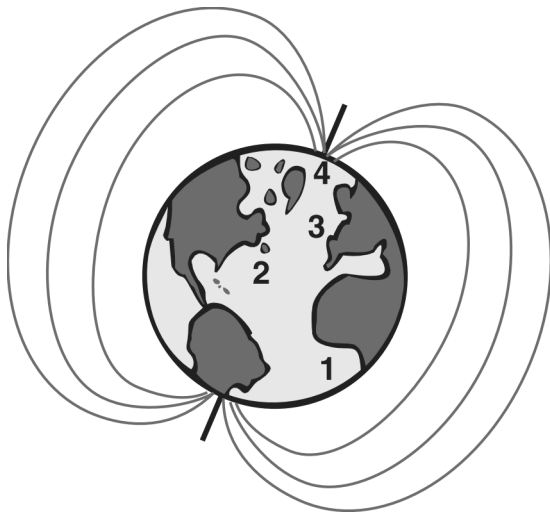


## RQ on Atmospheric Interactions

Name: \_\_\_\_\_

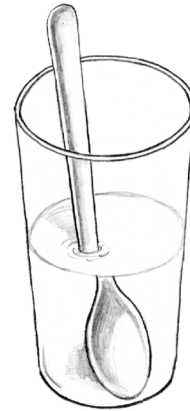
Date: \_\_\_\_\_

1. Earth's magnetic field *most* affects which of the following?
  - A. the rotation of Earth on its axis
  - B. the water cycle on Earth
  - C. the movement of Earth's tectonic plates
  - D. the amount of radiation reaching Earth's surface
2. What term is used to describe the Earth's magnetic field that extends far out into space?



- A. Magnetic Poles
- B. Magnetosphere
- C. Magnetomatic
- D. MangoTango

3. The setting sun often appears red. What is the best explanation for this?
  - A. The surface temperature of the sun is lower at sunset than at other times of the day.
  - B. The sun is closer to the horizon causing the light to encounter more water droplets, dust, and pollutants in the atmosphere, which scatter the red light.
  - C. The path of light through the Earth's atmosphere is shorter at sunset than at noon.
  - D. The surface of the Earth changes infrared radiation into red light.
4. Use the picture below to answer the following question.



The spoon appears to be broken where it enters the water because

- A. the light is reflected by the water.
- B. the light is absorbed by the water.
- C. the light is bent or refracted by the water.
- D. the light is dissolved by the water.

5. Denise was driving east over a hill in the afternoon, shortly after a rain shower. Suddenly the sun broke through the clouds, and she saw a rainbow ahead of her. Which of the following made the rainbow possible?
- A. Sunlight can be separated into all the colors of the rainbow when it changes mediums.
  - B. Water reflects sunlight like a mirror to make it look colored.
  - C. Overhead black clouds reflect in puddles to cause a mirage.
  - D. Air pollution causes the sky to look colored under these conditions.
6. Which of the following statements explains why light is refracted as it moves from air into glass?
- A. The speed of light decreases in glass.
  - B. The energy of light increases in glass.
  - C. The frequency of light decreases in glass.
  - D. The wavelength of light increases in glass.
7. Which of these effects does a prism have on light?
- A. It reflects the light.
  - B. It focuses the light.
  - C. It refracts the light.
  - D. It absorbs the light.
8. What is the difference between the reflection of light and the scattering of light?
- A. Reflected light travels in many directions, where as scattered light travels in only one direction
  - B. Reflected light travels in only one direction, where as scattered light travels in many directions
  - C. Reflected light travels at equal but opposite angle as the incident light, where as scattered light is bent
  - D. All of the above
9. Why is the sky blue?
- A. Because all the other colors of light are absorbed and only blue light is transmitted
  - B. Because blue light is scattered more by the air molecules and the other lights just past through
  - C. Because blue light refracted by the air molecules but the other colors are reflected
  - D. Because blue light is absorbed by the atmosphere and all the other colors are transmitted
10. Which of the following best describe what produces auroras?
- A. Charged particles from the Sun collide with oxygen and nitrogen atoms in the thermosphere, resulting in bursts of red, green, and blue lights.
  - B. Charged particles explode when they reach out atmosphere, like fireworks.
  - C. Gases in the atmosphere heat up as they rise and begin to glow different colors
  - D. All of the above