

## Activity #2 - Using a Dichotomous Key for Shells

### Objective:

Students will make observations of shells and specimens and determine the organism that inhabited the shell or the organism itself using a key.

### Materials:

- shells (you will need to provide: sponge, coral, starfish, conch, auger turret, sea urchin spine, tusk shell, abalone, sand dollar, cowry, snail, scallop, clam, cockle, limpet, sea urchin)
- ruler
- dichotomous key to the shells (see next page)

### Procedures:

1. Allow students time to examine items before passing out activity sheet.
2. Based on the outside of the items, order them from rough to smooth. Draw a picture of each item with as much detail as possible.
3. Use the dichotomous key to find out which animal belongs to each shell or specimen.

### Discussion:

- A. Was the key helpful in identifying each shell or specimen? Why?
- B. What main differences did you notice in the different items?
- C. Did the shell's size or shape help you determine which animal it belonged to? Explain.
- D. Research what each animal looks like and draw a picture of it.



## Dichotomous Key to some Shelled Invertebrates

The following are characteristics of the seashells and specimens in front of you. Use them to determine the animals' names.

1. Have a rounded or oval shape.....8  
    Are not rounded.....2
2. Highly porous surface.....3  
    Surface is not porous.....4
3. Pliable.....sponge  
    Hard.....coral
4. Radial symmetry.....starfish  
    Elongated shape.....5
5. Spiral shell shape.....6  
    Non spiral shape.....7
6. Wavy edge across opening.....conch  
    Rounded edge across opening.....auger turret
7. Long open tube.....tusk  
    Hard solid tube.....sea urchin spine
8. Have several perforations in shell.....abalone  
    Have none, one, or two holes in the shell.....9
9. Have distinctive ribbed lines on shell.....10  
    Are not ribbed.....11
10. Have ½ a hinge on back, were a part of a pair.....12  
    No hinge.....13
11. Rounded with radial shape on surface.....sand dollar  
    Long opening looking like comb teeth.....cowrie
12. Very flat.....scallop  
    Rounded.....14
13. Spiral in shape with an inner tube.....snail  
    Oval shape.....15
14. Crossed pattern of radiating circles and lines.....clam  
    Very distinctive ribbed lines.....cockle
15. Turquoise color inside of shell.....limpet  
    Knobs all over surface of shell with two holes.....sea urchin