Engaged Learning
Lesson Plan

Introduction

Title: Alaska Seaweed Preparation
Grade Level(s): 6-8
Subject(s): Science
Duration: 90 minutes

Synopsis: Students research Alaska Seaweeds and Create a Seaweed Recipe

Desired Results

GLE/Performance Standards
- English/Language Arts
- Mathematics
- Science
- Geography
- Government and Citizenship
- History
- Skills for a Healthy Life
- Arts
- World Languages
- Technology
- Employability
- Library/Information Literacy

Science GLE SF1
- History
- Skills for a Healthy Life
- Technology
- Library/Information Literacy

ISTE NETS*S
- Creativity and Innovation
- Communication and Collaboration
- Research and Information Fluency
- Critical Thinking, Problem Solving, and Decision Making
- Digital Citizenship
- Technology Operations / Concepts

Research & Information Fluency
Technology Operations/Concepts

21st Century Framework
- Life and Career Skills
- Learning and Innovation Skills
- Core Subjects – 21st Themes
- Info, Media, and Tech Skills

Learning and Innovation Skills

Assessment Methods
Rubric for Seaweed Cards

Classroom Considerations

Sequence of Learning Activities: Students will be shown Alaska seaweed species, and recipes with the help of the document camera. They then will research various seaweed recipes and create a digital SEAWEED RECIPE CARD that includes how to harvest, a picture, classification, and recipe. This recipe can be made at home or cards can be shared with friends and family.

Technology Used: Student computers, Document camera, Promethean board

Accommodations/Modifications: Students can make as many cards as they have time for.

Materials: Local seaweed recipe handouts, local seaweed recipe books

Resources: Online www.seaweeds.ofalaska.com

Author’s Reflection: Students get excited about learning how to prepare seaweeds. Unfortunately this unit is a part of Protoctista Kingdom study that happens in the winter. This way students will have information that they can keep and use when the local seaweeds are ready to pick in the fall.
**Synopsis**
Navigation skills enable students to read charts and find Desired Results.

<table>
<thead>
<tr>
<th>Desired Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GLE/Performance Standards</strong></td>
</tr>
<tr>
<td>▷ English/Language Arts</td>
</tr>
<tr>
<td>▷ Mathematics</td>
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<tr>
<td>▷ Technology</td>
</tr>
<tr>
<td>▷ Employability</td>
</tr>
<tr>
<td>▷ Library/Information Literacy</td>
</tr>
<tr>
<td>Students develop and understanding of the relationships among science, technology, and society.</td>
</tr>
</tbody>
</table>

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<tr>
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<td>▷ Digital Citizenship</td>
</tr>
<tr>
<td>▷ Technology Operations / Concepts</td>
</tr>
<tr>
<td>Collect and analyze data to identify solutions and/or make informed decisions -- use data-collection technology (digital camera, digital nautical chart)</td>
</tr>
</tbody>
</table>

<table>
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<th><strong>21st Century Framework</strong></th>
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<tr>
<td>▷ Life and Career Skills</td>
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<tr>
<td>▷ Learning and Innovation Skills</td>
</tr>
<tr>
<td>▷ Core Subjects – 21st Themes</td>
</tr>
<tr>
<td>▷ Info, Media, and Tech Skills</td>
</tr>
</tbody>
</table>

**Assessment Methods**
Assessment (Clicker) Results

**Classroom Considerations**

<table>
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<tr>
<th>Sequence of Learning Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students will:</td>
</tr>
<tr>
<td>(A) learn to read a NOAA Nautical Chart and interpret abbreviations for navigation markers along with Lingit place names</td>
</tr>
<tr>
<td>(B) observe the navigation markers as they navigate past them</td>
</tr>
<tr>
<td>(C) a student team will photograph the navigation markers they pass on the Navigation Boat Field Trip</td>
</tr>
<tr>
<td>(D) access navigation marker photos in class on their computer,</td>
</tr>
<tr>
<td>(E) using clickers then click on correct photograph number that matches the navigation marker abbreviation on the nautical chart that is projected on a white board (this activity is the “Navigation Marker Quiz”</td>
</tr>
</tbody>
</table>

**Technology Used**
digital nautical chart
digital camera
class computer
white board
clickers

**Accommodations/Modifications**
Special needs: students will be given copies of paper charts
Enrichment students: students can also record any Lingit names they learned along with pictures

**Materials**
digital nautical chart
digital camera
class computer
white board
clickers
Navigation Field Trip Data

**Resources**
“Chart Plot Navigator” software
Windows Photo Gallery
Snipping Tool

**Author’s Reflection**
To do this I have to learn to use the flip camera, and the above resources along with the clickers. This is a new assessment that I have never done before.
# Engaged Learning

## Lesson Plan

### Introduction

<table>
<thead>
<tr>
<th>Title</th>
<th>Invertebrate Research</th>
<th>Author(s)</th>
<th>Dick, Patty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade Level(s)</td>
<td>6</td>
<td>Subject(s)</td>
<td>Science</td>
</tr>
<tr>
<td>Duration</td>
<td>3 weeks</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Synopsis**
Invertebrate Research and Classification Experience

### Desired Results

**GLE/Performance Standards**
- English/Language Arts
- Mathematics
- Science
- Geography
- Government and Citizenship
- History
- Skills for a Healthy Life
- Arts
- World Languages
- Technology
- Employability
- Library/Information Literacy

**ISTE NETS*S**
- Creativity and Innovation
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**21st Century Framework**
- Life and Career Skills
- Learning and Innovation Skills
- Core Subjects – 21st Themes
- Info, Media, and Tech Skills

**Assessment Methods**
Review with clickers & white board and Unit Test

### Classroom Considerations

#### Sequence of Learning Activities
Students will research invertebrate phylums/classes in books and with the computer as they write it out on a research sheet. With their research, they will design and do a scientific presentation using the digital poster “glogster”. They will do a presentation to their class while students take notes. As a review students will use clickers to place invertebrates in phylums/classes to prepare for the unit test.

**Technology Used**
Computers, White Board, Clickers

**Accommodations/ Modifications**
Research and digital poster requirements are open ended so that students have the opportunity to go beyond what is required. For example they can research more than one animal, create a bigger bank of interesting facts, embed youtubes, multiple pictures, creative displays etc.

**Materials**
Invertebrate samples in each phylum

**Resources**
Multiple invertebrate ID books, multiple web sites below are a few of them:
- [http://www.pugetsoundsealife.com/habitats+sealife/Home.html](http://www.pugetsoundsealife.com/habitats+sealife/Home.html)
- [http://www.cdc.gov](http://www.cdc.gov)
- [http://www.adfg.state.ak.us](http://www.adfg.state.ak.us)
- [http://wiki.answers.com](http://wiki.answers.com)
- [http://www.glogster.com](http://www.glogster.com)
- [http://www.youtube.com](http://www.youtube.com)

**Author’s Reflection**
I am in the middle of doing this unit now. I think students writing things out long hand and then transferring it to the computer is an important method of doing research for 6th graders. They are able to use different parts of their brain in learning this way. This unit builds on what students have learned in researching sea mammals and birds with the digital poster to refine what they already know and branch out to try some of
what they have already seen others do. To start this unit off, I showed students the 7 levels of classification and had them create a mnemonic learning sentence/story to remember the levels. After they had made them out, I asked them to come up and write them on the white board. Afterward, I asked them to put the levels on a blank page and told them we were going to figure the percent correct for the class and compare it to other classes. To my surprise my first class that I did it with (my squirrely bird all boy last period class) 100% got them correct! It really showed me the power of the white board and letting them create their own mnemonic sentence. Now I plan to see if they remember their sentence on the unit test.

To be honest, I originally planned for students to do this in a power point format because of the possibility of a future digital statescience fair presentation being planned in power point format. My reasoning was that students could to this in power point and then when I give them the option of doing the science fair research they are presently doing in power point, it would be much easier for them. But as the time crunch took over the glogster drew me back because so many of the students miss so much class around the spring break and they need to be able to work on the glog at home which they can easily do. I did not have my act together to teach google.docs access from home plus since the students have had do much experience with glogs so far, I knew it would be quick for them and meet my time requirements better. But the power point format is much preferred with this unit because of the load of information that I require is pushing the limits of the space on the glog.
Engaged Learning
Lesson Plan

Introduction
Title: Alaska Mushroom Exploration  |  Author(s): Dick, Patty
Grade Level(s): 6-8  |  Subject(s): Science  |  Duration: 180 Minutes
Synopsis: Students research Alaska mushrooms and create a Glog (digital chart) presentation as a part of their Fungi Kingdom exploration.

Desired Results
GLE/Performance Standards
- English/Language Arts
- Mathematics
- Science
- Geography
- Government and Citizenship
- History
- Skills for a Healthy Life
- Arts
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- Technology
- Employability
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Learning and Innovation Skills

Assessment Methods
Rubric for glogs

Classroom Considerations
Sequence of Learning Activities
Students will be shown the 7 Alaska Mushroom types with the help of the document viewer. Then they will create a digital mushroom image file by saving google images of each mushroom type. Next they will create a glogster presentation that has images of all 7 mushroom types along with descriptions. Students will share glogs in front of class and be encouraged to share them with family and friends.

Technology Used
Student computers
Document camera
Promethean board

Accommodations/Modifications
Advanced students can make a glog on each mushroom type with expanded descriptions.
Number of mushrooms covered on the glog can be made when appropriate

Materials
Local Alaska mushroom types handouts

Resources
Local Alaska mushroom books
Online google mushroom images

Author’s Reflection
Plugging students into local mushroom identification is really fun. They love to tell stories of hunting mushrooms with their families or of discoveries they have make in the past.

Special note: After today, I am checking out Discovery Streaming to find out what they have on local mushroom ID!