Who's got a Shell?

Shell Classification

Audience: Upper Elementary and Middle School

Duration: 30 minutes for key, 3 class periods for the research and creation of report

STEM Process Skills: Observations, Conclusions, Comparing, Interpretation

Learning Objectives/Goals: The student will be able to use a classification key to identify unknown invertebrates

TEKS: 3rd—8th grade 1A,

Ocean Literacy Principles: 2, 5

Vocabulary: Classification key, Couplet, Mollusk

Set Up/Break Down:

Copy 1 guide sheet per student; have the field guides available or access to computers to research.

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Description: Introduce your students to the use of Dichotomus keys as a tool for identifying animals.

Materials: 1 copy of the student guide per student, Mollusk/Shell Field Guides, Shell Field guides or computers to reference on-line guides

Procedures: Study the provided drawings of the mollusk shell. Select one to identify. Begin with couplet 1 and compare the features of the selected shell with the descriptions in couplet 1. Choose the description that is most appropriate and follow the instructions at the end of the statement. Continue as above until the shell has been identified. To verify your identification, refer to a shells field guide or an online field guide.

Extensions: Have students use pictures of shells, or their own collection, and create their own classification key. Have the students research the species of mollusks they identified and create a field guide of their own.

Background Information: Identifying unknown organisms can be difficult. An excellent identification tool is a key. It consists of contrasting pairs of statements called "couplets." Each couplet has an "a" or "b" choice which compares physical features of the organism. By reading the couplet and following the directions given with the choice that best describes the organism, identification can be relatively easy.

Resources Used:

www.texasaquaticscience.org

www.oceantoday.noaa.gov

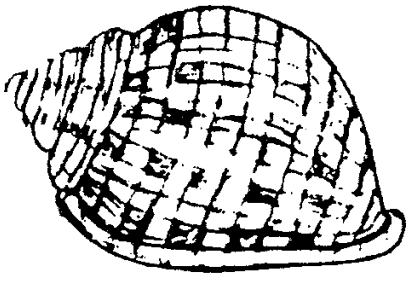
www.iucn.org

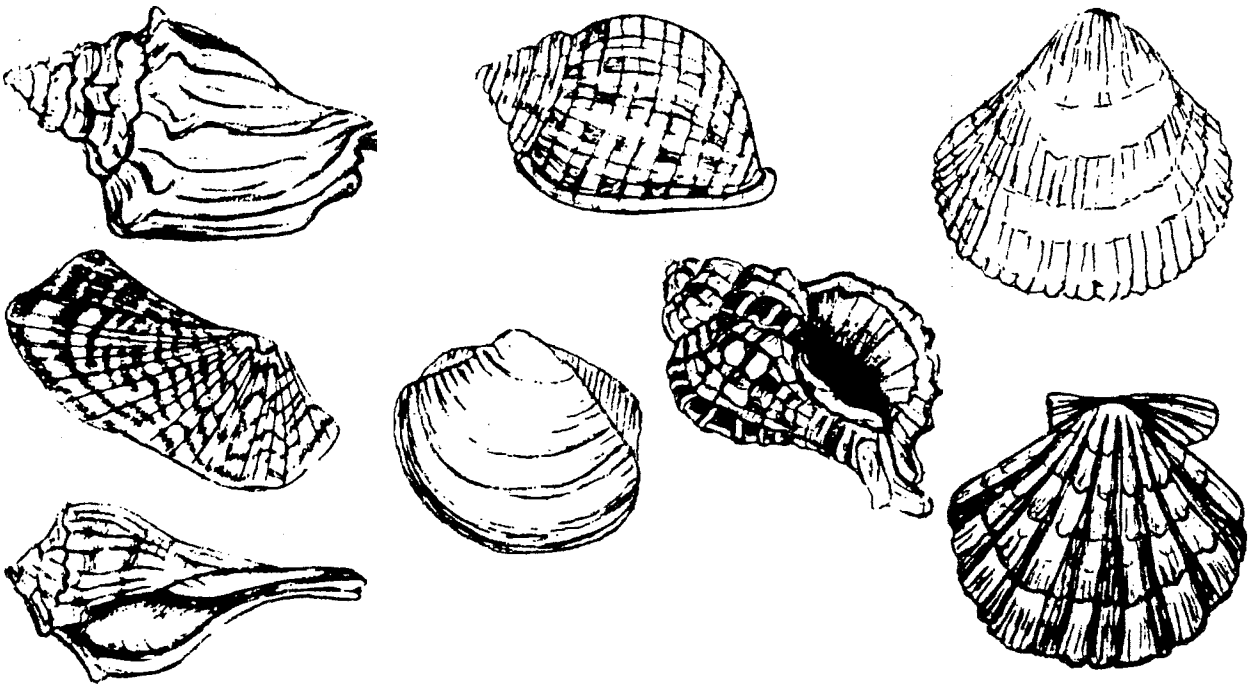
www.arkive.org

www.eol.org

http://www.discoverlife.org/20/q?guide=Molluscs

http://www.seashells.org/alltheseashells.html





Classification Key – Mollusks

1a. Univalve (snail-like appearance)……go to 2
b. Bivalve (not snail-like appearance)……go to 5

2 a. Shell swirled left to right (opening on the right side)……go to 3
b. Shell swirled right to left (opining on the left side)……Lightning whelk

3 a. Shell apex (top) sharply pointed……Fighting conch
b. Shell apex (top) not sharply pointed……go to 4

4 a. Shell length and width equal or nearly so……Scotch bonnet
b. Shell length and width obviously not equal……Apple murex

5 a. Shell with concentric lines only……Buttercup
b. Shell with more than concentric lines……go to 6

6 a. Shell length and width equal or nearly so……go to 7
b. Shell length approximately twice the shell width……Turkey wing

7 a. Shell beak (top) with flares on either side……Lion's paw
b. Shell beak (top) lacking flares……Cockle

STEM
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