

Name _____ Date _____

Weekly Test Lesson 10

Read the passage. Then answer the questions.

The Man Behind the Television

When you ask someone to name a famous inventor, you usually hear names like Alexander Graham Bell, Thomas Edison, and Benjamin Franklin. Do you ever hear the name Philo Farnsworth? You probably don't, although he is one of the greatest inventors of all. Among his inventions is a very popular household item—the television.

Philo Farnsworth was born on August 19, 1906. He and his family lived in a small log cabin in Utah. At a very young age, Philo helped out on the family farm. His parents always found him trying to fix or build new things with odds and ends.

Philo's first attempt at becoming an inventor happened in a barn on the family farm. He built a machine to make electricity with a pile of buckets, wooden boards, and some small garden tools. Philo was on his way!

Philo loved to read his uncle's science magazines. One day he read an exciting article about the idea of television. Radios were in some homes, but television was only a dream. It was all he could think about. He wanted to invent a television.

Several years later, the answer came to Philo while he was plowing the fields. When he stopped at the end of the row, he noticed the perfectly straight lines that the plow had made. He thought the field was like a picture made of lines. He wondered if parts of a picture could be sent line by line to form a complete picture on a television. The lines would be changed into electricity to zoom through wires to a television.

Philo continued to work on his television idea as he completed high school and college. After finishing school, he got a job. He shared his idea with his two bosses. They gave him some money to do more testing. They believed in Philo.

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Finally, in 1927 Philo brought television to life. His ideas were successful! Immediately, large radio companies took notice of Philo and his ideas. They, too, wanted to make and sell televisions. Companies could make a lot of money with this new idea. A large radio company offered Philo money for his ideas. The company knew this was the only way they would be able to make and sell televisions. Philo agreed and decided to use the money to help him with more inventions.

Televisions were instantly popular. They made the radio company very successful. Philo watched as they grew into a strong company seen by many as “the inventor of television.” Philo continued to look for other possible inventions. He was successful, but he always felt that the television was his baby.

Philo Farnsworth died in 1971. Although his name is not as well-known as Bell’s, Edison’s, and Franklin’s, he is one of the greatest inventors of the twentieth century. Without his great dreams and hard work, large-screen televisions, cable news, and cartoons might still be dreams and imaginings of the future!

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- 4 Read the sentence from the passage.

He was successful, but he always felt that the television was his baby.

What does the phrase the television was his baby mean?

- (A) The television was very noisy.
(B) The television was a lot of work.
(C) He created the television and loved it.
(D) He kept the television close and took care of it.
- 5 Label each event from the passage in the order in which it happened. The first event will be labeled 1, and the last event will be labeled 6.

___ A large radio company offered Philo money for his ideas.

___ Philo Farnsworth died in 1971.

___ Finally, in 1927 Philo brought television to life.

___ Philo's first attempt at becoming an inventor happened in a barn on the family farm.

___ Several years later, the answer came to Philo while he was plowing the fields.

___ Philo continued to work on his television idea as he completed high school and college.

- 6 Why did the author write this passage? Use evidence from the passage to support your answer.

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Line Art

Use geometric figures to draw each of the following.



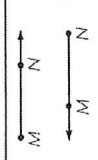
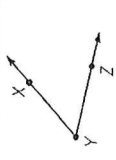

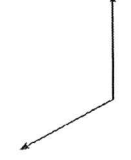
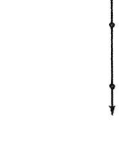
- 1. A flower using 1 line segment and 8 rays.
- 2. A sidewalk using 2 lines and 6 line segments.

- 3. Use geometric figures to draw your own design. Choose from points, lines, rays, segments, and angles.

- 4. Describe your design in Problem 3. Include the names of the figures you chose.

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Lines, Rays, and Angles

Name	What it looks like	Think
point D	$D \cdot$	A point names a location in space.
line AB ; \overleftrightarrow{AB} line BA ; \overleftrightarrow{BA}		A line continues without end in both directions.
line segment AB ; \overline{AB} line segment BA ; \overline{BA}		"Segment" means part. A line segment is part of a line. It is named by its two endpoints.
ray MN ; \overrightarrow{MN} ray NM ; \overrightarrow{NM}		A ray has one endpoint and continues without end in one direction. A ray is named using two points. The endpoint is always named first.
angle XYZ ; $\angle XYZ$ angle ZYX ; $\angle ZYX$ angle Y ; $\angle Y$		Two rays or line segments that share an endpoint form an angle. The shared point is the vertex of the angle.
A right angle forms a square corner.		An obtuse angle is greater than a right angle and less than a straight angle.
		A straight angle forms a line.
		

Draw and label an example of the figure.

- 1. \overline{PQ}
- 2. \overleftrightarrow{KJ}
- 3. obtuse $\angle FGH$

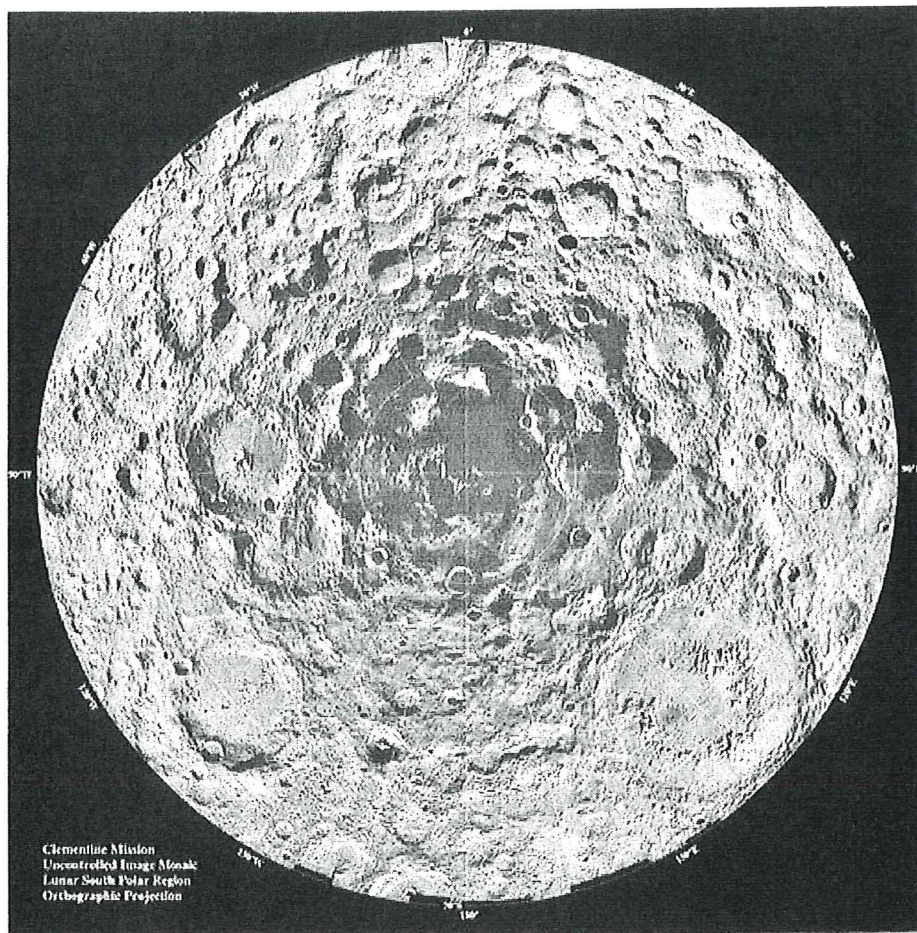
4. O.A.C.5
4. G.A.1
4. G.A.2
4. G.A.3

Why Is the Moon So Scarred with Craters?

This text is from NASA Space Place.

An asteroid or meteor is more likely to fall toward Earth than the moon because our planet's stronger gravity attracts more space debris. But we can see many thousands of craters on the moon and we only know of about 180 on Earth! Why is that?

The truth is both the Earth and the moon have been hit many, many times throughout their long 4.5 billion year history.



NASA/JPL/USGS

This view of the moon's cratered South Pole was seen by NASA's Clementine spacecraft in 1996.

Where did all of Earth's craters go?

The main difference between the two is that Earth has processes that can erase almost all evidence of past impacts. The moon does not. Pretty much any tiny dent made on the moon's

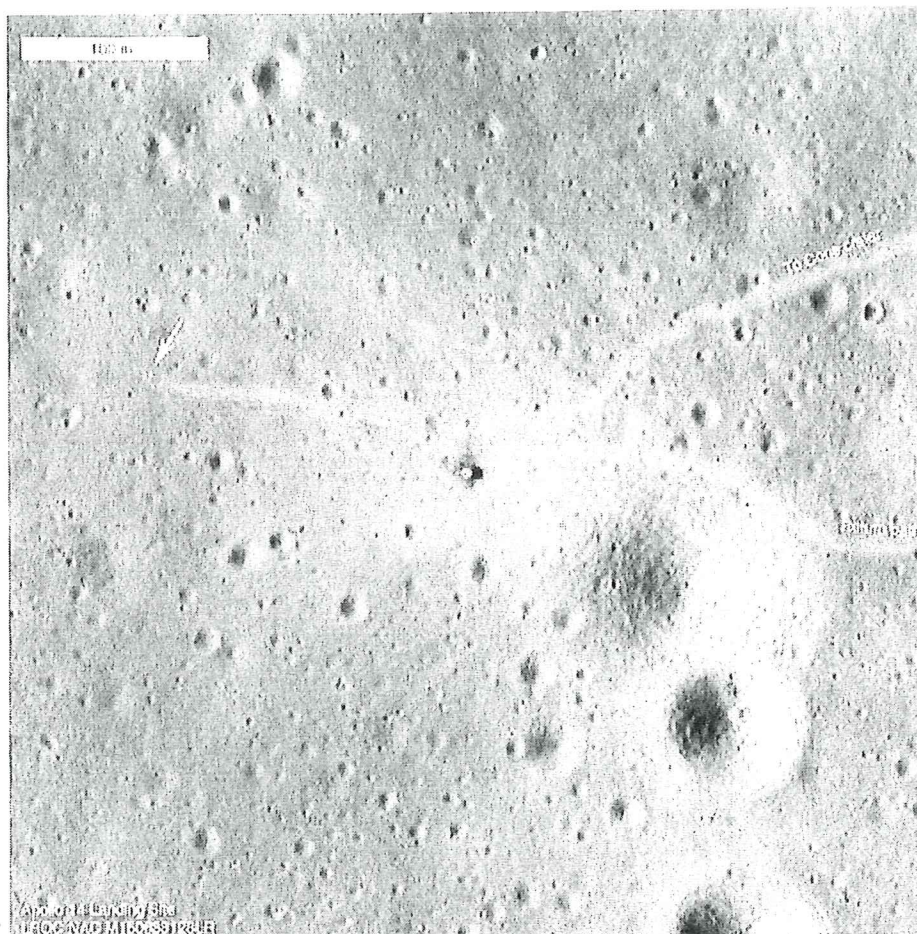
surface is going to stay there.

Three processes help Earth keep its surface crater free. The first is called erosion. Earth has weather, water, and plants. These act together to break apart and wear down the ground. Eventually erosion can break a crater down to virtually nothing.



NASA/GSFC/LaRC/JPL/MISR Team

Lake Manicouagan, a ring-shaped lake in Quebec, Canada, is all that remains of a crater from a massive impact over 200 million years ago.



NASA/LRO

Though they were made in 1971, these Apollo 14 astronauts' tracks were easily viewed from a NASA spacecraft in orbit around the moon in 2011 (tracks highlighted in yellow).

The moon has almost no erosion because it has no atmosphere. That means it has no wind, it has no weather, and it certainly has no plants. Almost nothing can remove marks on its surface once they are made. The dusty footsteps of astronauts who once walked on the moon are still there today, and they aren't going anywhere anytime soon.

The second thing is something called tectonics. Tectonics are processes that cause our planet's surface to form new rocks, get rid of old rocks, and shift around over millions of years.

Because of tectonics, the surface of Earth is recycled many times throughout its long history. As a result, very few rocks on Earth are as old as the rocks on the moon. The moon has not had tectonics for billions of years. That's a lot more time for craters to form and stay put.

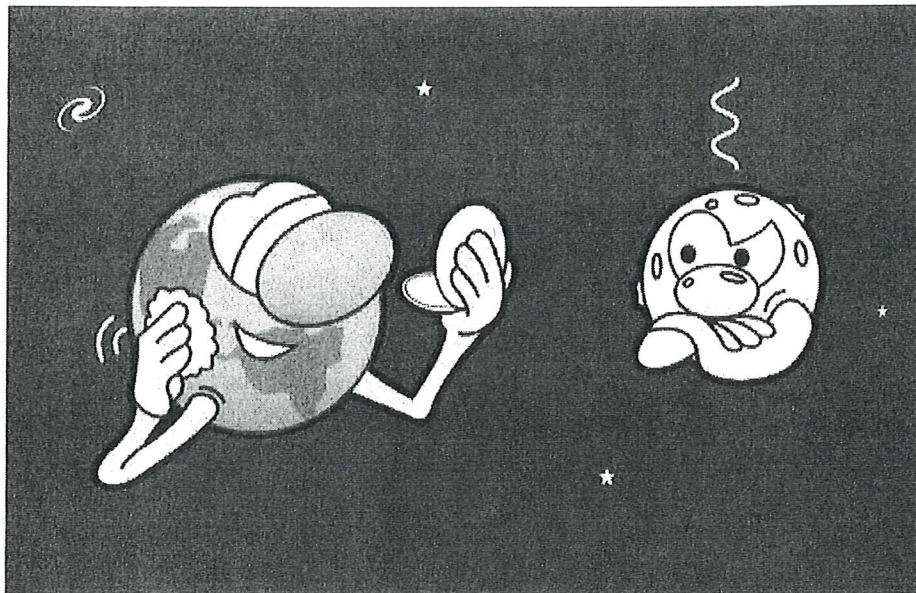
The third thing is volcanism. Volcanic flows can cover up impacts craters. This is a major way

impact craters get covered up elsewhere in our solar system, but it is less important than the recycling of crust here on Earth. The moon once had large volcanic flows way in the past that did cover up many of the bigger earlier impacts, but it has been without volcanism for around three billion years.

A powerless moon

The moon may attract fewer bits of space rock than the Earth, but the moon is powerless to do anything about it after it has been hit. Once something hits the moon, that event becomes frozen in time. Earth, on the other hand, simply brushes these impact craters off and moves on with its life.

No wonder there are so many craters on the moon compared to Earth!



NASA

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1. Why does the Earth have fewer craters than the moon?

- A. The Earth has a stronger gravitational field and attracts more debris than the moon.
- B. The Earth is bigger than the moon.
- C. The Earth has processes that can erase almost all evidence of past impacts. The moon does not.
- D. The moon attracts fewer bits of space rock than the Earth.

2. What does this passage describe?

- A. This passage describes the three processes that help Earth keep its surface crater free.
- B. This passage describes the dusty footsteps of astronauts that you can still see on the moon today.
- C. This passage describes the 180 craters that you can still see on Earth.
- D. This passage describes the way volcanism covers up craters everywhere in our solar system.

3. Read these sentences from the text:

"Three processes help Earth keep its surface crater free. The first is called erosion. Earth has weather, water, and plants. These act together to break apart and wear down the ground. Eventually erosion can break a crater down to virtually nothing."

What can be concluded about Earth's surface based on this information?

- A. Earth's surface looks exactly the same as the moon's surface.
- B. Earth's surface is constantly changing
- C. Earth's surface has been the same for thousands of years.
- D. Earth's surface will eventually be completely smooth.

4. Based on the information in the text, what do you think would happen to Earth's surface if erosion, tectonics, and volcanism suddenly stopped occurring?

- A. Earth would continue to erase evidence of past impacts.
 - B. Earth would have fewer craters.
 - C. Earth would stop erasing evidence of past and future impacts.
 - D. Earth would be completely smooth.
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The story above could be used to create a song. Describe how you could use dynamics and tempo to help tell each part of the story.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.