



**NEW ENGLAND
COMMON ASSESSMENT PROGRAM**

**Released Items
2009**

**Grade 8
Science**

Science

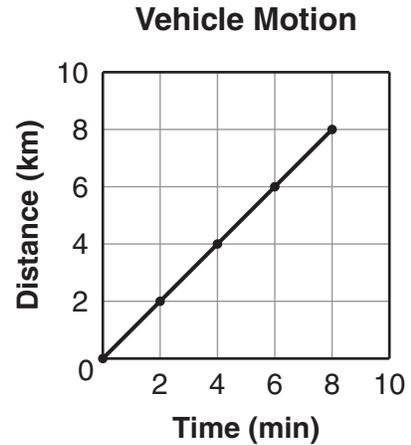
1 Which sequence represents matter that is losing energy?

- A. solid \rightarrow gas \rightarrow liquid
- B. solid \rightarrow liquid \rightarrow gas
- C. gas \rightarrow solid \rightarrow liquid
- D. gas \rightarrow liquid \rightarrow solid

2 Photosynthesis is a chemical reaction that occurs inside green plant cells. Which sentence describes one important energy conversion that occurs as a result of photosynthesis?

- A. Light is converted to chemical energy.
- B. Carbon dioxide is converted to light energy.
- C. Oxygen is converted to chemical energy.
- D. Chlorophyll is converted to light energy.

3 The graph below describes the motion of a vehicle traveling at a constant speed for 8 minutes.



What is the average speed of the vehicle after 5 minutes?

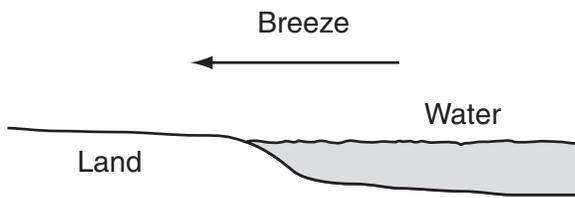
- A. 1 km
- B. 1 km/min
- C. 5 km
- D. 5 km/min

- 4 A naturally occurring element has a melting point of -38.9°C and a boiling point of 356.7°C .
- Identify the element's state of matter at 0°C and explain why the element is in this state.

The same element is heated from a temperature of -42.0°C to a temperature of -35.0°C .

- Describe what happens to the element as it is heated from -42.0°C to -35.0°C . Be sure to include what happens to the atoms of the element.

- 5 In the summer, coastal towns usually experience cool ocean breezes, as shown in the diagram below.

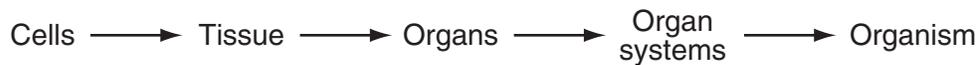


Which process creates the type of ocean breeze shown?

- A. Cool air above the ocean sinks and warm air above the land rises.
 - B. Cool air above the ocean rises and warm air above the land sinks.
 - C. Warm water evaporates and condenses above the ocean.
 - D. Warm water condenses and precipitates above the ocean.
- 6 Which type of rock forms under high temperatures and pressure but is **not** exposed to enough heat to melt?
- A. igneous
 - B. metamorphic
 - C. sedimentary
 - D. volcanic

- 7 What causes Earth's year to be shorter than Jupiter's year?
- A. the gravitational pull of Jupiter's moons
 - B. the shape of Earth's orbit around the Sun
 - C. the distance between Earth and the Sun
 - D. the mass and density of Jupiter

8 The diagram below shows the levels of organization in a multicellular organism.



Which level of organization is made up of cells working together to do just one job?

- A. cells
- B. tissue
- C. organ systems
- D. organism

9 Which two processes work together to cycle oxygen through an ecosystem?

- A. respiration and precipitation
- B. evaporation and precipitation
- C. respiration and photosynthesis
- D. evaporation and photosynthesis

10 In an experiment, fruit flies with normal wings were allowed to breed inside two different containers. The table below shows the wing types of the offspring.

Wing Types of Offspring

| Container | Normal Wings | Tiny Wings |
|-----------|--------------|------------|
| W | 223 | 61 |
| X | 211 | 90 |

Which statement is **best** supported by the data in the table?

- A. Fruit flies have only one kind of wing type.
- B. Both parent fruit flies passed on the tiny wing characteristic.
- C. Parent fruit flies with normal wings always have offspring with normal wings.
- D. Just one parent fruit fly determined the wing type the offspring have.