

Shell Classification

Grade Level(s) : 5, 6, 7, 8

Subject(s) :

- Science/Process Skills

OVERVIEW:

The purpose of this activity is twofold. Used at the beginning of the year, it introduces the structure and function of a dichotomous key preparatory to asking students to identify plant and animal specimens. It also reinforces the idea that there are many "right" answers in science.

OBJECTIVE(s):

Students will be able to:

1. Classify "specimens" according to observable characteristics.
2. Name the different specimens so they can be identified in their classification system
3. Prepare a "key" showing their classification system.
4. Use their key to identify a specimen.
5. Recognize the validity of classmates' classification systems.

NOTE: There are many different ways to classify organisms. Encourage lateral thinking for the most quirky keys

MATERIALS/RESOURCES:

- Eight bags of shells/lollies selected for differences in observable characteristics (i.e. color, texture, brand name, flavoring, etc.) Note: Shells are not permitted to be removed from the Barwon Bluff Marine Sanctuary as they provide shelter for many other creatures and become a part of the sand and rocks. Many schools may have some gathering dust in a storeroom or Prep class. Alternatively use a packet of party mix lollies.
- Whiteboard, overhead projector or butcher's paper for recording class key.
- Representative samples of each type of shells/lolly in labeled plastic bags. (Quantity determined by number of student groups.)
- Paper and pencils for student group recording.

ACTIVITIES AND PROCEDURES:

1. Display bags of shells/lollies and discuss their similarities and differences.
2. Ask volunteer to divide shells/lollies into two groups using an observable characteristic (i.e. wrapped/not wrapped).
3. Record results of first division.
4. Continue to divide groups of shells/lollies, using a different characteristic each time, until only one bag of shells/lollies remains in each group. Continue recording results.
5. Using the class key, identify "unknown" shells/lollies.
6. Divide class into groups of four to six students.
7. Provide each group with a sample set of shells/lollies.
8. Ask each group to devise and test a dichotomous key that is different from the class key.
9. Record and share results.
10. Eat the lollies!

Extension: Now try the same ideas using the animals and plants found in the Barwon Bluff Marine Sanctuary. What are some of the different ways of sorting them into groups?

Adapted from AskERIC Lesson Plan #:AELP-SPS0043