

Interactive Practice

Double Check

What it is:

Double Check is a strategy designed to give students practice applying a mathematical process or skill. This strategy provides a structure for students to discuss and explain their solutions to problems or to identify errors in other students' solutions. Using this strategy will help students better understand a process or skill.

In this sequence students use **Double Check** to practice comparing numbers.

How to teach it:

- Organize students into pairs.
- Review the key vocabulary students should use as they explain their solutions: *greater than*, *less than* and *equal to*. Also review the symbols that correspond with the vocabulary.
- Identify Partners A and B for each pair.
- Ask Partner A to solve the problems in the first box while explaining his work. Have him ask questions of Partner B to clarify or assist with the solution. While Partner A is solving the problem, he holds the pencil. If Partner B needs to assist, she may assist verbally while Partner A does the work.
- Have Partner B solve the problems in the second box following the same process.
- After the pairs have completed one set of problems, have them check their solutions with another pair of students. If both pairs agree on the two solutions, they can circle the checkmark and proceed to the next set of problems. If they disagree, the pairs must check each other's work, discuss any errors they find, and correct the erroneous solutions.

How to model it:

- Assume the role of Partner A and think aloud as you solve the problem on the overhead, modeling the level of thinking you want to hear in their explanations.
- Then, assume the role of Partner B and have a student volunteer be Partner A.

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continued

- Ask Partner A to solve a problem on a transparency on an overhead projector, and tell her to make at least one mistake.
- When Partner A makes a mistake, verbally model how to correct the student's computations. Do not write the corrections for Partner A. Be sure to model how to provide constructive feedback that is respectful.
- After both partners have completed a problem box, show another pair your answers.
- Pretend the pair has the same answers that you do. Show students how to circle the checkmark next to the row of problems you completed. Explain that both pairs may continue on to the next set of problems.
- Tell the class that if each pairs' answers had not been the same, their conversations would have been just as kind and respectful as the conversations you had with the student volunteer.
- Next, tell students that you and your partner will compare your answers with another pair, but this time you have a mistake in your work. (Show this mistake on the overhead projector.)
- Present your incorrect answers to another pair. As the other pair explains your mistake, step out of the role of student and highlight the fact that the students don't agree. They simply state what they understand the solution process to be and why they think so. Explain that students must be respectful at all times.
- Ensure that students understand that they must agree on the process and answer before circling the checkmark and continuing on to the next set of problems.

Note: You can easily stop this activity after students have completed a row and checked it off and restart it at another time or after a break, if necessary.



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Sample Page

Directions: Write < (less than), > (greater than), or = (equal to) in each circle.

Partner A

Partner B

5 > 4
-5 < -4

-7 < 5
 $\frac{1}{7}$ < $\frac{7}{1}$



$\frac{5}{10}$ = $\frac{1}{2}$
0.6 < 0.7

0.1 = $\frac{1}{10}$
3 = $\frac{3}{1}$



0 < $\frac{1}{2}$
 $\frac{3}{4}$ = 0.75

-1.2 > -2.1
40 > $\frac{40}{10}$



$-\frac{1}{2}$ = -0.5
 $\frac{3}{8}$ > $\frac{2}{8}$

$-\frac{1}{2}$ < 0
 $\frac{1}{4}$ > $\frac{3}{16}$

