

Science and Technology Activities Resource

Safety Rules for Grade 6

Students are expected to have:

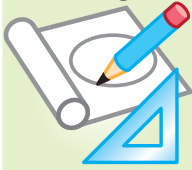
- the knowledge to use the materials, tools, and procedures involved in science and technology safely;
- the knowledge concerning the care of living things that are brought into the classroom; and
- the skills needed to perform tasks efficiently and safely.

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.
- take care not to spill water on the floor. Mop up any spills immediately.
- carefully dispose of broken glassware in containers clearly marked.

Teachers/Adults should:

- consider safety when planning and designing an activity.
- remind students not to look directly at the sun. Permanent eye damage can happen.
- use plastic instead of glassware whenever possible.
- use alcohol-filled thermometers, not mercury.
- in general, have a teacher or an adult supervise the activity.

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 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 test, 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 size and weight of testing objects.
- not taste anything in the lab, unless instructed by the teacher.

Tools



Students should:

- use tools only for the purpose for which they were designed and use tools correctly.
- use utility knives and cutting board or mat when cutting.
- use hole punch or paper drill when making holes in paper.
- Be careful when using glue gun which can get very hot.
- keep tools below waist level.

Teachers/Adults should:

- sharpen cutting tools to reduce need for excessive force when cutting, which may be dangerous.
- ensure that students use hand drill under supervision when making holes in wood and plastic.
- avoid using wood chisels.

Electric Devices



Students should:

- use battery holders to avoid burns.
- discard old batteries. Old batteries may leak and the contents can be corrosive and poisonous.
- carefully dispose of broken bulbs.
- beware of power overload when electrical appliances such as hot plates and hair dryers are used.
- unplug devices when setting up an activity. Do not insert any object into electrical outlets.

Teachers/Adults should:

- remind students not to short-circuit batteries as connecting wire will become hot and can cause serious burns.
- know that most circuit activities need only one or two 1.5V D-cells. Limit circuit voltage to 30V.
- never run a piece of electrical equipment near water.

Heating



Students should:

- ensure all heating activities and use of chemicals are conducted in well-ventilated areas.
- when candles are used, use candle holders and place them on sand trays.
- stand when heating things in order to move quickly enough in case of accident. Never leave flames unattended.

Teachers/Adults should:

- ensure a Type 2A-10BC fire extinguisher is available whenever an open flame is used and there is a risk of fire. A bucket containing dry sand is also recommended as an addition to the usual fire fighting equipment.
- avoid using alcohol burners.
- avoid using tall candles which are not stable.

Plants and Animals



Students should:

- be aware that some animals bite or sting. Discuss with the teachers when in doubt.
- wear protective clothing in outdoor activities.
- avoid touching the eyes when handling soils, plants and animals.
- always wash hands after handling soils, plants and animals.

Teachers/Adults should:

- be aware of students with allergies to certain plants and animals.
- return animals taken from their natural habitat after the activity.

Science and Technology Activities Resource — Safety Considerations for Grade 6

Before you start

- Read the *Safety Rules* on this card.
- Read the *Safety First Box* in your textbook before each activity.