Temperature Detectives

Measure and compare solids and liquids using Celsius temperatures.

SC.3.P.8.1 "Measure and compare temperatures of various samples of solids and liquids."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the sentences that tell how to measure a sample fairly, and circle the words that explain how to compare Celsius temperatures.

Measuring Sample Temperatures

1. Temperature tells how warm or cool a sample is. Scientists use a thermometer to measure temperature. They write the number and the unit, such as degrees Celsius. A solid keeps its own shape. A liquid flows and takes the shape of its container. Both solids and liquids can have different temperatures.

2. For a fair comparison, use the same thermometer and the same unit for each sample. Follow the thermometer directions. A probe may touch a solid's surface. In a liquid, keep the probe away from the bottom and sides of the container. Wait until the number stops changing, then record it.

3. During an investigation, a class measured four samples. They recorded whether each sample was a solid or a liquid. Then they put their results in the table. The measurements help the class compare a solid with a liquid. They can find samples that are warmer, cooler, or equally warm.

CLASS TEMPERATURE RESULTS

Sample	State of Matter	Temperature (°C)
Metal bolt	Solid	19
Water	Liquid	21
Modeling clay	Solid	21
Cooking oil	Liquid	23

2 ANSWER WITH EVIDENCE

Use the passage

1. Which two samples have equal temperatures?

2. Which sample is the warmest?

3. Compare the metal bolt and the water. Which sample is warmer, and by how many degrees Celsius?

4. Which solid is cooler? Use both solid temperatures to explain your answer.

3 YOUR TURN

Your own words

Measure two solids and two liquids with the same thermometer. Record each temperature in the table, then compare each sample with one other sample in the last column.

SAMPLE	SOLID OR LIQUID	TEMPERATURE (°C)	COMPARISON NOTE

ANSWER KEY # Temperature Detectives

GRADE 3 · SC.3.P.8.1

PART 1 · READ AND MARK

Underline the sentences that tell how to measure a sample fairly, and circle the words that explain how to compare Celsius temperatures. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which two samples have equal temperatures?	**Water and modeling clay, both 21°C.**
2	Which sample is the warmest?	**Cooking oil, 23°C.**
3	Compare the metal bolt and the water. Which sample is warmer, and by how many degrees Celsius?	**The water is warmer than the metal bolt by 2°C.**
4	Which solid is cooler? Use both solid temperatures to explain your answer.	**The metal bolt is cooler because it is 19°C, while the modeling clay is 21°C.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

SAMPLE	SOLID OR LIQUID	TEMPERATURE (°C)	COMPARISON NOTE
Coin	Solid	20	Cooler than tea
Tea	Liquid	35	Warmer than coin
Crayon	Solid	22	Warmer than milk
Milk	Liquid	6	Cooler than crayon

Accept equivalent comparison wording when it matches the table values. For the open task, accept different safe samples and temperatures if each comparison note correctly matches the recorded measurements.