

Science and Technology Activities Resource

Safety Rules for Grade 3

Students are expected to have:

- the knowledge to use the materials, tools, and procedures involved in science and technology safely;
- the knowledge concerning the care of living things that are brought into the classroom; and
- the skills needed to perform tasks efficiently and safely.

The Ontario Curriculum Grades 1-8: Science and Technology, 2007 (Revised)

The *Science and Technology Activities Resource* calls for an active, experimental approach to learning, with all students participating regularly in hands-on activities. These hands-on activities can reinforce the learning of science concepts and promote the development of the skills of scientific investigation and technological problem solving.

Teachers, students and parents all share in the goal to **ensure safe hands-on activities** and an outcome of **students becoming self-directed learners responsible for their own and others' safety**. The following guideline highlights a listing of do's and don'ts for all elementary science and technology students.

Planning



Students should:

- consider safety when planning and designing an activity.
- keep the floor and aisles clean at all times.
- in general, have a teacher or an adult supervise the activity.
- always wash hands thoroughly with soap after the classroom/lab cleanup.
- remind the teacher about any allergies they may have.
- take care not to spill water on the floor. Mop up any spills immediately.
- carefully dispose of broken glassware in clearly marked containers.

Teachers/Adults should:

- consider safety when planning and designing an activity.
- use plastic instead of glassware such as plastic mirror whenever possible.
- in general, have a teacher or an adult supervise the activity.
- gather known student allergy information at the beginning of the school year. Pay particular attention to investigations that may involve handling allergy-causing substances including foods.
- use alcohol-filled thermometers, instead of mercury-filled ones.

Safety Gear



When working in the science and technology classroom/lab, students should:

- wear safety goggles.
- use protective gloves.
- wear footwear at all times.
- tie back long hair.

When working in the science and technology classroom/lab, teachers/adults should:

- sanitize shared equipment such as goggles after use.

Testing



Students should:

- keep a safe distance away from stretched materials that might snap and cause injury.
- ensure structures, especially when required to support heavy loads, are designed and built to support the weight. In drop tests, use soft materials under the testing load.

Teachers/Adults should:

- review the testing procedures and ensure the tests do not put students at risk.
- limit the size and weight of testing objects.
- not taste anything in the lab, unless instructed by the teacher.

Tools



Students should:

- be careful when handling sharp objects
- use tools only for the purpose for which they were designed and use them correctly as instructed by the teacher.
- avoid damaging table tops and use utility knives and cutting boards or mats when cutting. In case of nailing, measure the nail for correct fit before hammering it into the project.
- use a hole punch or paper drill when making holes in paper.

Teachers/Adults should:

- sharpen cutting tools to reduce the need for excessive force when cutting, which may lead to injury.
- ensure that students use a hand drill under supervision when making holes in wood and plastic.
- be careful when using a glue gun which can get very hot.
- keep tools below waist level.

Plants and Animals



Students should:

- handle all living things with care and return plants and animals to their natural habitat after the activity.
- show care and respect to the environment and all living things.
- wear protective clothing in outdoor activities.
- avoid touching the eyes when handling soils, plants and animals.
- always wash their hands after handling soils, plants and animals.

Teachers/Adults should:

- be mindful of students with allergies to certain plants and animals.
- Use “untreated seeds” or “seeds for organic growers” in the activities where seeds are required. Avoid the use of seeds treated with pesticides.
- be cautious that some plants can be hazardous to our health. Students with asthma and allergies will be more vulnerable to these plants.

Science and Technology Activities Resource — Safety Considerations for Grade 3

Before you start

Ensure that the students:

- read the *Safety Rules* on this card.

Plants

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| INVESTIGATIONS | 1 | Ensure that the students: | INVESTIGATIONS | 6 | • use scissors safely. |
| | | • use the magnifying glass safely as it is breakable. | | 7 | • do not touch their eyes when handling plants. |
| | | • do not taste any part of a plant unless instructed by the teacher. | | | • do not taste any part of a plant unless instructed by the teacher. |
| | | • do not touch their eyes when handling plants. | | 8 | • do not handle the household chemicals. The teacher should prepare the polluted water. |
| | 2 | • remind the teacher about any allergies they may have. | | | • use scissors safely. |
| 4 | • use scissors safely. | | 9 | • handle the glass jars safely as they are breakable. Carefully dispose of broken glassware in clearly marked containers. | |
| 5 | • read and understand the warnings on the packaging materials of the fertilizer and use it according to the instructions. | | | • use scissors safely. | |

Stability

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| INVESTIGATIONS | 1 | Ensure that the students: | INVESTIGATIONS | 7 | • use a hole punch or paper drill when making holes in paper. |
| | | • use tools and sharp objects safely. | | | • use scissors safely. |
| | 2 | • use scissors safely. | | 8 | • use tools only for the purpose for which they were designed and use them correctly as instructed by the teacher. |
| | 3 | • exercise care when using heavy stacks of books. | | | • wear safety goggles. |
| | | • wear safety goggles when using elastics or springs. | | 9 | • do not push or pull too hard. |
| | 4 | • exercise care when handling sharp objects. | | | • conduct the activity in an open area away from the furniture. |
| 5 | • do not climb on ladder without teacher’s supervision. | | 10 | • use tools only for the purpose for which they were designed and use them correctly as instructed by the teacher. | |
| 6 | • use various lever samples only for the purpose for which they were designed and use them correctly as instructed by the teacher. | | | • wear safety goggles. | |

Forces and Movement

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| INVESTIGATIONS | 1 | Ensure that the students: | INVESTIGATIONS | | • are reminded to report any allergy they may have with latex rubber products. |
| | | • do not push or pull too hard. | | 5 | • are reminded to report any allergy they may have with latex rubber products. |
| | 2 | • stay clear of the path of the falling objects when doing the drop test. | | | • use sharp objects safely. |
| | | • wear protective gloves. | | 7 | • wear safety goggles. |
| | • mop up any spilled water immediately. | | 8 | • use sharp objects safely. | |
| | • do not touch the electrical fan when their hands are wet or run it near water. | | 9 | • do not explore the machines without the supervision of the teacher. | |
| 3 | • use sharp objects safely. | | 10 | • review the Tools Safety Rules before they start. | |
| 4 | • use sharp objects safely. | | | | |

Soils

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| INVESTIGATIONS | 1 | Ensure that the students: | INVESTIGATIONS | 8 | • do not open and touch the content of the bag during the decomposing process. |
| | | • remind the teacher about any allergies they may have. | | 9 | • wear protective gloves when examining the decomposed contents in the bucket. |
| | | • handle the glass jars safely as they are breakable. Carefully dispose of broken glassware in clearly marked containers. | | | • wear protective gloves when maintaining the composter. |
| | • wear protective gloves when picking up leaves. | | 10 | • be careful when handling sharp objects | |
| 5 | • use scissors safely. | | | | |
| | • do not taste the “purified water”. It may look clean but it is not pure enough to drink. | | | | |