Wonder Project

Ice Cream Challenge

Activity 3.2: Cold plate creations

Test how air makes ice cream scoopable!

While it may be invisible, air has a big impact on ice cream's scoopability. Explore for yourself by making two ice creams on a cold plate!

Experiment

*Make it fair! To make this a fair test, only 1 thing can change. We call this a **variable**.*

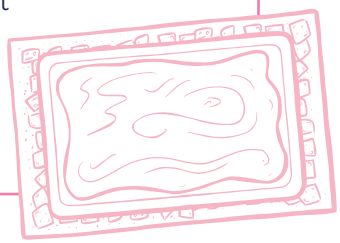
Variable (thing that will change):

- ✓ Air

Test 1:	Unwhipped cream
Test 2:	Whipped cream

Controlled conditions (things that say the same):

- ✓ Sugar type and amount
- ✓ Method
- ✓ Freezing time



Ask

What questions/pātai do you have about air and how it impacts scoopability?

Predict

What do you think will happen?

We think test 1 will be	
We think test 2 will be	

Use these words to help: soft, hard, light, dense, crumbly, smooth, scoopable.

Why do you think this?

Test

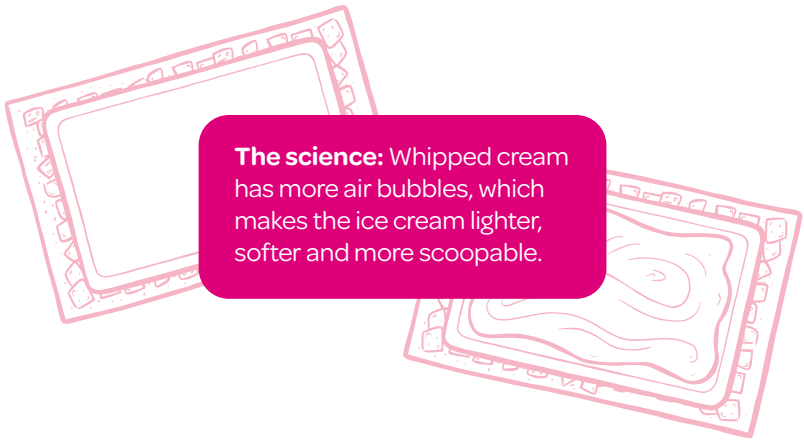
Do your experiment!

- ✓ Mix ingredients in bowl
- ✓ Pour 1/3 cup onto frozen cold plate
- ✓ Let it set for 5 minutes
- ✓ Scrape and test

What do you notice?	Test 1	Test 2
Drip test	Drips off spoon: ◯ Quickly ◯ Slowly	Drips off spoon: ◯ Quickly ◯ Slowly
Feel	◯ Soft ◯ Hard	◯ Soft ◯ Hard
Scoopability	◯ Easy to scoop ◯ Hard to scoop	◯ Easy to scoop ◯ Hard to scoop

Suggested roles:

Sensory Scientist:	Observes experiment and records results
Flavour Chemist:	Measures and mixes ingredients
Texture Technician:	Spreads mixture on cold plate
Hygiene Hero:	Manages health and safety



The science: Whipped cream has more air bubbles, which makes the ice cream lighter, softer and more scoopable.

Explain

What did you learn?

Your results:

What does this mean?

Was your prediction correct?

◯ Yes ◯ No

Do you need to change anything for next time?