Instructional Unit Resource Guide
Elementary Level
Based on Principles of Universal Design and Differentiated Instruction

Project Title: Food Chains
Grade Level: Elementary (intermediate)
Focus: Science
Author names: Susan Calabrese, Brenda Christophel, Shawn Dever, Kelly Stahl, Beth Snively, Karen Turner
Agency/School District: Bartholomew Consolidated School Corporation / Taylorsville Elementary School
Author's Notes

The Universal Design Team at Taylorsville Elementary is comprised of six faculty members. They are all members of the ISD (Instructional Service Delivery) team. Each member has various technological abilities from simple usage of word processors to use of assistive technology in the classroom. Listed below are the names of the members on this team, their position, and how long they have been in education.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susan Calabrese</td>
<td>5th grade teacher</td>
<td>13 years</td>
</tr>
<tr>
<td>Brenda Christophel</td>
<td>3rd/4th grade teacher</td>
<td>25 years</td>
</tr>
<tr>
<td>Shawn Dever</td>
<td>6th grade teacher</td>
<td>16 years</td>
</tr>
<tr>
<td>Beth Snively</td>
<td>Special Education teacher</td>
<td>21 years</td>
</tr>
<tr>
<td>Kelly Stahl</td>
<td>1st grade teacher</td>
<td>2 years</td>
</tr>
<tr>
<td>Karen Turner</td>
<td>Principal</td>
<td>36 years</td>
</tr>
</tbody>
</table>

This instructional unit is based on exploring the living environment. The intent of this unit is to provide all students with the understanding of the interdependence of organisms in the environment. This unit will take approximately 2 weeks to introduce and will be used to connect all the different organisms as they are discussed individually during the rest of the year.

After this 2 week unit all students will be able to describe that all kinds of animals’ food can be traced back to plants. Many students will be able to describe and explain the different types of relationships organisms have with an ecosystem.

Individual teachers can be contacted through the Taylorsville Elementary website located at [www.bcsc.k12.in.us/taylorsville](http://www.bcsc.k12.in.us/taylorsville).
Standards and Benchmarks

- Science:
  - 3.4.4 – Describe that almost all kinds of animals’ food can be traced back to plants.
  - 4.4.3 – Observe and describe and interact with one another in various ways such as providing food, pollination, and seed dispersal.
  - 4.4.4 – Observe and describe that some source of energy is needed for all organisms to stay alive and grow.
  - 5.4.4 – Explain that in any particular environment some kinds of plants and animals survive well, some do not survive as well, and some can’t survive at all.
  - 5.4.5. – Explain how changes in an organism’s habitat are sometimes beneficial and sometimes harmful.
  - 6.4.8. – Explain that in all environments organisms with similar needs may compete with one another for resources.
  - 6.4.9 – Recognize and explain that 2 types of organisms may interact in a competitive or cooperative relationship.

Resource Help

Indiana Learning Standards: [http://www.doe.state.in.us/standards/](http://www.doe.state.in.us/standards/)
Planning Pyramid

**Some students will know:**
Some students will be able to explain how changes in a habitat will directly affect which organisms will survive and the adaptations necessary for survival.

**Most students will know:**
Most students will be able to describe and explain the different types of relationships organisms have with an ecosystem.

**All students will know:**
After this 2 week unit all students will be able to describe that all kinds of animals’ food can be traced back to plants.
Teacher Library

The following websites will be helpful for teachers as they plan this unit:

www.brainpop.com
  • If you are a subscriber, there are many short video clips.

www.pppst.com
  • PowerPoint presentations on nearly every topic

http://www.teachnet-lab.org/glasgold/food_chain/introduction.htm
  • WebQuest to teach food webs

  • Virtual Owl Pellet dissection

  • Interact with food chains
# LEARNER ACTIVITIES

## Interdependence of Life

Choose 3 items in a row to complete.

<table>
<thead>
<tr>
<th>Create</th>
<th>Write/Draw</th>
<th>Quiz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Given a list of organisms, create a food web. Use arrows to show the energy flow within the ecosystem.</td>
<td>Collaborate with a partner to create a picture book for a younger student teaching them about a particular habitat and the interdependence of the organisms within it.</td>
<td><a href="http://www.kidsknowit.com/interactive-educational-movies/free-online-movies.php?movie=Food%20Chains">http://www.kidsknowit.com/interactive-educational-movies/free-online-movies.php?movie=Food%20Chains</a> Watch the video and take the quiz. Report your score to your teacher.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Draw</th>
<th>Watch</th>
<th>Create</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ask your teacher for the name of a biome and draw a food web that would be found in that biome.</td>
<td>Watch a PowerPoint from the website <a href="http://www.pppst.com">www.pppst.com</a> Then complete a “For Kids” learning activity of your choice.</td>
<td>Write a rap, song, or poem from an animal’s point of view within their food web. If they are a predator, describe how they feel as an example.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Read/Write</th>
<th>Read / Summarize</th>
<th>Compare/Contrast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use vocabulary words to create a crossword puzzle for your classmates to complete.</td>
<td>Read an article or watch a short video clip about food webs. Write a 1 paragraph summary when completed.</td>
<td>Choose similar organisms such as an arctic hare and a rabbit and compare and contrast their roles in their given habitats.</td>
</tr>
</tbody>
</table>
Assessment

What materials and resources will be useful for assessing student knowledge and skills?

- Teacher prepared short quizzes to quickly assess learning
- Use of classroom performance system such as 2KnowToolBar with Neo’s or Classroom Performance System to quickly assess
- Completion of activities on Tic Tac Toe Board
- Classroom assessment options listed on the DOE website.

Possible Resources for locating assessment materials:
http://www.ncrtec.org/tl/sgsp/index.html

Rubrics:
- http://rubistar.4teachers.org

Authoring Software:
- http://www.inspiration.com (Kidspiration/Inspiration)

Test Taking Software: http://www.quia.com

Electronic Quizzes:
- http://highered.mcgraw-hill.com/sites/0070947864/student_view0/chapter2/study_quiz_2_1.html (upper grades)
## Modifications: Planning for Academic Diversity

<table>
<thead>
<tr>
<th>LEARNING BARRIER</th>
<th>POSSIBLE SOLUTIONS</th>
<th>WEB RESOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student cannot read at grade level.</td>
<td>Let the students listen to an audio or video file of the test/work through I-tunes, Ipod, or Mp3 player.</td>
<td><a href="http://www.readplease.com">http://www.readplease.com</a></td>
</tr>
<tr>
<td>Student has difficulty comprehending the material.</td>
<td>Modify the material using the Microsoft Auto Summarize tool</td>
<td><a href="http://www.sparknotes.com">http://www.sparknotes.com</a></td>
</tr>
<tr>
<td>Student has difficulty mastering the vocabulary of the unit.</td>
<td>Use Marzano's vocabulary work to identify certain words to focus on for these students</td>
<td><a href="http://www.enchantedlearning.com/Dictionary.html">http://www.enchantedlearning.com/Dictionary.html</a> <a href="http://www.webster.com/">http://www.webster.com/</a> <a href="http://www.visuwords.com">www.visuwords.com</a> <a href="http://www.visualthesaurus.com">http://www.visualthesaurus.com</a></td>
</tr>
<tr>
<td>Student has difficulty with handwriting (speed or accuracy).</td>
<td>Use a portable word processor (i.e alphasmart) to help with writing skills</td>
<td><a href="http://www.idictate.com">http://www.idictate.com</a></td>
</tr>
<tr>
<td>Student has difficulty with calculating activities.</td>
<td></td>
<td><a href="http://www.webmath.com">http://www.webmath.com</a> <a href="http://mathforum.org/dr.math/">http://mathforum.org/dr.math/</a></td>
</tr>
<tr>
<td>Student needs help with conducting research.</td>
<td>Send students to a website that will help them find the correct information</td>
<td><a href="http://my.yahoo.com">http://my.yahoo.com</a> <a href="http://toolbar.google.com/">http://toolbar.google.com/</a> <a href="http://yahooligans.yahoo.com/">http://yahooligans.yahoo.com/</a></td>
</tr>
<tr>
<td>Student needs the instructional material in a language other than English.</td>
<td>Allow students to speak with others who speak their own language to interpret the conversation</td>
<td><a href="http://babelfish.altavista.com">http://babelfish.altavista.com</a></td>
</tr>
<tr>
<td>Student needs additional challenge.</td>
<td></td>
<td><a href="http://www.google.com">www.google.com</a> <a href="http://www.trackstar.com">www.trackstar.com</a></td>
</tr>
</tbody>
</table>

**Possible resources for developing modifications and accommodations:**

- **Making Modifications in the Classroom: A Collection of Checklists:**  

- **National Center on Educational Outcomes:**  
  [http://www.education.umn.edu/NCEO/](http://www.education.umn.edu/NCEO/)

Property of PATINS Project. Permission to copy or modify is granted if rights are maintained.