 because both plants makes spores.
- B. Plant 2 because both plants grow in wet soil.
- C. Plant 3 because both plants are short.
- D. Plant 4 because both plants grow in the shade.

NOTES: