

Scientific Observations

KEEPING MILK FRESH

ESSENTIAL QUESTION

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

WHAT ARE WE LEARNING?

- Why dairy products need to be refrigerated.
- The process of fair testing.
- How we see science in our everyday lives.

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

Give students 20 seconds to contribute to a padlet: 'Where is the milk kept at your house?'

Investigate the role of a refrigerator in homes. What happens if milk is left out of the refrigerator?

Introduce the idea of a scientific experiment.

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

Set up headings to record student's thoughts:

- 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

Introduce the idea of a fair test. Create a science language vocab wall that includes the words variables, prediction, control, comparison, and observation.

Devise the best methods to ensure the test is fair.

Challenge students to do a combined fair test with butter and margarine.

Discuss the variables - what should change? What shouldn't?

How will students make sure the same amount of product is in each container?

Is it important to use the same type of container?

Help students to record and graph what they see.

Conduct the test.

Photograph each stage.

PRODUCE

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

Give students the opportunity to create their own fair test using milk.

Show the three cartons of milk and 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 the scientific method 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	KEY CONCEPTS
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	Fair Test Real World Science Refrigeration Following a Process