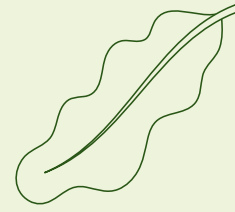




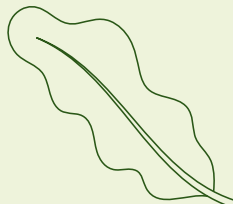
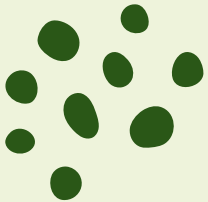
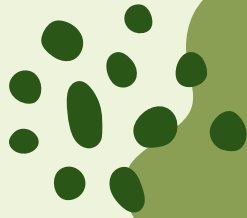
Invasive Species & Human Impact in Alberta Ecosystems



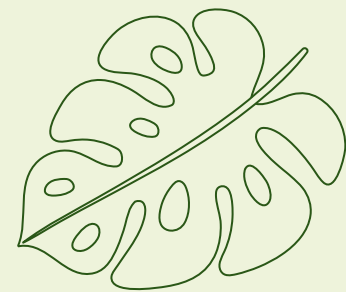
Materials



- Link to Google Slides: [here](#)
- Design Your Own Invasive Species: [here](#)
- Invasive Species Webquest: [here](#)

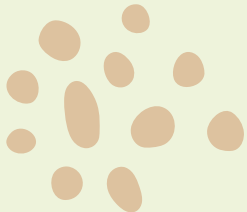


Learning Objectives



By the end of the lesson, you will be able to:

- Describe what invasive species are and explain how human actions contribute to their spread in Alberta ecosystems.
- Investigate and analyze how invasive species impact biodiversity and ecosystem stability through inquiry and data interpretation.
- Evaluate and propose strategies for preventing or managing invasive species, considering both personal and community responsibility.



What's Happening Here?



Goldfish



Zebra mussels




Flowering rush






These are examples of Invasive Species



Invasive species are non-native plants, animals, or organisms that spread quickly and cause harm.

They:

- Outcompete native species
 - Alter food webs
 - Spread disease
 - Cost millions in control and damage
- 

Watch Invasive Species 101:



Let's Review!



What is biodiversity?



What factors
affect a species'
survival?

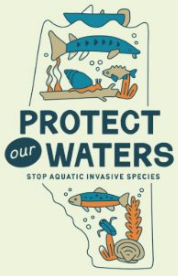


What do you
already know
about invasive
species?



Meet some of Alberta's Invaders:





Prussian Carp



Similar to goldfish, they disturb sediment, compete with native fish, and eat anything that can fit in their mouths.



Wild Boar



Wikimedia



Oat field with wild boar damage

One of the most damaging invasive species in North America. They damage crops, spread disease and make a mess in forests.



Rats



Rat burrowed under the grain bin.



Norway rat, *Rattus norvegicus*



Roof rat, *Rattus rattus*

Rats are one of the most destructive invasive species in North America! Alberta remains the largest RAT-FREE place in the world.

Invasive Plants - Flowering rush



● Invasive plants that have no natural means of control and will spread quickly and reduce biodiversity.

Name: _____ Date: _____

DESIGN YOUR OWN INVASIVE SPECIES

STEP 1: Draw your invasive species

Draw your made-up invasive species below. It can be an animal, plant, fungus, or something totally unique! Add labels to highlight its special traits (e.g., "climbing vines," "toxic bite," "fast-growing roots").

STEP 2: Describe its competitive traits

What makes this species so hard to stop? Pick or write its top 3 survival superpowers:

Check all that apply or write your own:

- Grows super fast
- Eats anything
- Reproduces like crazy
- Has no predators here
- Spreads by wind
- Hides easily
- Releases toxins
- Survives cold or heat
- Other: _____

Design your own Invasive Species



How did they get
here?



How did they get here?

- Global trade and travel
- Intentional releases (pets, gardens)
- Boats, ATVs, contaminated soil
- Climate change expanding ranges



Prevention = cheapest and most effective strategy!



Why are they a problem?



Canada thistle infestation



Himalayan balsam infestation



Why are they a problem?

- They steal food and space from native animals.
- They crowd out native plants that wildlife need.
- They make lakes and rivers muddy and unhealthy.
- They destroy farms and gardens.
- They cost a lot of money to clean up and control.

Can you think of other ways?



The Impacts

- Environmental: loss of biodiversity
- Economic: farm loss, property damage, control costs
- Social: health risks, recreation impacts

Ex: Wild boars can cost farmers thousands per year per field.

Can you think of other impacts?



What can we do to
stop the spread of
invasive species?



We Can Help!

- Don't let pets loose
- Wash your gear and boots
- Plant native flowers
- Report sightings to EDDMaps
- Stay on marked trails

How can you help in your community?



EDDMapS
find • map • track



Invasive Species of Alberta

Name: _____

For background information, watch this short video to answer questions 1-5

<https://www.youtube.com/watch?v=gYNA4twlc7hI>

1. What is an invasive species, and how is it different from other plants or animals that come from somewhere else? _____

2. Can you name two invasive species from the video and explain what problems they cause? _____

3. How do invasive species end up in places they don't belong? _____

4. Why are invasive species a problem for the environment and for people? _____

5. What are some things people can do to stop the spread of invasive species? _____

ASSIGNMENT

Your job is to investigate 3 of the following invasive species that are here or threatening and complete the data table. **You may ONLY use these sites to gather your information.**

- Alberta Invasive Species Council: <https://abinvasives.ca/>
- Government of Alberta: <https://www.alberta.ca/invasive-species>
- Alberta Parks: <https://albertaparks.ca>

Alberta Invasive Species WebQuest





Be Part of the Solution!

Design a campaign targeting:

- Boaters, gardeners, pet owners, anglers, etc.

Guiding questions:

- What's your key message or slogan?
- What actions can people take?

Ex. poster, video, or mock social media post



For More Information:

- Prussian Carp: [here](#)
- Protect Our Waters Campaign: [here](#)
- Wild Boar: [here](#)
- Squeal on Pigs Campaign: [here](#)
- Rats: [here](#)
- Rat on Rats Campaign: [here](#)
- Flowering rush: [here](#)
- Grow Me Instead Campaign: [here](#)



Thanks

Do you have any questions?
aiscaquatics@gmail.com | abinvasives.ca

