

## All About Cod 2<sup>nd</sup> Grade

### Math Learning Goals

- Summarize data in a table and a bar graph
- Practice addition and subtraction in the context of a word problem (story)
- Solve word problems involving money

### Introduction

Start class by asking students if any of them have ever gone fishing or if their parents fish. After discussing fishing, read from *The Cod's Tale* by Mark Kurlansky. The students need to listen because they will fill out a worksheet in groups when you are done.



### Explore

After reading the story, distribute the worksheet, and explain the activity to the students. In groups of 2 or 3, the students will be answering questions on the worksheet that corresponds to the story. You should keep the story projected somewhere, or give a copy of the story to each group. The students might have some difficulty answering questions 5 and 6. Question 6 should lead to a discussion about how the children and parents in the story caught all the fish.

After the students have finished the worksheet, have each group present one of the problems and explain their reasoning. After discussing the worksheet, talk about how this information came from cod fishing data in Maine and how overfishing is happening in Maine as well. Then put the bar graph that the state of Maine has about cod on board. Talk about the similarities and differences in the data the students have and the data Maine has.

### Tennessee Academic Standards 2<sup>nd</sup> Grade

Operations and Algebraic Thinking:

Represent and solve problems involving addition and subtraction

1.) Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing quantities, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Measurement and Data:

Relate addition and subtraction to length:

5.) Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

Work with time and money:

8.) Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using dollar (\$) and cent (¢) symbols appropriately.

Represent and interpret data:

10.) Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to 4 categories. Solve simple put-together, take-apart, and compare problems using information presented in bar graph.

Your Name: \_\_\_\_\_

## All About Cod (2<sup>nd</sup> Grade)

Using the story you heard in class, answer the questions below. Show all work!

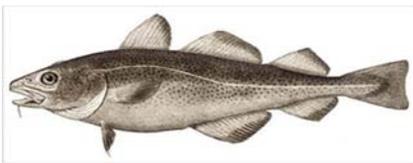
1.) Take the data given and make a table of how many fish Sarah caught each time she went fishing. Do not forget to use labels.

2.) How much fish did Marcus and friends catch in total?

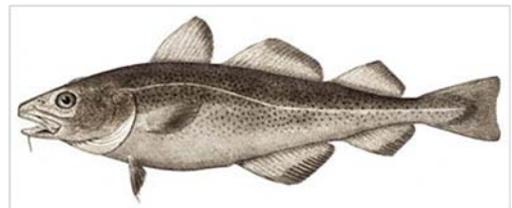
3.) Did Marcus and friends catch more fish in total than Sarah? Explain.

4.) Looking at Sarah's 1<sup>st</sup> catch, Sarah and her father decided to sell the third and seventh fish. If you get more money per pound, for which fish do you think they received the most money?

3<sup>rd</sup> Fish:



7<sup>th</sup> Fish:



5.) At the fish market, a pound of fish is worth \$1.25. On the 2<sup>nd</sup> catch day Sarah and her father went fishing, they decide that they are taking all of the fish they caught to the market. If the first fish weighs 2 pounds, the second fish weighs 3 pounds, and the third fish 2 pounds, how much money will Sarah get?

6.) Use the table you made in question 1 to make a bar graph. What do you notice about the graph?

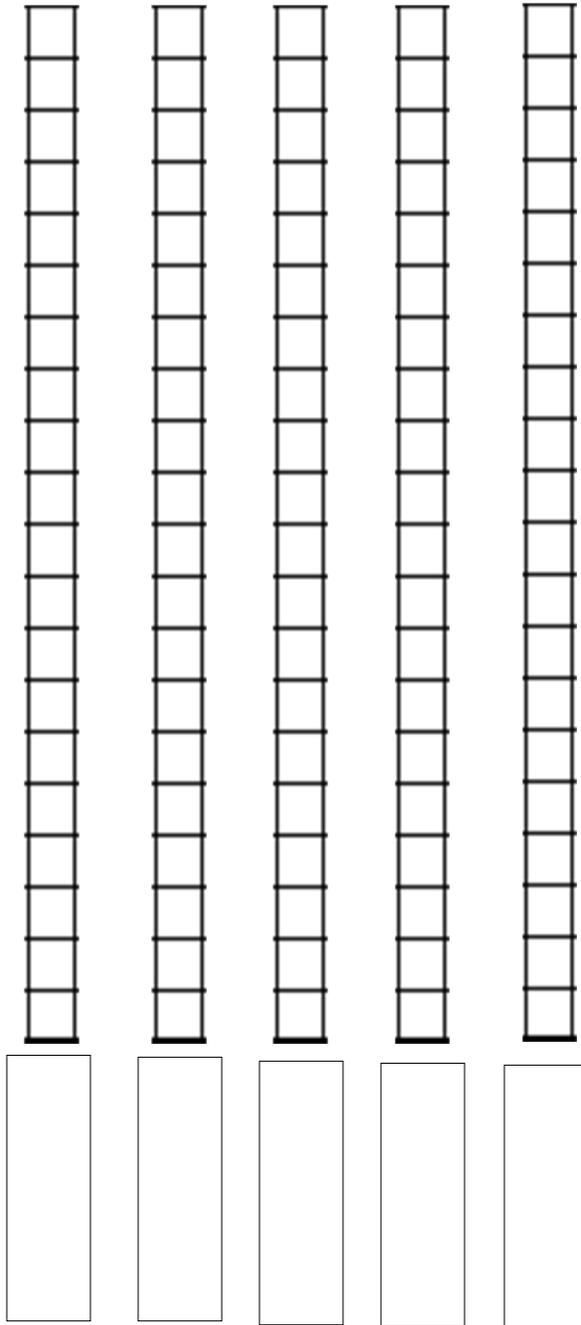
7.) What happened on the last time Sarah and her father went fishing? Why do you think this happened?

# Bar Graph

Name \_\_\_\_\_

Graph Title: \_\_\_\_\_

Number of Fish



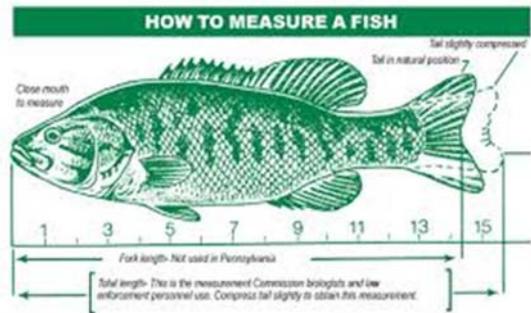
## Measuring Fish for 2<sup>nd</sup> Grade

### Math Learning Goals:

- Practice measuring the length of an object.
- Practice estimating the length of an object.

### Materials Needed:

- Class set of Plastic Fish
- Rulers – 1 per student
- Measuring Fish Activity Sheet



### The Activity:

This activity would go best following the Cod Data activity. First, the students need to each be given 2 plastic fish. Students decide which fish is #1 and #2. Then, they look at each fish and estimate its length. After the students have recorded their estimates on the activity sheet, they need to measure the fish twice: once using inches and once using centimeters. Then, the students need to compare the lengths of the two fish and their measurements in inches and centimeters. Once they have finished all of this, the students should discuss their answers with a partner or in a small group.

### TN Math Standards:

2<sup>nd</sup> Grade:

Measurement and Data:

- 1.) Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
- 2.) Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
- 3.) Estimate lengths using units of inches, feet, centimeters, and meters.
- 4.) Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

## Measuring Fish Activity Sheet

Before starting this activity, make sure you have labeled your fishes 1 and 2.

1.) Estimate the length of your fish.

Length of fish 1: \_\_\_\_\_

Length of fish 2: \_\_\_\_\_

2.) Measure fish 1 and 2 twice. The first time measure using inches, and the second time measure using centimeters.

Length of fish 1 (inches): \_\_\_\_\_

Length of fish 1 (cm): \_\_\_\_\_

Length of fish 2 (inches): \_\_\_\_\_

Length of fish 2 (cm): \_\_\_\_\_

3.) Compare the measurements for the same fish. Which do you think is the best way to measure the fish?

4.) Which fish is larger? How much larger? Show your work and give the correct units.