Equals signs notes and practice:

**Notes on the Education research report article:**

1. According to Capraro, the equals sign is different from add, subtract, multiply and divide because it shows…

2. a. Give an example of a “running equals sign”

b. Is a running equals sign a correct or an incorrect use of the “=” symbol?

3. What do these researchers identify as a likely cause or partial cause of the children’s misunderstandings about the equals sign in the US?

**Notes and practice on the Lecture Videos and/or Text.**

4. What is the difference between an equation and an expression?

5. Are children more likely to misunderstand the meaning of the equals sign in grade 1 or grade 5?

6. If children don’t understand the balance meaning of the equals sign, what do they probably think it means?

7. What is another helpful word/phrase teachers can use besides “equals” when reading the “=” sign in an equation?

8 (notes). Show two ways of fixing this unbalanced equation:



9. (practice). Show how to fix this unbalanced equation: by making smaller 1-step equations

10. Write a variety of true/false equations that help teach the meaning of the equals sign. Include at least one that is very easy and one that is tricky.

11. Write a variety of missing number problems that help teach the meaning of the equals sign. Include at least one that is easier and one that is tricky.

**D2L Videos**

**Grade K Solve Equals Sign**

12. What problem is Kevin solving?

13. How did Kevin read the symbol “=”?

14. How did Kevin solve the problem?

**4th Grade Class Equals Sign**

15. What problem is the class asked to solve?

16. What does the class initially think the answer is?

17. When the teacher goes back to easier questions, what are the questions where the class starts getting the right answers?

18. What questions does the teacher ask, getting harder, to get the children ready for the original question?

19. What answer does the class come up with for the question at the end?

**More practice**

20. Rewrite each of these running equations as several shorter balanced equations.

a.  b. 

21. Write down this student’s way of calculating 72-38 using balanced (correct) equations.

“I split the 72 into the 70 and the 2. I took away 30 from 70 and that was 40, and then I took away another 8 , and that was 32. Finally I added back the 2 from 72 and I got 34.

22. Write an equation chain for the number 14 that has at least 5 parts.