



**NEW ENGLAND  
COMMON ASSESSMENT PROGRAM**

**Released Items  
2010**

**Grade 4  
Science**

# Science

1 A student flattened a 25-g ball of clay. The flattened clay also weighed 25 g. Which conclusion is **best** supported by this information?

- A. Weight does not change when the shape of an object changes.
- B. Weight does not change when the texture of an object changes.
- C. Weight does not change when the flexibility of an object changes.
- D. Weight does not change when the temperature of an object changes.

2 Which of the following is an example of heat made by friction?

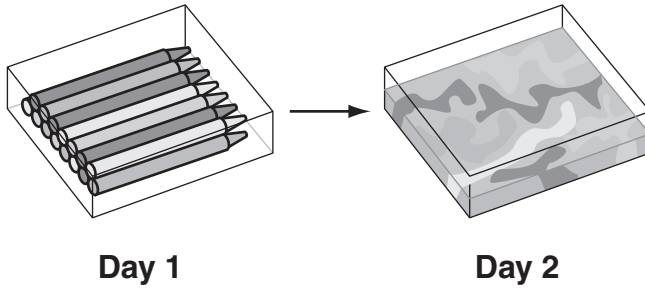
- A. a candle burning
- B. hands rubbing together
- C. water heating on a stove
- D. sunlight warming a sidewalk

3 Kristen pushes an 8 kg ball and a 5 kg ball toward Jeremy. She wants the balls to reach Jeremy at the same time.

How does Kristen push the balls?

- A. She pushes the 8 kg ball more gently than she pushes the 5 kg ball.
- B. She pushes the 8 kg ball harder than she pushes the 5 kg ball.
- C. She pushes the 8 kg ball in a different direction than she pushes the 5 kg ball.
- D. She pushes the 8 kg ball and the 5 kg ball equally.

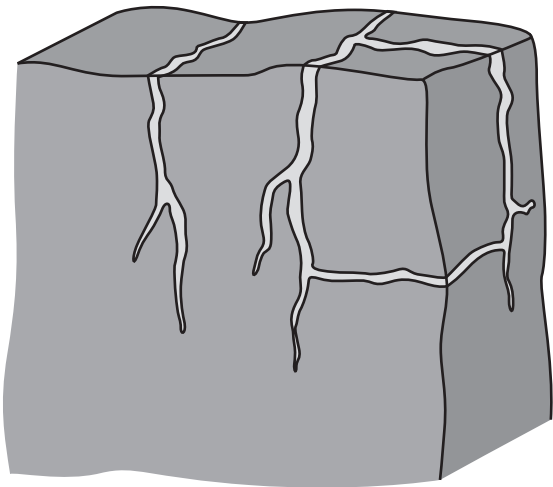
- 4 On Day 1, a tray of crayons is left inside a car on a hot afternoon. On Day 2, the temperature is cool. The crayons form one piece of solid wax that takes the shape of the tray.



- Explain how the crayons formed one piece of solid wax.
- Explain why the crayons took the shape of the tray.

- 5 A student has an earth material. Which is the **best** way for the student to find out if the earth material is soil?
- A. weigh the earth material
  - B. heat the earth material
  - C. look for pieces of dead plants in the earth material
  - D. measure the size of the pieces in the earth material

- 6 The picture below shows a rock with water in its cracks.



What is the **most likely** cause of the rock breaking apart?

- A. wind making the rock fall
- B. wind eroding the cracks
- C. water changing to vapor
- D. water changing to ice

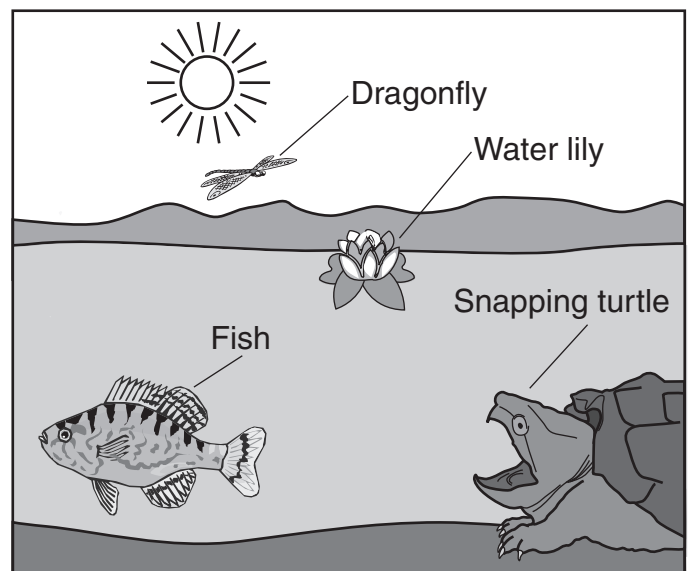
- 7 An earth material is used to make the products listed below.

- automobile parts
- airplanes
- tennis rackets

Which characteristics make this earth material useful for these products?

- A. strong and lightweight
- B. magnetic and flexible
- C. easily shaped and soft
- D. conducts electricity and heat

- 8 The diagram below shows living things in a pond.



Which living thing changes the energy from sunlight into food energy?

- A. dragonfly
- B. fish
- C. snapping turtle
- D. water lily

- 9 Eagles nest high in dead trees. All of the dead trees in an area are knocked down. Why does the number of eagles in the area decrease?
- A. The eagles start nesting in live trees instead of dead trees.
  - B. The eagles no longer have a good place to build nests.
  - C. The eagles no longer have materials with which to build nests.
  - D. The eagles start nesting on the ground instead of in dead trees.

- 10 A basketball player is seven feet tall. Why did he **most likely** grow that tall?
- A. His birth parents played basketball.
  - B. His birth parents are also tall.
  - C. He stretched his legs every day.
  - D. He learned how to play sports.