### Worksheet 5-5—Lesson Plan Format
(adapted with permission)

**Subject:** Science 6th Grade

**Lesson Name:** Petroleum Scavenger Hunt

**Location:** North Fremont Middle School

**Class:** Mrs. Stewart's 6th grade Science class

**Unit Context:** Using Earth’s Natural Resources

**Date:** March 10, 2009

#### Activities

Using information on the “Energy Information Administration” website, students will research different questions dealing with petroleum production and products.

Students will use the computer to access the “Energy Kid’s Page” at [www.eia.doe.gov/kids/energyfacts/sources/non-renewable/oil.html](http://www.eia.doe.gov/kids/energyfacts/sources/non-renewable/oil.html)

Students will answer a list of questions pertaining to petroleum processing and products.

#### Big6™ Skills

**Task Definition**

Idaho Science Standards

Standard 5.3: Understand the importance of natural resources and the need to manage and conserve them.

**Information Seeking Strategies**

**Location & Access**

**Use of Information**

**Synthesis**
The activity will be graded based upon complete and correct answers.

<table>
<thead>
<tr>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Context: Unit objectives: Students will know:</td>
</tr>
<tr>
<td>• how oil is formed</td>
</tr>
<tr>
<td>• where we get our oil</td>
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<tr>
<td>• what fuels are made from crude oil</td>
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<tr>
<td>• how does oil impact the environment</td>
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</tbody>
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Materials/Resources: Student science textbook, Computer lab, Energy Kid’s Page website

Evaluation: Points will be given based upon completeness of answers.

Notes: Make sure students are on the correct webpage at the beginning of activity!
### Worksheet 5-5—Lesson Plan Format
(adapted with permission)

<table>
<thead>
<tr>
<th>Subject: Science 6th Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson Name: Hydrogen—An Electrolysis Experiment</td>
</tr>
<tr>
<td>Location: North Fremont Middle School</td>
</tr>
<tr>
<td>Class: Mrs. Stewart's 6th grade Science class</td>
</tr>
<tr>
<td>Unit Context: Using Earth's Natural Resources</td>
</tr>
<tr>
<td>Date: March 10, 2009</td>
</tr>
</tbody>
</table>

#### Activities
Students will research the various methods used today to produce hydrogen. After determining the different methods, students will perform a hydrolysis experiment in which they separate hydrogen from water.

The entire class will discuss where to find information on Hydrogen and using Hydrogen for energy sources. Students will determine which resources would be best suited to answer their question.

#### Big6™ Skills
- Information Seeking Strategies

#### Task Definition
Idaho Science Standards
Standard 5.3: Understand the importance of natural resources and the need to manage and conserve them.
Students will use the Lili databases and books in the library to find information on Hydrogen.

The students will use the information found in their sources to write a one-paragraph summary on Hydrogen uses.

Using the information in their summary paragraph, students will apply that knowledge to an experiment separating water into oxygen and hydrogen.

Students will attach their summary paragraph to their lab paper. Teacher will grade the paragraph and lab paper.

<table>
<thead>
<tr>
<th>Location &amp; Access</th>
<th>Use of Information</th>
<th>Synthesis</th>
<th>Evaluation</th>
</tr>
</thead>
</table>

**Learning Context:** Unit objectives:
- how to classify natural resources as renewable and non-renewable
- how natural resources can be managed
- the effects of human activities on resources
- some alternative energy sources in place of fossil fuels

**Materials/Resources:** Student science textbook, Library, computer lab for Lili databases. Use elibrary and elibrary curriculum databases found on Lili.

- One 6-volt lantern battery. You can also use a solar panel and either a reading lamp or the sun as your energy source.
- Tap water
- Two wire test leads with double-ended alligator clips. If you are using a solar panel as your energy source, you will need a wire with an alligator clip at only one end.
- Aluminum foil — 2 pieces, each about 6 cm x 10 cm
- Salt
- 400–1000 milliliter (ml) clear beaker or small, clear plastic tub

**Evaluation:** Students will complete a lab paper and correctly answer questions associated with the activity. A rubric using the 6 traits of writing will be used to grade the summary paragraph.
**Worksheet 5-5—Lesson Plan Format**
(adapted with permission)

**Subject:** Science 6th Grade  
**Teacher:** Michele Stewart and Laura Allen

**Lesson Name:** Reduce, Reuse, Recycle – Trash Art  
**Location:** North Fremont Middle School

**Class:** Mrs. Stewart's 6th grade Science class  
**Unit Context:** Using Earth's Natural Resources

**Date:** March 10, 2009

**Activities**

Students will use recycled materials such as plastic bottles, aluminum cans, paper, or cardboard boxes to create a piece of art or classroom decorations

After discussing recyclable materials, the students will gather a variety of recyclable materials and design their own piece of art.

A classroom art show will display the student’s work. A panel of judges will decide on a first, second and third place winner.

**Big6™ Skills**

**Task Definition**

Idaho Science Standards

Standard 5.3: Understand the importance of natural resources and the need to manage and conserve them.

**Synthesis**

**Evaluation**
Learning Context: Unit objectives:
Students will know:
* how to classify natural resources as renewable and non renewable
* how natural resources can be managed
* the effects of human activities on resources

Materials/Resources: Student science textbook, recyclable materials (a wide variety), art supplies such as tape, scissors, glue, paint, markers, etc.

Evaluation: This will be graded based on participation. A fun art show with a few awards will be given out to projects that exhibit creativity and originality.

Notes: Need faculty members to act as judges for art show!