a WOW Lab BLUEPRINT

Classroom Science Investigation

Achievements and Competencies

Learning Outcomes

Kindergarten - Grade 3	Grades 4-6
Materials and our senses	Properties and changes of materials
Liquids and solids	
Materials and structures	

Achievements and Competencies are based on the Common Framework of Science Learning Outcomes (K-12) set by the Canadian Council of Ministers of Education (1997).

Specific Expectations

Grade 1

PHYSICAL SCIENCE

Materials and our senses

> 100-10 Identify attributes of materials that we can learn to recognize through each of our senses (e.g., compare sounds using words such as "loud" or "soft," "high pitch" or "low pitch"; describe tastes as sweet, sour, salty, bitter; compare textures using words such as "hard" or "soft," "smooth" or "rough," "sticky" or "not sticky"; describe appearance in terms of shape, colour and lustre).

While the students are completing the crime scene investigation, they will visit six different stations to analyze the evidence. At every station, the students use their senses to recognize and describe the attributes of different materials, such as cookies, clothing fibres and dental molds.

> 202-2 Place materials and objects in a sequence or in groups according to one or more attributes (e.g., classify materials into groups according to their texture).

During the crime scene investigation, the students must sequence and group the evidence that they obtain from every station. For example, at the dental analysis station the students must classify each dental imprint according to tooth curvature, number of teeth, whether the teeth are straight or crooked, large or small, and tightly spaced or not.

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Classroom Science Investigation - Achievements and Competencies

Grade 2

PHYSICAL SCIENCE

Liquids and solids

201-5 Make and record relevant observations and measurements, using written language, pictures and charts (e.g., use a chart to record observations about solids that hold water and those that do not).

At each station, students record their observations about the various pieces of evidence. The students will be able to accumulate enough information based on their observations and measurements to determine who stole the teacher's cookie and juice.

Grade 3

PHYSICAL SCIENCE

Materials and structures

200-2 Identify problems to be solved (e.g., identify a need to improve the stability of a structure).

This activity gives students the opportunity to identify the main problem, which is that their teacher's cookie and juice were stolen. They will then work in groups to solve the problem and catch the thief.

202-9 Identify new questions that arise from what was learned (e.g., ask why some buildings have sloped roofs and some are flat).

Throughout the crime scene investigation, the students will be able to identify new questions, such as "why are some dental imprints curved while others are not?"

Grade 5

PHYSICAL SCIENCE

Properties and changes of materials

104-5 Describe how results of similar and repeated investigations may vary and suggest possible explanations for variations (e.g., compare different pieces resulting from tearing or breaking an object and relate their form and size to the force and direction applied).

At the *Cookie Analysis Station*, different types of cookies will be crushed and the crumbs will be analyzed by the students. Variations between the crumbs will be compared to determine who was sitting where and who ate which cookie type.

300-10 Identify properties such as texture, hardness, flexibility, strength, buoyancy and solubility that allow materials to be distinguished from one another.

Throughout the crime scene investigation, different materials will be analyzed to help the students determine who stole the teacher's cookie and juice.