

Quebec - Achievements and Competencies

Learning Outcomes

Cycle 1 (Gr. 7-8)
Physical changes

The Quebec Achievements and Competencies are based on the Progression of Learning Outcomes derived from the Quebec Education Plan set by the Ministère de l'Éducation, du Loisir et du Sport.

Specific Expectations

GENERAL EDUCATION PATH

CYCLE 1 (Gr. 7-8) — Secondary 1 and 2

MATERIAL WORLD

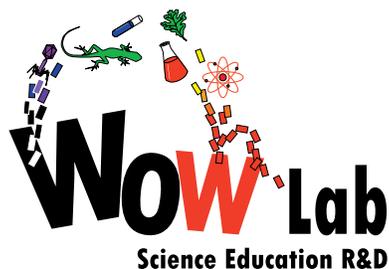
B. Changes

2. Physical changes

a. Physical changes

- i) Describes the characteristics of a physical change (e.g. substance retains its properties, molecules remain intact)
- ii) Recognizes different physical changes (e.g. phase changes, preparation or separation of a mixture)

Teachers can use this activity to demonstrate how the disruption of the surface tension of milk results in a physical change. Teachers should engage students in discussions about the change that is observed, emphasizing that it shows a physical change because the fat molecules remain intact and it is only the organization of these molecules that has changed. Students should share examples of other physical changes that occur, such as the mixing of food colouring and milk or examples of phase changes.



a WOW Lab

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**Colourific - Quebec -
Achievements and Competencies**

APPLIED GENERAL EDUCATION PATH

CYCLE 1 (Gr. 7-8) — Secondary 1 and 2

MATERIAL WORLD

B. Changes

2. Physical changes

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Strategies

A. EXPLORATION STRATEGIES

3. Referring to similar problems that have already been solved
4. Becoming aware of his or her previous representations
6. Formulating questions
7. Putting forward hypotheses (e.g. individually, in teams, as a class)
9. Anticipating the results of his or her approach
10. Imagining solutions to a problem in light of his or her explanations
13. Using different types of reasoning (e.g. induction, deduction, inference, comparison, classification)

B. INSTRUMENTATION STRATEGIES

4. Using different tools for recording information (e.g. diagrams, notes, graphs, procedures, logbook)
5. Using a variety of observational techniques and tools

C. ANALYTICAL STRATEGIES

3. Using different types of reasoning (e.g. inductive and deductive reasoning, comparison, classification, prioritization) in order to process information
4. Reasoning by analogy in order to process information and adapt scientific and technological knowledge

D. COMMUNICATION STRATEGIES

3. Exchanging information
4. Comparing different possible explanations for or solutions to a problem in order to assess their relevance (e.g. full-group discussion)