Summer Vacation

Want to avoid the "Summer Slide"?
Are you looking for ways to keep math concepts you've learned fresh?
Here are some ideas!

Use the daily math calendars located on the links below. These calendars provide a problem for each day of the summer to help combat the summer slide. Keeping a student's brain sharp during the summer will help to ensure they are ready for school this fall.

[Summer Math Learning Packet - Students Entering Grade 6](#)

[Grade 6 Answers Summer Math](#)

[Summer Math Learning Packet - Students Entering Grade 7](#)

[Grade 7 Answers Summer Math](#)

[Summer Math Learning Packet - Students Entering Grade 8](#)

[Grade 8 Answers Summer Math](#)

Websites for Summer Vacation Enrichment Opportunities

✓ Create your own math summer program by using the website: **www.ck12.org**

Through the use of science, students can review and learn more about math concepts.   Use **BrainFlex** to create an individualized summer learning program that is fun while building math and science skills through daily practice.

✓ Use the FCPS Symballo to explore a multitude of math sites. From sites that use games to promote learning math to more traditional sites, this Symballo has something for exeryone.

https://www.symbaloo.com/mix/fcpsmiddleschoolsummer

Websites with great stuff that will make you think (and they're fun too!)

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Super cool games and activities for all areas of math. http://illuminations.nctm.org/ActivitySEarch.aspx	**Great games! Play against the computer or create an account and play against your friend.** http://calculationnation.nctm.org/	**Computation practice while problem solving** http://www.kenken.com/
Puzzles galore! Try these area problems out by thinking about factors and multiples. http://www.puzzle-shikaku.com/	**Challenge yourself with a problem each week at your level.** http://mathforum.org/pows/	**Need a refresher? Lots of great instructional videos.** http://learnzillion.com/
Many games and activities for many middle school topics! www.ixl.com/Math	**Practice with decimals!** http://www.decimalsquares.com/dsGames/	**Algebraic reasoning** http://www.mathplayground.com/wangdoodles.html
The Ultimate Puzzle Site (has an app too!) http://puzzle.dse.nl/index_us.html	**The Franklin Institute: Open-ended problems** http://sln.fi.edu/school/math2/	**The language of algebra and its symbols** http://www.quia.com/mc/319817.html
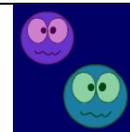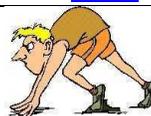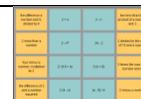
| The National Library of Virtual Manipulatives:		
Algebra Balance Scales *http://nlvm.usu.edu/en/nav/frames_asid_324_g_3_t_2.html?open=instructions&from=category_g_3_t_2.html*	**Prime Factorization** *http://nlvm.usu.edu/en/nav/frames_asid_202_g_3_t_2.html?from=category_g_3_t_2.html*	**Make every circle add up to 21** *http://nlvm.usu.edu/en/nav/frames_asid_188_g_3_t_1.html?open=instructions&from=category_g_3_t_1.html*
Making sense of multiplication of fractions *http://nlvm.usu.edu/en/nav/frames_asid_194_g_3_t_1.html?from=category_g_3_t_1.html*	**Make Fraction computation come alive with fraction bars!** *http://nlvm.usu.edu/en/nav/frames_asid_265_g_3_t_1.html?open=activities&from=category_g_3_t_1.html*	**Interactive activities for kids of all ages!** *http://nlvm.usu.edu/*
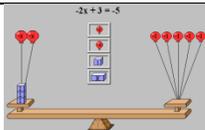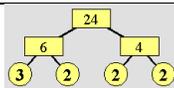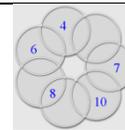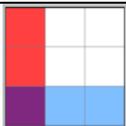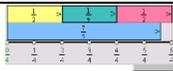
Cool Apps that will make you think (and are fun and free too!):

- Quadris
- Rush Hour (Block and Block)
- Fourteen
- Set

- Cut the Rope (there's physics in there!)
- Motion Math: by MotionMath
- Puzzle Me

Math Counts Problems of the Week

https://www.mathcounts.org/resources/problem-of-the-week

Prodigy Games

It is Common Core aligned. Kids love the gaming aspect.

www.prodigygame.com

Sign up for an account, choose the grade level you

were in this past school year.

Real life Math – Sumer Enrichment Ideas

Incoming 6th graders:

- Bake cookies and double the recipe! Draw models of the fractions that you need to double.
- Travelling is expensive! How much is the trip likely to cost, taking into account gasoline, tolls, meals, lodging, recreation, and souvenirs? You might compare the actual costs of the trip to your prediction.
- Keep a running track of the money you earn and spend this summer, right down to the penny.
- Are you swimming on the swim team this summer? If so, keep track of your times. Represent them in a way that communicates the progress you are making.
- Hitting the grocery store? Check out the sale ads and find coupons to help your parents save money at the grocery store! What is the total amount of savings? About how much of the total do you end up actually spending?
- Get an allowance? Split it into parts — for example 50% for savings, 25% for spending, 25% for savings. How much money is represented by each percentage? What changes and what stays the same as you earn your allowance each week . . . the percents? The amount in each part? Represent the amounts as equivalent fractions, decimals, and percents.

Incoming 7th graders:

- Making lemonade for a large picnic or party? What's the ratio of lemonade mix to water? Think about how much ingredient you would need for any amount of lemonade.
- Going on a road trip? Determine the miles per gallon your car travelled.
- Plan a treasure hunt! Create a coordinate plane of your yard or house. See if your friend can find the treasure?
- Having dinner in at restaurant? Help determine the amount you should include for tip. Compare the different ways the people in your dinner party determine the tip?
- Going shopping for back to school clothes? Determine the price after a discount. How much tax will you need to pay?
- What transformations can you find in your environment? Are they translations, rotations, or reflections?
- Having a party or going to a cookout? How many of each recipe will you need to make to have enough for all the guests? Then determine how much of each ingredient you will need to make the recipe. Do you have enough or do you need to go to the grocery store? Explain how you know?
- Does this summer seem warmer than the last? Do you think climate change is affecting summer highs and lows? Do you believe recent weather events are connected to global warming? How can you tell? Get up to speed on the latest news and views about global warming and track the temperatures all summer long. Research historical weather data and compare with current trends. Use tools like WeatherSpark to create graphs of weather data and ForecastAdvisor to compare different weather projections.
- The boys of summer are back! Follow the performance of your favorite baseball teams and players using the Baseball section and the Major League Baseball statistics page. Will the Yankees win 100 games this year? And for an interesting application of geometry to baseball, consider the new dimensions of Citi Field, the home stadium for the New York Mets. Only 108 home runs were hit at Citi

Field last year. Now that the fences have been moved in, how many home runs will be hit there this year?

<u>Incoming 8th graders:</u>

- Playing a game on the boardwalk? What's the probability you're going to win?
- Going shopping for back to school clothes? Determine the price after a discount. How much tax will you need to pay?
- Going on a trip? Use a map's scale to determine distances and travel times.
- Going to a Keys, Nats, or Orioles game? Keep track of the statistics during the game. If you were the team's coach, how would you use your data to make decisions for the next game?
- What transformations can you find in your environment? Are they translations, rotations, reflections, or dilations?
- Earning money this summer? Graph the money you are saving and spending. What kind of graph will best communicate your information? How can you make sure that someone else can read your graph? Does it show a positive or negative relationship?
- Going someplace new? Take along your camera and take pictures of the interesting architecture you see. What geometry can you find in the designs?
- Keep an eye on how Hollywood movies fare over the summer. Which movie will win the title of biggest summer blockbuster? Will box-office numbers continue to decline? Check the weekly box-office numbers and track how your favorite films, and the industry overall, are doing.
- How do seasonal changes affect businesses' bottom lines? What kinds of companies perform better in the summer? Worse? Do restaurants and hotel chains post better financial numbers in the summer? Research and follow companies like Darden Restaurants and Choice Hotels International to see whether and how their performance changes in the summer months. Do companies like the Gap and Staples pick up steam as students start to head back to school? Or, identify specific companies of your choice based on your own criteria, and track their stock prices. How does the market overall perform over the summer? Track composite indices like Dow Jones Industrial Average and compare its performance with historical data from summers and winters past; does the market change at similar rates throughout the year?

Thank you for your support during the past school year. Please encourage your child to access these wonderful opportunities to keep up with their math skills and be ready for next year!

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Have a Great Summer!

The Walkersville Mathematics Department