Spring 2019

CLC Expanded Learning Opportunity Club: Living World

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**NEBRASKA HONORS PROGRAM**  
**CLC EXPANDED LEARNING OPPORTUNITY CLUBS**  
**INFORMATION SHEET**

**Name of Club:** Living World Club  
**Age/Grade Level:** 4-5  
**Number of Attendees:** 10  
**Goal of the Club:**  
Spark students’ interest in the natural world and foster learning about key environmental topics.

**Resources:**  
Project WILD, Nebraska State Museum – Morrill Hall

**Content Areas:** (check all that apply)  
☐ Arts (Visual, Music, Theater &Performance)  
☐ Literacy  
☒ STEM (Science, Technology, Engineering &Math)  
☐ Social Studies  
☐ Wellness (Physical Education, Health, Nutrition &Character Education)

**Outputs or final products:**  
Sustained interest in the environment.

**Introducing your Club/Activities:**  
This club focuses on greater education about the environment through interaction and fun.

**General Directions:**  
Encourage exploration and enjoyment of the natural world.

**Tips/Tricks:**  
Try to include an interactive portion of every activity and be open to following students’ interests and requests.
### Lesson Plan Worksheet

<table>
<thead>
<tr>
<th>Lesson Activity Name:</th>
<th>Food Chains and Webs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length of Activity:</strong></td>
<td>45 minutes</td>
</tr>
<tr>
<td><strong>Supplies:</strong></td>
<td>Paper, markers or crayons</td>
</tr>
</tbody>
</table>

**Directions:**

Begin by introducing the concept of food chains and webs and what they look like. Ask students which way they think the arrows in a food chain point, towards the animal being eaten or the animal eating. Establish they point towards the animal eating because food webs show the flow of energy. Discuss producers, consumers, and dentrivores. Have students draw their own food webs, allowing them to use any animals they choose, but emphasizing the trophic levels.

**Conclusion of the activity:**

Allow students to present their food webs and clarify any question they may have.

**Parts of activity that worked:**

This activity was very successful as an introduction to the club for my students.

**Parts of activity that did not work:**

This activity is largely dependent on having students that can sit still and focus for relatively longs period of time. Without that, this activity may be much less successful.

<table>
<thead>
<tr>
<th>Lesson Activity Name:</th>
<th>Animal Skulls</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length of Activity:</strong></td>
<td>45 minutes</td>
</tr>
<tr>
<td><strong>Supplies:</strong></td>
<td>Animal skulls and information, notecards with each animal’s name</td>
</tr>
</tbody>
</table>

**Directions:**

Begin by asking students what parts of an animal can tell you what it ate. Focus the discussion on teeth. Ask students to list what types of ‘eaters’ exist in nature: herbivores, omnivores, insectivores, and carnivores. Ask which type humans are (omnivores). Bring out the animal skulls and place the notecards with the animal names on the table. Direct the students to match the skulls with the names. After they have cooperatively decided on names for each skull, give them the correct answers. Ask students to tell you what type of ‘eater’ each animal would be based on its skull. Ultimately, give them the correct answer and reasons for each.

**Conclusion of the activity:**

Play 4 corners: call out an animal from the skulls you looked at and have the students go to a corner based on whether they think it is a herbivore, carnivore, insectivore, or omnivore. As a challenge, add animals whose skulls you did not look at.
Parts of activity that worked:
The students enjoyed getting an up-close look at the skulls and playing 4 corners.

Parts of activity that did not work:
I would leave more time for the students to investigate the skulls.

Special thanks to Morrill Hall for providing the materials for this lesson.

Lesson Activity Name: Ecology Trivia Game
Length of Activity: 45 minutes
Supplies: Colored construction paper, age appropriate trivia questions and answers

Directions:
This activity was a direct response to one of my student’s requests to play board games. Lay out the colored construction paper in a path, like a game board. Randomly assign the students an order (I used alphabetical). Ask each of the students a trivia question related to plants, animals, or the environment. If they get it right, they move one square forward. If they get it wrong, they stay where they are.

Conclusion of the activity:
Recognize the winner(s) and distribute a prize if desired.

Parts of activity that worked:
The students were all very engaged and really were cooperative in helping each other get the correct answer.

Parts of activity that did not work:
I had a variety of levels of learners in my group, so some students really excelled while others struggled. Adjusting the level of the trivia questions may help with this.

Lesson Activity Name: Plate Tectonics
Length of Activity: 45 minutes
Supplies: Plate tectonics puzzle, wooden blocks demonstrating each type of boundary, a map of Pangea

Directions:
This activity was based on one I designed for Morrill Hall, which is where I got the materials. Begin by having the students put together the plate tectonics puzzle. Encourage them to work together. When they have it put together, ask if they know why the puzzle was broken into pieces the way it was. Explain that it shows the major plate boundaries – areas between the large pieces
of land that move over our Earth’s surface. Ask them to find a place where the arrows on the map point away from each other. Tell them that is a divergent boundary. Allow them to play with the corresponding blocks to figure out how divergent boundaries work. Repeat for convergent and transform boundaries. Play a game similar in Simon Says, where the leader calls out each type of boundary and the students move according to that. For example, they would step towards each other for convergent.

**Conclusion of the activity:**

This activity ties into the activity I did the next week on rocks and minerals, so at the end of our time I began introducing the three types of rocks.

**Parts of activity that worked:**

The students enjoyed moving the blocks and putting together the puzzle, as well as the Simon Says game.

**Parts of activity that did not work:**

I’m not sure trying to introduce the rock types at the end was very effective, as they weren’t very focused.

**Lesson Activity**  |  **Name**: Rocks and Minerals
---|---
**Length of Activity**: | 45 minutes
**Supplies**: | Colored balloons labelled sand, gravel, and silt; assorted rocks and minerals

**Directions:**

Begin by establishing the concept of sediments and introduce the three sediments written on the balloons. Ask them to identify the smallest to the largest (silt, sand, gravel). Tell them that rivers carry sediments. Ask them which river would carry gravel, a fast-moving river or a slow-moving river? Once it has been established that faster rivers carry larger sediments, begin the balloon activity. Tell them they are a slow-moving river and they can only carry silt. Have them cooperatively try to keep the balloon off the ground. Progressively, tell them they are now moving faster and add the sand and then gravel balloons. Ask them what type of rock these sediments will become (sedimentary). Review the other two types of rocks and establish the difference between rocks and minerals. Show them and let them touch examples of each rock.

**Conclusion of the activity:**

Play 3 corners (just like 4 corners) by holding up a rock and having them move to the corner that corresponds to the type of rock they thing it is.

**Parts of activity that worked:**

Playing with balloons was a big hit, but they were still engaged in learning about rocks and minerals.

**Parts of activity that did not work:**
They really wanted to take the balloons home, but I only had three. So either have enough for everyone or make it very clear no one gets a balloon.

**Lesson Activity**

Name: Predator and Prey

**Length of Activity:** 45 minutes

**Supplies:** Cards labelled water and food

**Directions:**

This session was partly based on the ‘Oh Deer’ activity in the Project WILD manual. Begin by discussing with students what predators and prey are. Ask them to name some examples of each. Ask them what resources animals need to survive. Split them into two groups and have them stand in a line across from each other (I would recommend doing this outside if possible). Tell one group they are the resources and the other group they are the deer. Randomly distribute the water and food cards to each student in both groups. Tell the deer they have to run and find a resource with a card that matches theirs. The deer that don’t find a match become resources. The deer that do bring the resource student back with them to become a deer. Play a couple rounds and talk about scarcity of resources and overpopulation. If there is time, introduce a predator (mountain lion) to the activity. The mountain lion will stand in the middle and try to tag the deer as they move to get their resource. If a deer is tagged, it becomes a mountain lion too.

**Conclusion of the activity:**

Along the way, plot the number of deer, mountain lions, and resources on a graph. At the end, show them the graph and talk about why there is a fluctuation.

**Parts of activity that worked:**

They really enjoyed playing this activity and even came up with their own suggestions for extensions.

**Parts of activity that did not work:**

There would have been a greater variation in deer/resources/mountain lions with a bigger group, which may have illustrated the point more effectively.