



TIMSS 2019 Assessment Frameworks APPENDIX B

Example Restricted Use Items

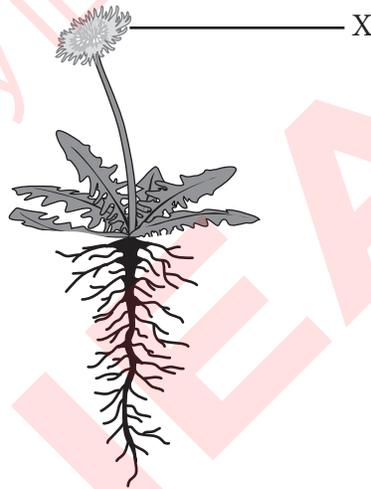


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Grade 4 Science

The diagram shows a flowering plant.



What is a function of the part of the plant labeled X?

- (A) to make food
- (B) to transport food
- (C) to produce seeds
- (D) to absorb water

S041223

Sara wants to know if fertilizer has any effect on the growth of plants.

She has four pots containing the same type of soil. She puts plants in each pot and adds fertilizer to two of the pots as shown below.

			
Pot 1	Pot 2	Pot 3	Pot 4
Fertilizer	Fertilizer	No fertilizer	No fertilizer

Which two pots should she compare to find out if fertilizer has any effect on the growth of plants?

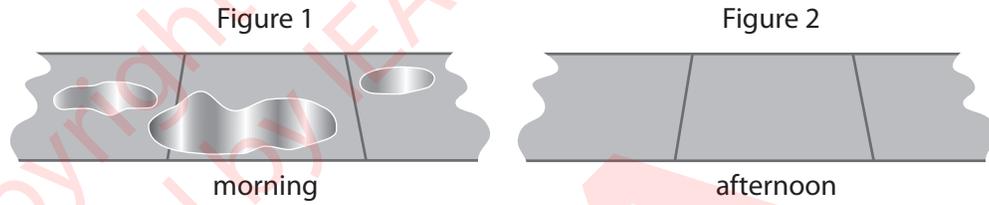
Pot 1 and Pot 3.

Explain your answer.

Pots 1 and 3 have the same
type of flower

S051008

Figure 1 shows some puddles of water on a concrete sidewalk in the morning. In the afternoon, the concrete sidewalk was dry as shown in Figure 2.



What happened to the water?

- A It went into the air.
- B It turned to dust.
- C It was used by trees.
- D It spilled into the road.

S051105

Which material is the best conductor of heat?

- A wood
- B metal
- C glass
- D plastic

S041191

Mike took four items from his kitchen and tested them to see whether they dissolved in water. He also touched them to see how hard they were. He wrote his results in a table, as shown below.

	Hard	Soft
Dissolves in water	Sugar cube	Honey
Does not dissolve in water	Metal spoon	Sponge

Mike found four more items, as shown below.



jelly



rock salt



rubber ball



glass bottle

Which item is in the same group as the sponge?

- (A) jelly
- (B) rock salt
- (C) rubber ball
- (D) glass bottle

S041050

The pictures below show a shadow at three different times of the day.

9 a.m.



12 noon



5 p.m.



Explain why the shadows changed.

The shadows changed because the sun changed position in the sky

S041113

Water flows across Earth's surface.

In which direction does it flow?

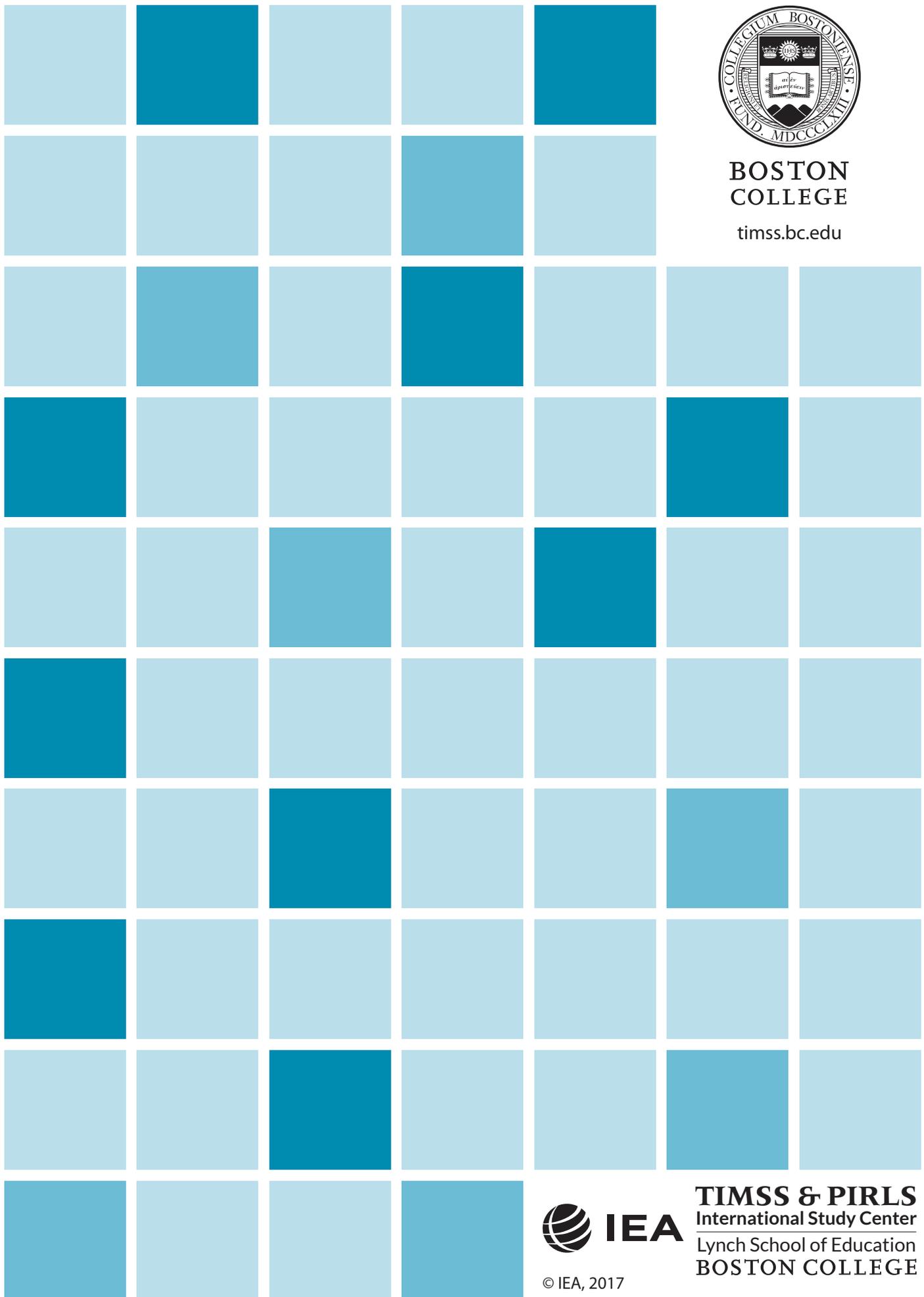
- mountains → rivers → oceans
- oceans → mountains → rivers
- rivers → oceans → mountains
- mountains → oceans → rivers

S051102



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