



INVASIVE SPECIES COUNCIL of BC Education Activity - Don't Let it Loose! Aquarium Poster Activity

Grade levels: Grades 3 – 5

Subject Areas: Art – Visual Art; Science: Life Systems, Ecosystems, Impacts

Duration: 1-2 periods

Description:

Students will take action by creating educational posters to display at school, libraries, pet shops and city aquariums that remind the public of their responsibilities as pet owners. As an art activity, this project will be used to explore tint, shade and texture.

Learning Objectives:

Students will learn that when they release aquatic pets and plants into local waterways there can be negative impacts on habitats and communities.

Through the creation and display of educational posters, students will demonstrate their understanding of responsible pet ownership and the importance of being an active community member in preventing the spread of invasive species.

Materials:

white paper, water colour paint kits / tempura paints, 1 cardboard square or plastic palette per student, brushes, water, OR use markers; scrap paper, pencils, rulers, examples of public information posters, Pet Shop Poster Messages (write on board or photocopy)

Procedure:

1. Begin a class discussion. Ask: *Who has or has had an aquarium?* An aquarium is a very simple, contained and created habitat, while the animals and plants that live in it (along with its human host) are a community. To class: Describe the aquarium food chain. Could this habitat survive without human interaction?

2. Ask: *What would you do if you had to move far away and couldn't look after your aquarium anymore? Why might someone think it would be good to empty an aquarium into a local water system? Why could this be a bad idea?* Explain that plant and animal species sold in pet shops are very often non-native species. What would happen if they were dumped into a pond?

If they are potentially invasive species, they:

- Have few natural enemies or predators
- Reproduce quickly and often
- Adapt to many conditions
- Out-compete native species for food and habitat
- Can eat many types of food

(Note that some aquarium species like exotic salamanders or fish like piranha may not be invasive, but could have disease or parasites that could infect our native species.)

Ask: How does this compare to their life (role in the food chain) in the aquarium?

3. In two separate columns on the board, brainstorm the following questions:

- i. How can aquarium owners best care for their pets and plants when they can no longer look after them? (E.g. donate to schools or seniors homes, give back to pet stores, give to responsible friends, dry the plants out in the sun.)
- ii. How as a class can we let people know about careful aquarium care? (Prompt: “create posters for community spaces, pet shops”, if needed.)

4. Explain to students that they will be creating a special poster that will educate citizens on the importance of being a responsible aquarium owner. Explain that it must contain one message from the Poster Messages list (see below). Write the list on the board or hand photocopy out to students. Go over the messages together to ensure that students understand them.

5. Ask students to close their eyes and imagine they are swimming underwater in a pond or aquarium. *What do you see? Now swim down to the bottom. Is it lighter or darker there? Why?* Tell students that they will adjust the lightness and darkness of the blue water in their painting using white paint and black paint. Referencing the chalkboard, define shade and tint for the students. (Suggest they start by painting the middle of the pond or aquarium in plain blue.)

6. *Ask: Describe the different textures in the water you were swimming in.* Explain that there are many things in a pond or aquarium that aren’t smooth. What can we do in our paintings to show different textures? Discuss (and demonstrate, if able) brush technique and the addition of sand to paint (mix it into the paint on the palette before applying) to create textures for pond and aquarium bottoms, plants and fish. (Optional: Students can also use materials like glitter for fish scales and wool for aquatic plants.)

7. Ask students to choose a poster message and using shade, tint and texture, create a picture depicting it. Write these criteria on the board and review with the class:

Posters will:

- Include a large aquarium or pond in tints and shades of blue
- Explore texture with brush strokes and sand
- Communicate a message to the public about aquarium pet stewardship

NOTE: Students should ensure there is message space on the top or bottom of their poster by marking it out ahead of time with a ruler. Messages can be written in when the painting is finished with marker or pencil crayon.

Closure/Checks for Understanding:

Once posters are complete, have students present to the class explaining how the message they've chosen is depicted in their poster. Ask them to also address the art techniques they used.

Determine a method for delivering the posters to libraries, a community hall, a mall or local pet shops. The ISCBC would love to see your students' posters as well – send any photos to education@bcinvasives.ca.

Notes For Teacher:

Most aquarium fish, plants and invertebrates are not native to British Columbia waters. By releasing them into open waterways, these species could establish beyond their native range and have notable consequences on the environment.

An example is that of the red-eared slider turtle, a popular turtle species sold in pet stores. Red-eared sliders look cute and irresistible when they're babies but can grow to dinner plate size as adults. All turtles require a lot of care and investment when kept as pets to ensure that they do not get stressed and suffer from disease or infections. When released into BC's aquatic habitats, red-eared sliders compete with the Western Painted Turtle, BC's only native freshwater turtle, for food and nesting areas. They are also carriers of Salmonella, a bacterium that can be easily transferred up the food chain.

Bullfrogs, native to eastern North America, were brought to BC in the early 1900's to farm for their meaty legs. They have spread throughout the Lower Mainland, Vancouver Island and the Okanagan, and are out-competing BC's native frogs as well as eating them! (Bullfrogs will eat almost anything they can fit in their mouth, including other frogs, salamanders, fish, even small mammals and birds!) Bullfrog tadpoles are large (as are the frogs themselves) making them a preferred pet for kids to capture and raise. Once they grow into frogs, they are usually released into new habitats, increasing their spread.

You are responsible for your aquarium pets and plants. The release of aquarium pets into BC waters is illegal. You can help prevent the spread of non-native aquatic species by doing the following:

- Never release or flush unwanted aquarium pets or aquarium water into natural waters, drainage ditches or sewers.
- Drain aquarium water on dry land.
- Return or donate unwanted aquarium fish, reptiles, snails and plants to a pet store or a school.
- Contact a local aquarium club or the Canadian Association of Aquarium Clubs, at (905) 682-2991 (www.caoac.on.ca) and ask about a fish rescue program for unwanted aquarium pets, or contact the Invasive Species Council of BC at education@bcinvasives.ca.

Evaluation:

Posters can be evaluated for art concepts (tint, shade and texture) while presentations will indicate whether students recognize the need for human action to protect against the impact of

invasive species. Students should be able to make connections to healthy habitats and communities discussed in previous activities and provide specific examples of what aquarium owners can do to protect local habitats.

Poster Messages

- Releasing aquarium pets and plants into the wild is harmful to local habitats!
- Never release or flush aquarium pets or water into drains, toilets, ditches, sewers, or natural waterways. Drain aquarium water on dry land – it can be really good for the garden!
- Burials on land are better than burials at sea. Don't flush dead pets away. They could harm our habitats!
- When finished with aquarium plants, dry them out in the sun and put them in the garbage (not in the compost)!
- Donate unwanted aquarium fish, snails and plants to a pet store, school or aquarium hobbyist. Advertise and offer them for free!

Adapted from: *Making Waves! Protecting Ontario's Aquatic Habitats*; Invading Species Awareness Program
www.invadingspecies.com