

**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 5th and 6th Graders

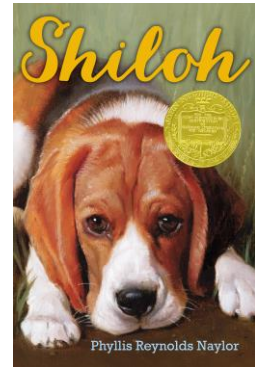
Language Arts Summer Work 2018

Hello parents and students,

Here are the books assigned for incoming fifth and sixth graders for summer Language Arts reading. Hope you like them.

5th Grade

This summer, the only reading assignment I have for incoming fifth graders is to read the book *Shiloh* by Phyllis Reynolds Naylor. Some of them might have already read it, but that is okay. After reading it, please complete the brief Summer Reading Notes document. Over the first week or so of class, we will review it together. After that, we will have a vocabulary test over it.

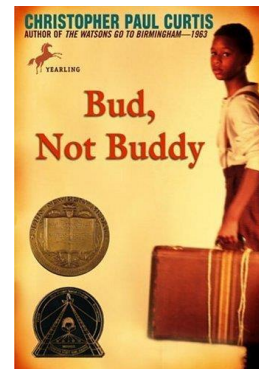


During fifth grade, I like to start to get the kids to not only read for comprehension, which is obviously very important, but to also read critically and look at the theme and even how it is written (say, first person vs. third person). So, if your son or daughter wants to wait until later in the summer to read so they can retain it better, that seems fine as well. I really hope they just can start to enjoy reading (if they do not already).

Please let me know if you have any questions. I found a copy of the novel at Half Price Books for \$2.99, so you should be able to find it easily and inexpensively.

6th Grade

Our Language Arts reading for the summer will be a novel *Bud, Not Buddy* by Christopher Paul Curtis. After reading it, please complete the brief Summer Reading Notes document. You can find copies of the novel on Amazon, at the library, and at most bookstores, including Half Price Books.



We will discuss its plot and themes over the first days of school and have a vocabulary test soon after. If your son or daughter wants to wait until later in the summer to read it, don't be too alarmed. That might help them retain the story better.

Feel free to email me with any questions at kzedelmeier@stleonardlouisville.org. Thanks and have a good summer.

Kevin Sedelmeier

5th Grade Homeroom

5th-6th grade Language Arts and Social Studies

St. Leonard School

Incoming 6th 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: _____

Number Sense and Operation

1. Circle all numbers that will round to 100.

- a.) 49 b.) 51 c.) 104 d.) 149 e.) 152

2. Circle all numbers that will round to 500.

- a.) 451 b.) 550 c.) 449 d.) 501 e.) 1000

3. Circle the largest number that rounds to 200.

- a.) 199 b.) 204 c.) 249 d.) 250

4. Explain why you chose that answer for number 3.

5.

6. If you bought 6 pairs of socks for \$2.95 each, how much change should you receive if you paid with a \$20 bill? **Show your work.**

7. An auditorium has 132 rows of seats. There are 48 seats in each row. How many total seats are there? **Show your work.**

8. You and your friend spent a total of \$10.50 at Taco Bell. You shared the bill equally and then you spent an additional \$1.50 of your money on Cinnamon Twist. How much did you spend all together? **Show your work.**

9. Solve. **Show your work.**

a.) $615.9 \div 3 =$ _____

b.) $64.09 + 4.1234 =$ _____

c.) $64.87 - 4.129 =$ _____

d.) $615.2 \times 36 =$ _____

10. Divide. Fill in the missing numbers to show long division.

Number Theory

11. Circle the prime numbers. 1 2 11 27 39 51

12. Dylan's car can hold a maximum of 18 gallons of gas. Since 18 rounds to 20, he figures he can drive to Washington, D.C (which is a 20 gallon trip) without refueling. Is his thinking correct? Explain your answer.

13. Can 5 mice equally share 86 pieces of cheese? How can you tell without using division? Explain.

14. Find the least common multiple (LCM) for the following pairs of numbers.

LCM of 8 and 10 = _____

LCM of 15 and 20 = _____

15. Find the greatest common factor (GCF) for the following pairs of numbers.

GCF of 9 and 36 = _____

GCF of 15 and 20 = _____

Fractions

16. Imagine you really love pizza and are really hungry, would you rather have $\frac{6}{8}$ of a pizza or $\frac{2}{3}$ of a pizza? Explain.

17. Write the following fractions in the correct box below.

$$\frac{5}{8} \quad \frac{5}{6} \quad \frac{92}{98} \quad \frac{5}{4} \quad \frac{3}{8} \quad \frac{1}{6} \quad \frac{9}{20}$$

Closest to 0

Closest to $\frac{1}{2}$

Closest to 1

18. You have 24 coins in your piggy bank.

a.) If $\frac{1}{2}$ of the coins are quarters, how many coins are quarters? _____

b.) If $\frac{1}{4}$ of the coins are nickels, how many coins are nickels? _____

19. Mr. D's dog took a bite out of his training schedule! Use the schedule shown below to answer the questions that follow.

a.) From Monday to Thursday, how many miles did Mr. D run?

b.) If Mr. D ran a total of 25 miles this week, how far did he run on Friday?

Coordinate Grid

20. Give the ordered pairs for points X, V and Y:

X: _____

V: _____

Y: _____

21. Use the grid from #19 to plot and label the following points:

A (0, 8) B (10, 7) C (6, 3)

22. Calculate the volume of the prism given the following information.

$$V = L \times W \times H$$

23. Find the missing dimension given the volume.

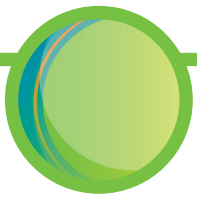
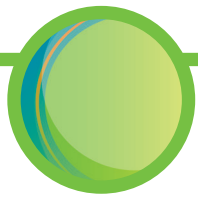
$$V = L \times W \times H$$

$$V = 189 \text{ yd}^3$$



Summer Math Journal

NAME: _____



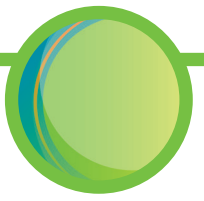
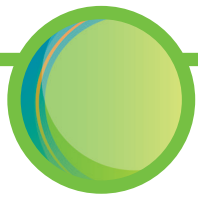
Week: ___ Start Date: ___/___/___	Lessons Completed	Start	Finish
Session 1		___:___	___:___
Session 2		___:___	___:___
Session 3		___:___	___:___

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