

Eagle Dinnertime Math

Title: Math Munchin' Eagles

Grade Level Range: 3rd – 4th Grade

Content Areas Addressed: Mathematics

Group Size: Whole Class, 4-6 Medium Sized Groups

Duration: 60 – 90 Minutes

Key Vocabulary: Whole Numbers, Variable, Remainder, Beak, and Talon

Materials Needed: Eagle Cam (Viewable for Whole Class), Class Handout (Attached)

Lesson Objective

1. All students will be able to solve multistep word problems given groups and a worksheet within the allotted time with 80% Accuracy.

Methods: Direct Instruction, Group work

Procedures

1. Introduction: Berry Eagle Cam (*10 Minutes*)
 - Have the Berry Eagle Cam pulled up on the projector
 - Ask questions if anyone has seen this before or what do they know about eagles.
 - The following list is background information about an Eagle's feeding habits that will be helpful to review for they will be part of the word problems later in class.
 - A bald eagle's *beak* is a strong eating tool (*Point out beak*).
 - *Talons* are important for hunting and defense. (*Point talons*).
 - The beak and talons grow continuously.
 - An eagle's lifting power is 4 pounds.
 - They prefer to eat freshly killed meat, especially fish but will eat carrion if they are hungry.
 - Eagles fish in both fresh and salt water.
 - Eagles are very good swimmers but do not land and take off on water..
 - The eagle's hunting range is from 1,700 to 10,000 acres.
 - Only 1 out of 18 of the eagle's attacks of prey are successful in finding food. They often get tired out.
 - An eagle can consume one pound of fish in four minutes.
 - Bald eagles will steal food from other eagles.
 - Eagles do not have to eat everyday.
2. Background Information: Determining Unknown Whole Number (*10 Minutes*)
 - Discuss standard MCC. 3.OA.4.
 - Review *Whole Numbers*
 - Do as a class practice problems on the board.

- Examples:
 - $3 \times \underline{\quad} = 12$
 - $\underline{\quad} / 6 = 42$
 - $\underline{\quad} - 10 = 70$
 - $2 + \underline{\quad} = 13$
- Check for questions and understanding. Do as much review on this as needed.

3. Direct Instruction/ Guided Practice: Word Problems (15 – 20 Minutes)

- Take determining whole numbers a step further
- Talk about word problems
- Modeling: Practice solving a word problem together as a class on the board. You can do two, one demonstrated by the teacher and one with class participation.
- Discuss remainders and what to do with remainders and how to interpret them in word problems.
- Example eagle word problems:
 - *Mama eagle is out hunting for fish. She sees a pile of 9 dead fish that weigh one pound each. She can only carry four pounds worth of fish in her talons. How many trips will Mama eagle have to take in order to collect all 9 fish?*
 - *Papa eagle has to fly 11 miles from the nest to reach a freshwater lake to catch some food for his two young eagles. The fish he is carrying weighs four pounds, so he has to take a break every 3 miles. How many times will Papa have to stop?*

4. Instructions: Group Work Practice (5 Minutes)

- Teacher has set groups (4-6 groups depending on class size)
- Teacher has one word problem for each group. They will have 10 – 15 minutes to work together to solve it.
- At the end of this time they will be expected to present what the problem and work they have done in front of the class.
- Set expectations for group work and management.

5. Group Work: Eagle Word Problems (10 – 15 Minutes)

- Teacher walks around and helps groups as needed.

6. Assessment: Presentations (20 Minutes)

- Wrap up lesson by each group having 5 minutes or so to present their work together.

7. Closure (5-10 Minutes)

- This is a time for the teacher to clear up common mistakes that were presented and allow for questions.

- A homework assignment could be given from this on multistep word problems.
- Tell them the eagle cam is accessible online and can be watched at home if they would like!

Evaluation Alternatives: Instead of Group Work and Presentations, students could complete a worksheet with determining unknown whole numbers and a compilation of the eagle word problems. (Attached)

Background: Students will have had to work with solving problems with whole numbers with all of the operations.

Resources

- Georgia Standards
- <http://www.baldeagleinfo.com/>
- <http://www.berry.edu/eaglecam/>

Standards Addressed

- MCC. 3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers.
- MCC4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Attachments: 4 Group Worksheets, Evaluation Alternative Worksheet

Group 1

The baby eagle has now taken flight! Baby eagle is from a long day of flying and is ready to eat. While was out Mama eagle collected five fish in the nest, how many fish will he get to eat?



Group 2

Papa eagle is starving. After attempting to find food all day, he runs across a dead deer on Berry's Campus. An eagle can eat a pound of meat in four minutes. How many pounds can two eagles eat in two minutes?



Group 3

Eagles steal food from other eagles. Papa eagle stole 30 fish, 6 from each eagle. How many other eagles did he steal from?



Group 4

There are currently two baby eagles in the nest. Together they have consumed 16 pounds of meat. If they can eat a pound every 4 minutes, how long did it take them to eat all the meat?



Alternative Worksheet

Solve for the unknown number.

$6 \times \underline{\quad} = 120$

$35 + \underline{\quad} = 52$

$6 \times 4 \times \underline{\quad} = 72$

$\underline{\quad} / 10 = 80$

$\underline{\quad} - 13 = 89$

$\underline{\quad} \times 2 / 4 = 3$

Solve the following word problems. Explain your remainders.

1. The baby eagle has now taken flight! Baby eagle is tired from a long day of flying and is ready to eat. While he was out Mama eagle collected five fish in the nest, how many fish will he get to eat?

2. Papa eagle is starving. After attempting to find food all day, he runs across a dead deer on Berry's Campus. An eagle can eat a pound of meat in four minutes. How many pounds can two eagles eat in two minutes?

3. Eagles steal food from other eagles. Papa eagle stole 30 fish, 6 from each eagle. How many other eagles did he steal from?

4. There are currently two baby eagles in the nest. Together they have consumed 16 pounds of meat. If they can eat a pound every 4 minutes, how long did it take them to eat all the meat?

