

Home Connections in Mathematics

November 2021 'Fact Fluency'

"Children should learn their number facts. However, they would benefit from learning their facts by using an increasingly sophisticated sense of strategies rather than by jumping directly to memorization."

(Lawson, 2016)

Knowing Your Facts: Just One of the "Basics"

What do you think of when you hear, "getting back to the basics" in mathematics? Well, the basics can mean anything from counting, to computation, to problem solving. But *basic facts* refers to the set of single digit number facts for addition and multiplication, and their related subtraction and division facts. For example, $7 + 8$, $15 - 7$, 5×6 , $30 \div 6$, are all basic facts.

One of the fundamental skills that children need to have in mathematics is to master their basic facts. *Mastering math facts* involves understanding and recalling math facts using a variety of strategies.

How Should Children Master Math Facts?

Most children will learn math facts gradually over a number of years. During this time, they should be encouraged to use what they already know to help them solve for facts they don't know *yet*. For example, to solve for 6×8 , they may use the known fact $5 \times 8 = 40$ and add one more group of 8 to get 48. Over time, this reasoning will help children master facts and eventually become more fluent.

The goal is not *memorization* of facts, but *automaticity* which is the quick and effortless recall of math facts.

Asking your child to memorize without opportunities to reason and visualize is not an effective way to commit facts to memory.

Games to Master Math Facts

Games are fun to play over and over again, and therefore are an excellent way to provide repeated practise for students to learn their facts. When your child is not able to immediately recall a fact, encourage them to use what they do know to help them solve it rather than simply telling them the answer.

TRY THESE GAMES:

Go Fish for 10!

You need: 2 players
One deck of cards (Aces, Queens and 2 to 10)



Queen = 0 Ace = 1

<https://www.youtube.com/watch?v=8hgbL08XkDg>

Lay the deck of cards face down on the table. Each player selects three cards from the deck. The goal is to make pairs that add to 10. The first player looks for a pair in their hand, and if they find a pair, they lay that down for a point and pick up two more cards from the pile. If they don't find a pair, they ask their partner for what they need to make a ten pair. If the partner has the card, they pass it over. If they don't have the card, they say "Go Fish!" and the first player draws a card from the pile. Switch turns. Play continues until there are no remaining cards.

Addition Challenge

One deck of cards (A to 10)

Players split a deck of cards and flip over the top two cards at the same time. They add their own cards and the person with the largest sum takes all the cards. Person with the most cards at the end of the game wins.

This game can also be played to practice subtraction and multiplication.

Here are several more dice and card games to practice math facts.

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[https://www.granby.k12.ct.us/uploaded/faculty/wyzika/Dice and Card Games to Practice Math Facts.pdf](https://www.granby.k12.ct.us/uploaded/faculty/wyzika/Dice%20and%20Card%20Games%20to%20Practice%20Math%20Facts.pdf)

Have fun playing and mastering facts with your child.

Financial Literacy

Penny, Nickel, Dime: In this game you will roll a dice 7 times. For every roll, you take that many pennies, nickels, dimes.

Whoever gets closest to \$1 without going over wins the game.

Please use the chart below to record your findings.

Students can utilize mental math strategies and financial literacy skills in order to improve fact fluency.

Dimes	Nickels	Pennies

Game on!