Composing and Decomposing Numbers

Student	Teacher
___ and ___ is the same as ____. Example: 3 and 2 is the same as 5. **___ and ___ is the same value as ____.** Example: 60 and 20 is the same value as 80. **___ and ____ and ____ is the same as ____.** 100 and 100 and 47 is the same as 247. **___ and ___ is ___.** Example: 4 and 1 is 5.	Avoid using 4 and 1 "makes" 6. When students hear "makes" they assume they need to complete an action. Also the term "makes" doesn't translate to the definition of equal: 4 and 2 makes 3 and 3 is not accurate. Whereas, 4 and 2 is the same as 3 and 3 describes the relationship as equal.

Place Value & Comparing Numbers

Student	Teacher
There are ____ tens and ___ ones. Example: There are 2 tens and 8 ones. **The digit ___ is in the ____ place.** Example: The digit 7 is in the hundred thousands place. **The digit ____ represents _____.** The digit 7 represents 700,000. **____ is the same as ____.** Example: 15 is the same as 15. **____ is greater than _____.** Example: 127 is greater than 49. **___ is less than ___.** Example: 4.75 is less than 5.23. **___ is 10 more than ____.** Example: 40 is 10 more than 30. **___ is 10 less than ____.** Example: 30 is 10 less than 40.	Work to maintain your place value language as you talk about addition, subtraction, multiplication and division. For example, when adding 53 and 29. *Fifty and twenty is seventy. Three and nine is twelve. So, seventy and twelve is eighty-two.* When teachers remove their place value language, students see mathematics as procedures and lose number sense (see subtraction). 103 is read as "one hundred three." The word "and" is used for fractions and decimals such as "Four and seventy-five hundredths."

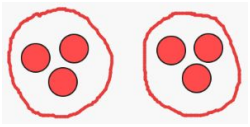
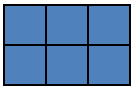
Addition

Student	Teacher
___ and ___ is the same as ____. Example: 35 and 22 is the same as 57. **___ and ____ is the same value as ____.** 90 and 10 is the same value as 100. **___ and ___ is ___.** Example: 4 and 1 is 5.	Avoid the term "carry." We want student to think about what is happening with the numbers. Instead use the term regroup or rename as an alternative.

Subtraction

Student	Teacher
The difference between ____ and _____ is _____. Example: The difference between 9 and 7 is 2.	When teachers remove their place value language, students see mathematics as procedures and lose number sense. Notice when students try and regroup when solving: 14 - 7 Although this answer is in finger range or can be solved with a derived fact (7+7), some students will still try to regroup to solve. Avoid the term "borrow." Student need to see that we are renaming, regrouping or ungrouping to solve.

Multiplication

Student	Teacher
____ groups of ____ is ____. Example: 6 groups of 4 is 24. **___ rows of ____ is ____.** Example: 7 rows of 3 is 21.	 2 groups of 3 is 6.  2 rows of 3 is 6. Avoid the term "bring down the zero." This again is about the mathematical procedure and avoids the importance of place value language: 26 x42 12 (2x6) 40 (2x20) 240 (40 x 6) 800 (40 x 20) 1,092

Division

Student	Teacher
___ shared equally with ___ is ____ Partitive Division Example: 12 shared equally with 3 is ___. Quotative/Measurement Division Example: 12 shared equally with ___ is 4.	The term "shared equally" applies to division and fractions. Avoid the term "goes into," as in 3 goes into 12 how many times. Using "goes into" negates the idea of equal sharing which later relates to fractions. Use the term "remainder," instead of leftover. As students learn about fractions, they can connect to the remainder as a fractional part.

Fractions

Student	Teacher
____ equal parts of ____. Example: 3 equal parts of 4. **____ equal pieces of ___.** Example: 2 equal pieces of 3. **____ parts of ____.** Example: 4 parts of 5.	Avoid using the term "out of." When students hear "out of" they think that the equal part of the whole/set is missing or gone.

Measurement

Student	Teacher
The ____ is longer than the _____. **The _____ is shorter than the _____.** **The ____ is the same as the _____.** **The ____ is taller than the _____.**	

Geometry

Student	Teacher
A ___ has ____ sides and ___ vertices. Example: A triangle has 3 sides and 3 vertices. **An example would be _____.** **A non-example would be _____.** **These two shapes are similar because _____.** **These two solids are different because _____.**	Using correct geometric terms and vocabulary is essential in the classroom. Using visuals helps students connect the definition and properties. Frayer Models can support students in showing examples and non-examples.

Data Analysis

Student	Teacher
_____ has the greatest. Example: Chocolate ice cream has the greatest number of votes on the graph. **_____ has the least.** Example: Strawberry is the least favorite flavor. **_____ has ____ fewer than ____.** Example: Vanilla has 4 fewer than Chocolate. **____ has ____ more than _____.** Example: Chocolate has 4 more than Vanilla.	

Math Discourse/Number Talk

Student

I wonder _____.	I notice _____.
I agree with ____ because _____.	I disagree with ____ because _____.
I predict _____.	I estimate _____ because _____.
My strategy is _____.	I did _____ because _____.
I tried _____.	I noticed a connection between _____.
A question I have is _____.	I don't understand _____.
I'm still thinking about _____.	I'm still not sure about _____.

References and Resources

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