ACTIVITY 2
Ranch Bird Beaks

RANCH LIFE SERIES | BOOK 3 | RANCH WILDLIFE:
Chapter 3

Content Area:
Science

Topics:
Structure and Function

Objective:
Students will understand the structure and function of ranch bird beaks.

Texas Essential Knowledge and Skills (TEKS):
3.10A, 4.10A, 5.10A
Ranch Bird Beaks

CONTENT AREA: Science

TOPICS: Structure and Function

ACTIVITY MATERIALS:

- BLANK SHEET OF PAPER: 1 PER STUDENT
- RANCH BIRD INFORMATION CARDS (PAGE A2 - 4): 1 BIRD CARD PER STATION
- RANCH BIRD SCORE SHEET (PAGE A2 - 5): 1 PER STUDENT
- 9 OZ CUP: 1 PER STUDENT
- 4 GROCERY PLASTIC BAGS TO USE FOR TRASH AT EACH STATION
- TOOLS: 4 TWEEZERS, 4 HALVED SKEWERS, 4 SCISSORS, 4 NUTCRACKERS
- MOURNING DOVE STATION SET UP: 1 OF EACH TOOL, PAN CONTAINING WHOLE SUNFLOWER SEEDS
- WILD TURKEY STATION SET UP: 1 OF EACH TOOL, PAN CONTAINING SUNFLOWER SEEDS, RICE, AND GUMMY WORMS
- QUAIL STATION SET UP: 1 OF EACH TOOL, PAN CONTAINING WHOLE PECANS AND WHOLE SUNFLOWER SEEDS
- HAWK STATION SET UP: 1 OF EACH TOOL, 4 PANS CONTAINING A PREY (DOWEL ROD WRAPPED IN CLAY)
- THE BOTTOM LINE (PAGE A2 - 6): 1 PER STUDENT OR STUDENT TABLE GROUP

READING STRATEGY: Twelve Square Chunking

This activity chunks the information from the reading in a student friendly way. The movement between sections allows for students to have a break from the reading and minimizes reading fatigue. The before, during, and after reading assignments helps focus readers and strengthens comprehension of the material.

1. Students will fold a blank sheet of paper into twelve squares.
2. The four columns will be labeled: Doves and Quail, Wild Turkeys, Birds of Prey, and Buzzards.
3. The three rows will be labeled: Before, During, After.
4. Before reading chapter 3, students should fill in the “before” row with everything they know about the birds listed on their paper.
5. After most students have completed the task (1-2 minutes), they will read the section about doves and quails (p. 16-23). While reading silently, students should be taking notes in the “during” section which is the middle row of their paper.
6. When students have completed reading the Doves and Quail section and their notes are filled in, they should stand up. Once all students are standing, they will go find a partner. Students will review each other’s notes and add any information not included on their paper in the last row labeled “after”.
7. This process will be repeated for each section of the reading.

<table>
<thead>
<tr>
<th></th>
<th>Dove &amp; Quail</th>
<th>Wild Turkeys</th>
<th>Birds of Prey</th>
<th>Buzzards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>During</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ACTIVITY INSTRUCTIONS:

1. After reading chapter 3, students will role play what it is like to hunt food as each bird they studied during the reading.
2. Students should be divided into groups of four. Give each student a cup and have them move to a bird station.
3. At the bird station, students will find an information card, “beak” tools, and a pan with simulated food. Students should be instructed to pick a tool.
4. Students will have 30 seconds to gather food.
   
   Rules:
   - Students cannot use their hands to touch the food.
   - Food must be gathered one piece at a time and dropped into the cup (bird stomach).
   - If food is dropped or dragged it goes back in the pan.
   - Seeds must be opened before going in the stomach (cup).
   - The cup must remain flat on the table.
5. When the teacher calls time, students record how many pieces of food they collected on their record sheet.
6. Direct students to discuss their results and complete the Team Score table. Have students analyze their results and try to figure out which tool was the best model for the bird beak.
7. They should find the following combinations: Dove-tweezers, Wild Turkey-halved skewers, Quail-nut cracker, and Hawk-scissors. *Do not announce the best model to the class until the end of the activity.
8. Once the score sheet has been completed for the station, students should discard the food collected in their cup and reset the station for the next group.
9. When the signal is given, students will move to the next bird station and repeat the instructions.

STUDENT SKILLS ASSESSMENT:

- Have students (or student groups) complete THE BOTTOM LINE worksheet at the end of the activity.
SECURITY BRIEFING –

WORDS OF WISDOM FROM HANK THE COWDOG:

*Birds* can be a good source of fun on the ranch. I mean...you can chase them, scare them, and they hardly ever retaliate...unless we are talking about the *Mississippi Kite*. Those guys do not have a sense of humor. Of course, *buzzards* are not a bird to mess with either because they are always looking for a meal and you might be on the menu. Well...now that I think about it...only some birds on the ranch are fun. As the head of ranch security, I try to understand all the critters on the ranch and sometimes the best way to do that is to “walk in its shoes for a day”. Of course, birds don’t wear shoes, but you know what I mean. Mr. Loper brings me my food every day in a bowl, but birds are not so lucky. For this activity, you are going to become a bird and see what it is like to try and get food on the ranch.

**ACTIVITY MATERIALS:**

- BLANK SHEET OF PAPER
- 9 OZ. CUP
- RANCH BIRD SCORE SHEET
- PENCIL
- THE BOTTOM LINE

**ACTIVITY INSTRUCTIONS:**

1. Read chapter 3 and take notes on the twelve square note page.
2. Wait for your teacher to assign you to a group and move to your assigned station with your cup, score sheet, and pencil.
3. At the bird station, select one “beak” tool, read the information card, and find the pan with simulated food.
4. You will have 30 seconds to gather food.
   **Rules:**
   - You cannot use your hands to touch the food.
   - Food must be gathered one piece at a time and dropped into the cup (bird stomach).
   - If food is dropped or dragged it goes back in the pan.
   - Seeds must be opened before going in the stomach (cup).
   - The cup must remain flat on the table.
5. When your teacher calls time, record how many pieces of food you collected on the record sheet.
6. Discuss your results with your team. Fill in the Team Score table. Based on the information card, which team member had a beak that most closely modeled the real bird’s beak?
7. Once the score sheet has been completed for the station, discard the collected food in the trash bags and reset the station for the next group.
8. When the signal is given, move to the next bird station.

**WRAP UP:**

Fill out THE BOTTOM LINE worksheet after you have completed the activity.
<table>
<thead>
<tr>
<th>Bird</th>
<th>Food Source</th>
<th>Beak Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mourning Dove</td>
<td>seeds, wild grasses, weeds, herbs and occasionally berries</td>
<td>short, thin beak</td>
</tr>
<tr>
<td>Wild Turkey</td>
<td>leaves, seeds, nuts, berries, salamanders, snails and insects</td>
<td>long, thin, curved beak</td>
</tr>
<tr>
<td>Quail</td>
<td>seeds, leaves, acorns and during the Summer a variety of insects</td>
<td>short, stout beak</td>
</tr>
<tr>
<td>Hawk</td>
<td>small animals, mostly birds</td>
<td>short, sharp, curved beak</td>
</tr>
</tbody>
</table>
# RANCH BIRD SCORE SHEET

INSTRUCTIONS: Record your data in the table below from each station. You will use your data to compare results with your teammates and fill in the Team Score Card after each round.

## My Score Card

<table>
<thead>
<tr>
<th></th>
<th>Dove</th>
<th>Hawk</th>
<th>Turkey</th>
<th>Quail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tool used:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of food gathered:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did it survive? (3 or more)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did it reproduce? (6 or more)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Food chunks must be over 3cm. to count.

Put a star next to any number 3–5.
Put a circle around numbers 6 or over.

## Team Score Card

<table>
<thead>
<tr>
<th>Tool used</th>
<th>Dove</th>
<th>Hawk</th>
<th>Turkey</th>
<th>Quail</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of food gathered</td>
<td>*Food chunks must be over 3cm. to count</td>
<td>Number of food gathered</td>
<td></td>
</tr>
<tr>
<td>Tweezer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skewer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutcracker</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scissors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Put a star next to any number 3–5.
Put a circle around numbers 6 or over.
THE BOTTOM LINE
Complete the following questions after you have played the stations.

1. Based on your information card, what tool best represented the beak of:
   - Dove-
   - Hawk-
   - Turkey-
   - Quail-

2. How does each unique bird beak help it get its food? Explain your answer and give examples.

3. Look at your team score table results. When the correct tool was used to model the beak, did the bird survive?
   - Dove-
   - Hawk-
   - Turkey-
   - Quail-

4. When looking at your team score table, did you or a teammate have any data that surprised you?
   Explain your answer.