

Mussel Identification Activity:

This activity is an in-class hands-on and an online interactive activity created in Flash technology that allows users to identify species of mussels by choosing sets of characteristics of the mussels in question through a series of choices.

Objective: students will be able to identify given species of animals, such as various mussels, by sets of physical characteristics as they use a key.

Grade levels: grade 2 - 6

Time Required: 15 minutes for identification, plus discussion before and after

ISM Online Content Link:

Harvesting the River Online Presentation: Musseling
Illinois Mussel Species Digital Collection and Database

Materials:

instructor to introduce concepts of mussel shell anatomy using actual shells or digital images of mussels shells of five different species

identification guide sheet printout or interactive game URL:

[http://www.museum.state.il.us/_____](http://www.museum.state.il.us/)

Procedure:

Hands-on version:

- The instructor or leader will help students read about mussels on the Illinois River and look at mussel species in the online database.
- The instructor will place the identification guide poster on a table and line up five mussel shells of different species (or cutouts of color printouts of the mussels from the online collection gallery) across the top.
- Students will read aloud and define each set of key characteristics that will help them to identify each species.
- Students will move one species of mussel through the sets of identifying characteristics of the chart.
- When the mussel reaches a characteristic at the bottom of the chart, the mussel has been identified.
- The instructor will point out that there are many hundreds of species, some of which may have other sets of identifying characteristics, but the principles still apply to them and to other animals.

Online Version:

- Students will read about mussels in the two online sources, and in Illinois Department of Natural Resources (DNR) web site, which is a version of the DNR poster (which can be ordered)

- Instructor will introduce the activity by presenting a short discussion of sets of characteristics that can be used to identify things, using an example the students are familiar with (dogs: size, color, shape, hair, ears, etc.) and tell students that they are going to use sets of characteristics presented by the interactive game to choose which characteristics a mussel has as it goes through the steps of identification.
- Students will choose a mussel and make choices of characteristics it exhibits at each step until it is identified within the set of characteristics.

Assessment:

Students will realize that they have successfully identified their mussel at the end of the activity, or they will be allowed to back up and try again to correct an error.

Students will list the characteristics their mussel(s) exhibit. They can check it against the descriptions of the mussel on the Harvesting Web site and in the online database.

Students should be able to explain what they did, how sets of characteristics are used to identify living things or species, how a key helps them.

Illinois State Board of Education Goals and Standards:

Early Elementary:

12.A.1a Identify and describe the component parts of living things (e.g., birds have feathers; people have bones, blood, hair, skin) and their major functions.

12.A.1b Categorize living organisms using a variety of observable features (e.g., size, color, shape, backbone).

Late Elementary:

12.A.2a Describe simple life cycles of plants and animals and the similarities and differences in their offspring.

12.A.2b Categorize features as either inherited or learned (e.g., flower color or eye color is inherited; language is learned).

Publication:

Students can arrange the mussel shells (hands-on version) in a case with labels that tell which characteristics were identified with each species.

Students can make a poster that labels identified mussels using images printed out from the photographic database.