Activities to Build Number Sense

FIND THE SAME AMOUNT

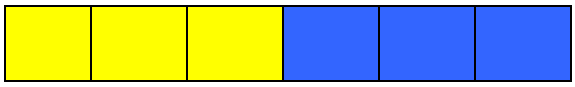
Give children a collection of cards with sets on them. You can use dot cards or ten-frame cards. Use cards that represent the number differently so students get practice seeing numbers represented in a variety of ways. Spread the cards out, face up on the table. Children pick up one card in the collection and then find another card with the same amount to form a pair. This activity can be modified to have children find cards that are less or more than the card they chose.

QUICK IMAGES

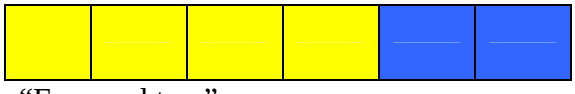
Briefly (1 – 2 seconds) show your child a card with a pattern of dots on it (domino patterns, ten-frame patterns, dice patterns, etc. can be drawn on index cards). Ask your child to tell you how many dots. If he isn't sure of how many, quickly flash the card again and have him draw the pattern that he remembers. Then flash the card again to have him check the pattern. Here are some examples of patterns you might use for this activity:

BUILD IT IN PARTS

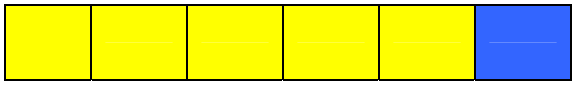
Provide children with one type of material, such as Unifix cubes or color tiles. The task is to see how many different combinations for a particular number they can make using two parts. Each different combination can be displayed on a small mat, such as a piece of construction paper. An example with Unifix cubes building the parts of 6 may look like:



"Three and three"



"Four and two"



"Five and one"

Activities to Build Number Sense and Practice Basic Facts

TEN-FRAMES GAMES

The following 3 games are played like "War". Start playing them with ten-frame cards. Playing them with ten-frame cards emphasizes the number concept while developing thinking strategies for basic facts. A deck of ten-frame cards is made of 20 cards, 2 each of ten-frame cards from 1-10.

WHO HAS MORE

Played like "War". Each child gets 10 cards (ten-frame cards from 1 – 10). The players turn over the top card of their decks at the same time and each player **says** the number on her card. (Saying the number is a very important part of playing this game.) The player with the greatest value wins and takes both cards. In the event of a tie, one more card is played and the person with the highest value of both cards together gets all four cards. Once all cards have been played, each player counts the number of cards she has. The winner for the round is the player with the most cards.

TERRIFIC TENS

Similar to "Who Has More" except that each player removes a "10" card from the deck and places it face up in front of him. This "10" card becomes one of the addends in each face off. Players mix their cards and then turn over the top card of their deck. They say the number, then add it to the "10" card that is already face up and say the sum. For example, if a player turns over a card with 2 dots, he says "2 plus 10 is 12." The player with the greatest sum wins all of the non-ten cards. All players retain their original "10" card for the next face off.

NIFTY NINES/EXCELLENT EIGHTS/FANTASTIC FIVES

Played like Terrific Tens except that each player removes a "9", "8" or "5" card from the deck to use as an addend for each face off. This is an excellent way for children to practice addition facts using a visual model. Encourage children to use thinking and visual strategies rather than counting strategies. Have her explain how she knows her answer. For example, for 8 + 4 a child might say, "The eight has two empty spaces, so two of the dots from the four could slide over and fill up the ten and then it would be 10+2 which is 12."

The following game is played like "Go Fish" using a deck of ten-frame cards.

MAKE A TEN

This game is played like "Go Fish". You can use a deck of ten-frame cards (2 each of 1 – 10) or a deck of playing cards with the Jack, Queens, and Kings removed (Aces stand for 1). Deal each player 5 cards. Each player needs to make pairs that add to 10 (1+9, 2+8, etc.). If a player has any such pairs, she lays them down in front of her (she would also lay down a card that has 10 dots). On her turn she asks another player for a card. For example, if she has a 3 in her hand, she would want to ask for a 7. If the player she asks has the card, he must give it to her. If not, she draws a card from the deck. It is then the next player's turn. The object is to make as many pair as possible.

Thinking Strategies for Addition and Subtraction that are Explicitly Taught in Bridges K-2

- **Zero Property:** The zero property is the identity property for addition and subtraction. When zero is added or subtracted from any number the answer is the original number. It retains its identity.
- **Think One More/Less:** The strategy used when adding or subtracting 1. Think (not count) what number is one more/less.
- **Think Two More/Less:** The strategy used when adding or subtracting 2. Think (not count) what number is one more/less.
- **Combinations of Ten:** Knowing the pairs of numbers that go together to make ten. Students can get to ten from any one digit number. If I say 8 they say how many they need to get to ten.
- **Doubles:** Adding two of the same number. (4+4=8)
- **Neighbors:** An addition problem in which one addend is one more than the other (4+5). It can be solved by using a known doubles fact and mentally adding one more (4+4=8 so 4+5=9).

Other Thinking Strategies for Addition and Subtraction

- **Sharing:** Breaking numbers apart in order to add numbers that are "friendly" or easy to add. *Example:* In solving 6+8, the child thinks, "8 can be 6 and 2. So I have 6+6+2, I know that 6+6=12 and 2 more is 14."
- **Make a Ten:** This is a form of sharing in which a child works with numbers in chunks of 10. It is commonly used when adding 8 or 9. *Example:* In solving 5+9, you can take one from the 5 to make the 9 a ten. Then you have 4+10.
- **Think Addition:** Think addition to solve subtraction facts. For 10-6 you think 6 plus how many equal 10.
- **Building up through Ten:** Used in subtraction, commonly when subtracting 8 or 9. *Example:* In solving 14-8, think of adding on to 8 to get to 14. "If I start at 8, I need 2 more to get to 10. Then 4 more to get to 14. 2+4=6 so 14-8=6"
- **Backing down through Ten:** This is a sharing strategy for subtraction similar to Make a Ten. *Example:* For 15-7 a child thinks, "15-5=10 and I need to subtract 2 more because 7=5+2 so 10-2 equals 8."