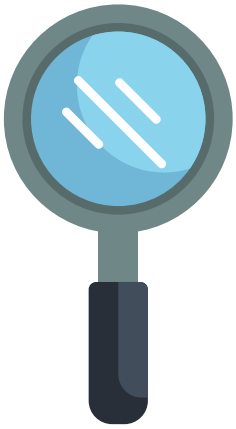
How Does Temperature Affect Candy Dissolving?

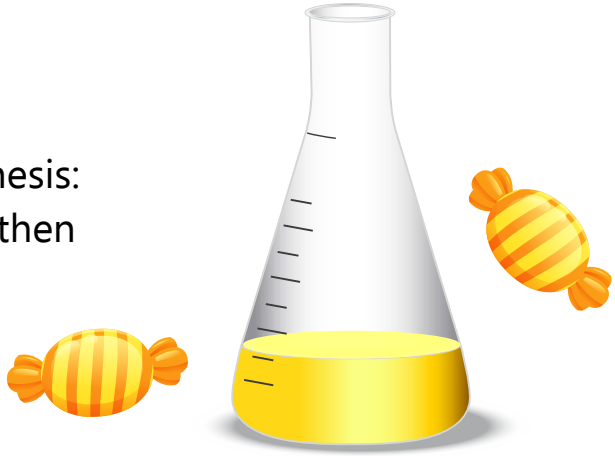
The scientific method is a step-by-step process that helps you investigate questions, test your hypothesis, and analyze the results to draw conclusions.



A hypothesis is a statement or prediction about what you think will happen during an experiment, based on prior knowledge or observations. It can be tested to determine if it's correct.

In any experiment, we work with variables: the independent variable is what you change, the dependent variable is what you measure, and control variables are the conditions you keep the same to ensure a fair test.

The Experiment:
You're going to test how fast a piece of candy dissolves in different water temperatures: hot, warm, and cold. You will place the same type of candy in each cup of water and observe how long it takes to dissolve.



Create Your Hypothesis
What do you think will happen?
Complete this sentence to create your hypothesis:
If I place candy in hot, warm, and cold water, then the candy in the _____ water will dissolve the fastest because _____.

Identify the Variables
Let's figure out the variables for this experiment!
Independent Variable: What will you change in this experiment?
Answer: _____
Dependent Variable: What will you measure in this experiment?
Answer: _____
Control Variables: What things will you keep the same for all tests?
(Hint: Think about the type of candy, amount of water, etc.)
Answer: _____

How Does Temperature Affect Candy Dissolving?

Plan the Scientific Method Steps

Ask a Question:
(Example: How does water temperature affect how fast candy dissolves?)
Answer: _____
Do Research:
Write down one thing you know about how things dissolve in water.
Answer: _____
Test the Hypothesis (Experiment):
1. Fill three cups with the same amount of water: one with hot, one with warm, and one with cold water.
2. Drop the same type of candy into each cup at the same time.
3. Observe and time how long it takes each piece of candy to dissolve.
4. Record your results!
Collect Data (Results):
Write down how long it takes for the candy to dissolve in each cup (hot, warm, and cold water).
Time in hot water: _____
Time in warm water: _____
Time in cold water: _____
Draw a Conclusion:
Based on your results, was your hypothesis correct? Explain what you learned.

Create a Journal Entry
After the experiment, write a short journal entry like a scientist! Include:
What did you do?
(Describe the steps you took during the experiment.)
What did you find out?
(Which water temperature dissolved the candy the fastest? What was the result?)
Was your hypothesis correct?
(Explain whether or not your guess was right, and why.)

Share Your Findings!
Once you've completed the experiment and written your journal entry, share your results with your class or family. Explain what you tested, what happened, and what you learned.