

3rd Grade Math: Measuring Temperature

What Is Temperature?

Temperature tells us how hot or cold something is. We use a **thermometer** to measure temperature, and in 3rd grade, students learn how to read thermometers and understand common units of measurement: **degrees Celsius (°C)** and **degrees Fahrenheit (°F)**.

Tools for Measuring Temperature

1. **Thermometers:**

2. A thermometer is the tool used to measure temperature. It has a scale marked in degrees that show the current temperature.

3. **Units of Measurement:**

- **Celsius (°C):** Used in most parts of the world, especially for scientific measurements. Water freezes at 0°C and boils at 100°C.
- **Fahrenheit (°F):** Commonly used in the United States. Water freezes at 32°F and boils at 212°F.

How to Read a Thermometer

4. **Look at the liquid level:**

5. On a liquid thermometer, the liquid rises as the temperature increases and falls as the temperature decreases.

6. **Check the temperature scale:**

The scale will show numbers that represent degrees in Celsius or Fahrenheit.

Example 1: Reading a Thermometer in Celsius

Problem:

You look at a thermometer that measures in Celsius, and the liquid stops at the number 20. What is the temperature?

Solution:

The temperature is **20°C**, which is considered warm.

Example 2: Reading a Thermometer in Fahrenheit

Problem:

You check a thermometer in Fahrenheit, and it reads 68. What is the temperature?

Solution:

The temperature is **68°F**, which is a comfortable room temperature.

Converting Between Celsius and Fahrenheit

While in 3rd grade, you may not need to convert between Celsius and Fahrenheit, it is helpful to understand the relationship between them:

- To **estimate** from Celsius to Fahrenheit, you can multiply by 2 and add 30.

$$\text{Fahrenheit} \approx (\text{Celsius} \times 2) + 30$$

- To estimate from Fahrenheit to Celsius, you can subtract 30 and divide by 2.

$$\text{Celsius} \approx (\text{Fahrenheit} - 30) \div 2$$

Example: Convert 25°C to Fahrenheit

$$(25 \times 2) + 30 = 50 + 30 = 80^\circ F$$

So, 25°C is about 80°F.

Common Temperatures to Remember

- **Freezing point** of water:
 - 0°C (Celsius)
 - 32°F (Fahrenheit)
- **Boiling point** of water:
 - 100°C (Celsius)
 - 212°F (Fahrenheit)
- **Comfortable room temperature:**
 - Around 20°C to 25°C
 - Around 68°F to 77°F

Conclusion:

- Temperature is measured in **degrees** and is commonly expressed in **Celsius (°C)** or **Fahrenheit (°F)**.
- Use a **thermometer** to read the temperature, and understand basic points like the freezing and boiling points of water.
- Practicing how to read and interpret temperatures will help you in everyday life, from understanding weather reports to using the oven!