“Whooo’s in the Food Chain”

For further information contact…

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2008 - 2009 IDEA CATALOG OF EXCELLENCE

PROGRAM OVERVIEW
Do you want to make the food chain come alive for your students? I did! I wanted a hands-on method where students could actually “see” the food chain in a very real way. That’s what led me to a thematic unit on owls lasting two to three weeks, depending on computer availability for the PowerPoint presentation, which culminated with students dissecting owl pellets.

OVERALL VALUE
This unit was valuable because it addressed Standards 1 and 2 of strand G in the Sunshine State Standards for Science. Students learned how animals interact with their environment and they learned what can happen when animals’ habitats are destroyed.

The best part of the unit was seeing the students become excited about learning. I always enjoy watching the students when they first get the owl pellet. The most common reaction at first is “EWWW!” However, as soon as they start the dissection their excitement increases. They are so engaged in the lesson and their interaction with other students is unbelievable! They are truly learning by doing. It is a lesson that they do not forget for a very long time.

LESSON PLAN TITLES
- KWL Chart
- Word Sort
- Power Point on Owls
- Virtual Owl Pellet Dissection
- Owl Pellet Dissection

ABOUT THE DEVELOPER
Jane Herman has a B.A. in Elementary Education from the University of Illinois in Springfield. She is a National Board Certified Teacher, and Teacher of the Year 2007/2008 at Gibbons Street Elementary, where she is currently a fourth grade teacher.

MATERIALS
This unit utilizes a VCR or DVD player and the materials listed in each lesson plan. The materials, vendors, and pricing follows the lesson plans.

ADDL INFORMATION
The following websites have useful information that can be used in this unit:
- http://www.kidwings.com/index.htm - This is where the virtual owl pellet dissection is located. They also have free charts to download
- http://www.obdk.com - Here you can print certificates and bone charts
- http://www.stemnet.nf.ca/CITE/owls_pellets.htm

BOOKS
- Barn Owl by Sally Tagholm & Bert Kitchen
- Owl Babies by Martin Waddell and Patrick Benson
- Hoot by Carl Hiaasen (Also a video of this)
- Owl Puke by Jane Hammerslough

UNIFIED STREAMING
Concepts in Nature: Why Do Animals Look the Way They Do?
Animal Profiles: Owls
Creature Features: Special Features of Creatures
**SUBJECTS COVERED**
Science, Language Arts

**GRADES**
Fourth

**OBJECTIVES**
✓ Students will discuss what they know about owls, what they want to know about owls, and at the end of the unit what they learned about owls.
✓ The students will speak, read, listen, and write as they discuss their ideas about owls.

**SUNSHINE STATE STANDARDS**
LA.C.1.2.3
The student interacts with peers in a variety of situations to develop and present familiar ideas.

LA.C.1.2.5
The student responds to speakers by asking questions, making contributions, and paraphrasing what is said.

**MATERIALS**
- Individual KWL Chart
- Chart paper for large KWL chart
- Pencils

**DIRECTIONS**
1. The teacher will tell the class they are going to be learning about owls.
2. The teacher will ask students to think about what they know about owls. As students discuss their ideas, teacher will record them on the chart paper KWL chart. Students will record them on their individual charts.
3. Students will then give ideas about what they want to learn about owls. Teacher will record the ideas on her KWL chart and students will record them on their individual charts.
4. When the unit is finished, the class will come together again to finish the chart by recording what they have learned.

**EVALUATION/ASSESSMENT**
There will be no formal assessment, but the teacher will collect the charts and give participation points.

★ ★ ★
“Whooo’s in the Food Chain” Jane Herman
Lesson Plan No 2: Word Sort

■ SUBJECTS COVERED
Science, Language Arts/Classifying

■ GRADES
Fourth and Fifth Grade

■ OBJECTIVE
✓ Students will sort words into correct categories after listening to the book, *Butternut Hollow Pond*.

■ SUNSHINE STATE STANDARDS
SC.F.1.2.2
Knows how all animals depend on plants.

SC.G.1.2.1
The student knows ways that plants, animals and protests interact.

■ MATERIALS
Word Sort Cards
*One set per student*

■ DIRECTIONS
1. Each student will be given two sheets of word sort cards.
2. They will cut the cards apart.
3. The words that are the main categories are noted on the card. These are placed across the top of the student's desk.
4. Students place the remaining cards under the correct category.

■ EVALUATION/ASSESSMENT
Teacher can check off that students completed the activity, or take a grade based on the number correct.

■ ADDL INFORMATION
This activity goes along with the book *Butternut Hollow Pond* by Brian J. Heinz

★★★
<table>
<thead>
<tr>
<th>Deer</th>
<th>PRODUCER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wildflower</td>
<td>Snapping Turtle</td>
</tr>
<tr>
<td>Brown Bat</td>
<td>Fisherman</td>
</tr>
<tr>
<td>Grass</td>
<td>CONSUMER</td>
</tr>
<tr>
<td>Marsh Hawk</td>
<td>Raccoon</td>
</tr>
<tr>
<td>Opossum</td>
<td>CARNIVORE</td>
</tr>
<tr>
<td></td>
<td>CARNIVORE</td>
</tr>
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</table>
### Word Sort Cards– Butternut Hollow Pond
Taken from National Science Teacher Assn. – Picture-Perfect Science Lessons

<table>
<thead>
<tr>
<th>Dragonfly</th>
<th>HERBIVORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Largemouth Bass</td>
<td>Mallard Duck</td>
</tr>
<tr>
<td>Main Category</td>
<td>OMNIVORE</td>
</tr>
<tr>
<td>OMNIVORE</td>
<td>Heron</td>
</tr>
<tr>
<td>Woodchuck</td>
<td>Water Shamrock</td>
</tr>
<tr>
<td>Pickerel Frog</td>
<td>Green Algae</td>
</tr>
</tbody>
</table>

**Main Category**

- HERBIVORE
- OMNIVORE

**“Whooo’s in the Food Chain” Jane Herman**

**Lesson Plan No 2: Word Sort – Additional Information**
ANSWERS FOR WORD SORT ACTIVITY

<table>
<thead>
<tr>
<th>PRODUCER</th>
<th>CONSUMER</th>
<th>CARNIVORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green algae</td>
<td>woodchuck</td>
<td>dragonfly</td>
</tr>
<tr>
<td>Wildflower</td>
<td>mallard duck</td>
<td>largemouth bass</td>
</tr>
<tr>
<td>Water shamrock</td>
<td>deer</td>
<td>pickerel frog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Snapping turtle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heron</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brown bat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marsh hawk</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OMNIVORE

- Fisherman
- Raccoon
- oppossum
“Whooo’s in the Food Chain” Jane Herman
Lesson Plan No 3: Power Point Presentation

**SUBJECTS COVERED**
Science Technology

**GRADES**
Fourth

**OBJECTIVES**
✓ Students will research a specific type of owl using books and the internet.
✓ Students will create a Power Point presentation following specific guidelines.

**MATERIALS**
- Computers with internet access and reference books.
- Worksheet with guidelines for presentation.
- Paper and pencil.

**DIRECTIONS**
1. Students will use three to five 45 minute time periods to research the type of owl they will present.
2. Students will use three to five 45 minute time periods to create a Power Point Presentation based on the requirements attached.
3. Students will present their completed project to the class.

**EVALUATION/ASSESSMENT**
Students and teacher will grade all of the presentations on a rubric which was made together as a class. Example attached.

**SUBJECTS COVERED**
Science Technology

**GRADES**
Fourth

**OBJECTIVES**
✓ Students will research a specific type of owl using books and the internet.
✓ Students will create a Power Point presentation following specific guidelines.

**SUNSHINE STATE STANDARDS**
SC.H.1.2.1 Uses scientific processes and habits of mind to solve processes.
SC.H.1.2.2 Knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results.
SC.H.1.2.3 Knows that to work collaboratively, all team members should be free to reach, explain, and justify their own individual conclusions.
SC.H.3.2.1 Understands that science, technology, and society are interwoven and interdependent.
LA.A.2.2.5 The student reads and organizes information for a variety of purposes, including making a report, conducting interviews, taking a test, and performing an authentic task.
LA.C. The student speaks for specific occasions, audiences, and purposes, including conversations, discussions, projects, and informational or imaginative presentations.
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Lesson Plan No 3: Power Point Presentation – Add’l Information

Power Point Presentation Requirements

1. Choose one of the owls below to research and present a create a Powerpoint Presentation:
   - Barn Owl
   - Snow Owl
   - Elf Owl
   - Barred Owl
   - Pygmy Owl
   - Screech Owl

2. You will need the following for your presentation:
   a. The name of the owl you are researching.
   b. Where it is found.
   c. What it eats.
   d. How big it is.
   e. What it looks like.
   f. One slide must have a sound file of your owl.
   g. At least two more interesting facts that you found.

   Each slide will need a picture which matches what you have written on the slide. You will need to have a total of ten slides. This includes your Title slide.

3. We will be going to the computer lab to do research. You will have three 45 minute periods to research. You may use books, encyclopedias or any other type of reliable resource.

4. You will make a written representation of your slide show before actually creating your Powerpoint.

5. You will have an additional three computer lab periods to make your slide show.

6. You will be presenting your slide show to the whole class.

This project will be worth 100 points.
## Power Point Presentation on Owls

<table>
<thead>
<tr>
<th>VISUAL APPEAL</th>
<th>Beginning 1</th>
<th>Developing 2</th>
<th>Accomplished 3</th>
<th>Exemplary 4</th>
<th>SCORE</th>
</tr>
</thead>
</table>
| Slides hard to read. Graphics confusing and unrelated to words. Too much movement in slides. | There are too few graphic elements. Appropriate background. Some slides hard to read. | Good graphic elements. Slides are easy to read and movement and sounds are sufficient. | Appealing graphic elements. Slides are easy to read and movement and sounds are used effectively | |}

| REQUIRED INFORMATION | | | | |
|-----------------------| | | | |
| Little or none of the required information is included. | Some of the required information is included. | Most of the required information is included. | Student went beyond required information and added additional information. | |}

| READABILITY OF SLIDES | | | | |
|-----------------------| | | | |
| Many errors in spelling, grammar and punctuation. Inconsistent, unclear bullet format. Too much information. | Some spelling, grammar, and punctuation errors. Inconsistency on a few slides. Too much information on two or more slides | Little or no grammatical errors. Most bullets are consistent and clear. Most information is clear and concise on each slide. | No grammatical errors. Bullets are consistent and clear. Information is clear and concise on each slide. | |}

| PRESENTATION SKILLS | | | | |
|---------------------| | | | |
| Presenter didn’t know the material. Hard to hear and understand. Did not use expression. | Presenter knew some of the material. Could be heard but little expression. | Presenter knew most of the material. Spoke loud enough with some expression. | Presenter knew material well. Spoke in a way that engaged the audience. Used appropriate gestures. | |
“Whooo’s in the Food Chain” Jane Herman
Lesson Plan No 4: Virtual Owl Pellet Dissection

■ SUBJECTS COVERED
Science

■ GRADES
Fourth

■ OBJECTIVE
✔ Students will go online to perform a virtual owl pellet dissection.

■ MATERIALS
Computers with internet access.

■ DIRECTIONS
Students will go to the website: http://www.kidwings.com/index.htm and dissect a virtual owl pellet.

■ EVALUATION/ASSESSMENT
Teacher will check students as they work.

■ EXTENSION
When students have finished they can explore the kidwings site for information about owls. They also have a link for teachers which has activities to go along with this unit.

■ SUNSHINE STATE STANDARDS
SC.H.1.2.2
Knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results.

SC.G.1.2.1
Understands the relationship among organisms in aquatic and terrestrial food chains.

★ ★ ★
“Whooo’s in the Food Chain” Jane Herman
Lesson Plan No 5: Owl Pellet Dissection

**SUBJECTS COVERED**

Science

**GRADES**

Fourth

**OBJECTIVE**

✓ Students will dissect and examine an owl pellet.
✓ Students will compare the contents of their pellet to a bone sorting chart and glue the bones on the chart.
✓ Students will complete an inquiry sheet on their findings.

**SUNSHINE STATE STANDARDS**

SC.H.1.2.2
Knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results.

SC.H.1.2.3
Knows that to work collaboratively, all team members should be free to reach, explain, and justify their own individual conclusions.

**MATERIALS**

- Owl pellet
- Dissecting forceps
- Wooden probes
- Plastic gloves
- Hand lens
- Bone Sorting Chart
- Inquiry Sheet
- Pencils
- Ruler

**EVALUATION/ASSESSMENT**

Teacher will check students as they work. Bone sorting charts will be turned in and checked. Inquiry sheets will be graded.

**EXTENSION**

After students have finished they will turn everything in, wash their hands, and be given an edible owl pellet. (Recipe attached)

**DIRECTIONS**

1. The teacher will review owl pellets with the class.
2. Students will be handed their own owl pellet, bone sorting chart, dissecting tools, and inquiry sheet.
3. Students will take the pellet apart and separate the bones.
4. Students will glue the bones from their pellet onto the bone sorting chart.
**OWL PELLET DISSECTION DATA SHEET**

1. What is the size of your pellet? Length _______ Width _______

2. How many skulls were in your pellet? ______________________

3. Put a check by each animal whose bones you found in your pellet.
   - Rodent ____ Shrew ____ Mole ____ Bird ____ Other _____

4. Put a check by each kind of bone you found.
   - Ribs ____ Jaws ____ Pelvis ____ Scapula ____ Bird ____ Other ____

5. Did you find a complete skeleton? What is one reason you may not find a whole skeleton? _________________________________________________________
   - _________________________________________________________
   - _________________________________________________________
   - _________________________________________________________

6. About how many animals did this owl eat? _____________________________

7. What do the contents in this pellet tell you about the owl’s diet?
   - _________________________________________________________
   - _________________________________________________________

8. What habitat do you think this owl would be hunting in? _________________
   - _________________________________________________________
Edible “Barn Owl Pellets”

Makes about 36 pellets.
(I cut this recipe in half and had plenty for my 18 students)

| 6 cups crispy rice cereal  |
| 2 cups (12 ounces) semisweet or milk chocolate chips. |
| 1 cup sugar |
| 1 cup corn syrup |
| 1 cup peanut butter (smooth or crunchy) |
| 1 white chocolate candy bar or white chocolate chips chopped into pieces. These look like the “bones” |
| Foil for wrapping pellets |

In a large bowl, mix cereal and chocolate chips. Set aside.
Mix sugar and corn syrup in a small pan, and heat until hot and bubbling.
Remove sugar-syrup mixture from heat and stir in peanut butter.
Stir peanut butter mixture into cereal and chocolate chips and mix together well. The chocolate chips will melt. When the cereal is completely coated and is a brown color, allow mixture to sit for five minutes to cool.
Using washed hands, pick up 2-3 tablespoons of the mixture. Sprinkle 4-5 white chocolate bones into the mixture with your hand.
Squeeze mixture in your fist until it looks just like an owl pellet. Smooth edges if necessary and place chocolate pellet on a plate or wax paper.
Wrap each pellet in foil and store in refrigerator until ready to eat.
These are VERY realistic and such fun! I usually tell the kids I’m going to eat an owl pellet, and when I start eating one of these it freaks them out!

Taken from “Owl Puke” by Jane Hammerslough
PRE and POST TEST OWLS

Name: _______________________

Fill in the blanks using these words. You will not use all of the words.

Plumage  talons  facial disk  beak
Roost  ear tufts  owlet  nocturnal
Barn owls  eggs  baby birds  crow
Typical owls  owl pellets  Great Horned  snow
Owl pellets

1. The sharp curved claws of an owl are called __________________________.

2. A clutch is a set of ____________________________.

3. A brood is a set of ____________________________.

4. There are two families of owls: _______________ owls and _______________ owls.

5. Owls regurgitate _______ ________________.

6. Owls are mostly active at night. They are __________________ animals.

7. A baby owl is called an ____________________________.

8. An example of an owl with ear tufts is the ________________ ________________ owl.

9. Owls like to _______________ in a tree during the day and _______________ at night.

10. A black colored bird called the _______________ does not like owls.
## Materials Budget

<table>
<thead>
<tr>
<th>SUPPLIER</th>
<th>ITEM DESCRIPTION</th>
<th>COST</th>
<th>QUANTITY</th>
<th>TOTAL COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genesis, Inc.</td>
<td>Original Owl Pellet Pak with 15 pellets</td>
<td>34.95</td>
<td>1</td>
<td>34.95</td>
</tr>
<tr>
<td><a href="http://www.pellet.com">http://www.pellet.com</a> *</td>
<td>Barn Owl Pellets</td>
<td>1.65</td>
<td>5</td>
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</tr>
<tr>
<td></td>
<td>Ecology and the Barn Owl (DVD)</td>
<td>34.95</td>
<td>1</td>
<td>34.95</td>
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<tr>
<td></td>
<td>Bone Sorting Sheets (15 each)</td>
<td>3.95</td>
<td>2</td>
<td>7.90</td>
</tr>
<tr>
<td></td>
<td>Plastic Forceps</td>
<td>.90</td>
<td>20</td>
<td>18.00</td>
</tr>
<tr>
<td></td>
<td>Wooden probes (15 count)</td>
<td>1.50</td>
<td>2</td>
<td>3.00</td>
</tr>
<tr>
<td>Amazon.com *</td>
<td>Medium poly gloves (1 each)</td>
<td>.10</td>
<td>20</td>
<td>2.00</td>
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<td>Food web poster</td>
<td>3.95</td>
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<td>Book: <em>There’s an Owl in the Shower</em></td>
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<td>Book: <em>Butternut Hollow Pond</em></td>
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<td>RainbowHorizons.com</td>
<td>Owls downloadable unit</td>
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<td>Publix</td>
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<tr>
<td></td>
<td>16 oz. corn syrup</td>
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<td>1</td>
<td>2.39</td>
</tr>
<tr>
<td></td>
<td>1 bag chocolate chips</td>
<td>1.69</td>
<td>1</td>
<td>1.69</td>
</tr>
<tr>
<td></td>
<td>2 lbs. sugar</td>
<td>1.29</td>
<td>1</td>
<td>1.29</td>
</tr>
<tr>
<td></td>
<td>18 oz. peanut butter</td>
<td>2.19</td>
<td>1</td>
<td>2.19</td>
</tr>
<tr>
<td></td>
<td>1 bag white chocolate chips</td>
<td>2.59</td>
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* **Shipping Charges:**
  - Pellet.com .................... 9.50
  - Acornnaturalists.com .... 5.95
  - Amazon.com ................. 4.98

<table>
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<tr>
<th></th>
<th>Subtotal</th>
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<th>Shipping if applicable</th>
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<td></td>
<td>$165.81</td>
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<td>20.43</td>
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**Teacher’s Name:** Jane Herman

**School:** Gibbons Street Elementary
## WHOOO’S IN THE FOOD CHAIN

<table>
<thead>
<tr>
<th>Assessment for</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KWL Chart</strong></td>
<td>Information disorganized. One or more topics not addressed. Information has little or nothing to do with topic. Does not contribute to discussion.</td>
<td>Information not accurately organized with incomplete sentences. Information strays from the topic. Does not willingly contribute to discussion.</td>
<td>Information organized with most in complete sentences. Most information relates to the topic. Contributes to the discussion</td>
<td>Information well organized with complete sentences. Information relates to the topic. Contributes to discussion.</td>
</tr>
<tr>
<td><strong>Word Sort</strong></td>
<td>Does not listen to story. Has less than 8 of the cards correctly categorized.</td>
<td>Listens to part of the story. Has 8-10 cards correctly categorized.</td>
<td>Listens to the story. Has more than 10 cards correctly categorized.</td>
<td>Listens attentively to the story. Has all of the cards correctly categorized.</td>
</tr>
<tr>
<td><strong>Virtual Dissection</strong></td>
<td>Does not stay on task. Does not complete dissection. Most bones placed incorrectly on the chart.</td>
<td>Is off task some of the time. Completes part of the task and places a few of the bones correctly on the chart.</td>
<td>Stays on task most of the time. Completes most of the dissection. Places most bones correctly on the chart.</td>
<td>Stays on task, completes the dissection and places all the bones correctly on the chart.</td>
</tr>
<tr>
<td><strong>Owl Pellet Dissection</strong></td>
<td>Off task. Separates only a few of the bones. Does not attempt to glue the bones on the bone sorting sheet.</td>
<td>On task some of the time. Separates some of the bones and glues them on the bone sorting sheet.</td>
<td>On task most of the time. Separates most of the bones and glues them on the bone sorting sheet.</td>
<td>On task all of the time. Separates all of the bones and glues them on the bone sorting sheet.</td>
</tr>
</tbody>
</table>

**TOTAL**

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2008 - 2009 IDEA CATALOG OF EXCELLENCE