Math Facts Resource Page

Importance of learning math facts:
Automatic recall of basic math facts is so critical to development in math that it must be given serious attention. It makes possible a greater understanding of number sense and forms the brush strokes with which higher-level math concepts are painted. Basic fluency in math facts is a must for students to have the confidence and capacity to do basic computation as well as think freely about the big ideas in mathematics.

Construct Meaning of Math Facts
- Use Manipulatives – coins, beans, candy etc.
- Create problem solving stories - Use real examples they can relate to, then draw a picture of the problem, then write the problem
- Clothespin Hangers: Place a number of clothespins on the bottom of a hanger to indicate a certain number. Separate the clothespins to show various number sentences.

Organizing Facts to Make Connections
- Connect addition and subtraction and multiplication and division with fact families
- Color patterns on a hundreds chart
- Complete and use multiplication tables
- Use tens frames

Build Automaticity
- Skip counting songs
- Card/Dice games
- Wheel game
- Online games

Online Resources:

1. www.mathfactcafe.com
   All Grade Levels – All facts
   Practice flash cards on line or build math practice sheets
2. http://illuminations.nctm.org/ActivityDetail.aspx?ID=75
   Addition up to 10 only
   Great for building number sense for young children and practicing simple addition.
3. http://donnayoung.org/math/tricards.htm
   Printable triangular math fact cards – great for practicing fact families
4. www.aplusmath.com
   Rectangular flash cards – practice online
5. http://www.uen.org/3-6interactives/math.shtml
   Utah Education Network -- Math practice games - Fruit Splat multiplication and other games
6. http://www.arcademicskillbuilders.com
   Racing games for all operations and some other areas

Math Fact Card Games
(Modified from All Hands on Deck activity book for math games.)

1. WAR
   Addition, multiplication or subtraction facts
   Use 1 card deck. Remove the face cards for younger students, or use them (J=11, Q=12, K=13) for older students.
   The object is to win cards by being lucky to pick the greatest sum. Place the deck face down between 2 players. Each draws 2 cards and finds the sum. Player with the greatest sum takes all 4 cards. Continue with the rest of the deck. If both players have the same sum, each pulls 2 more cards. The winner of this 2nd pull wins all 8 cards. When the deck is used up, the player with the most cards wins.

Variations: Use subtraction instead of addition; just take the smaller away from the larger number. Use multiplication instead of addition. For 6th grade, use the red cards as negative numbers and the black cards as positive numbers for addition or for multiplication practice.

2. SUBTRACTION SNAP
   Addition or Multiplication and subtraction facts
   Use 1 card deck without the face cards. All cards have their number value.
   The object is to win cards by being quickest at subtraction. Place the deck face down between 2 players. One player picks two cards and places them face up on the table. That player says their sum. The second player picks 1 card and places it to the side of the others. The goal is to find the difference of the sum and the 3rd card. That is, the subtraction can be done either way. The first player to call out the correct difference wins and collects all 3 cards. When the deck is used up, the player with the most cards wins.

1st 2 cards	3rd card	Difference
4 + 7 = 11	7	11 – 7 = 4
1 + 2 = 3	10	10 – 3 = 7

Variations: The first player does not say the sum, so both players need to calculate it mentally. Or multiply the first 2 cards, rather than adding them.

3. SMALLEST REMAINDER
   Division with remainders
   Use 1 card deck, ace – 9. All cards have number value.
   The object is to create a division problem with the smallest remainder. Place the deck face down between 2 players. Each player picks 3 cards and arranges these to form at most three different division sentences. For example, if a player selects 3, 9, and 5, he could make three problems:
   $39 \div 5 = 7$ R4
   $35 \div 9 = 3$ R7
   $93 \div 5 = 18$ R3
   A player may be able to do some problems mentally, and will need to write down others for long division. Meanwhile, the other player will do calculations with his own three cards. The player who makes the problem with the least remainder wins that round and earns 1 point. As players have more experience with this game, they will find strategies to improve their chances.
   Continue until the deck is used up. The player with the most points wins.

Variation: Use different numbers of cards to make more difficult division problems.