

Water Mix

Trend task

Approach: One to one

Level: Year 4

Focus: Use a thermometer to record water temperatures and mix hot and cold water to achieve a specified temperature range.

Resources: Thermometer, 3 glasses, cold water, hot water (around 50–55°C), note paper.

Questions/instructions:

Pour about 4 cm of cold water into one glass, and about 4 cm of hot water into another.

In this activity you are going to use a thermometer to measure the temperature of some cold water and some hot water. After that, I am going to ask you to mix cold water and hot water together to get a different water temperature.

1. First I want you to measure the temperature of the COLD water in this glass.

Have you used a thermometer before?

If the student says “yes” then allow them to proceed.

If the student says “no”

Prompt: Can you figure out how it works?

If the student cannot figure it out, show them how to use it, demonstrating with the cold water, then ask the student to repeat that measurement.

Fold open the recording book to the results sheet and give to student.

Now write the measurement on your results sheet.

Check the actual temperature and make a private note.

Record alongside the student’s record after the student has finished, so that they do not see the teachers’ measurements.

cold water temperature accurately recorded 78 (86)

2. Now measure the temperature of the HOT water, and write the measurement on your results sheet.

accurately recorded 75 (89)

3. Now I want you to think about how you could mix together some of the cold water and some of the hot water to make water that is at a different temperature. I want you to try to mix the water so that it is between 30°C and 35°C.

Water mix	Teacher measurements here	
Results sheet		
Temperature of the COLD water	<input type="text"/>	<input type="text"/>
Temperature of the HOT water	<input type="text"/>	<input type="text"/>
Temperature of the MIXED water	<input type="text"/>	<input type="text"/>

Try to do that now. Mix together some of the cold water and some of the hot water so that you will have water at a temperature between 30° and 35°C.

Allow time for the student to do the mixing.

mixed water: between 30°C and 35°C 73 (74)
between 24°C–29°C or 36°C–42°C 19 (24)

4. Now write down the temperature of your water on your results sheet.

Check the actual temperature and record this and your earlier measurement alongside the student’s record.

recorded accurately 83 (89)

% responses
1999 ('95)
year 4

% responses
1999 ('95)
year 4

Commentary:

The 1999 students were somewhat less able than the 1995 students to measure temperatures.