Preschool
Here are 6 unplugged ideas for mathematical thinking fun for parents at home:
- Use any small manipulatives that have a number of colors. Have your child sort the items by color. Once they have been sorted, have them count how many of each color there are. And, finally, how many are all together.
- Let your child sort any familiar items at home by size, color, texture or shape. For example, crayons, mail, socks, etc.
- Cut animal pictures from magazines. Classify them by animals that walk, fly, crawl, jump, etc.
- Using similar manipulatives, give your child one color from the group while the parent has another. (For the sake of example, we’ll imagine using small plastic “counting bears.”) Let’s say the parent has the red bears and the child has the green. Place a red bear in front of your child. Ask your child to match (or pair) a green bear next to the red bear. Next, place two or three bears in the line, and ask your child to pair a green bear to each red bear. Continue in this way. The object is to match items from one set to the same number of items from another set.
- Allow your child to set the dinner table. Ask them to first count out and set down the number of placemats needed, then to count out and set down the same number of plates, then forks and so on. Once the table is set, ask them to count how many places there are total. To extend upon this when your child is ready, you can ask questions such as, “How many more would we need to have if grandma came to join us?” “How many would there be at dinner then?” “What if grandma and grandpa both came?” etc.
- Play Chutes and Ladders or Candy Land on raining days.
- A number hunt. This game can be played at home, in the supermarket, etc. As your child to find the number “1” somewhere, then the number “2” and so on. As the child recognizes more and more numerals, give them higher numbers.
- Garden Math: Count the number of tomatoes on a plant in the backyard. Ask your child to pick 3 red ones to use for the salsa you want to make, etc.

Electronic Resources
Here is a link to an excellent website that will lead parents to resources:
https://www.commonsensemedia.org/lists/math-apps-and-learning-tools-for-kids

Prekindergarten
Counting:
- count stairs
- count snacks
- set tables and count utensils and plates
- work on one-to-one correspondence while counting groups of objects
- use playing cards

Sorting:
- sort groceries
- sort toys
- sort money (change) by size and color
- sort laundry
- match socks

Patterns:
- natural materials outside
- cereal
- beaded necklaces
- legos
- make patterns with sidewalk chalk

Parts to Whole:
- puzzles
- dividing food up between a group of people

Number Recognition:
- scavenger hunt for numbers while driving in the car
- playing cards (put them in order)
- hide numbers in playroom/sandbox/outside and go on a hunt for them

Kindergarten
Games
- Sum Swamp
- Connect Four
- Blockus
- Trouble
- Monopoly Junior
- Guess Who
- Mancala

Apps
- Adventure Basic School Math
- Everyday Mathematics, Addition Top It
- Fast Facts Addition/Subtraction
- Juicy Math
- Math Bingo
- Operation Math
- Super 7
- Native Numbers PK-K
- Amazing Coins
- Counting Money
- Coin Math

Websites
http://www.funbrain.com
http://www.playkidsgames.com/mathGames.htm
http://gregtangmath.com/games.php
http://www.mathplayground.com/

2nd Grade
For spatial relationships and arranging 3D shapes: arranging/organizing cupboards, building with blocks, re-organizing their bedroom

Money: Making change, counting money in the piggy bank

Facts: flashcards, playing war as a card game with both addition and subtraction
Apps:
- Splash Math
- Grade 2 Math Blaster
- Tangrams
- Money
- Rocket Math
- Flashcards

Websites:
www.funbrain.com
www.ABCya.com
www.coolmath.com

Games:
Sum Swamp
Domino math
Monopoly
Fraction Formula
Hundred Board puzzles

3rd Grade Math Links

Bedtime Math: Daily multi-level math problems within a context for children to do with their parents
http://bedtimemathtoomath.org/

E is for Explore: integrated, hands-on, and many art-based learning activities based on common core standards (math, science, & language arts)
http://eisforexploremath.blogspot.com/

NRICH: Enriching mathematics with multi-level problem solving opportunities
http://nrich.maths.org/frontpage

Math Cats: creative, open-ended math explorations
http://www.mathcats.com/

Games for the Brain: quiz, memory, and brain games
http://www.gamesforthebrain.com/

Sum Dog: large selection of games that mix fact fluency, number ID, fractions, and more for grades 1-5
www.sumdog.com

OCSD Interactive Games: large selection of pre-made games with options to create your own games
http://resources.oswego.org/games/

Rock Hopper: multi-level mental math and patterning to reach target number

Xtra Math: free web-based math fact mastery program, requires registration
Virtual Manipulatives: digital library of manipulative tools with activities to explore all mathematical strands
http://nlvm.usu.edu/

http://www.pragmaticmom.com/2014/06/summer-math-ideas/

5th Grade
Games:
- Set
- Mancala
- Monopoly
- Life
- Multiplication with dice
- Multiplication War
- Sudoku
- Card Games
- Rubix Cube
- Connect Four
- Origami
- Sequence
- Logic Puzzles

Apps:
- Blendoku
- Pearl Diver
- Slice It
- Math Facts-too many to choose one, just pick one you like!
- Pick-a-Path, NCTM-works on number sense. Parents will enjoy this one too!
- Pearl Diver, Learning Games Lab-Number sense, with a focus on fractions
- Basic Fraction, Explorer Technologies-review of basic fraction concepts
- Equivalent Fractions, NCTM- a way to practice finding equivalent fractions
- Chicken Coop Fractions Game, Lumpty Learning-working with proper and improper fractions
- KenKen

Websites:
Illuminations
http://illuminations.nctm.org/
Calculation Nation
http://calculationnation.nctm.org/
Tenmarks
www.tenmarks.org
The Math Worksheet Site
http://themathworksheetsite.com/
Quizlet
http://quizlet.com/
XtraMath
http://xtramath.org/
Additional activities:
Have children guess the amount of a bill based on menu prices, rounding, or estimation
Have children calculate tip: 15%, 18%, 20%
Have children pay for items and check the change given
Have children measure ingredients, sometimes using related measuring cups that are not the actual amount, ex. ¼ cup for measuring out ½ cup, 1 ½ cup, etc.

Additional Resources for all students
Math Apps:
Math Puppy – Basic operations

Blackboard Madness Math – Advanced since this is very fast play and requires up through division – gives badges

iSolveIt: MathSquared and iSolveIt: MathScaled involve math squares and patterns weighted on scales respectively for a logical challenge that get increasingly more difficult. Students have individual records.

Math Sites:
http://www.visualmathlearning.com/ - for all grades — a wonderful site for visual learners.
http://www.math4children.com/ - Resources for teachers and activities for students all grades
http://www.visualfractions.com/ - fractions visually done with both lines and circles.
http://www.mathebook.net/index.htm - this gives you a choice for every lesson of a virtual experience or of saving an eBook page to do online and/or print out. For all ages and topics.
http://www.teachthechildrenwell.com/math.html#pat – an incredible variety of both topic and age level interactive activities – not just math by the way.
http://www.worldbookonline.com/ewol/home - This site from Infohio – has many math games for our younger students, as well as reading and writing.

Mr Gill’s favorite
Numberphile youtube channel (or visit the Numberphile website). Perhaps a video a day will keep boredom at bay?