

Exploring Invasive Species in Alberta

Engaging students of all ages is an important part of protecting Alberta's unique biodiversity and reducing the spread of invasive species.

WELCOME TO INVASIVE SPECIES EDUCATION ACTIVITIES

On the *For Educators* page, you'll find Alberta curriculum-linked activities designed to help students learn about invasive species. These lessons use inquiry and project-based approaches that connect learners with local environments. Each activity can be used on its own or combined with others to build larger lesson plans.

FINDING THE RIGHT ACTIVITIES FOR YOUR CLASS

All activities are organized by **age group and/or grade level**, with links to Alberta's curriculum. This makes it simple to choose lessons that align with your teaching goals.

EDUCATION PATHWAYS

Educators can follow pathways organized by grade to explore:

- Early Elementary: Grades K-3 - Ages 5-8
- Late Elementary: Grades 4-6 - Ages 9-12
- Early Secondary (Junior High): Grades 7-9 - Ages 12-15
- Late Secondary (High School): Grades 10-12 - Ages 15-18

Each pathway connects activities to Alberta curriculum outcomes, making it easy to integrate invasive species education into your classroom.

There is a short presentation to spark conversation with students on topics of invasive species. This may be followed up with any activity listed, depending on the direction you wish to go.

PREPARATION FOR EDUCATORS

Before leading activities, you may want to:

- **Read:** <https://abinvasives.ca/invasive-species/>
- **Watch:** <https://www.youtube.com/watch?v=gYNAtw1c7hl>

Grade/ Age Group	Relevant links to Alberta curriculum	Potential activities that could be incorporated in the curriculum
<p>Early Elementary: Grades K-3 - Ages 5-8</p>	<p>Grade 1: Living Systems: Understandings of the living world by investigating natural systems and their interactions.</p> <ul style="list-style-type: none"> • Students investigate and examine needs of plants and animals. <p>Grade 1: Social Studies - Citizenship</p> <ul style="list-style-type: none"> • Understanding local, national, and global issues empowers individual and collective action toward an inclusive society. <p>Grade 2: Living Systems: Understandings of the living world by investigating natural systems and their interactions.</p> <ul style="list-style-type: none"> • Plants and animals can be affected by human behaviour. <p>Grade 2: Social Studies: Canada's Dynamic Communities</p> <ul style="list-style-type: none"> • Students will demonstrate an understanding and appreciation of how geography, culture, language, heritage, economics and resources shape and change Canada's communities. <p>Grade 3: Living Systems: Understandings of the living world by investigating natural systems and their interactions.</p> <ul style="list-style-type: none"> • Plants and animals interact with each other in various environments in ways that can be represented with food chains. 	<p>What is an invasive species</p> <p>Elementary Lesson - All Invasives</p> <p>Elementary Lesson - DLIL</p> <ul style="list-style-type: none"> • Goldfish Cut Outs <p>Search for Invasive Species</p> <p>POW Maze to CD3 Unit</p> <p>Relay Game: Competing Species</p> <p>Blob Tag (Invasive Species Edition)</p> <p>Resource Competition Game (Cones/Fish Food)</p> <p>Resource Competition Game - Cut outs (optional)</p> <p>Where's the Goldfish? Activity</p> <p>Spot the difference - Aquatic</p> <p>Wanted Poster</p> <p>Where's Tank? Activity</p> <p>Coloring sheets</p>
<p>Late Elementary:</p>	<p>Grade 4: Living Systems: Understandings of the living world by investigating natural systems and their interactions.</p>	<p>What is an invasive species</p>

<p>Grades 4-6 - Ages 9-12</p>	<ul style="list-style-type: none"> • A variety of organisms live on Earth and have external structures that support various functions. <p>Grade 4: Social - Celebrations and Challenges</p> <ul style="list-style-type: none"> • Students will demonstrate an understanding and appreciation of how Alberta has grown and changed culturally, economically and socially since 1905. <p>Grade 5: Social Studies: Time and Place</p> <ul style="list-style-type: none"> • Students examine how geographical features and environmental changes contributed to the settlement and trade of ancient civilizations. <p>Grade 6: Living Systems: Understandings of the living world by investigating natural systems and their interactions.</p> <ul style="list-style-type: none"> • The components and characteristics of an ecosystem affect the diversity of the organisms that live in it. <p>Grade 6: Health / Environmental & Outdoor Education</p>	<p>Elementary Lesson - All Invasives</p> <p>Elementary Lesson - DLIL</p> <ul style="list-style-type: none"> • Goldfish Cut Outs <p>Competitive advantage lab - scoop vs spoon</p> <p>Search for Invasive Species</p> <p>POW Maze to CD3 Unit</p> <p>Relay Game: Competing Species</p> <p>Blob Tag (Invasive Species Edition)</p> <p>Resource Competition Game (Cones/Fish Food)</p> <p>Resource Competition Game - Cut outs (optional)</p> <p>Design Your Own Invasive Species</p> <p>Skit Scenarios - puppet show or acting in groups</p> <p>Spot the difference - Aquatic</p> <p>Where's the Goldfish? Activity</p> <p>Where's Tank? Activity</p> <p>Wanted Poster</p> <p>Coloring Sheets</p>
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<p>Early Secondary (Junior High): Grades 7-9 - Ages 12-15</p>	<p>Grade 7: Science Unit A - Interactions and Ecosystems</p> <ul style="list-style-type: none"> Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions Monitor a local environment, and assess the impacts of environmental factors on the growth, health and reproduction of organisms in that environment <p>Grade 7: Science Unit B - Plants for Food and Fibre</p> <ul style="list-style-type: none"> Analyze plant environments, and identify impacts of specific factors and controls Identify and interpret relationships among human needs, technologies, environments, and the culture and use of living things as sources of food and fibre <p>Grade 7 Social Studies: Following Confederation: Canadian Expansions</p> <ul style="list-style-type: none"> Students will demonstrate an understanding and appreciation of how the political, demographic, economic and social changes that have occurred since Confederation have presented challenges and opportunities for individuals and communities. <p>Grade 8: Science Unit E - Freshwater and Saltwater Systems</p> <ul style="list-style-type: none"> 3E. Analyze factors affecting productivity and species distribution in marine and freshwater environments 4E. Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, 	<p>Secondary Lesson - All Invasives</p> <p>Secondary Lesson - DLIL</p> <p>Grade 9 Lesson Plan - Lesson slide deck</p> <p>Alberta Invasive Species - Choose A Path Activity (Google Form)</p> <p>Skit Scenarios - puppet show or acting in groups</p> <p>Design Your Own Invasive Species</p> <p>Build Your Own Biocontrol Agent</p> <p>Invasive Species Stations</p> <p>Invasive Species of Alberta Webquest</p> <p>Search for Invasive Species</p> <p>POW Maze to CD3 Unit</p> <p>Spot the difference - Aquatic</p> <p>Where's the Goldfish? Activity</p> <p>Wanted Poster</p> <p>Spot the difference - Terrestrial</p>



	<p>problems and issues</p> <p>Grade 9: Science Unit A - Biological Diversity</p> <ul style="list-style-type: none"> Investigate and interpret diversity among species and within species, and describe how diversity contributes to species survival <p>Grade 9: Science Unit C - Environmental Chemistry</p> <ul style="list-style-type: none"> Identify mechanisms by which pollutants enter and move through the environment; Monitor a local environment. <p>Grade 9: Social Studies - Economic Systems</p> <ul style="list-style-type: none"> Students will demonstrate an understanding and appreciation of how economic decision making in Canada impacts quality of life, citizenship and identity. 	
<p>Late Secondary (High School) : Grades 10-12 - Ages 15-18</p>	<p>Science 10: Unit D: Energy Flow in Global Systems</p> <ul style="list-style-type: none"> Investigate and interpret the role of environmental factors on global energy transfer and climate change <p>Biology 20: Unit A - Energy and Matter Exchange in the Biosphere</p> <ul style="list-style-type: none"> Explain the structure of ecosystem trophic levels, using models such as food chains and food webs <p>Biology 20: Unit B - Ecosystems and Population Change</p> <ul style="list-style-type: none"> Define species, population, community and ecosystem and explain the interrelationships among them Explain how terrestrial and aquatic ecosystems support a diversity of organisms through a variety of habitats and niches 	<p>Secondary Lesson - All Invasives</p> <p>Secondary Lesson - DLIL</p> <p>Alberta Invasive Species - Choose A Path Activity (Google Form)</p> <p>AIS Trivia</p> <p>Invasive Species Stations</p> <p>Invasive Species of Alberta Webquest</p> <p>Design Your Own Invasive Species</p>



	<p>Biology 30: Unit D - Population and Community Dynamics</p> <ul style="list-style-type: none"> • Describe the factors that cause the diversity in the gene pool to change • Describe the basis of species interactions and symbiotic relationships and describe the influence of these interactions on population changes • Explain how mixtures of populations that define communities may change over time or remain as a climax community <p>Social Studies 10: Globalization and Sustainability</p> <ul style="list-style-type: none"> • Students will understand the economic, environmental and other impacts of globalization. • Assess economic, environmental and other contemporary impacts of globalization. <p>Social Studies 30: Ideologies and the Global Community</p> <ul style="list-style-type: none"> • Analyze the relationship between ideologies and the role of government in addressing contemporary issues (e.g., environmental regulation). <p>CTS: Environmental Stewardship, Natural Resources, or Agriculture Pathways</p>	<p>Build Your Own Biocontrol Agent</p> <p>Search for Invasive Species</p> <p>POW Maze to CD3 Unit</p> <p>Spot the difference - Aquatic</p> <p>Where's the Goldfish? Activity</p> <p>Spot the difference - Terrestrial</p>
Adults	No curriculum.	<p>Alberta Invasive Species - Choose A Path Activity (Google Form)</p> <p>AIS Trivia</p> <p>POW Maze to CD3 Unit</p> <p>Spot the difference - Aquatic</p>



		Spot the difference - Terrestrial Where's the Goldfish? Activity
Extra Resources		Posters for Classroom: AIS “ Top 10 Most Wanted ” board

