This lesson is part of the Classification unit, which explains how to organize the millions of organisms on Earth. Below is a summary of what is included in the entire unit.

UNIT CONTENTS

A. Background Information
   • How Do We Classify Organisms?
   • Linnaean Naming System
   • Coral Classification
   • Modern Classification
   • Understanding Cladograms
   • How to Build a Cladogram

B. Lessons

   Watch It! Naming Nature
   • A worksheet to accompany the Naming Nature video

   Classify This!
   • A worksheet to classify an organism and identify its characteristics

   Rules, Rules, Rules
   • A worksheet about scientific names

   'Taxing' Corals
   • An activity to classify corals based on their characteristics

   In Light of New Evidence
   • A writing assignment on an organism that has been reclassified

   The Key to ID
   • An activity using a dichotomous key for sea stars

   And Then There Was One
   • An activity to create a dichotomous key for corals

   Cladograms 1
   • A lesson on creating and interpreting a cladogram

   Cladograms 2
   • A lesson on creating and interpreting a cladogram (with traits already included)

   Read It! Troubling Taxonomy
   • A worksheet to accompany the Troubling Taxonomy field blog

   Read It! Blue, You Say?
   • A worksheet to accompany the Blue, You Say? field blog
LESSON 5

INSTRUCTIONS:
1. Figure out the shared characters of the organisms in the chart.
2. Mark an ‘X’ in the boxes when the organism shares that characteristic.

<table>
<thead>
<tr>
<th>Characters</th>
<th>Butterflyfish</th>
<th>Coral</th>
<th>Flatworm</th>
<th>Nudibranch</th>
<th>Sea Star</th>
<th>Sea Turtle</th>
<th>Shark</th>
<th>Sponge</th>
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3. Draw a cladogram based on the results from the chart. Make sure to include the organism’s name and the shared characters.
INSTRUCTIONS: Answer the following questions based on the cladogram that you drew.

1. How many traits do sea turtles and sharks have in common? ________________________________

2. What organism evolved before nudibranchs? ________________________________

3. What organism evolved after sea stars? ________________________________

4. In which organism did a true coelom begin to develop? ________________________________

5. Which characteristic evolved first? ________________________________

6. Which organism(s) have a deuterostome? ________________________________

7. Which organism(s) have a true coelom and gills? ________________________________

8. Are corals more closely related to sponges or flatworms? Explain: ________________________________

9. Are there characteristics that all of these organisms share? If so, which one(s)? ________________________________

10. Which organisms are most distantly related? ________________________________

11. You discovered a new organism that has these characteristics: multi-cellular, symmetrical, triploblastic, but does not have a true coelom or deuterostome. Where would you place the organism in your cladogram? ________________________________

12. Describe three pieces of information that you can obtain from a cladogram. ________________________________