Georgia Performance Standards Framework for Life Science- 7th Grade

Unit: Interdependence of Life- Ecology
Differentiated (Tiered) Task
Recognizing Similarities and Differences of Organisms

Subject Area: Life Science
Grade: 7th

Standards (Content and Characteristics):

S7L1. Students will investigate the diversity of living organisms and how they can be compared scientifically.
   a. Demonstrate the process for the development of a dichotomous key.
   b. Classify organisms based on a six-kingdom system and a dichotomous key.

S7CS1. Students will explore of the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.
   a. Understand the importance of—and keep—honest, clear, and accurate records in science.

S7CS4. Students will use tools and instruments for observing, measuring, and manipulating equipment and materials in scientific activities.
   a. Use appropriate technology to store and retrieve scientific information in topical, alphabetical, numerical, and keyword files, and create simple files.

S7CS6. Students will communicate scientific ideas and activities clearly.
   a. Write clear, step-by-step instructions for conducting particular scientific investigations, operating a piece of equipment, or following a procedure.

Enduring Understanding: Within a biome, an organism can be identified by its physical characteristics through the use of a dichotomous key.

Essential Question(s): How does the construction of a dichotomous key help you to see the similarities and differences among organisms in the 6 kingdoms?
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Pre-Assessment:
1. Part 1: Have students use a dichotomous key to identify species.
2. Part 2: Have students observe 8 pictures of various animals and have them create a dichotomous key.
   - Accurate completion of Part 1 is required before moving to Part 2. Those students who did not successfully complete Part 1 will be given small group instruction while others are working on Part 2 to determine group placement.

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<tr>
<th>Outcome/Performance Level Indicator</th>
<th>BASIC</th>
<th>INTERMEDIATE</th>
<th>ADVANCED</th>
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<tbody>
<tr>
<td>Performance Task: (Detailed Description)</td>
<td>The students will create a dichotomous key based on physical characteristics to investigate and classify organisms. Using various cutouts of shapes, the teacher should model how to create and use a dichotomous key.</td>
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<td>Teacher role?</td>
<td>Teacher will provide students with pictures of organisms (all six kingdoms will be represented) and a list of characteristics for the various organisms. The teacher will also provide a graphic organizer for students to list characteristics that apply to each organism. They will then use the characteristics listed to create a dichotomous key.</td>
<td>Teacher will provide students with pictures of organisms (all six kingdoms will be represented) and provide a graphic organizer for students to list characteristics for each organism. They will then use the characteristics listed to create a dichotomous key.</td>
<td>Teacher will provide students with resources that students can use to cut out pictures of organisms. The teacher should instruct students to find organisms from all six kingdoms. The students will then identify characteristics that distinguish the organisms from one another. They will use these characteristics to develop a dichotomous key. The keys may be used by fellow students to identify organisms.</td>
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<td>Student role?</td>
<td>Students will be given an illustration of organisms (all six kingdoms will be represented) and will then use the graphic</td>
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<td>Instructional Tasks Accommodations for ELL Students</td>
<td>Instructional Tasks Accommodations for Students with Specific Disabilities</td>
<td>Instructional Tasks Accommodations for Gifted Students</td>
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| Provide students with scientific discourse patterns to use with the compare/contrast graphic organizer.  
“This _____ is similar to this _____ because both __________.”  
“This _____ is different from that _____ because one has _____ and the other has _____.” | Provide students with various colors of highlighters and have them highlight characteristics that are common to various organisms. Students will then use the highlighted characteristics to help them differentiate similarities and differences among the organisms. | To extend learning to include gaining knowledge of organisms indigenous to specific biomes, students will identify 2 organisms from each biome. They will explain why the organisms live in their specific biome. They will then use the characteristics that allow the organism to live in their biome to construct a dichotomous key. |

Resources

- Pictures of various organisms from the 6 kingdoms with characteristics listed on the back of each picture. Graphic organizer
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- Magazines, books, computer clip art, etc.

Homework/Extension

- Students are given pictures of several different organisms and asked to complete a compare/contrast graphic organizer to identify similarities and differences. There will be a response bank provided for the graphic organizer.
- Students are given pictures of several different organisms and asked to complete a compare/contrast graphic organizer to identify similarities and differences.
- Students are given pictures of several organisms and will construct a graphic organizer of his/her choice to show similarities and differences among the organisms.