

ORC CURRICULUM MAP

Grade 6 Science

- *Topics Included: Air and Aerodynamics, Sky Science, Evidence and Investigation, Trees and Forests.*

Resources Included: Britannica School: Middle, PowerKnowledge Earth and Space Science, PowerKnowledge Life Science, PowerKnowledge Physical Science, Science In Context, ScienceFLIX, TrueFLIX

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1. Go to LearnAlberta.ca
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How to Use This Guide

Attached please find a listing of databases found on Learn Alberta's Online Reference Centre (ORC) that directly support specific learner outcomes in the social studies curriculum.

Formatting Overview:

Curricular Topic

Specific Learner Outcome (SLO)

Name of the Database

- Where to click or search
 - Other instructions to direct you
 - Article Title (with permalink where possible)
 - Article Sections if applicable (with permalink where possible)

For navigation, you may choose to use control F or the find tool to find keywords.

If you have any questions regarding this guide, notice a hyperlink that is broken, have recommended additions, or if you would like a guide for additional grades please contact the ORC Coordinator at orc@thealbertalibrary.ab.ca

Topic A: Air and Aerodynamics

SLO: Provide evidence that air takes up space and exerts pressure, and identify examples of these properties in everyday applications

SLO: Provide evidence that air is a fluid and is capable of being compressed, and identify examples of these properties in everyday applications.

Britannica School: Middle

- Articles
 - Science and Mathematics
 - Earth Sciences
 - Article: Air

PowerKnowledge Earth and Space Science

- Energy and Matter
 - Matter
 - [Gases](#)
 - Article Section: [Gases and Compressibility](#)

SLO: Recognize that streamlining reduces drag, and predict the effects of specific design changes on the drag of a model aircraft or aircraft components.

PowerKnowledge Physical Science

- Force and Motion
 - Motion in Our World
 - [Airplanes](#)
 - Simple Machines
 - [Wedges](#)
 - Article Section: Wedges and Air

SLO: Describe and demonstrate instances in which air movement across a surface results in lift – Bernoulli’s Principle.

Science In Context

- Browse Topics
 - Bernoulli, Daniel
 - Featured Content
 - [Bernoulli’s Principle](#)

SLO: Identify adaptations that enable birds and insects to fly.

Science In Context

- Browse Topics
 - Insects
 - [Introductory Article](#)

TrueFLIX

- Animal Kingdom
 - Birds
 - Chapter: Meet the Birds

SLO: Recognize that in order for devices or living things to fly, they must have sufficient lift to overcome the downward force of gravity.

SLO: Recognize that streamlining reduces drag, and predict the effects of specific design changes on the drag of a model aircraft or aircraft component.

Britannica School: Middle

- Articles
 - Technology
 - Transportation
 - Article: Airplane

Science In Context

- Browse Topics
 - Aerodynamics
 - [Introductory Article](#)
 - Reference
 - [Aerodynamics](#)
 - [Aircraft](#)
 - Aviation
 - Featured Content
 - [Physics of Flight](#)

ScienceFLIX

- Tech, Math & Engineering
 - Transportation
 - Dive Deeper!
 - Ground, Sea, and Air Transport
 - Aviation
-

Topic B: Sky Science

SLO: Recognize that the Sun and stars emit the light by which they are seen and that most other bodies in space, including Earth's Moon, planets and their moons, comets, and asteroids, as seen by reflected light.

PowerKnowledge Earth and Space Science

- Space
 - Constellations
 - [Suns and Other Stars with Graphic Organizers](#)
 - Article Section: [Stars and Planets](#)

PowerKnowledge Physical Science

- Energy and Matter
 - Light and Sound
 - [All About Light](#)
 - Article Section: [Reflected Light](#)

TrueFLIX

- The Solar System
 - Chapter: The Sun

SLO: Describe the location and movement of individual stars and groups of stars (constellations) as they move through the night sky.

Britannica School: Middle

- Articles
 - Science and Mathematics
 - Astronomy
 - Constellation

PowerKnowledge Earth and Space Science

- Space
 - Constellations

- [Andromeda](#)
- [Gemini](#)
- [Orion](#)
- [Pisces](#)
- [Sun and Other Stars with Graphic Organizers](#)
- [The Big Dipper](#)
- [The Little Dipper](#)

Science in Context

- Browse Topics
 - Stars
 - Reference
 - [Constellation](#)

TrueFLIX

- Outer Space
 - Constellations

SLO: Recognize that the apparent movement of objects in the night sky is regular and predictable, and explain how this apparent movement is related to Earth's rotation.

PowerKnowledge Earth and Space Science

- Space
 - Constellations
 - [Sun and Other Stars with Graphic Organizers](#)

TrueFLIX

- Outer Space
 - Constellations
 - Chapter: The View From Earth
- The Solar System
 - The Sun
 - Chapter: The Star of the Solar System

SLO: Describe seasonal changes in the length of the day and night and in the angle of the Sun above the horizon.

PowerKnowledge Earth and Space

- Space
 - Planets
 - [Earth](#)
 - Article Sections: [Orbiting the Sun](#), [Earth's Axis](#)

Science In Context

- Browse Topics
 - Seasons
 - Reference
 - [Season](#)

TrueFLIX

- The Solar System
 - Planet Earth
 - Chapter: The Blue Marble

SLO: Recognize that the Moon's phases are regular and predictable, and describe the cycle of its phases.

Britannica School: Middle

- Articles
 - Science and Mathematics
 - Astronomy
 - Moon
 - Article: Moon

PowerKnowledge Earth and Space

- Space
 - The Moon
 - [Phases of the Moon](#)

Science In Context

- Browse Topics
 - Moon
 - [Introductory Article](#)
 - Reference
 - [Lunar Phases](#)

TrueFLIX

- The Solar System
 - The Moon
 - Chapter: Satellite in the Sky
 - Chapter: Light and Shadow

SLO: Recognize that the other eight known planets, which revolve around the Sun, have characteristics and surface conditions that are different from Earth; Identify examples of those differences.

Britannica School: Middle

- Articles
 - Science and Mathematics
 - Astronomy
 - Planet
 - Articles: Earth, Jupiter, Mars, Mercury, Neptune, Saturn, Uranus, Venus

PowerKnowledge Earth and Space

- Space
 - Planets
 - [Earth](#)
 - [Jupiter](#)
 - [Mars](#)
 - [Mercury](#)
 - [Neptune](#)
 - [Saturn](#)
 - [Uranus](#)

- [Venus](#)
- Space and Our Solar System
 - [Pluto and Other Dwarf Planets](#)
 - Article Sections: [What is a Planet?](#), [Pluto is Not a Planet](#), [The First Dwarf Planet](#), [Pluto's Moons](#), [Cool Facts and Fun Figures](#)

Science In Context

- Browse Topics
 - Mars
 - Reference
 - [Mars \(Source - Astronomy & Space\)](#)
 - Mercury
 - Reference
 - [Mercury \(Source - Astronomy & Space\)](#)
 - [Mercury \(planet\)](#)
 - Neptune
 - Reference
 - [Neptune \(Source - UXL Encyclopedia of Science\)](#)
 - [Neptune \(Source - World of Scientific Discovery\)](#)
 - Planets and Dwarf Planets
 - [Introductory Article](#)
 - Pluto
 - Reference
 - [Pluto \(Source - UXL Encyclopedia of Science\)](#)
 - [Pluto \(Source - Astronomy & Space\)](#)
 - Saturn
 - Reference
 - [Saturn \(Source - UXL Encyclopedia of Science\)](#)
 - [Saturn \(Source - World of Scientific Discovery\)](#)
 - Venus
 - Reference
 - [Venus \(Source - UXL Encyclopedia of Science\)](#)

ScienceFLIX

- Space Science
 - Solar System
 - Dive Deeper!
 - The Inner Planets
 - The Outer Planets

TrueFLIX

- The Solar System
 - Planet Earth
 - Planet Jupiter
 - Planet Mars
 - Planet Mercury
 - Planet Neptune
 - Planet Saturn
 - Planet Uranus
 - Planet Venus
- Outer Space
 - The Solar System
 - Chapters: The Inner Planets, The Outer Planets

SLO: Recognize that not only Earth, but other planets, have moons; and identify examples of those moons.

Britannica School: Middle

- Articles
 - Science and Mathematics
 - Astronomy
 - Planet
 - Article: Planet

PowerKnowledge Earth and Space

- Space
 - Space and Our Solar System
 - [Moons of Our Solar System](#)

- Planets
 - [Earth](#)
 - Article Sections: [The Moon](#), [Astronauts on the Moon](#)
 - [Jupiter](#)
 - Article Sections: [All Around Jupiter](#), [Io and Europa](#), [Ganymede and Callisto](#)
 - [Mars](#)
 - Article Sections: [Phobos](#), [Deimos](#)
 - [Neptune](#)
 - Article Sections: [Neptune's Moons](#), [Mighty Triton](#)
 - [Saturn](#)
 - Article Sections: [Saturn's Moons](#), [Giant Titan](#)
 - [Uranus](#)
 - Article Section: [Moons Around Uranus](#)
- Space and Our Solar System
 - [Pluto and Other Dwarf Planets](#)
 - Article Section: [Pluto's Moons](#)

Science In Context

- Browse Topics
 - Solar System
 - Reference
 - [Solar System](#)

ScienceFLIX

- Space Science
 - Solar System
 - Dive Deeper!
 - The Inner Planets
 - The Outer Planets

TrueFLIX

The Solar System

- Planet Earth
 - Chapter: The Moon

- Planet Jupiter
 - Chapter: The Moons of Jupiter
- Planet Mars
 - The Moons of Mars
- Planet Neptune
 - Chapter: Neptune's Moons and Rings
- Planet Saturn
 - Chapter: Saturn's Moons and Rings
- Planet Uranus
 - Chapter: Natural Satellites

SLO: Identify technologies and procedures by which knowledge, about planets and other objects in the night sky, has been gathered.

Britannica School: Middle

- Articles
 - Science and Mathematics
 - Astronomy
 - Space Exploration

PowerKnowledge Earth and Space

- Space
 - Space Exploration
 - People and Space
 - [All About Astronauts](#)
 - [Apollo 13: Surviving a Space Explosion](#)
 - [Endeavour SRTM: Mapping the Earth](#)
 - [Endeavour STS-61: Fixing the Hubble Space Scope](#)
 - [Galileo and the Telescope](#)
 - [Living and Working in Space](#)
 - Space Firsts
 - [Apollo 11 Mission: First Man to Walk on the Moon](#)
 - [Columbia: First Space Shuttle](#)
 - [Dennis Tito: First Space Tourist](#)

- [Gemini IV Mission: First American Space Walk](#)
- [Mercury 6 Mission: First American Astronaut to Orbit Earth](#)
- [Skylab: First American Space Station](#)
- [Sputnik: First Satellite](#)
- [Valentina Tereshkova: First Woman in Space](#)
- [Yuri Gagarin: First Man in Space](#)
- [Rockets](#)
- [Satellites](#)
- [Searching for Life in Space](#)
- [Space Missions](#)
- [Space Shuttles](#)
- [Space Stations](#)

TrueFLIX

- The Solar System
 - Planet Earth
 - Chapter: Missions Earth
 - The Moon
 - Chapter: Modern Lunar Missions
- Outer Space
 - The Solar System
 - Chapter: Exploring the Solar System
 - Stars
 - Chapter: Star Studies

SLO: Understand that Earth, the Sun, and the Moon are part of a solar system that occupies only a tiny part of the known universe.

Britannica School: Middle

- Articles
 - Science and Mathematics
 - Astronomy
 - Universe
 - Article: Universe

PowerKnowledge Earth and Space

- Space
 - Space and Our Solar System
 - [Our Solar System](#)

Science In Context

- Browse Topics
 - Galaxies
 - [Introductory Article](#)

ScienceFLIX

- Space Science
 - Universe

TrueFLIX

- Outer Space
 - The Solar System
-

Topic C: Evidence and Investigation

SLO: Investigate evidence and link it to a possible source; e.g., by: classifying footprints, tire prints and soil samples from a variety of locations, analyzing the ink from different pens, using paper chromatography, analyzing handwriting samples to identify handwriting of a specific person, comparing samples of fabric, and classifying fingerprints collected from a variety of surfaces.

Science In Context

- Browse Topics
 - Chromatography
 - Reference
 - [Chromatography \(Source - UXL Science\)](#)
 - [Chromatography \(Source - Environmental Encyclopedia\)](#)
 - [Chromatography \(Source - World of Invention\)](#)

ScienceFLIX

- Tech, Math & Engineering
 - Forensic Science
 - Dive Deeper!
 - Blood, Fingerprints, and Other Physical Media
-

Topic D: Trees and Forests

SLO: Identify reasons why trees and forests are valued. Students meeting this expectation should be aware that forests serve as habitat for a variety of living things and are important to human needs for recreation, for raw materials and for a life-supporting environment.

SLO: Describe the role of trees in nutrient cycles and in the production of oxygen.

Britannica School: Middle

- Articles
 - Plants
 - Trees
 - Article: Tree

PowerKnowledge Life Science

- Food Chains and Food Webs
 - [Forest Food Chains](#)
 - [Producers](#)
 - Article Sections: [Producers Make Food](#), [Our Lungs Need Producers](#)
- Habitats and Ecosystems
 - Biomes and Habitats
 - [Coniferous Forests](#)
 - Article Section: [Canada's Boreal Forests](#)
 - [Deciduous Forests](#)
 - Article Section: [People and the Forest](#)
 - [Forest Habitats](#)
 - Article Sections: [What is a Forest Habitat?](#), [Where are the World's Forests?](#), [A Special Forest: The Boreal Forest](#), [Animals in Forest Habitats](#), [A Closer Look: The Raccoon](#), [People and Forests](#)
- Plants
 - [How Trees Grow](#)
 - Article Section: [What Trees Do](#)

- [Oak Trees](#)
 - Article Sections: [From Wood to Lumber](#)

Science In Context

- Browse Topics
 - Coniferous Forests
 - [Introductory Article](#)
 - Reference
 - [Coniferous Forest](#)
 - Deciduous Forests
 - [Introductory Article](#)
 - Reference
 - [Deciduous Forest](#)
 - [Forests](#)

TrueFLIX

- Ecosystems
 - Temperate Forests
 - Chapter: Forest Life

SLO: Identify general characteristics that distinguish trees from other plants, and characteristics that distinguish deciduous from coniferous trees.

Britannica School: Middle

- Articles
 - Plants
 - Trees
 - Article: Conifer

PowerKnowledge Life Science

- Habitats and Ecosystems
 - Biomes and Habitats
 - [Coniferous Forests](#)
 - [Deciduous Forests](#)
 - [Forest Habitats](#)

- Article Sections: [What is a Forest Habitat?](#), [Where are the World's Forests?](#), [Falling Leaves](#), [Needle Leaves](#), [More than Just Trees](#)
- Plants
 - [How Trees Grow](#)
 - Article Sections: [Kinds of Trees](#), [The Evergreen Family](#), [Red and Yellow Leaves](#), [Self-Seeders](#)
- Classification
 - [Plants with Seeds](#)
 - Article Sections: [Conifers: Pines and More](#), [Conifers: Cones and Seeds](#)

Science In Context

- Browse Topics
 - Coniferous Forests
 - [Introductory Article](#)
 - Reference
 - [Coniferous Forest](#)
 - Deciduous Forests
 - [Introductory Article](#)
 - Reference
 - [Deciduous Forest](#)

TrueFLIX

- Ecosystems
 - Temperate Forests
 - Chapters: Forest Features, Hard Times (The BIG Truth)

SLO: Interpret the growth patterns of a young tree, distinguishing this year's growth from that of the previous year and from the year before that. Students meeting this expectation should recognize differences in coloration and texture of new growth and old growth, and locate scars that separate old and new growth.

Britannica School: Middle

- Articles

- Plants
 - Trees
 - Article: Tree

PowerKnowledge Life Science

- Plants
 - Oak Trees
 - Article Section: [The Oak's Trunk](#)

SLO: Identify human actions that enhance or threaten the existence of forests.

SLO: Identify an issue regarding forest use, identify different perspectives on the issue, and identify actions that might be taken.

PowerKnowledge Earth and Space Science

- Save Our Earth
 - [Deforestation](#)

Science In Context

- Browse Topics
 - Deforestation
 - [Introductory Article](#)
 - Featured Content
 - [Deforestation](#)
 - [Logging](#)

ScienceFLIX

- Life Science
 - Conservation

TrueFLIX

- Ecosystems
 - Temperate Forests
 - Chapters: Forests in Danger, Conservation