

**Incoming Grades 6th-8th
Science Summer Homework 2018**

Dear Students and Parents,

I am so excited to have your student in my science class next year! Attached are three assignments for summer. **Students will need to complete all three assignments.** My hope is that these assignments help them continue to “do science” over the summer while practicing their math, reading, and writing skills.

I have included rubrics for each assignment - each assignment is worth 10 points and the rubrics will help your student focus on the key pieces I would like to see from each activity. Students can also self-evaluate using the rubric.

Please feel free to e-mail me with any questions at cousley@stleonardlouisville.org.

Thank you! Enjoy Doing Science!

Mrs. Ousley

Incoming Grades 6-8: Complete all three activities below.

A. Measurement Conversion: All scientists need to know how to convert measurements from one unit to another. Scientists must be able to convert within the metric system (for example grams to kilograms) and within the imperial system (for example inches to feet). Complete the conversions below showing your work.

Converting Within the Metric System

For help/review, you can watch this video:

<https://www.khanacademy.org/math/in-fifth-grade-math/big-heavy/volume-1/v/conversion-between-metric-units>

You can also read for help/review here <http://www.purplemath.com/modules/metric.htm> and here

http://www.montereyinstitute.org/courses/DevelopmentalMath/COURSE_TEXT_RESOURCE/U06_L2_T2_text_final.html

1. What 517.68 meters in centimeters?
2. What is 595,100 millimeters in meters?
3. What is 9.15 liters in millimeters?
4. What is 17.42 kilograms in grams?
5. What is 51,311 centigrams to grams?

Converting Within the Imperial System

For help/review you can watch this

video:<https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-measurement-topic/cc-4th-convert-length/v/feet-to-inches-exercise-example>

You can also read for help/review here

<https://www.ck12.org/book/CK-12-Middle-School-Math-Concepts-Grade-8/section/4.12/>

6. How many inches are in 40 feet?
7. How many tons are in 6000 pounds?

8. How many feet are in 3 miles?

9. How many gallons are in 320 quarts?

10. How many yards are 288 feet?

	Possible Points	Earned Points
Student has the correct answer	5 (0.5 points a piece)	
Student shows the work behind their thinking	5 (0.5 pts a piece)	
	Total	/10

2. Completing Calculations Using an Equation: Scientists have many different equations that they use to calculate various values. You will be practicing two different equations - speed and density.

Speed/Rate: Speed (or rate) is calculated using the following equation: $speed (s) = \frac{distance (d)}{time (t)}$. Your unit for speed is always a distance unit (like miles or km) over a time unit (like hours or seconds). Some examples would be miles/hour (read miles per hour, abbreviated mph) or meters/sec (read meters per second, abbreviated m/s).

To solve speed problems, you simply plug your given values into the equation and solve for the missing value.

Review here:

<https://www.khanacademy.org/math/pre-algebra/pre-algebra-ratios-rates/pre-algebra-rates/v/usain-bolt-s-average-speed> and here:

http://www.bbc.co.uk/bitesize/standard/maths_i/numbers/dst/revision/1/

1. A car travels 540km in 6 hours. What speed did it travel at?

2. A mouse runs a distance of 2 meters in 15 seconds. What is its speed?

3. A girl cycles for 3 hours at a speed of 40 km/h. What distance did she travel?
4. The distance between two cities is 144 km. It takes me 3 hours to travel between these cities. What speed did I travel at?
5. A train travels from the station to the beach, a distance of 576 km in 6 hours. The maximum speed limit allowed is 90 km/hr. Did the train break the speed limit?

Density: Density is calculated using the following equation $density (d) = \frac{mass (m)}{volume (v)}$. Your unit for density is always a mass unit (like grams or kilograms) over a volume unit (like mL or cm³). An example would be g/mL or kg/cm³.

To solve density problems, you simply plug your given values into the equation and solve for the missing value.

Review here: <https://www.youtube.com/watch?v=y6hGr6u8RIM> or <https://sciencenotes.org/density-calculations-worked-example-problem/>

6. A block of aluminum occupies a volume of 15.0 mL and weighs 40.5 g. What is its density?
7. Mercury metal is poured into a graduated cylinder that holds exactly 22.5 mL. The mercury used to fill the cylinder weighs 306.0 g. From this information, calculate the density of mercury.
8. What is the mass of the ethyl alcohol that exactly fills a 200.0 mL container? The density of ethyl alcohol is 0.789 g/mL.
9. Calculate the density of sulfuric acid if 35.4 mL of the acid has a mass of 65.14 g.
10. What volume of silver metal will weigh exactly 2500.0 g. The density of silver is 10.5 g/cm³.

	Possible Points	Earned Points
Student has the correct answer	5 (0.5 points a piece)	
Student shows the work behind their thinking	5 (0.5 pts a piece)	
Total		/10

3. Practice your research and writing skills: Find a news article on a current scientific event and/or discovery. Read the news article and write a two paragraph response to the article.

- The first paragraph should summarize the news article in at least 5 to 6 sentences.
- The second paragraph should offer your personal response to the news in 5 to 6 sentences. Make sure to articulate why you feel the way that you do. Two possible examples of a personal response could be:
 - Excitement over the possibilities due to this discovery (A new drug is able to find and target specific cells in the body - that means it could potentially target just cancer cells!)
 - Hesitation over the possibilities due to this discovery (Meat can be grown entirely in a lab - but what does that mean for farmers?)

News article sources are listed below the rubric. You may find articles from outside these sources. Please either paste the url of the article below or print and attach to your assignment.

Article URL:

Write your paragraphs below.

	Possible Points	Earned Points
Article Choice	1 pt - Students pick a challenging but appropriate article.	
1st Paragraph	3 pts - Students summarize the article including all key points in 5-6 sentences.	
2nd Paragraph	3 pts - Students provide a personal response to the science news in 5-6 sentences. The response is thoughtful and shows that the students have thought about and understand potential implications of the discovery/news.	
Report - Grammar/Punctuation	3 pts - Report is nearly free of grammatical errors.	
Total		/10

News/Articles Sources:

<http://www.readworks.org> (requires a free account to access)

<https://www.sciencenewsforstudents.org/>

<https://www.studentnewsdaily.com/daily-news-article/>

<https://newsela.com/>

<https://www.nationalgeographic.org/news/>

<https://www.tweentribune.com/>

Incoming 7th Grade Math Summer Homework 2018

Dear Students and Parents,

I am very excited to have you or your student in my Math class this upcoming year! This packet will help you prepare for the content and the different problem types to be ready for the next school year. You will bring your packet to school in August, and we will spend a few days going over it in class.

Also along with the math packet, you will be required to completed at minimum, 2 lessons in Dreambox, 3 times a week. A total of 6 lessons a week. This program is designed around your needs and what you need work on. You will be filling out a journal that is provided, to show when and how long you worked and answer a question. You may do all 6 lessons at once or break it up. You may also do more than 6 lessons as well.

If you need help on any of the information that is in the packet, you may use different resources for help. There are a lot of helpful videos online. Mr. Dauenhauer's Youtube account has some videos, along with other helpful resources. If you truly get stuck on a problem, note that on your packet, then email me for assistance.

If you would like to do it completely digital, you may use Google Classroom to find your document. If you lose the packet that was given to you, you may find an addition packet on Google Classroom. When you have finished your packet, if you do it on paper, you may take a picture or scan it onto Google Classroom to turn it in. It will need to be turned in on Google Classroom. If you are having trouble uploading or with Google Classroom in general feel free to email me.

Looking forward for next year!

Mr. Dauenhauer

adauenhauer@stleonardlouisville.org

Resources

Youtube <https://www.youtube.com/channel/UCUdJYBbNLY-i0yzM9Y684Yw>

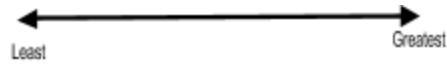
Dreambox <http://www.clever.com>

NAME: _____ DATE: _____

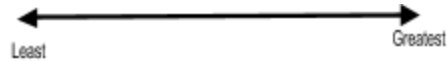
Fractions

1. Order the following sets of numbers on the number line from least to greatest.

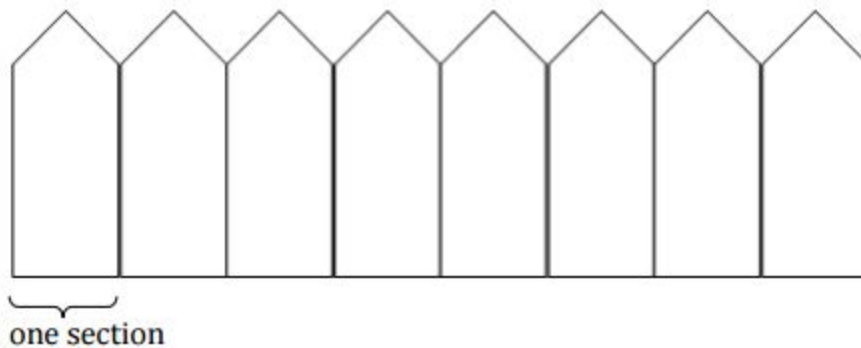
a.) $\frac{4}{5}, -\frac{2}{3}, -\frac{2}{6}, -\frac{3}{4}$



b.) $\frac{3}{8}, \frac{2}{9}, -\frac{3}{5}, -\frac{3}{5}$



2. Candy has to paint the fence shown below. If she can paint $\frac{2}{3}$ of **each** section in $\frac{1}{2}$ an hour, how long will it take her to paint the entire fence?



3. The snow at my uncle's house is up to $\frac{11}{12}$ feet. A new storm added $\frac{2}{3}$ feet. What is the snow level now?

4. Which one of the following fractions is not equivalent to the others?

a.) $\frac{12}{15}$

b.) $\frac{20}{25}$

c.) $\frac{25}{30}$

d.) $\frac{28}{35}$

5. A cupcake weighs $3\frac{1}{2}$ ounces. How many cupcakes are there in a 20-ounce package?

Number Sense and Operation

6. Mr. Dauenhauer bought 3.4 pounds of coffee that cost \$6.95 per pound. How much did he spend on coffee?
7. Which of the following quotients has the greatest value?
- a.) $0.075 \div 6$ b.) $7.5 \div 0.006$ c.) $0.75 \div 0.06$ d.) $0.75 \div 0.6$
8. Mr. Dauenhauer is planning on having a birthday party. He has 36 slices of pizza and 24 sodas. What is the maximum number of people he can invite so that each person gets the same number of slices of pizza and the same number of soda?
9. Write each phrase using numbers and symbols.
- a.) A number divided by 8.
- b.) A number less than 30.
- c.) The sum of a number and six, times three.
- d.) Twelve added to half of a number.

10. Use the table below to answer each question.

Continent	Highest Point	Elevation above sea level (ft.)	Lowest Point	Elevation below sea level (ft.)
Africa	Mt. Kilimanjaro	19,340	Lake Assal	-512
Asia	Mt. Everest	29,035	Bentley Subglacial Trench	-8,327
Australia	Mr. Kosciusko	7,310	Lake Eyre	-52
Europe	Mt. Elbrus	18,510	Caspian Sea	-92
North America	Mt. McKinley	20,320	Death Valley	-282
South America	Mt. Aconcagua	22,834	Valdes Peninsula	-131

a.) What is the highest elevation on Earth? What is its elevation?

b.) What is the lowest elevation on Earth? What is its elevation?

c.) Which point on Earth is higher - Mt. Elbrus or Mt. Kilimanjaro?

d.) Which point on Earth is lower - Caspian Sea or Lake Eyre?

11. Mr. Dauenhauer and his friends played basketball. Their scores at the end of the game were 14, 15, 8, 16, 3, 0, and 12.

a.) Find the median.

b.) Find the mode.

c.) Find the average.

12. The average temperatures for one week in Alaska are as follows:

10, 6, 9, 6, 2, 0, 3

a.) Find the median.

b.) Find the mode.

c.) Find the average.

13. If you can buy 8 gallons of gas for \$25.60, what is the **cost per gallon?**

14. The ratio of girls to boys in a seventh grade class is 5 to 7. Using this information, which of the following statements are possible?

a.) 15 boys are in the class

c.) 10 girls are in the class

b.) 24 people are in the class

d.) 35 people are in the class

15. You took a 20 question test and received a 65% on it. How many questions did you answer correctly?

Geometry

16. Calculate the area of the rectangle below.

Area = Length x Width

17. If the perimeter of Milo's rectangular backyard is 16 feet. Which of the following could be the dimensions of the yard? Circle all that apply?

a.) 6 feet by 2 feet

b.) 4 feet by 3 feet

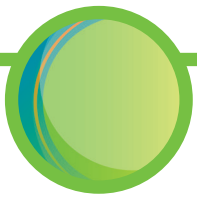
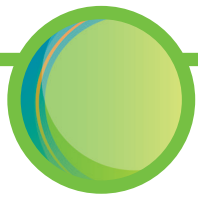
c.) 7 feet by 9 feet

d.) 3 feet by 5 feet



Summer Math Journal

NAME: _____



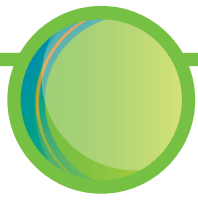
Week: ___ Start Date: ___/___/___	Lessons Completed	Start	Finish
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Incoming 7th & 8th Grade Language Arts Summer Homework 2018

Dear Students and Parents,

I am so excited to have your student in my Language Arts class next year! Attached is information regarding the summer reading assignment. **Once again, this year's assignment, will have everyone in each grade level reading the same book.** In having everyone reading the same novel over the summer, students can practice their reading, comprehension, and critical thinking skills. When we return to school in August students will have the opportunity to participate in deep discussions of character analysis, theme, author's purpose, and more. **There will also be a book test within the first two weeks of classes.**

While reading students will complete a "Reader's Notebook." This will be a digital interactive notebook distributed to them through Google Classroom on 5/23/18. Students who successfully complete the readers notebook will earn a completion grade of 20/20. Objective summative assignments will be given and assessed when school resumes in August.

Summer Reading- Assigned Books:

7th grade: *Mrs. Frisby and the Rats of NIMH* by Robert C. O'Brien

8th grade: *The Boy in the Striped Pajamas* by John Boyne

Both books should be easily accessible through LFPL, Amazon, Barnes and Noble, etc. I even found some copies at Half Price Books!

Please feel free to e-mail me with any questions or concerns.

Enjoy your break!

-Mrs. Schepers

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