



ORC CURRICULUM MAP

Grade 5 Science

- Topics Included: Electricity and Magnetism, Mechanisms Using Electricity, Classroom Chemistry, Weather Watch, Wetland Ecosystems

Resources Included: PebbleGO Next, PowerKnowledge Earth and Space Science, PowerKnowledge Life Science, PowerKnowledge Physical Science, ScienceFLIX, TrueFLIX

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Background and Access Information

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To Access the Online Reference Centre:

1. Go to LearnAlberta.ca
2. Select English or French
3. Click on "Online Reference Centre" in the tab along the top of the screen
4. In school while on a school device, users do not need to enter a username or password. Users are able to enter any database or website instantly.
5. Access from a personal device in school or remotely from outside of the school will require the user to enter a username/password once to unlock all of the resources.
 - a. School District Username: LA_____ Password: _____
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6. Please share your district's ORC username/password with your students, parents of your students, and fellow staff members. Please do not share the username and password information on an open website (a website that does not require the user to login).

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: Electricity and Magnetism

SLO: Describe and demonstrate example activities that show that electricity and magnetism are related: demonstrate that electricity can be used to create magnetism, demonstrate that a moving magnet can be used to generate electricity.

PebbleGO Next

- Science
 - Physical Science
 - Forces and Motion
 - [Electromagnetism](#)
 - [Magnetism](#)

PowerKnowledge Physical Science

- Energy and Matter
 - Electricity and Magnetism
 - [All About Magnets](#)
 - Article Sections: [Electromagnets](#), [Magnets Everywhere](#)
 - [All About Electricity](#)
 - Article Sections: [Electromagnetism](#)
 - [Forms of Energy](#)
 - Article Section: [Magnets](#)

ScienceFLIX

- Physical Science
 - Magnets and Magnetism
 - Read It
 - “Change my Reading Level” at the top right of the article if needed
 - Explore More
 - Magnets and Magnetism
 - Electrical Energy

SLO: Demonstrate and interpret evidence of magnetic fields around magnets and around current-carrying wired, by use of iron filings or by use of one or more compasses.

PowerKnowledge Physical Science

- Energy and Matter
 - Electricity and Magnetism

- [All About Magnets](#)
 - Article Sections: [Magical Magnetism](#), [Pushes and Pulls](#), [Magnetic Fields](#)
- Science Fair Projects and Experiments
 - [The Biggest Magnet of All](#)

SLO: Demonstrate that a continuous loop of conducting material is needed for an uninterrupted flow of current in a circuit.

SLO: Distinguish electrical conductors – materials that allow electricity to flow through them – from insulators – materials that do not allow electricity to flow through them.

PebbleGO Next

- Science
 - Physical Science
 - Energy
 - [Electricity and Circuits](#)

PowerKnowledge Physical Science

- Energy and Matter
 - Electricity and Magnetism
 - [All About Electricity](#)
 - Article Sections: [Energy](#), [What is an Atom?](#), [Electricity](#), [Current Electricity](#)
 - [Electricity in Our World](#)
 - Article Sections: [It's Electric!](#), [Atoms and Electricity](#), [Electric Current](#), [Conductors and Insulators](#), [Using Electric Currents](#), [Electric Circuits](#), [How Light Bulbs Work](#)
 - [Thomas Alva Edison and Electricity](#)
 - Article Section: [Edison's Electric System](#)
 - [Energy with Graphic Organizers](#)
 - Article Section: [Electricity](#)
 - [Forms of Energy](#)
 - Article Section: [Electricity](#)
- Science Fair Projects and Experiments
 - [Metals](#)

Topic B: Mechanisms Using Electricity

SLO: Identify example applications of electrical devices in the school and home environment, and classify the kinds of uses. Categories of electrical use may include such things as: heating, lighting, communicating, moving, computing.

PowerKnowledge Physical Science

- Energy and Matter
 - Electricity and Magnetism
 - [Alexander Graham Bell and the Telephone](#)
 - Article Section: [The Telephone](#)
 - [Electricity in Our World](#)
 - Article Section: [How Light Bulbs Work](#)
 - [Thomas Alva Edison and Electricity](#)
 - Article Section: [Edison's Electric System](#)
-

Topic C: Classroom Chemistry

SLO: Recognize and identify examples of the following kinds of mixtures: two or more solids, a solid and a liquid, two or more liquids.

PowerKnowledge Physical Science

- Atoms and Molecules
 - Matter
 - [Solids](#)
 - Article Section: [Solids and Mixtures](#)
 - Reactions, Mixtures, and Compounds
 - [Mixtures and Compounds](#)
 - Article Sections: [What is a Mixture?](#), [Solutions](#)

SLO: Apply and evaluate a variety of techniques for separating different materials.

PowerKnowledge Physical Science

- Atoms and Molecules
 - Reactions, Mixtures, and Compounds
 - [Mixtures and Compounds](#)
 - Article Sections: [Separating Mixtures by Size](#), [Separating Mixtures by Density](#), [Separating Mixtures by Temperature](#)

SLO: Distinguish substances that will dissolve in a liquid from those that will not, and demonstrate a way of recovering a material from solution.

PowerKnowledge Physical Science

- Atoms and Molecules
 - Matter
 - [Liquids](#)
 - Article Section: [Liquids in Solutions](#)
 - Reactions, Mixtures, and Compounds
 - [Mixtures and Compounds](#)
 - Article Section: [Solutions](#)

SLO: Demonstrate a procedure for making a crystal

PowerKnowledge Earth and Space Science

- Rocks and Minerals
 - Minerals
 - [All About Gems, Crystals, and Precious Rocks](#)
 - Article Sections: [Many Types of Crystals](#), [Making Crystals](#)
 - [Crystals](#)
 - Article Sections: [What are Crystals?](#), [How do Crystals Form?](#), [Crystals are Everywhere!](#)

SLO: Recognize that the surface of water has distinctive properties, and describe the interaction of water with other liquids and solids.

PowerKnowledge Physical Science

- Atoms and Molecules
 - Matter
 - [Liquids](#)
 - Article Sections: [Liquids and Cold](#), [Special Properties of Liquids](#), [Liquids and Density](#), [The Most Important Liquid](#)
 - Reactions, Mixtures, and Compounds
 - [Mixtures and Compounds](#)
 - Article Section: [Compounds and Water](#)

TrueFLIX

- Science and Nature
 - Earth Science
 - Hydrology: The Study of Water
 - Chapter: Properties of Water

SLO: Produce carbon dioxide gas through the interaction of solids and liquids, and demonstrate that it is different from air.

PowerKnowledge Physical Science

- Atoms and Molecules
 - Matter
 - [Solids](#)
 - Article Section: [Changing from a Solid to a Gas](#)

SLO: Distinguish reversible from irreversible changes in materials, and give examples of each.

PowerKnowledge Physical Science

- Atoms and Molecules
 - Matter
 - [All About Matter](#)
 - Article Sections: [What is Matter?](#), [States of Matter](#), [How Does Matter Change From One State To Another?](#), [Will All Matter Melt?](#)
- Science Fair Projects and Experiments
 - [Make a Solution](#)

SLO: Recognize and describe evidence of a chemical reaction. Explain how the products of a reaction differ from the original substances.

PowerKnowledge Physical Science

- Atoms and Molecules
 - Reactions, Mixtures, and Compounds
 - [Atoms and Chemical Reactions](#)
 - Article Sections: [Chemical Reactions](#), [Recognizing New Compounds](#), [Chemical Reactions and Salts](#), [Photosynthesis](#), [Everyday Chemical Reactions](#)
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Topic D: Weather Watch

SLO: Describe patterns of air movement, in indoor and outdoor environments, that result when one area is warm and another area is cool.
SLO: Describe and demonstrate methods for measuring wind speed and for finding wind direction.

PebbleGO Next

- Science
 - Earth Science
 - Atmosphere
 - Weather and Climate
 - [Weather Patterns](#)

PowerKnowledge Earth and Space Science

- Weather and Climate
 - [Weather with Graphic Organizers](#)
 - Article Section: [Air and Wind](#)

ScienceFLIX

- Earth Science
 - Atmosphere and Weather
 - Dive Deeper
 - Air in Motion
 - Wind
 - “Change my Reading Level” at the top right of the article if needed

SLO: Describe evidence that air contains moisture and that dew and other forms of precipitation come from moisture in the air.

SLO: Describe and measure different forms of precipitation, in particular, rain, hail, sleet, snow.

PowerKnowledge Earth and Space Science

- Weather and Climate
 - Everyday Weather and Seasons
 - [Rainy Weather](#)
 - Article Sections: [What is Rain?](#), [The Water Cycle](#), [Outdoor Fun](#), [Kinds of Rain](#), [Thunderstorms](#)
 - [Snowy Weather](#)
 - Article Sections: [What is Snow?](#), [Snowflakes](#), [Studying Snow](#)
 - [Why It Rains](#)

- Article Sections: [Rain, Rain Go Away](#), [Water, Water Everywhere](#), [It's Raining, It's Pouring!](#), [Hail, Sleet, and Snow](#)
- [Water in the Atmosphere](#)
 - Article Sections: [Water in Motion](#), [The Big Bubble](#), [Where Weather is Born](#), [Powered by the Sun](#), [From the Ground Up](#), [Clouds](#), [Falling Water](#), [Dew, Frost, and Fog](#), [Stormy Weather](#)

ScienceFLIX

- Earth Science
 - Extreme Weather
 - Dive Deeper
 - Weather Makers
 - Rain, Snow, and Ice
 - "Change my Reading Level" at the top right of the article if needed

TrueFLIX

- Science and Nature
 - Earth Science
 - Hydrology: The Study of Water
 - Chapter: The Hydrologic Cycle
 - Meteorology: The Study of Weather
 - Chapter: The "Weather Engine"

SLO: Identify some common types of Clouds, and relate them to weather patterns.

PebbleGO Next

- Science
 - Earth Science
 - Atmosphere
 - Weather and Climate
 - [Clouds](#)

PowerKnowledge Earth and Space Science

- Weather and Climate
 - Everyday Weather and Seasons
 - [Why It Rains](#)
 - Article Section: [Cloud Clues](#)
 - [Water in the Atmosphere](#)
 - Article Section: [Clouds](#)
 - [Weather with Graphic Organizers](#)

- Article Sections: [Clouds](#), [Stormy Weather](#)

ScienceFLIX

- Earth Science
 - Atmosphere and Weather
 - Dive Deeper
 - Atmospheric Conditions
 - Clouds and Fog
 - “Change my Reading Level” at the top right of the article if needed

TrueFLIX

- Science and Nature
 - Extreme Nature
 - Thunderstorms
 - Chapter: Storm Brewing

SLO: Describe the effects of the Sun’s energy on daily and seasonal changes in temperature – 24-hour and yearly cycles of change.

PowerKnowledge Earth and Space Science

- Weather and Climate
 - [Weather with Graphic Organizers](#)
 - Article Sections: [What is Weather?](#), [Sunshine and Temperature](#), [Seasons](#)

SLO: Understand that climate refers to long term weather trends in a particular region and that climate varies throughout the world.

PowerKnowledge Earth and Space Science

- Weather and Climate
 - Weather Maps
 - [Climate Maps](#)
 - Articles Sections: [What is Climate?](#), [Climate Zones](#)
 - [Weathers with Graphic Organizers](#)
 - Article Section: [Climates](#)

TrueFLIX

- Science and Nature
 - Earth Science
 - Meteorology: The Study of Weather
 - Chapter: What is Weather?

SLO: Recognize that human actions can affect climate, and identify human actions that have been linked to the greenhouse effect.

PebbleGO Next

- Science
 - Earth Science
 - Atmosphere
 - [Greenhouse Gases and Global Warming](#)
 - [Humans and the Atmosphere](#)

PowerKnowledge Earth and Space Science

- Save Our Earth
 - [Human Impact on the Environment](#)
 - Article Sections: [Air Pollution](#), [Water Pollution](#), [Making Changes](#)
 - [Ozone Loss](#)
 - Article Sections: [Earth's Sunscreen](#), [Big Trouble](#), [Ozone Eaters](#), [Stopping the Ozone Eaters](#), [Rays of Hope](#)
- Weather and Climate
 - Climate Change
 - [All About Climate Change](#)
 - [Deforestation](#)
 - [Earth's Atmosphere](#)
 - [Global Warming](#)
 - [Rising Temperatures of the Past and Future](#)
 - Weather Maps
 - [Climate Maps](#)
 - Article Section: [Climate Change](#)

SLO: Appreciate how important it is to be able to forecast weather and to have suitable clothing or shelter to ensure various types of weather.

PebbleGO Next

- Science
 - Earth Science
 - Atmosphere
 - Weather and Climate
 - [Forecasting Weather](#)

TrueFLIX

- Science and Nature
 - Earth Science
 - Meteorology: The Study of Weather
 - Chapter: Rain or Shine?
-

Topic E: Wetland Ecosystems

SLO: Recognize and describe one or more examples of wetland ecosystems found in the local area; e.g., pond, slough, marsh, bog, fen.

SLO: Understand that a wetland ecosystem involves interactions between living and nonliving things, both in and around the water.

SLO: identify some plants and animals found at a wetland site, both in and around water; and describe the life cycles of these plants and animals.

PebbleGO Next

- Science
 - Life Science
 - Life in an Ecosystem
 - Biomes
 - [Wetlands](#)

PowerKnowledge Life Science

- Classification
 - [Classification of Living and Nonliving Things](#)
 - Article Sections: [Living and Nonliving](#), [Nonliving Things](#)
- Habitats and Ecosystems
 - Animals and Their Habitats
 - [Wetland Animals](#)
 - Article Sections: [Wet Ground](#), [A Wetland Home](#), [A Place to Work and Play](#), [Ducks on the Water](#), [Fast Fliers](#), [Amphibians](#)
 - Biomes and Habitats
 - [Pond Habitats](#)
 - Article Sections: [What is a Pond Habitat?](#), [All Sorts of Ponds](#), [Plenty of Plants](#), [Plants in the Water](#), [Animals Around a Pond](#), [A Closer Look: A Frog's Life Cycle](#), [One Big Community](#), [A Pond Food Chain](#)
 - [Wetlands](#)
 - Article Sections: [What is a Wetland?](#), [The Climate of Wetlands](#), [Where in the World Are Wetlands?](#), [Kinds of Wetlands](#), [Wetland Plants](#), [Wetland Animals](#), [The Importance of Wetlands](#), [Wetland Facts](#)
 - Understanding Habitats and Ecosystems
 - [Organisms and the Environment](#)
 - Article Sections: [What is the Environment?](#), [Organisms and the Environment](#), [Plants and the Environment](#), [Animals and the Environment](#), [Food Chains](#)

- Life Cycles
 - Animal Life Cycles
 - [All About Life Cycles](#)
 - [Life Cycle of a Duck](#)
 - Plant Life Cycles
 - [How Plants Grow](#)
 - Article Section: [The Life Cycle](#)

TrueFLIX

- Science and Nature
 - Ecosystems
 - Wetlands
 - Chapter: Squishy, Slimy, Mucky Wetlands, Home, Wet Home, It's All About Plants

SLO: Identify the roles of different organisms in the food web of a pond: producers, consumers, decomposers.

PowerKnowledge Life Science

- Food Chains and Food Webs
 - [Decomposers](#)
 - Article Sections: [Food Chains and Webs](#), [Energy and Nutrients](#)
 - [Food Chains and Food Webs](#)
 - Article Sections: [Food Chains and Food Webs](#), [How Does a Food Chain Start?](#), [Decomposers](#), [How Do Food Chains Make a Food Web?](#), [How Food Chains Change](#)
 - [Pond Food Chains](#)
 - [Producers](#)
 - Article Sections: [What Are Food Chains?](#), [Everything is Connected](#), [Producers Make Food](#), [Green Leaves on Plants](#), [Water and Sunlight](#), [Producers and Animals](#), [Our Lungs Need Producers](#)
- Habitats and Ecosystems
 - Biomes and Habitats
 - [Pond Habitats](#)
 - Article Section: [A Pond Food Chain](#)

SLO: Draw diagrams of food chains and food webs, and interpret such diagrams.

PebbleGO Next

- Science
 - Life Science
 - Life in an Ecosystem
 - Food Chains and Webs
 - [Food Chains](#)
 - [Food Webs](#)

PowerKnowledge Life Science

- Food Chains and Food Webs
 - [Food Chains and Webs with Graphic Organizers](#)
 - Article Sections: [Food Chains](#), [Food Webs](#), [Recycling in Food Chains](#), [Changing Food Chains and Food Webs](#), [Everyday Food Chains](#)

SLO: Identify human actions that can threaten the abundance or survival of living things in wetland ecosystems; e.g., adding pollutants, changing the flow of water, trapping or hunting pond wildlife.

SLO: Identify individual and group actions that can be taken to preserve and enhance wetland habitats.

PowerKnowledge Life Science

- Habitats and Ecosystems
 - Animals and Their Habitats
 - [Wetland Animals](#)
 - Article Section: [Conserving Wetlands](#)
 - Biomes and Habitats
 - [Pond Habitats](#)
 - Article Section: [Taking Care of Pond Habitats](#)
 - [Wetlands](#)
 - Article Section: [Protecting Wetlands](#)

TrueFLIX

- Science and Nature
 - Ecosystems
 - Wetlands
 - Chapters: Why Wetlands Are Important, Saving the Wetlands