



# Summer Math

**Attention all students entering Grades 5-8:**

Summer Math is **REQUIRED** for you!  
**It will count as your first homework grade and will be an easy way to start the year off great in math!!**

You will select a *minimum* of **two** activities, although you are welcome to choose more than that. You may also choose to work with a buddy or even a group to get outside and have some fun!!

During the summer months, skills become rusty and you can even lose some of what you learned this year. By participating in Summer Math, you will keep your math knowledge fresh and be better prepared to be successful next year.

The activities have been designed to help you connect the math you learn in school to the real world around you. You can click on the links to explore loads of digital resources to help you, and use digital photos or video to help document what you do. Have fun with it!

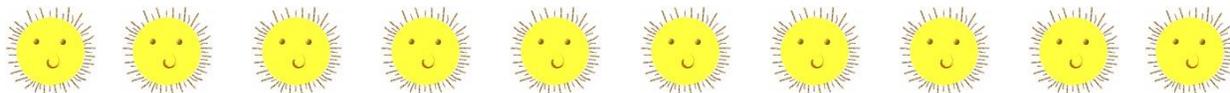
## **WHAT DO YOU HAND IN WHEN YOU RETURN IN SEPTEMBER??**

Your product can be a journal/notebook where you have completed your tasks, a Powerpoint where you show what you did and reveal your solutions, a video where you show and tell what you found....get creative!

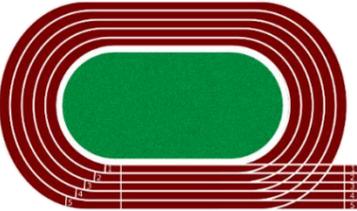
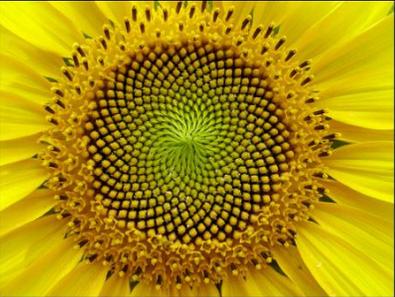
As long as you complete at LEAST 2 of the activities and show your work and solutions, you will receive credit! Remember that this product will be the first piece of work that your teacher will get from you, make sure it is neat, complete, well done, and has your name on it!!

Be sure to indicate which activities you selected. For example:  
Choice #1: Shopping with Unit Rates / Choice #2: Track Steps and Ratios

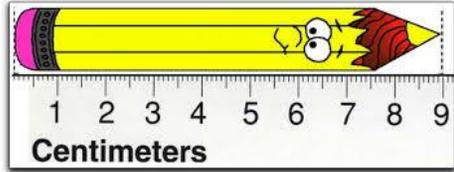
**HAVE A WONDERFUL SUMMER AND STAY SAFE!!!**



**Where is the Math in Your World?**  
**Entering Grade 6 - 2018 Summer Math Projects – Ahern Middle School**  
 (Complete at least 2 projects - due first week of school)

Project Title	Directions	Entering Grade 6
<p>1. <b><u>Geometric Figures in Our World</u></b></p> 	<p>Find the Geometric figures (see grade list) in the outdoors. Describe and explain the dimensions and purpose of figure. (things at the playground, in the backyard or school)</p>	<p>Find 4 examples of a quadrilateral. Some examples would be a rectangle, square or trapezoid. Take a picture or make a sketch of the shape and explain what the attributes are of each shape.</p> <p><b>Below are 2 videos to help you remember about quadrilaterals.</b></p> <p><a href="https://www.youtube.com/watch?v=0OW2bU0So-4">https://www.youtube.com/watch?v=0OW2bU0So-4</a>  <a href="https://www.youtube.com/watch?v=yiREqzDsMP8">https://www.youtube.com/watch?v=yiREqzDsMP8</a></p>
<p>2. <b><u>Track Steps and Ratios</u></b></p> 	<p>Measure the distance of the Middle School running track as outlined by grade.</p>	<p>1. What is your estimate for how many steps it will take for you to walk around the track?          2. Count your steps circling around the outside edge of the track.          3. Measure your own foot in inches and calculate the distance around the track in inches, feet, and miles.</p> <p>Watch this video for a review of rate.  <a href="https://youtu.be/RQ2nYUBVvqI">https://youtu.be/RQ2nYUBVvqI</a></p>
<p>3. <b><u>Numbers in Nature</u></b></p> 	<p>Find natural objects in nature. Classify and explore number relationships as outlined by grade level. (classify and describe patterns that occur naturally)</p>	<p>Find two objects in nature that show a pattern. Take a picture or sketch the objects for your project. Watch the following video: <i>The Fibonacci Sequence: Nature's Code</i>  <a href="https://youtu.be/wTlw7fNcO-0">https://youtu.be/wTlw7fNcO-0</a></p> <p>Can you find the pattern or sequence in your objects? Draw on the pictures or write a brief paragraph describing the patterns you find.</p>

4. **Metric and Customary Systems of Measurement**



Measure an outdoor figure and provide measurements in both systems as outlined by grade level.

Find an object outside that you can measure **or** record the distance from your home to a place you visit this summer. Some places to look for objects are outside your home, at a playground, the beach or a park. An outing might be to visit a relative, a trip to the beach or park or a vacation (just somewhere that you traveled away from home).

Create a table to show the dimension that you measured (length, width or distance) in a unit that makes sense for the object or distance. For example: A large object would probably be measured in feet and meters or an outing would probably be measured in miles or kilometers. You should do your measuring in customary and metric measurements.

Convert the unit of measure in the customary system to the additional units so your table reflects:

Feet, Inches, Yards, Miles (for distance only),

Convert the unit of measure in the metric system to the additional units so your table reflects:

Millimeters, Centimeters, Meters, Kilometers (for distance only).

**Video for metric system review:**

[https://learnzillion.com/lesson\\_plans/7014](https://learnzillion.com/lesson_plans/7014)

**Video for customary system review:**

[https://learnzillion.com/lesson\\_plans/5003-compare-and-convert-customary-units-of-length](https://learnzillion.com/lesson_plans/5003-compare-and-convert-customary-units-of-length)

**Online Rulers:**

<https://www.printablerulers.net/click2.php>

## 5. Graphs & Tables



Online research demonstrating the use of graphs in tables in the world. (as outlined by grade level)

Create a line plot for a set of data that you develop based on your interests. Some examples of questions to generate your data would be:

1. What is the snowfall in January for Foxboro for the last 10 years?
2. What is the favorite ice cream flavor for each person in your family and each of your friends?
3. What is the average temperature in July in Foxboro for the last 10 years?
4. What is the height of 10 people that you know?
5. How many different types of plants do you find in your flower and/or vegetable garden and what is the number of plants for each type?
6. What is the length of at least 10 pencils that you can find in your backpack or around your house?
7. Find at least 15 pennies. Sort them by the decade that they were made and develop your line plot using this data.

**You can develop data based on any topic you would like. The only requirement is that you create a line plot based on at least 10 data points.**

**Online Ruler:** <https://www.printablerulers.net/click2.php>

**Videos to help:**

[https://learnzillion.com/lesson\\_plans/4782](https://learnzillion.com/lesson_plans/4782)

[https://learnzillion.com/lesson\\_plans/6972](https://learnzillion.com/lesson_plans/6972)

## 6. Shopping with Unit Rates!



Compare unit rates (as outlined by your grade level) of products you purchase either online or in the store.

Visit a clothing store or an online clothing website and find the price of a pair of shorts and a shirt that you would like to buy. Using the nearest whole dollar for each item, find the total cost for the outfit to the nearest whole dollar.

**Using the total cost of one outfit:**

1. Find how much money you would have to spend if you bought 205 students (the entire 5<sup>th</sup> grade!) the same outfit.
2. Using the amount of money you need to buy the 205 outfits, calculate the amount you would have to pay if you broke up the amount into 25 equal payments.

If there is a remainder, write an explanation of what you would do with that remainder.

[https://learnzillion.com/lesson\\_plans/8041](https://learnzillion.com/lesson_plans/8041)

[https://learnzillion.com/lesson\\_plans/5647](https://learnzillion.com/lesson_plans/5647)

[https://learnzillion.com/lesson\\_plans/7861](https://learnzillion.com/lesson_plans/7861)

## 7. Library Numbers



Explore Decimals using the Dewey Decimal Numbering System that is used in the library

Visit the library or use the online catalog for the library to find a non-fiction book on a topic of your choice. Some suggested topics and books are:

### **Math Theme Books**

Career Ideas for Kids Who Like Math  
Real Life Math Series  
Fun With Roman Numerals  
See Symmetry

### **Space Theme Books**

Books about Planets

### **Sports Theme Books**

The History of \_\_\_\_\_ (Basketball related)  
NFL Today – The Story of \_\_\_\_\_ (Baseball related)  
Pro Sports Hall of Fame

### **Craft Theme Books**

### **Cooking Theme Books**

### **SAILS online catalog**

<http://www.sailsinc.org/>

**Please note you can use any Non-Fiction book for the activity as long as it has a decimal number for its' catalog number.**

Please answer the following questions related the book's Dewey Decimal Number:

1. What is the name of the book you chose and the Dewey Decimal Number associated with this book?
2. Write the book's number in expanded notation.
3. What would be the equivalent mixed number for the books' decimal catalog number?
4. Compare the number of your book to the following decimal numbers using (<, = ,>):  
352.1, 650.01, 452.60
5. Add 2,356 to the book's number.
6. Subtract the book's number from 2,356.
7. Multiply the book's number by  $10^3$ .
- 8 Divide the book's number by  $10^2$ .
9. Round the book's catalog number to the nearest whole number and the nearest tenth.

**Library Numbers Continued**

**If you having trouble locating a book, please ask the librarian for help.**

Converting decimals to fractions:

[https://learnzillion.com/lesson\\_plans/6185-convert-decimals-to-fractions-to-the-hundredths-place-using-visual-aids](https://learnzillion.com/lesson_plans/6185-convert-decimals-to-fractions-to-the-hundredths-place-using-visual-aids)

Comparing decimals:

[https://learnzillion.com/lesson\\_plans/6024](https://learnzillion.com/lesson_plans/6024)

Decimals in Expanded Notation:

[https://learnzillion.com/lesson\\_plans/8001-write-decimals-in-expanded-notation](https://learnzillion.com/lesson_plans/8001-write-decimals-in-expanded-notation)

Rounding Decimals:

[https://learnzillion.com/lesson\\_plans/5889-round-decimals-to-the-nearest-whole-number](https://learnzillion.com/lesson_plans/5889-round-decimals-to-the-nearest-whole-number)

[https://learnzillion.com/lesson\\_plans/6848-round-decimals-to-the-nearest-tenth](https://learnzillion.com/lesson_plans/6848-round-decimals-to-the-nearest-tenth)

Multiplying and Dividing by Powers of 10:

[https://learnzillion.com/lesson\\_plans/4766](https://learnzillion.com/lesson_plans/4766)

Add Decimals:

[https://learnzillion.com/lesson\\_plans/5224](https://learnzillion.com/lesson_plans/5224)

Online Hundredths Grid Paper:

<https://www.eduplace.com/math/hmcam/tools/blms/g5/5hmmca-mc48-mc.pdf>