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 it's 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 cm^3). An example would be g/mL or kg/cm^3.

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 if 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 it thoughtful and shows that the students have thought about and understand potential implications of the discovery/news.		
Report - Grammar/ Punctuatio n	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 8th Grade
Math Summer Homework 2017

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-ioyzM9Y684Yw
Dreambox http://www.clever.com

NAME:_____ DATE:_____

Expressions

1. Simplify the following expressions.

    a.) -10 + 4   b.) 2 - ½ x 4   c.) (15 - 3) ÷ 2 x 3

    d.) $\dfrac{3^2 - 11 \times 3}{-2 \times 4}$ e.) $-3\,(-1 + 4)^2$ f.) -5x + 4 -x

2. Find the value of the expressions below if **a = -2** and **b = 3**.

    a.) 3a + 4   b.) a - 2b   c.) $\dfrac{-4b}{a}$

3. Determine which situation below can be represented by the expression: 3x - 6

    a.) Jeff has six pencils less than a third of the amount of pencils Rob has.

    b.) Jeff has six pencils more than triple the amount of pencils Rob has.

    c.) Jeff has six pencils less than triple the amount of pencils Rob has.

    d.) Jeff has six pencils more than a third of the amount of pencils Rob has.

Solving Equations

4. Solve the following equations.

    a.) -21 = 3x + 6   b.) 2y - 5 = 1   c.) 3m = m

Proportions

5. Jackie McSpeedy can run 5 miles in 30 minutes. How far can Jackie run in two hours?

6. Mr. Smith can type 3 pages in 15 minutes. How many pages can he type in 45 minutes?

7. Chad went to the mall and bought a shirt that was originally $40, but was on sale for 25% off. How much did Chad pay for his shirt?

8. Sarah got 32 questions correct on an exam that had 50 questions. What percent did Sarah get correct on her exam?

Graphing

9. Label the four quadrant on the coordinate plane below.

10. Plot the following points on the coordinate plane below. Label your points.

11. Determine the coordinates of the points below.

12. Determine which equation represents the following graph below.

a.) $y = x$

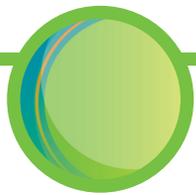b.) $y = 1.5x$

c.) $y = 2x$

d.) $y = 3x$

13. Graph the following equation on the coordinate plane below.

a.) $y = x$

dreambox
LEARNING

Summer Math Journal

Week:___ Start Date:__/__	Lessons Completed	Start	Finish
Session 1		__:__	__:__
Session 2		__:__	__:__
Session 3		__:__	__:__

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Session 1		__:__	__:__
Session 2		__:__	__:__
Session 3		__:__	__:__

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Session 1		__:__	__:__
Session 2		__:__	__:__
Session 3		__:__	__:__

Week:___ Start Date:__/__	Lessons Completed	Start	Finish
Session 1		__:__	__:__
Session 2		__:__	__:__
Session 3		__:__	__:__

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.

<u>**Summer Reading- Assigned Books:**</u>
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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7/8 Language Arts and Social Studies
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