All About Cod
For Grades 3-5

Introduction
Start the class with asking them how many have gone fishing, or if any of their parents' fish. After discussing fishing, read from *The Cod's Tale* by Mark Kurlansky.

Activity:
The teacher will read the story aloud to the students, or have the students read the story aloud. After you have finished reading the story, write on the board 1st catch. Then leave a space and write 2nd catch. Continue this until you have all the catches written on the board. Then under each of those write the names of the people who caught fishes on those times out. Have the students copy what is being written on the board, and follow along with what their classmates put on the board. After the students have agreed that the names are in the correct order. Let students fill in the spaces with the correct number of fish, you can either let them draw the fish in or you can have fish already made that the students just need to tape on the board. The students will be using the information from the board for their worksheet. Students may work individually, in groups, or as a class with the teacher facilitating. Once the students are done with the activity, the class discusses their answers.

TN Academic Standards

3rd Grade TN Math Standards:
Operations and Algebraic Thinking:
Solve problems involving the four operations, and identify and explain patterns in arithmetic:
8.) Solve two-step word problems using the four operations. 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.
Represent and solve problems involving multiplication and division:
4.) Determine the unknown whole number in a multiplication or division equation relating three whole numbers.
Numbers and Operations:
Build fractions from unit fractions by applying and extending previous understanding of operations and whole numbers:
3d.) Solve word problems involving addition and subtraction of fraction by a whole number by using visual fraction models and equations to represent the problem.

4th Grade TN Math Standards:
Operations and Algebraic Thinking:
3.) Solve multi-step 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.
Number and Operations:
3d.) Solve word problems involving addition and subtraction referring to the same whole and having like denominators by using visual fraction models and equations to represent the problem.
4c.) Solve word problems involving multiplication of a fraction by a whole number by using visual

fraction models and equations to represent the problem.
Measurement and Data:
Make a line plot to display a data set of measurements in fractions of a unit. Solve problems involving addition and subtraction of fractions by using information presented in line plots.

5th Grade TN Math Standards:
Numbers and Operations:
2.) Solve word problems involving addition and subtraction of fractions and referring to the same whole, including cases of unlike denominators.
6.) Solve real world problems involving multiplication of fractions and mixed numbers by using fraction models or equations to represent the problem.
Measurement and Data:
2.) Make a line plot to display a data set of measurements in fractions of a unit. Use operations of fractions for this grade to solve problems involving information presented in line plots.

Developed by Kelly Sturner, Virginia Parkman, and Suzanne Lenhart for NIMBioS

All About Cod
3rd Grade

Each year Sarah and her father go cod fishing on a small bay in their town. They started when Sarah turned five. The first year Sarah and her father went fishing, she and her father caught many fish. In the morning, they caught 7 fish, and in the afternoon, they caught 8 fish. They decided that they did not need that many fish, so they threw back 3 of them. Of the fish they did not throw back, Sarah caught 3, and her father caught 3 times what Sarah caught. However, they decided to only take a half the catch home. Sarah was so excited about fishing that she told her best friend Marcus about the small bay and how many fish she caught.

The next time Sarah and her father go fishing, Marcus and his mother come fishing, too. They catch a total of 6 fish. Marcus catches 2, and Sarah catches twice as much as Marcus.

The third time Sarah and her father go fishing, Marcus is there with his mother and his friends Sean and Rekenya. They fish for a few hours together, and, by the end of the day, they catch a total of 6 fish. They decide they all want to share and get the same amount of fish. Everyone goes home happy.

The fourth time Sarah and her father go fishing, Marcus and friends are there again, but they also bring their families. Everyone has a great time, and in total they catch 11 fish. Sarah and her father take home 2 fish and decide to eat them for dinner. During their fifth trip, Sarah catches 4 fish while everyone else catches 11 fish in total. She liked the dinner she and her father made after their last fishing trip, so she decides to use the same recipe again after this trip.

On their sixth trip, the group does not catch as many fish as last time. They catch one third of their previous catch. On their seventh fishing trip, Sarah and her father were alone on the lake, and they only caught one fish.

Developed by Kelly Sturner, Virginia Parkman, and Suzanne Lenhart

All About Cod (3rd Grade)

Using the story you heard during class, answer the questions below. Show your work!

1.) How many fish did they catch in total on the first trip?

2.) How many fish did they not throw back on their first trip?

3.) How many fish did Sarah's father catch on the first trip?

4.) How many fish did they take home from the first trip?

5.) On Sarah's second trip, how many fish did she catch?

6.) On the third trip, how many fish did each person get?

7.) Using the fish Sarah brought home after the fourth trip, create a recipe for Sarah and her father to use to cook the fish.

8.) Change your recipe to be used with four fish instead of two.

9.) How many fish did the group catch in total on the fifth trip?

10.) On their sixth trip, how many fish did they catch?

11.) What do you think happened to all the fish?

All About Cod
4th Grade

Each year Sarah and her father go fishing on a small bay in their town. They started when Sarah turned five. The first year Sarah and her father went fishing, she and her father caught many fish. In the morning, they caught eight fish, and in the afternoon, they caught half the fish they caught in the morning. They caught some cod, but they threw back three of them. Sarah caught three fish, and her father caught three times what Sarah caught. They decided to only take half the catch home. Sarah was so excited about how many fish she caught that she told her best friend Marcus about the small bay and the fish she caught.

The next time Sarah and her father go fishing, Marcus and his mother are there too. They total catch six fish. Marcus catches two, and Sarah catches twice as much as Marcus.

The next time Sarah and her father go fishing, Marcus is there with his mother and his friends, Sean and Rekenya. They fish for a few hours together, and at the end of the day, they catch a total of eight fish. They decide that they all want to share and get the same amount of fish. Everyone goes home happy.

The fourth time Sarah and her father go fishing, Marcus and friends are there again, but they also bring their families. Everyone has a great time, and in total they catch eleven fish. Sarah and her father take home two and decide to eat them for dinner.

During their 5th trip, Sarah only catches 4 fish while everyone else catches eleven fish in total. She liked the dinner the last time she made the fish, so she decides to use the same recipe on this catch. On their sixth trip and catch, the group does not catch as much as last time. They catch one third of their previous catch. On their seventh catch, Sarah and her father are fishing alone, but only caught one fish. They are disappointed.

All About Cod (4th Grade)

Using the story you heard during class, you will answer the questions below. Show your work!

1.) How many fish did they catch in total on the first catch?

2.) How many fish did they not throw back on the first catch?

3.) How many fish did Sarah's father catch on the first catch?

4.) How many fish did they take home on the first catch?

5.) On Sarah's second catch, how many fish did she catch?

6.) On the 3rd catch, draw a line graph to show how much fish each person gets. Make sure that you label the line correctly.

7.) On the 3rd catch, how much fish did each person get?

8.) Using the fish Sarah brought home after the 4th catch, create a recipe for Sarah and her father to use to cook the fish. (If you are looking for some ideas, look back at the Cod's Tale).

9.) Change your recipe to be used with four fish instead of two.

10.) How many fish did the group catch in total on the fifth catch?

11.) On their sixth catch, how many fish did they catch?

12.) What do you think happened to all the fish?

All About Cod
5th Grade

Each year Sarah and her father go fishing on a small bay in their town. They started when Sarah turned 5. The first year Sarah and her father went fishing, she and her father caught many fish. In the morning, they caught eight fish, and in the afternoon, they caught half the fish they caught in the morning. They caught some cod but they threw back three of them. Sarah caught three fish, and her father caught three times what Sarah caught. They decided to only take a fourth of the catch home. Sarah was so excited about how many fish she caught that she told her best friend Marcus about the small bay and the fish she caught.

The next time Sarah and her father go fishing, Marcus and his mother are there too. They total catch 10 fish. Marcus catches two, and Sarah catches five times that as much as Marcus. The next time Sarah and her father go fishing, Marcus is there with his mother and his friends Sean and Rekenya. They fish for a few hours together, and at the end of the day, they catch a total of eight fish. Marcus and Sarah both want one fish, but everyone else wants to share to have the same amount of fish.

The fourth time Sarah and her father go fishing, Marcus and friends are there again, but they also bring their families. Everyone has a great time, and in total they catch eleven fish. Sarah and her father take home three and decide to eat them for dinner.

During their 5th trip, Sarah only catches 4 fish while everyone else catches eleven fish in total. She liked the dinner the last time she made the fish, so she decides to use the same recipe on this catch. On their sixth trip and catch, the group does not catch as much as last time. They catch one third of their previous catch. On their seventh catch, Sarah and her father go fishing alone, but only caught one fish.

All About Cod (5th Grade)

Using the story you heard during class, you will answer the questions below. Show your work!

1.) How many fish did they catch in total on the first catch?

2.) How many fish did they not throw back on the first catch?

3.) How many fish did Sarah's father catch on the first catch?

4.) How many fish did they take home on the first catch?

5.) On Sarah's second catch, how many fish did she catch?

6.) On the 3rd catch, draw multiple line graphs to show how much fish each person gets. Make sure that you label the line correctly.

7.) On the 3rd catch, how much fish did everyone besides Sarah and Marcus get?

8.) Using the fish Sarah brought home after the 4th catch, create a recipe for Sarah and her father to use to cook the fish. (If you are looking for some ideas, look back at the Cod's Tale).

9.) Change your recipe to be used with four fish instead of two.

10.) How many fish did the group catch in total on the fifth catch?

11.) On their sixth catch, how many fish did they catch?

12.) What do you think happened to all the fish?