

Scientific Observations

KEEPING MILK FRESH

ESSENTIAL QUESTION

Why do dairy products need to be kept in the refrigerator?

WHAT ARE WE LEARNING?

- Why dairy products need to be refrigerated
- To follow a scientific process to find answers to a question
- The process of fair testing
- What happens to dairy products that aren't refrigerated

TRY THIS WITH

- Years 1-4
- Students who like finding out the reason why
- Students who love scientific experiments and making observations

FIND

- Define
- Recall
- Discuss
- Label
- Reproduce
- Observe

Ask: 'Where is the milk kept at your house? What happens if milk is left out of the refrigerators?'

Explain to the class that for the next five days they will be conducting a scientific experiment.

Discuss the importance of following a scientific process - this includes thinking about what could happen and making predictions that we can refer back to each day.

Set up the following headings to record student's thoughts (use a Google Doc or similar to record).

What is the aim or opportunity?

What is the plan?

How will you carry out the plan?

Report the interesting aspects.

Self/Peer assess.



APPLY

- Practice
- Transfer
- Group
- Link
- Test
- Assumption

In order to set up the scientific experiment it is important that students understand they need to test the same thing each time.

View the fair testing video to learn more.

Have students devise the methods to ensure the test is fair - how will they make sure the same amount of milk is in each container? Is it important to use the same type of milk container? The same type of milk (low fat etc.)? Is it important to check the experiment at the same time each day? Why? Why not?

Prepare students to record (and graph) what they see and smell.



PRODUCE

- Adapt
- Prove
- Support
- Experiment
- Invent
- Justify

Show the three cartons of milk (check that they all have the same expiry date and are the same brand/type of milk).

Ask: What will happen to the milk if we don't keep it refrigerated? Record answers.

Take the temperature of each container then place one in the fridge (as the control), one in the sunshine and one in the classroom (on a shelf where it won't be knocked).

Each day, students will need to look at and smell the milk as well as take the temperature of each carton. Record results.

Share the responsibility each day for a student to photograph the experiment.

Complete by recording answers in each of the agreed headings.



SUCCESS CRITERIA

Students can check they have completed the task successfully by:

- Checking if the experiment is correctly recorded under the agreed headings
- Ensuring the daily change been accurately captured
- Checking the daily findings been recorded in a logical manner

PRINCIPLES	VALUES	KEY COMPETENCIES	LEARNING AREAS	WORD BANK	RESOURCES REQUIRED
Community engagement Future focus High expectations	Excellence Innovation, inquiry and curiosity Integrity	Thinking Using language, symbols and text Participating and contributing	Science Mathematics CREST	Refrigeration Temperature Fair test Observations	Rosie's Education YouTube