

Grade 8 Science Core Competencies

Curricular Competencies

Students (should) be able to do the following:

Questioning and predicting

- Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest
- Make observations aimed at identifying their own questions about the natural world
- Identify a question to answer or a problem to solve through scientific inquiry
- Formulate alternative “If...then...” hypotheses based on their questions
- Make predictions about the findings of their inquiry

Planning and conducting

- Collaboratively plan a range of investigation types, including field work and experiments, to answer their questions or solve problems they have identified
- Measure and control variables (dependent and independent) through fair tests
- Ensure that safety and ethical guidelines are followed in their investigations

Processing and analyzing data and information

- Experience and interpret the local environment
- Apply First Peoples perspectives and knowledge, other **ways of knowing**, and local knowledge as sources of information
- Use scientific understandings to identify relationships and draw conclusions

Evaluating

- Reflect on their investigation methods, including the adequacy of controls on variables (dependent and independent) and the quality of the data collected
- Identify possible sources of error and suggest improvements to their investigation methods
- Demonstrate an awareness of assumptions and bias in their own work and secondary sources
- Demonstrate an understanding and appreciation of evidence (qualitative and quantitative)
- Exercise a healthy, informed skepticism and use scientific knowledge and findings from their own investigations to evaluate claims in secondary sources
- Consider social, ethical, and environmental implications of the findings from their own and others’ investigations

Applying and innovating

- Contribute to care for self, others, community, and world through personal or collaborative approaches
- Transfer and apply learning to new situations
- Generate and introduce new or refined ideas when problem solving

Communicating

- Communicate ideas, findings, and solutions to problems, using scientific language, representations, and digital technologies as appropriate
- Express and reflect on a variety of experiences and perspectives of **place**

Content grade 8 science

Students (should) know the following:

- characteristics of life
- cell theory and types of cells
- photosynthesis and cellular respiration
- major geological events of local significance
- First Peoples knowledge of:
 - local geological formations
 - significant local geological events
- layers of Earth

Grade 8 Physical and Health Education Core Competencies

Curricular Competencies

Students are expected to be able to do the following:

Physical literacy

- Develop, refine, and apply fundamental movement skills in a variety of physical activities and environments
- Develop and apply a variety of movement concepts and strategies in different physical activities
- Apply methods of monitoring and adjusting exertion levels in physical activity
- Develop and demonstrate safety, fair play, and leadership in physical activities
- Identify and describe preferred types of physical activity

Healthy and active living

- Participate daily in physical activity designed to enhance and maintain health components of fitness
- Describe how students' participation in physical activities at school, at home, and in the community can influence their health and fitness
- Assess factors that influence healthy choices and their potential health effects
- Identify and apply strategies to pursue personal healthy-living goals
- Reflect on outcomes of personal healthy-living goals and assess strategies used

Social and community health

- Propose strategies for avoiding and/or responding to potentially unsafe, abusive, or exploitive situations
- Create strategies for promoting the health and well-being of the school and community

Mental well-being

- Describe and assess strategies for promoting mental well-being, for self and others
- Describe and assess strategies for managing problems related to mental well-being and substance use, for others

Content

Students are expected to know the following:

- proper technique for fundamental movement skills, including non-locomotor, locomotor, and manipulative skills
- movement concepts and strategies
- ways to monitor and adjust physical exertion levels
- how to participate in different types of physical activities, including individual and dual activities, rhythmic activities, and games
- training principles to enhance personal fitness levels including the FITT principle, SAID principle, and specificity
- effects of different types of physical activity on the body
- basic principles for responding to emergencies
- strategies to protect themselves and others from potential abuse, exploitation, and harm in a variety of settings
- signs and symptoms of stress, anxiety, and depression

Grade 8 Social Core Competencies

Curricular Competencies

Students (should) be able to do the following:

- Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions
- Assess the significance of people, places, events, or developments at particular times and places (significance)
- Identify what the creators of accounts, narratives, maps, or texts have determined is significant (significance)
- Assess the credibility of multiple sources and the adequacy of evidence used to justify conclusions (evidence)
- Characterize different time periods in history, including periods of progress and decline, and identify key turning points that mark periods of change (continuity and change)
- Determine which causes most influenced particular decisions, actions, or events, and assess their short-and long-term consequences (cause and consequence)
- Explain different perspectives on past or present people, places, issues, or events, and compare the values, worldviews, and beliefs of human cultures and societies in different times and places (perspective)
- Make ethical judgments about past events, decisions, or actions, and assess the limitations of drawing direct lessons from the past (ethical judgment)

Content

Students (should) know the following:

- social, political, and economic systems and structures, including those of at least one indigenous civilization
- philosophical and cultural shifts
- interactions and exchanges of resources, ideas, arts, and culture between and among different civilizations
- exploration, expansion, and colonization
- changes in population and living standards