

## AQUATIC ROOTS

### ❖ Garden visit follow-up activity

#### Sources:

- Project WILD: Activity Guide, The Council for Environmental Education, 1999.

#### Basic Description:

Students use reference materials to research various local aquatic plants and/or animals to find out whether they are natives or exotics and to investigate their impacts on people, other animals and the environment. Inquiry and investigation.

#### Materials:

- World map
- Yarn
- paper
- reference materials
- student data sheets from the field trip program
- a list of common native and exotic plants and animals, including a variety of aquatic plants and animals

#### Time Allotment:

- two or three 45-minute periods, with additional time out of class for student research and preparation of reports

#### Procedure:

1. Compile results from the data sheet to make a list of native and exotic species. Add to this list as necessary from local fish and wildlife agencies, garden clubs, nature societies and wildlife organizations. Ask students which of the plants and animals are “native” and which are introduced or “exotic”. Help the students establish clear working definitions of “native” and “exotic”. A native species is one which naturally occurs in an area. Any plant or animal not naturally occurring in the ecosystem of Canada becomes “exotic” once it is introduced.
2. Assign each student or small groups one species known to be “introduced” as an exotic to the area, province or territory from the list. Ideally, a variety of introduced species will be studied, including some aquatic species. Each student or group should prepare a report to be both written and oral. Have them gather information about the origins of the plant or animal and its impacts in the area. Have students assess each introduced species in terms of benefits and/or liabilities for the ecosystem. They could create a two-column list of benefits and liabilities. Some effects might be unknown, so students might also generate a list of unknown effects or questions they have for which they feel concern.
3. Ask each student or group to report to the class. Following the reports, encourage discussion and debate. Ask the students to identify and discuss the potential trade-offs involved. Evaluate each introduction with students for appropriateness, according to personal judgement, identifying and describing criteria. They might also consider the

potential introduction of a species that is common somewhere else but is not yet in their area.

4. As a visual summary, have the students create a “network” of the exotics they studied on a world map. Stretch a strand of yarn from your location to the site of origin of each organism. Place a tag on the yarn with the plant or animal’s name.
5. Preventing “accidental” introductions is also important. Develop a list of ways these introductions can occur and ways to help assure that they don’t happen. Discuss the importance of laws and regulations that prevent, control and/or allow introductions of species.

## Extensions

- Find out more about federal and local laws concerning the introduction of exotics into aquatic environments.
- Investigate how humans have re-introduced plant and wildlife species into their original habitat where the species has previously been extinct or endangered. Have them distinguish some differences and similarities between “re-introductions” and “exotics”.

