

Saskatchewan

Grade One

Core Unit: Earth

Describe the features of the Earth's surface.

- Identify the Earth as a sphere in space.
- Recognize the globe as a model of the Earth.

Optional Unit: The Sky

Describe the major objects that can be seen in the sky.

- Realize that the sun is a star.
- Identify the sun as a source of light and heat.
- Realize that [stars](#) other than the sun are very far away.
- Observe some of the patterns that stars make in the sky.
- Identify Venus, [Mars](#), and [Jupiter](#) in the sky.
- Observe the changes in the apparent shape of the moon.
- Observe the changes in the time of day when the moon appears in the sky.

Grade 3

Core Unit: The Solar System

Describe and demonstrate the motions of the Earth and the Moon.

- Define the terms revolution and rotation, with respect to the Earth and the Moon.
- Describe how the rotation of the Earth produces day and night.
- Recognize that the revolution of the Earth around the Sun produces the seasons.
- Investigate why the full moon and new moon occur, using models.
- Observe the full moon and the new moon in the sky.
- Show how the eclipses of the Sun and the Moon occur.

Describe the solar system.

- Compare the sizes of the Sun, the Moon, and the Earth.
- Name the planets.
- Describe some characteristics of each planet.
- Locate the planets Venus, Mars, and Jupiter in the sky or on sky charts.

Grade Six

Core Unit: Exploring Space

Discuss the role of satellites and space probes in describing and monitoring the Earth and other planets.

- Explain how rockets work.
- Investigate how Landsat is used to monitor aspects of Canada's environment.
- Describe Canada's network of communications satellites.
- Study the problem of establishing geosynchronous orbits.
- Examine the successes and failures of the Hubble space telescope project.
- Compare the advantages and disadvantages of space missions that carry humans and ones, which only carry remote sensing equipment.
- Discuss the impact of the space program on the development of new technologies.

Predict the future impact of space exploration.

- Research the NASA space program from the Mercury flights through the space shuttle program and beyond.

- List some examples of international cooperation in space.
- Identify some of the technical problems associated with space travel and space colonization.
- Discuss some of the psychological and physical problems of human ventures into space.
- Discuss ways that space may be used in the future.
- Evaluate different scenarios of future space exploration.

Appreciate the value and limitations of technology within society. (TL)

- Understand the dependence of the space program on technology.
- Explore innovations in technology that have led to advances in the space program.
- Assess technological developments in terms of economic factors, adaptation of the technology to uses other than for which it was designed, and public and worker health concerns.

Promote both intuitive, imaginative thought and the ability to evaluate ideas, processes, experiences and objects in meaningful contexts. (CCT)

- Respond to activities, projects, and assignments in innovative ways.
- Develop ways to evaluate creative processes, assignments, and projects.
- Understand that real life problems often have more than one solution.
- Provide arguments related to principles and evidence for their answers, ideas, and responses.

Grade Eight

Core Unit: The Earth and Space

Understand the movements of the planets and other bodies in the solar system.

- Describe how the rotation of the Earth produces day and night.
- Account for the differences of day length in midsummer and in midwinter.
- Explain why the Sun has a stronger heating effect in summer than in winter in the northern hemisphere.
- Compare the speed and the length of path of the orbits of the planets.
- Explain the retrograde motion of the planets in the sky.
- Identify by sight the planets Venus, Jupiter, and Mars.

Recognize the conditions that govern life in space.

- Study the physiological and psychological experiences of astronauts and cosmonauts in the Skylab and Spacelab programs.
- Research the successes and failures of the space shuttle program.
- Consider the distances and times involved in interplanetary and interstellar space travel.
- Investigate ideas about space exploration expressed in science fiction.

Reflect on the matter of interstellar travel.

- Determine how distances to stars are estimated.
- Examine the distribution of stars in the sky.
- Identify the various types of objects and groupings of objects in interstellar space.

Provide for students' active involvement in decision-making about space exploration.

- Generate alternatives to technological innovations in the study of space.
- Participate in debate about the support of space exploration.
- Examine the place of space science and technology in North American science.