Proportional Reasoning on a Double Number Line

The interactive white board tool for this lesson can be found on our website under Resources and Teacher Tools. (www.dreambox.com/teachertools)

In this DreamBox lesson, students are given a racetrack and it's length then are asked to identify a specific fraction along the track. Once they place the kilometer marker at the appropriate distance around the racetrack, they will then place the stops markers at the same place and determine the equivalent fraction of each marker.

Sample Lesson

Objective: Students will correctly identify a number and equivalent fractions based upon a given fraction and a whole.

Background: Students should have background knowledge of the equivalent fractions and determining parts of a whole using a given fraction.

Instruction:

1. Before opening the lesson, review how to determine a part from a whole using a given fraction. This can be done through a warm-up activity or a quick question and answer session. After students chose a partner or a small group, have them identify the missing part using the given fraction and the whole. Write down the different answers on the board. Use the km marker on the right and drag it to each number on the board. Two of the four markers on the right contain fractions. Place them at the same point as the km marker then check to see if the placement is correct. Continue this process until the class finds the one that works. During the process, discuss the ones that did not work and why. Students can also find the equivalent fractions of the wrong answers to help strengthen the skill.

2. Now click on the km marker and enter in the correct number.

3. Give the students a few minutes within their groups to create the equivalent fractions using the fractions within the markers and the part. Then have a class discussion on which fractions are equivalent. As the students share their answers, remind them to justify their answers mathematically. Fill in the equivalent fractions and then repeat the process for the other marker.
Possible responses for creating the equivalent fractions:

a) The numerator and the denominator are multiplied by the same number to create the new fraction.

b) We put the part and whole together to make a fraction and then divided to get the new fractions.

4. Click the check mark to ensure the accuracy of the responses. Repeat the process for one or two more problems before allowing the students to complete another set within their groups. Have students write down the three equivalent fractions for each new problem.