

Sample Items from TIMSS 2023 Assessments

G4

Sample Item 1

Subject: Math

Content Domain: Data

Cognitive Domain: Applying

Students in a class made three different origami animals using blue, red, and yellow paper. The table shows the number of animals that were made with each color paper.

Animal	Color Paper		
	Blue	Red	Yellow
 Tortoise	8	4	3
 Giraffe	3	2	10
 Fish	10	6	

Complete the table by solving this puzzle:

- There are the same number of blue fish as yellow giraffes.
- There are the same number of red fish as the other two red animals combined.
- There are 24 yellow animals in all.

Sample Item 2

Subject: Science

Content Domain: Life Science

Cognitive Domain: Applying

John investigated the effect of different amounts of light on two identical plants.

He put the plants in identical pots with the same kind of soil and the same amount of water.

John put Plant A near the window and put Plant B inside a closet with the door closed.

After two weeks, the plants looked like this:



Why is Plant B that was kept in the closet less healthy than Plant A that was kept by the window?

A is healthy because it had light

G8Sample Item 1

Subject: Math

Content Domain: Algebra

Cognitive Domain: Reasoning

Eric has 50 minutes to make as many model planes as he can.
It takes Eric 5 minutes to make Model A and 3 minutes to make Model B.

A. Eric wants to make 5 of Model A and 10 of Model B.

Explain why he will **not** have enough time to complete these models.

it will take him 55 minutes

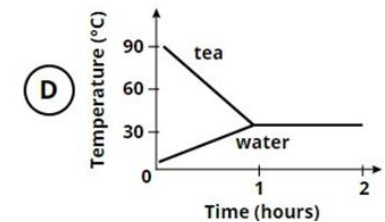
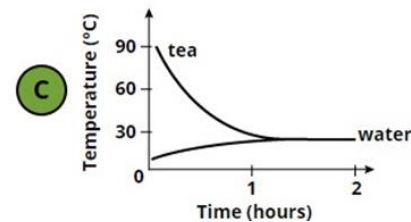
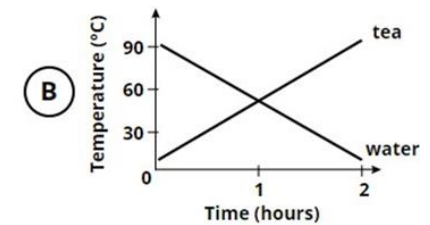
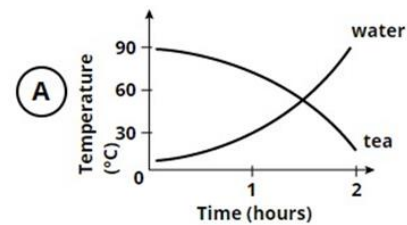
Sample Item 2

Subject: Science

Content Domain: Physics

Cognitive Domain: Applying

Lucy placed a glass of hot tea next to a glass of cold water on the table. Which of the graphs shows how the temperatures of the tea and the water changed over the next two hours? Assume the temperature in the room is 25°C .



Sample Items Measuring Environmental Knowledge

G4

Sample Item 1

All of these resources can be used to produce electricity:

- sunlight
- wind
- oil
- natural gas

What is one way that using sunlight or wind to produce electricity is **better** for the environment than using oil or natural gas?

Sunlight and wind do not burn and give off fumes.

G8

Sample Item 2

Which of the following is a **disadvantage** of using solar energy?

- ☐ A The sun is a renewable energy resource.
- ☐ B Solar panels are not efficient in windy areas.
- ☐ C Solar energy can be used in remote places where there are no power lines.
- ☒ D Clouds affect the amount of energy produced by solar panels.