Marine Plants Lesson Plan

<table>
<tr><td>Purpose:</td><td colspan="8">To teach students about marine plants and how to properly identify various species.</td></tr>
<tr><td>Goals:</td><td colspan="8">1: Students should be able to identify at least two species of algae.
2: Students should be able to identify the 3 main species of mangroves found in the Virgin Islands.
3. Students should be able to explain why mangrove forests are an important ecosystem.</td></tr>
<tr><td rowspan="5">Vocabulary:</td><td colspan="2">Halophyte</td><td colspan="6">A plant that grows in waters of high salinity, coming into contact with saline water through its roots or by salt spray.</td></tr>
<tr><td colspan="2">Pneumatophore</td><td colspan="6">An aerial root specialized for gaseous exchange.</td></tr>
<tr><td colspan="2">Prop root</td><td colspan="6">Any of the modified roots that arise from the stem of certain plants and provide extra support.</td></tr>
<tr><td colspan="2">Nectary</td><td colspan="6">A nectar secreting glandular organ in a flower or on a leaf or stem.</td></tr>
<tr><td colspan="2">Brackish</td><td colspan="6">Slightly salty, as is the mixture of river water and seawater in estuaries.</td></tr>
<tr><td>Presentation:</td><td colspan="8">Approximately 30 slides that covers the different species of mangroves found in the Virgin Islands and their ecological significance. The latter portion of the PowerPoint covers different types of sea grass and algae and their importance.</td></tr>
<tr><td>Time:</td><td colspan="8">Approximately 30-45 minutes.</td></tr>
<tr><td rowspan="2">NGSS standards:</td><td colspan="4">Middle School</td><td colspan="4">High School</td></tr>
<tr><td>LS1-5</td><td>LS1-6</td><td>LS2-1</td><td>LS2-3</td><td>LS2-1</td><td>LS2-2</td><td>LS2-4</td><td>LS2-5</td></tr>
<tr><td rowspan="4">Activities</td><td colspan="2">Algae presses</td><td colspan="4">Students collect algae and learn how to preserve them through pressing for herbarium collections. 4-12</td><td colspan="2">Approximate time: 30-45 minutes.</td></tr>
<tr><td colspan="2">Microscopy</td><td colspan="4">Students can use microscopes to look at the cellular structures in algae and other marine plants. 5-12</td><td colspan="2">Approximate time: 30 – 45 minutes</td></tr>
<tr><td colspan="2">Mangrove planting</td><td colspan="4">Students can plant red mangrove seedlings in a nursery environment or in the field. 3-12</td><td colspan="2">Approximate time: 30-45 minutes</td></tr>
<tr><td colspan="2">Mangrove health assessments</td><td colspan="4">Students can measure the height and number of leaves on planted red mangrove seeds to add data to this on-going project. 5-12</td><td colspan="2">Approximate time: 30- 45 minutes</td></tr>
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