

Think About It

K-2

Sorting activities to help students understand
mathematical concepts

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Sorting Activities for Math

These activities are designed to help students understand mathematical concepts and skills

How to Use the Sorts:

1. Copy onto card-stock. Then cut them up and have students work in pairs to put them back together.
2. Give a partially filled out sort and have students work in pairs to finish it.
3. Have students make their own sorts on index cards or give a blank template to help students get started. Once they make a sort and the teacher checks it, it's ready for others to try!

Two Type of Sorts:

1. Stand and Sort: Each student receives a card and silently walks around to find others who have a card that goes with the set.
2. Sit and Sort: Students work in pairs or individually to organize the cards. The cards can have headings/categories which lead students to one correct answer. Or there can be terms, shapes, images and students can sort them into self-created categories. For this type of sort, there may be more than one answer.

Keys to Making a Sort

1. Deepening concepts: In order to make the cards more effective think about how you can expand the way the topic or concept is developed. For example, for a term like *clock* you might give the following: the word clock, a description of what a clock does; 2 pictures of different clocks; and clock words. For a number concept 24: expanded form, describe the number of tens and ones; even number, sum of the digits is 6; one more than 23, picture with base ten blocks; tally marks; position on hundreds chart...
2. Difficulty levels: One of the most important things to consider when creating a sort is how challenging to make the sort. Often it works best to build in some easy parts and some more rigorous parts. It can also be helpful to have two or three sorts on the same topic for students who finish early or are ready for a more difficult task.
3. Finishing early: Have a task ready. Consider the following:
 - a. Have students add more order (go from big to small; organize vertically as well as horizontally (i.e. put all definitions in the same row)
 - b. Have an answer key so students can check their own sort
 - c. Quiz Me: one student turns card over; other student names the image of flipped card
 - d. Students make their own sort using a template to guide them
 - e. Have some open problems that need a solution
 - f. Try a more difficult sort
4. Questions to ask while students are working or when they are finished:
 - a. How did you get started? Which was easiest? Why?

- b. How did you share the work? What did you do when you got stuck?
- c. Is there another way to organize this? Can you go from small to big?
- d. What if this card was changed to this....What if you added another row, what would it be? Can you think of a way to make this more challenging?
- e. If I put this card here, why would it be wrong? Can you help me understand my mistake?

What could you tell me to put me on the right track?

- f. Could there be another way to sort these?
- g. How do you know you have it correct? Did you make any small mistakes when you were working?