

SCIENCE**Course Expectations Regarding Occupational Health and Safety (OHS)****General Considerations for Program Planning: Health and Safety**

Teachers are responsible for ensuring the safety of students during classroom activities and for teaching students to assume responsibility for their own and others' safety. They must model safe practices and communicate safety expectations to students in accordance with school board and ministry policies. This concern for safety in science requires that students demonstrate:

- knowledge about the materials, tools, processes, and procedures used in science;
- skill in performing tasks in the laboratory;
- knowledge about health and safety concerns and about the care of living things (plants and animals) that are brought into the classroom;
- concern for the health and safety of self and others.

Students demonstrate the knowledge, skills, and habits of mind required for safe involvement in science when they, for example:

- maintain a well-organized and uncluttered work space;
- carefully follow the instructions and example of the teacher;
- identify possible health and safety concerns;
- follow established safety procedures;
- suggest and implement appropriate safety procedures in new situations;
- comply with Workplace Hazardous Materials Information System (WHMIS) legislation.

Teacher's Note

Because of the important messages they carry, and since all students must take Science, delivery of the Biological and Chemical Modules is highly recommended in both Grade 9 and Grade 10 Science Courses. The Physical Module Section I is appropriate for Grade 9 Science.

SCIENCE (cont'd)**Course Expectations Regarding Occupational Health and Safety (OHS)**

	MINISTRY OF EDUCATION COURSE EXPECTATIONS	<i>LIVE SAFE! WORK SMART!</i>	
		MODULE	SECTION & PAGE
Grade 9			
Science Grade 9, Academic (SNC1D)			
	<p>Biology: Reproduction</p> <p><i>Understanding Basic Concepts (SE):</i> Discuss factors that are able to alter genetic material in both somatic and reproductive cells.</p> <p><i>Developing Skills of Inquiry and Communication (SE):</i> Investigate the effects that UV and nuclear radiation, carcinogens, and toxins have on developing organisms.</p>	Physical	Section I: pgs. 2-15
	<p>Physics: The Characteristics of Electricity</p> <p><i>Developing Skills of Inquiry and Communication (SE):</i> Demonstrate knowledge of electrical safety procedures when planning and carrying out an inquiry and choosing and using materials, tools and equipment.</p>	Biological	Section I: pgs. 2-8
	<p>Chemistry: Atoms and Elements</p> <p><i>Developing Skills of Inquiry and Communication (SE):</i> Demonstrate a knowledge of laboratory safety and disposal procedures while conducting investigations (e.g. wear safety glasses; practice orderliness and cleanliness; be aware of WHMIS guidelines and emergency procedures; be aware of proper handling and storage procedures).</p>	Chemical	Section I: pgs. 2-17

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	MINISTRY OF EDUCATION COURSE EXPECTATIONS	<i>LIVE SAFE! WORK SMART!</i>	
		MODULE	SECTION & PAGE
Science Grade 9, Applied (SNCIP)			
	<p>Biology: Reproduction - Processes and Applications <i>Relating Science to Technology, Society and the Environment</i> (SE): Identify local environmental factors and individual choices that may lead to a change in a cell's genetic info, or an organism's development, and investigate the consequences such factors have on human development (e.g. identify the consequences of exposure to X-rays for the development of the fetus).</p> <p>Physics: Electrical Applications <i>Developing Skills of Inquiry and Communication</i> (SE): Demonstrate knowledge of electrical safety procedures when planning and carrying out investigations and choosing and using materials, tools and equipment.</p>	Physical Biological	Section I: pgs. 2-15 Section I: pgs. 2-8
	<p>Chemistry: Exploring Matter <i>Developing Skills of Inquiry and Communication</i> (SE): Demonstrate a knowledge of laboratory safety and disposal procedures while conducting investigations (e.g. wear safety glasses; practise orderliness and cleanliness; be aware of WHMIS guidelines and emergency procedures, use proper handling and storage procedures. Demonstrate the skills required to plan and conduct an inquiry into the properties of substances, using apparatus and materials safely, accurately, and effectively.</p>	Chemical	Section I: pgs. 2-17

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	MINISTRY OF EDUCATION COURSE EXPECTATIONS	<i>LIVE SAFE! WORK SMART!</i>	
		MODULE	SECTION & PAGE
Grade 10			
Science Grade 10, Academic (SNC2D)			
	Chemistry: Chemical Processes <i>Developing Skills of Inquiry and Communication (SE):</i> Select and use appropriate apparatus, and apply WHMIS safety procedures for the handling, storage, disposal, and recycling of laboratory materials (e.g., wear safety goggles and aprons; use proper techniques for the handling, disposal, and recycling of acids, bases, and heavy metal ions; describe procedures to be followed in an emergency).	Chemical	Section II: pgs. 27-35
		Biological	Section II: pgs. 12-18
Science Grade 10, Applied (SNC2P)			
	Chemistry: Chemical Reactions and their Practical Applications <i>Developing Skills of Inquiry and Communication (SE):</i> Select and use appropriate apparatus, and apply WHMIS safety procedures for the handling, storage, disposal, and recycling of laboratory materials (e.g., wear safety goggles and aprons; use proper techniques to handle, dispose of, and recycle acids, bases, and heavy metal ions; describe procedures to be followed in an emergency).	Chemical	Section II: pgs. 27-35
		Biological	Section II: pgs. 12-18

Note: OE and SE : *Overall Expectations and Specific Expectations*