Ashley Carrillo

EED 480 - W – 4pm

**Science Cooperative Learning Lesson Plan**

**Grade Level: 1st grade**

**Big Idea:**

In this lesson, students will collaboratively work together to learn how different beaks in birds determine the food each bird can eat. They will conduct an experiment and analyze the data from their experiment to come to a conclusion on which animal beak will gather more food.

**Standards:**

1-LS1-1: Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

1. **Formation of Groups: (5E Framework – Engage)**

Students are going to form in groups of 4. I have 24 students, so each student is going to be counted off by a number; 1-6. Each person is going to go with their number. I will have numbers across the room and students will go to that part of the room and work with their teams. This will allow for students to work with other people than they are used to. Students need to learn to interact with other students from other groups. They can gather new ideas from other peers in different subject matters.

**Objectives:**

At the conclusion of this lesson, students will be able to:

1. The students will be able to explain how different beaks in birds determine the food each bird can eat.

**Instructions:**

State objective: The students will be able to explain how different beaks in birds

determine how much food a bird can eat. With their results, they are going to address which animal would consume the most food.

In this lesson, the students understand that animals all have body parts that are different in the ways they take in food and water. This is going to be important to incorporate in a lesson because students are going to begin comparing different animals’ mouths and forms of carrying food. Through observations from a video presented to them of different animals eating, we are going to engage in open discourse as to the different characteristics animals have in order to eat.

Focus Questions:

1. What special part does this animal use to get its food?
2. What other parts of the body to animals use to get food?
3. Can all animals eat the same type of food because of their mouths and size?

**Materials:**

**Black. Beans (Dried)**

**Dixie Cups (3 oz)**

**Elbow Macaroni**

Masking Tape

Paper Cups (8 oz)

Plastic Straws (Not Bendable)

Bird Beaks printout

Scissors

Pencils

**II. Role Assignments: Beginning with the Checker all roles are assigned to the right (clockwise)**

Materials Manager/ Encourager:  The materials manager/encourager is going to gather all materials for the group before the experiment. While doing the experiment, they are also going to go around and ensure that everyone is on task. They will give moral support with lots of chants that have been incorporated in the classroom.

Checker/Timekeeper: This student is going to have a timer and they will keep track of the time that students have for each portion of the experiment. This student will also check if students are doing the tasks that is assigned of them correctly.

Data Recorder: This student is going to record the data that is being presented to them during the experiment. They will get a paper where they can write down the data.

Observer/Reporter: This student will observe what is occurring during the experiment and will report in a formal manner to present the outcome of the experiment. With the team, they are going to analyze the data to create the report.

**III. Task (See Big idea above and what the students are expected to do)   
 5E Framework--Explore**

Students are expected to create a point beak and a duck-shaped beak. They are going to conduct an experiment to gather data to determine which beak can collect the most food. Students are expected to work together as a group to come to a conclusion with this experiment.

**V. Time Limits for each part: (Instructions with time stamps)**

1. **Students will watch the video on the different animals and have a discussion based off of their observations. (15 minutes)**
2. **Students will be assigned into their groups with their jobs. (5 minutes)**
3. **Students will have their materials collected by the materials manager.   
   (5 minutes)**
4. **Students will begin creating their beaks along with the food for their experiment. (10 minutes)**
5. **Students will begin to pick as many pieces of food one beak at a time. They will have 3 minutes to get as many pieces. The timekeeper will keep track of each beak’s time in the collection of food. During this process, the encourager will encourage the team to pick up as many pieces as they can. (10 minutes)**
6. **The data recorder will begin to count the amount of food and input it on the handout.   
   (5 Framework--Elaborate/Extend)**
7. **As a team, they will analyze their data and determine which beak collects the most food and how does that affect each type of bird who has that shape of a beak. They will compose a thought-out conclusion of their results.**

**V. Social Skills and or Habits of Mind to Engage/Assess:**

1. Students have to ensure that they respect the opinion of others.
2. Students have to ensure that they reach a consensus.
3. Students have to ensure that they follow role assignments.
4. Students have to communicate clearly, effectively and with reason.
5. Students have to demonstrate creativity and innovation.
6. Students have to work productively and collaboratively in teams.

**VI Level of Voice: Classroom Level 2 – Normal Voice Table Talk   
Voice Levels Chart**

|  |  |
| --- | --- |
| **4** | **Outside Voice**  for the yard or outdoors |
| **3** | **Teacher Voice**  for presentations, reading aloud, and speeches |
| **2** | **Table Talk**  for group work with your table or team |
| **1** | **Soft Whisper**  for working with your seat partner or a friend |
| **0** | **Silence**  for independent work or silent reading |

**VII. Processing--Questions for groups and individual reflections:**

**Group Questions:**

1. What beak picks up the most food? The pointy beak or the duck shaped beak?
2. How do our physical characteristics affect the amount of food we consume?

**Individual Questions:**

1. What observations did you make during the experiment?
2. Do beak size determine the size food birds eat? Why?
3. Do you think the size and shape of our mouth determine the type of food we eat? If so, why?

**VIII. Assessment Content: (5E Framework – Evaluate)**

**Assessment of Cooperation/Collaboration and Student:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **1**  **Seldom** | **2**  **Occasionally** | **3**  **Most of the time** | **4**  **Always** |
| Collaboration | Did not work collaboratively on the activity ` | Sometimes worked collaboratively on some parts on the activity | Worked collaboratively on most parts of the activity | Always worked collaboratively on all parts of the activity |
| Behavior | Was not respectful and polite to all group member | Respectful and polite to all group member sometimes | Respectful and polite to all group members most of the time | Always respectful and polite to all group members |
| Motivation | Did not use group time wisely and remained focused | Used group time wisely sometimes and remained focused | Used group time wisely most of the time and remained focused | Always used group time wisely and remained focused |
| Contribution | Did not contribute to the group | Contributed to the group sometimes | Contributed to the group most of the time | Always contributed to the group |

**Self-Assessment of Collaborative Performance - Peer Assessment:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **1**  **Seldom** | **2**  **Occasionally** | **3**  **Most of the time** |
| Collaboration:  I worked with my group. | Download Very Sad Emoji Image in PNG | Emoji Island | A picture containing clock  Description automatically generated | A picture containing drawing  Description automatically generated |
| Behavior:  I was respectful to my group. | Download Very Sad Emoji Image in PNG | Emoji Island | A picture containing clock  Description automatically generated | A picture containing drawing  Description automatically generated |
| Motivation:  I stayed on task and focused. | Download Very Sad Emoji Image in PNG | Emoji Island | A picture containing clock  Description automatically generated | A picture containing drawing  Description automatically generated |
| Contribution: I did the job given to me. | Download Very Sad Emoji Image in PNG | Emoji Island | A picture containing clock  Description automatically generated | A picture containing drawing  Description automatically generated |

**Group members Overall Performance Total from above**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1 2 3 \_\_\_\_\_\_\_/9

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**VIII. Encouraging Energizer:** Stamp of approval, round of applause, chant “teamwork makes the dreamwork”

**Observer Checklist**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Group Member Name** | **Encourager** | **Attentive Listening** | **Working Toward**  **Consensus** | **Staying with the group** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Scoring Key: 0 ☹ X Sometimes :/ Frequently. ☺**

**Based on the book: *Blueprints for Achievement in the Cooperative Classroom*. Bellanca and Fogarty, 2001.**

**THE 5-E FRAMEWORK**

**ENGAGE** Checker

15 MINUTES

Students will watch a video about different animals and their forms of eating. Student will lead the team by recalling the different forms that animals can eat with. They will tell the students that they are going to create two different beaks; a pointy beak and a duck shaped beak. They will tell students that they are going to do this to determine how many pieces of food each beak can pick. Students will then create their own hypothesis of whether or not the point beak or the duck shaped beak can pick up the most food.

**EXPLORE**

40 MINUTES

Developing Questions:

Scaffold students in creating their own ideas of **whether or not the physical features that you have determine the food you eat.** Would this also relate to humans and the food they eat?

**Observe and ask questions**- What is your hypothesis based off of this question? **RECORDER**

The recorder is going to gather the hypothesis of the group.

The recorder will also take a tally of students that think the pointy beak will pick up more food or the duck shaped beak.

**7 minutes**

**EXPLAIN ALL  
Students will begin to do the lesson. While everyone is being a part of the experiment, we have students continuously encouraging, collecting data, checking and keeping track of time.**

**Students will begin to pick up food with the beaks and set aside the amount of food each beak was able to gather. Once students have finished the experiment, they will gather the data and record it. They will analyze this data and create their conclusion. They will go back to their hypothesis on the experiment and determine whether or not they were correct. The reporter will create a report of the experiment with the help of everyone about the data and how a beak shape may or may not affect a bird.**

**EVALUATE: Summative Content Evaluation the shows evidence that students have achieved the objective**

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