

FIGURING OUT
Fluency
ADDITION & SUBTRACTION
With Fractions and Decimals

A Classroom
Companion

Jennifer M. Bay-Williams
John J. SanGiovanni
Sherri Martinie
Jennifer Suh

CORWIN Mathematics

Thank you

FOR YOUR
INTEREST IN
CORWIN

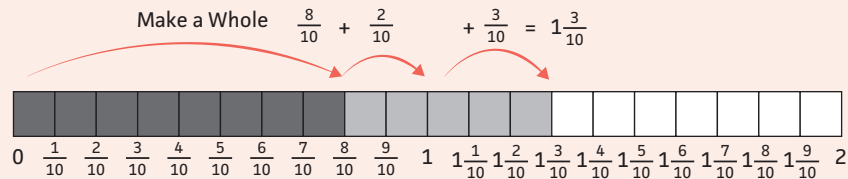
Please enjoy this complimentary excerpt from Figuring Out Fluency - Addition and Subtraction With Fractions and Decimals, by Jennifer M. Bay-Williams, John J. SanGiovanni, Sherri Martinie and Jennifer Suh.

[LEARN MORE](#) about this title!



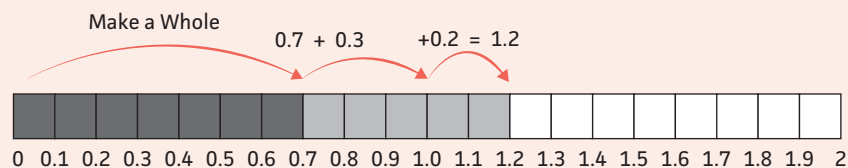
ACTIVITY 3.4 BUILD THE FRACTION AND DECIMAL TRACK

Number lines are essential to developing fluency. Fraction tracks (pictured here) are a way to connect an area representation (fraction strip) to a number line. With fraction tracks (and decimal tracks), students shade a length above a number line rather than show jumps with arrows. For example, the following fraction track shows $\frac{8}{10} + \frac{5}{10}$.



Ask students to estimate how long the two tracks will be when combined. Discuss how $\frac{2}{10}$ or 0.2 can be moved to the track of $\frac{8}{10}$ or 0.8 to make one whole. Ask students how this process connects to ways to add efficiently. An alternative to shading is to have students make physical sets of fraction tracks (like fraction strips) and physically lay down their fraction track on a master fraction track to see how long the tracks are when combined.

The process looks the same with decimals. The fraction track is simply labeled with decimal values rather than fraction values, as illustrated here for $0.7 + 0.5$.



Fraction tracks, like many tools, also can be used for other strategies like Count On, Count Back, Think Addition, and so on.

Repeat the activity with a variety of combinations. Here are some examples where both addends are less than 1:

TEACHING TAKEAWAY

Fraction tracks, like many tools, also can be used for other strategies like Count On, Count Back, Think Addition, and so on.

$\frac{9}{10} + \frac{5}{10}$	$\frac{8}{10} + \frac{6}{10}$	$0.9 + 0.05$	$0.8 + 0.6$
$\frac{9}{10} + \frac{7}{10}$	$\frac{7}{10} + \frac{7}{10}$	$0.9 + 0.7$	$0.7 + 0.7$

Using decimal fractions allows students to naturally see how the Make a Whole strategy works for both decimals and fractions in the same way. Once students are comfortable with like denominators, these activities can be used with other like and unlike denominators.

$\frac{3}{5} + \frac{4}{5}$	$\frac{5}{8} + \frac{1}{2}$	$\frac{3}{4} + \frac{1}{2}$	$\frac{7}{8} + \frac{1}{4}$
-----------------------------	-----------------------------	-----------------------------	-----------------------------

Addends greater than 1 also can be solved with fraction tracks; the track just has to be long enough to represent the quantities. Also see Activity 3.13 for a fraction track center activity.