Dissolving Candy Cane Experiment

Grades 2-4

Name _____ Date _____

Question: Does water temperature change how fast a candy cane dissolves?

You need

- 3 small candy canes, all the same size
- 3 clear cups or glasses, all the same
- A timer or clock
- Cold water, room-temperature water and warm tap water
- Masking tape and a marker for labels

Safety: a grown-up handles the warm water. Use warm tap water, never boiling. Do not eat the candy canes after the test.

What to do

1. Label the cups **Cold**, **Room** and **Warm**.
2. Pour the **same amount** of water into each cup (about 1 cup). A grown-up fills the warm cup from the hot tap. Never use boiling water.
3. Unwrap the candy canes. Put one in each cup **at the same time** and start the timer.
4. Do not stir. Look closely at 2, 5 and 10 minutes and write what you see.
5. Keep checking. Write down the time when each candy cane is gone or almost gone.

My prediction. The candy cane will dissolve fastest in the

cold room warm

water, because

_____

_____

Draw your setup

Draw the three cups before you start. Label each one Cold, Room or Warm.

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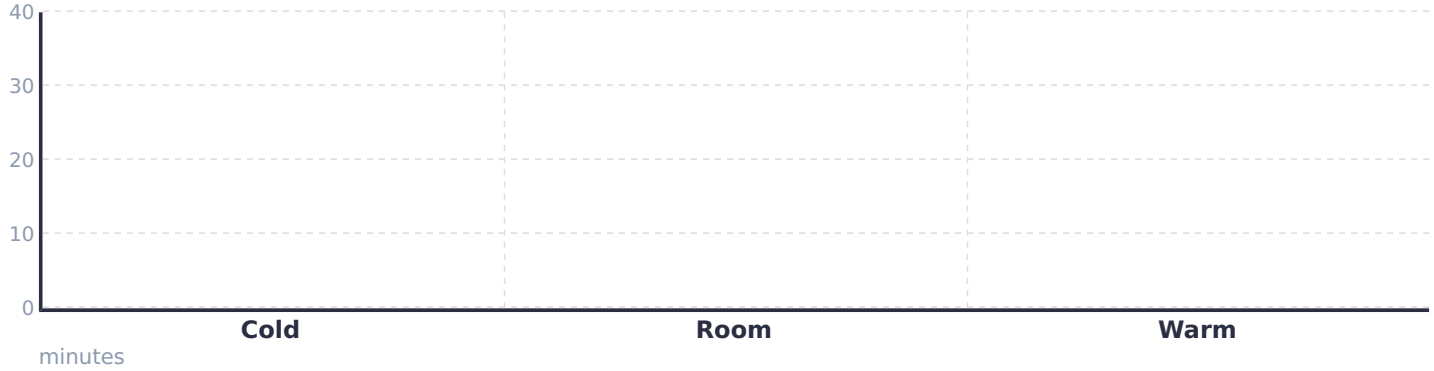
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What I observed

Cup	After 2 minutes	After 5 minutes	After 10 minutes	Time to dissolve
Cold				
Room				
Warm				

Graph my results

Colour a bar up to the number of minutes each candy cane took to dissolve. If one took longer than 40 minutes, colour to the top and write the time on the bar.



Think about it

1. Which candy cane dissolved fastest?

2. Was your prediction right?

3. What did we keep the same in every cup to make it a fair test?

Science words

Draw a line from each word to what it means.

dissolve	O	O changing only one thing so the test is fair
prediction	O	O to look closely and notice what happens
fair test	O	O a smart guess about what will happen
observe	O	O to mix into a liquid until you cannot see it

Teacher Notes & Answers

Dissolving Candy Cane

What usually happens

The candy cane in **warm water** dissolves first, then **room-temperature**, and the **cold** one is slowest. Exact times depend on the size of the candy canes and how warm the water is, so accept any results the children really observed. The red stripes often spread out as coloured streaks first, and a sugary layer settles at the bottom of each cup.

The science

Candy canes are mostly sugar. Water is made of tiny particles that are always moving, and in warm water they move faster. Faster particles bump into the sugar more often and harder, so they pull it apart and mix it into the water sooner. The sugar does not disappear: it is still in the water, which now tastes sweet.

Think about it

1. Usually the warm-water candy cane. 2. Answers will vary. 3. The same size candy cane, the same amount of water, the same kind of cup, put in at the same time, no stirring. Only the water temperature changed.

Science words

dissolve → to mix into a liquid until you cannot see it · prediction → a smart guess about what will happen · fair test → changing only one thing · observe → to look closely and notice what happens

Try next

Does stirring change the time? Does a crushed candy cane dissolve faster than a whole one? Change only one thing each time.