1. The diagram shows the pattern of air movement around the flame of a candle which helps to rotate a pinwheel.

   What type of heat transfer is represented in the diagram?
   A conduction
   B convection
   C insulation
   D radiation

2. As the Moon revolves around Earth, it is observed in phases. Which best explains the reason for the phases of Earth’s Moon?
   A The phases depend on the position of the Moon in relation to the Sun and Earth.
   B The phases depend on whether or not the Earth casts a shadow on the Moon.
   C The phases are caused when the Moon casts a shadow on Earth.
   D The phases are caused when the Moon totally blocks the Sun.
3. This diagram shows two different ways to represent longitudinal waves.

Which letter corresponds to rarefaction in the waves?
A  W  
B  X  
C  Y  
D  Z

4. Which would most likely cause a plant to undergo dormancy?
A  change in oxygen amounts  
B  change in temperature  
C  change in sugar production  
D  change in carbon dioxide levels

Sample Constructed Response with Rubric

Photosynthesis is essential to the survival of green plants. Describe why photosynthesis is important to plant survival. List all steps necessary for photosynthesis to occur in plants.

Score 0: No response or the response does not address the prompt.
Score 1: Fulfills only 1 of 2 requirements of a level 2 performance.
Score 2: Identifies how photosynthesis is important to plant survival; lists all steps necessary for photosynthesis to occur in plants.

Possible Responses:
Photosynthesis allows plants to make their own food for survival. The steps needed for photosynthesis to occur in plants are as follows:
- take in carbon dioxide
- absorb energy from sunlight through the leaves
- take in water
- convert energy from sunlight into glucose
- release oxygen