GRADE 8
SUMMER PACKET

ALL PACKETS MUST BE RETURNED ON THE FIRST DAY OF SCHOOL! SEPTEMBER 3RD, 2019

**NO EXCUSES**

NAME: ____________________________
GRADE 8
SCIENCE PACKET

PACKET MUST BE RETURNED ON THE FIRST DAY OF SCHOOL! *SEPTEMBER 3RD, 2019*

**NO EXCUSES**

NAME: ________________________________
POSTCARD DIRECTIONS

Did you have a scientific summer? The answer may surprise you. Most likely, you did not build a solar panel, or go digging for fossils. However, you did something over the summer that relates to science. How do I know this? Because... science is everywhere! Science doesn’t just live in a laboratory. You are surrounded by science in your everyday life, all the time.

For this assignment, you will create a postcard to your classmates which describes one activity you did over the summer and how science was involved. The requirements for this assignment are listed below.

Your postcard must include:

1. An illustration or real picture of the summer activity
   - Color required
   - Add detail to illustrated pictures
   - Sorry, no stick figures are allowed. Do your best to draw out the scene

2. A two paragraph written response
   1st Paragraph – a detailed description of one activity you did over the summer
   2nd Paragraph – a full scientific explanation telling the reader how this activity relates to science + key vocabulary words explained
   - Assume the reader has no prior knowledge of the terms

Remember:
★ This is a letter format, so you must include a salutation and a closing.
★ Proper spelling and grammar are required.
★ You will be reading your postcard to your fellow classmates (in small groups). So, please create a thoughtful postcard worthy of sharing.

Struggling with ideas on what to write about? Here are just a few of the endless possibilities:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Branch of Science</th>
<th>Example of Keywords to Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooking</td>
<td>Chemistry</td>
<td>chemical reaction, chemical change, energy, heat, fire</td>
</tr>
<tr>
<td>Hiking/Camping</td>
<td>Ecology</td>
<td>food chain, heterotroph, autotroph, producer, consumer, decomposer, predator, prey</td>
</tr>
<tr>
<td>Amusement Park</td>
<td>Physics</td>
<td>force, energy (potential and kinetic), gravity, inertia</td>
</tr>
<tr>
<td>Watching TV</td>
<td>Physics</td>
<td>electromagnetic waves, electricity, pixels</td>
</tr>
<tr>
<td>Got a tan?</td>
<td>Biology</td>
<td>skin, UV radiation, pigment, melanin</td>
</tr>
<tr>
<td>Star Gazing</td>
<td>Astronomy</td>
<td>star, planet, galaxy, nuclear fusion</td>
</tr>
<tr>
<td>Gardening</td>
<td>Botany</td>
<td>photosynthesis, soil, flower, fruit, xylem, phloem</td>
</tr>
</tbody>
</table>

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### Postcard Grading Rubric

<table>
<thead>
<tr>
<th>Category</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description of Summer Activity</strong></td>
<td>You have sufficient detail. The reader can clearly visualize the activity.</td>
<td>Your description includes detail, but needs to be more specific.</td>
<td>Your description includes some detail, but not enough to easily visualize the activity.</td>
<td>Your description is extremely lacking. The reader only gets a vague idea of what occurred.</td>
</tr>
<tr>
<td><strong>Science Vocabulary</strong></td>
<td>Relevant vocabulary is present/explained. It is clear that you thoroughly researched the topic.</td>
<td>Relevant vocabulary is present/explained. The explanation may be somewhat lacking in clarity.</td>
<td>Relevant vocabulary is present, but some vocabulary terms are insufficiently explained.</td>
<td>Very little (if any) vocabulary words are present/explained.</td>
</tr>
<tr>
<td><strong>Science Explanation</strong></td>
<td>Your postcard demonstrates a thorough understanding of the science concepts.</td>
<td>Your postcard demonstrates an above average knowledge of the science concepts.</td>
<td>Your postcard demonstrates a partial understanding of the science concepts.</td>
<td>There is little, if any, explanation of the science concepts behind the activity.</td>
</tr>
<tr>
<td><strong>Illustration or Real Photo of Event</strong></td>
<td>Your illustrations are related to the topic. Your drawing detail and color application is exemplary.</td>
<td>Your illustrations are related to the topic. Your drawing detail and color application is above average.</td>
<td>Your illustrations are related to the topic. However, there is a lack of detail and/or color to your pictures.</td>
<td>Your illustrations are extremely incomplete.</td>
</tr>
<tr>
<td><strong>Grammar, Spelling, Mechanics</strong></td>
<td>You have 0-1 errors in grammar, spelling, or mechanics.</td>
<td>You have 2-3 errors in grammar, spelling, and/or mechanics.</td>
<td>You have 4-5 S errors in grammar, spelling, and/or mechanics.</td>
<td>You have 6 or more errors in grammar, spelling, and/or mechanics.</td>
</tr>
</tbody>
</table>

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Lafayette Street School & Annexes

Summer Math Packet
Incoming 8th Grade

Mrs. Amaral
CLASS OF 2020

Student Name: ________________________

Room: ______________________________

Date: _______________________________
ORDER OF OPERATIONS

Objective: To evaluate expressions using the order of operations.

Example 1

Simplify $9 ÷ 3 + 4 \cdot 7 - 20 ÷ 5$

Solution

$\frac{9}{3} + 4 \cdot 7 - \frac{20}{5}$
$3 + 28 - 4$ Divide 9 by 3.
$31 - 4$ Multiply 4 and 7.
$27$ Divide 20 by 5.
$Add$ Add 3 and 28.
$4$ Subtract 4 from 31.

Example 2

Simplify $8 - [(3 \cdot 4) - 5]$.

Solution

$8 - [12 - 5]$ Simplify the innermost parentheses first.
$8 - 7$ Then the [ ] grouping.
$1$ Subtract.

Find the value of each expression. Show ALL work.

1. $8 + [(16 - 6) ÷ 2]$
2. $16 - 3[9 - 2(5 - 3)]$
3. $[(4 + 8) ÷ 6] \cdot 3$
4. $(8 + 16) ÷ (12 - 9)$
5. $\frac{30}{3(5 - 3)}$
6. $14 \cdot [(15 - 7) ÷ 4]$
EVALUATING EXPRESSIONS

Objective: To evaluate an algebraic expression.

Example 1

Evaluate the expression \(c+b-23\) if \(c=25\) and \(b=16\).

Solution
\[
c+b-23 = 25+16-23 \quad \text{Substitute the given values for the variables.}
\]
\[
= 41-23 \quad \text{Simplify by adding 25 and 16.}
\]
\[
= 18 \quad \text{Subtract 23 from 41.}
\]

Example 2

Evaluate the expression \(2x+(3y-z)+7\) if \(x=5\), \(y=2\), and \(z=4\).

Solution
\[
2x+(3y-z)+7 = 2\cdot 5+(3\cdot 2-4)+7 \quad \text{Substitute the given values.}
\]
\[
= 10+2+7 \quad \text{Simplify by multiplying inside parentheses first.}
\]
\[
= 19 \quad \text{Multiply 2 times 5 and subtract 4 from 6.}
\]

Evaluate each expression if \(x=2\) and \(y=-3\). Show ALL work.

1. \(2x-y\) 
2. \(3y-(2-x)\) 
3. \((7+x)(y-1)\)

Evaluate each expression if \(r=6\) and \(t=8\). Show ALL work.

4. \((r-4)+2t\) 
5. \([10-(r+3)]+2t\) 
6. \([3\cdot(t+1)]-r\)
COMBINING LIKE TERMS

Objective: To simplify an algebraic expression by combining like terms.

Example 1

Simplify the expression $3x + 5 - 9 - x$.

Solution

$3x - x + 5 - 9$ Rewrite expression so that like terms are together.

$2x - 4$ Combine the like terms.

Example 2

Simplify the expression $6x - 15 - 4x - (-8)$.

Solution

$6x - 4x - 15 - (-8)$ Rewrite expression so that like terms are together.

$2x - 7$ Combine $6x - 4x$ and $-15 - (-8)$.

Simplify each expression. Show ALL work.

1. $7x + 5 + 2x$
2. $6 + 9x - 3$
3. $4y - 7y + 6$

4. $-8m + 3 + 10 + 3m$
5. $-7w - 6k + 4w$
6. $-11g + 8h - 3g - 7h$

7. $-14b + 7y - 5b - 10y$
8. $6x - 15 - 4x - (-8)$
9. $-2m + 9 - 4m - 13$
DISTRIBUTIVE PROPERTY

Objective: To simplify an algebraic expression by using the distributive property

Example 1

Simplify the expression $2(x+3)$.

Solution

$2(x+3)$ Distribute the 2 by multiplying it by the $x$ and 3.

$2x + 6$

Example 2

Simplify the expression $3(2x+y-1)$.

Solution

$3(2x+y-1)$ Distribute the 3 by multiplying it by $2x$, $y$, and $-1$.

$6x + 3y - 3$

Simplify each expression. Show ALL work.

1. $2(x+4)$

2. $-3(x+5)$

3. $2(3x-6)$

4. $8(5-4x)$

5. $-7(1+4x)$

6. $5(3x-10)$

7. $-4(x+y-8)$

8. $2(-x+2y-11)$

9. $\frac{1}{2}(x+4)$
SOLVING ONE STEP EQUATIONS

Objective: To solve equations using one transformation.

Example 1

a. Solve for $x$.

\[
\begin{align*}
x + 7 &= 10 \\
x + 7 &= 10 \quad \text{(Isolate } x, \text{ think opposite of } +7) \\
-7 &= -7 \quad \text{(Subtract 7 from both sides)} \\
x &= 3
\end{align*}
\]

b. Solve for $x$.

\[
\begin{align*}
\frac{x}{7} &= 3 \\
(7)\frac{x}{7} &= 3(7) \quad \text{(Multiply both sides by 7)} \\
x &= 21
\end{align*}
\]

Solve for $x$. Circle your final answer. Show ALL work.

1. \(x + 2 = 13\) 
2. \(4x = 48\) 
3. \(x + 9 = 8\)

4. \(x - 5 = -5\) 
5. \(\frac{x}{4} = -2\) 
6. \(x + 14 = 7\)

7. \(x - 10 = 23\) 
8. \(-6 = \frac{x}{3}\) 
9. \(-6 + x = -13\)

10. \(\frac{2}{3}x = 8\) 
11. \(5x = 35\) 
12. \(18 = -3x\)
SOLVING TWO STEP EQUATIONS

Objective: To solve equations using two transformations.

Example 1

a. Solve for x.
   \[ 2x + 8 = 14 \]
   
   \[ 2x + 8 - 8 = 14 - 8 \quad \text{Subtract 8 from both sides} \]
   
   \[ 2x = 6 \]

   \[ \frac{2x}{2} = \frac{6}{2} \quad \text{Divide by 2 on both sides} \]
   
   \[ x = 3 \]

b. Solve for x.
   \[ \frac{x}{5} - 3 = -6 \]

   \[ \frac{x}{5} - 3 + 3 = -6 + 3 \quad \text{Add 3 to both sides} \]

   \[ \frac{x}{5} = -3 \]

   \[ 5 \cdot \frac{x}{5} = -3 \cdot 5 \quad \text{Multiply by 5 on both sides} \]

   \[ x = -15 \]

Solve for x. Circle your final answer. Show ALL work.

1. \[ 2x + 4 = 12 \]
2. \[ -3x + 8 = -4 \]
3. \[ 15 = -x - 7 \]

4. \[ 5x - 4 = 21 \]
5. \[ -8 = \frac{x}{2} + 3 \]
6. \[ \frac{x}{5} - 3 = 10 \]

7. \[ \frac{x}{4} + 5 = 16 \]
8. \[ 6x + 8 = 5 \]
9. \[ \frac{2}{3}x - 1 = 11 \]
SOLVING PROPORTIONS

Objective: To solve a proportion using cross-multiplication.

Example 1
Solve for \( x \).

\[
\frac{x}{4} = \frac{21}{7}
\]

(Cross-multiply)

\[
7x = 82
\]

(Divide both sides by 7)

\[
x = 12
\]

Reminder:
Cross-multiplying creates an equation that you already know.

Solve each proportion for \( x \) using cross multiplication. Circle your final answer. Show ALL work.

1. \( \frac{x}{9} = \frac{4}{12} \)

2. \( \frac{5}{x} = \frac{9}{27} \)

3. \( \frac{7}{16} = \frac{x}{32} \)

4. \( \frac{x}{35} = \frac{2}{5} \)

5. \( \frac{1}{3} = \frac{2x}{18} \)

6. \( \frac{20}{12} = \frac{5}{3x} \)
ELA SUMMER PACKET
(7TH GOING INTO 8TH GRADE)

- This packet will be used as a grade for the first marking period
- This packet is designed to help you maintain your reading, writing and analyzing text skills that you have learned in 7th grade
- The packet will be due the first day of school.

Name: ________________________________
**Directions:**

**Part 1:**
You must read *one fiction* book of your choice and complete a book report template as well as the final report *typed*. Attach the final *typed* book report.

The book must be *at least 200 pages long*.

**Part 2:**
Read the attached article, "Stomp out Bullying!" and answer the writing extended response.

Answer the quiz as well which is attached.
Book Report Template

As you read the book, fill in the sections for this outline. You will receive a grade for this template and for the report (see points next to each item). When you go to write your book report, be sure to include the information completed on the following pages. The final report must be typed and double spaced. Be sure to hand into your Reading teacher both this template and the book report when you return to school. Introductory paragraph -What is the name and author of the book on which you are choosing to write? (2 pts.)

Introductory paragraph -What is the name and author of the book on which you are choosing to write? (2 pts.)

Book title: ____________________________________________
Author: ______________________________________________

Write at least 3 facts about the author (Where is he/she from? What kinds of books does he/she write? About what topics does he/she write?) (3 pts.)

• ____________________________________________________
• ____________________________________________________
• ____________________________________________________

2nd paragraph
Write 1-2 sentences that give a brief summary of the book (ex: Loser is the story of Donald Zinkoff, a student who struggles to stand strong even though he is constantly teased by his classmates.

• ____________________________________________________
Write 2-3 sentences that describe the setting of the book (Where and when does the story take place? How is the setting significant to the story?) (8 pts)

•

•

•

3rd paragraph

Write a topic sentence about the major characters of the book (ex: There are several main characters involved in the book The Giver) (8 pts)

•

Describe the main characters in the book in the 2nd paragraph (you may have 2, 3, 4, 5 or more important characters). Include characteristics of the characters that are important to the story.

•

•

•

•

•

4th paragraph

Write a topic sentence about the main events that occur in the book (ex: There are several main events that happen in the story of The Giver) (10 pts)

•

Include the main events of the book in the 4th paragraph:

• First,

• Next,

• Then,

• Finally,
The 5th paragraph will discuss a section of the book you found to be most interesting. Start out this paragraph with the following quote.

"The part of the book I found to be most interesting is around page _______, when . . . ."
(jot down some of the interesting details here) (4 pts.)

Give at least 2 reasons why this part is interesting to you:

•

•

The 6th paragraph will tell why you liked or disliked the book

The topic sentence should include whether you liked or disliked the book.

•

Include 3-4 sentences that tell why you liked, or disliked or the book. (6 pts.)

•

•

•

•
Stomp Out Bullying!

Maybe it's name-calling. Maybe it's mean text messages. Maybe it's spreading rumors. No matter what form it takes, bullying is a serious problem. Luckily, it's a problem that communities, schools, national organizations, and some celebrities are trying to stop—but they need your help.

A Serious Problem
Consider this: One in four people age 18 or younger is bullied, and one in five admits to bullying someone else. Forty-two percent of young people have been bullied online.

What are the consequences of all this bullying? Ashley Gordon, 14, of Coral Springs, Florida, explains what happens to kids who are bullied: "It affects their self-esteem. It makes them not want to come to school."

Every day, 160,000 students miss school in the U.S. to avoid being bullied. Victims of bullying may also suffer from depression and anxiety. They can have trouble concentrating in school or sleeping at night. The good news is that many people are working hard to put an end to bullying once and for all.

Working for Change
Stomp Out Bullying and the National Center for Bullying Prevention are two organizations working to put an end to the epidemic. Both have Web sites packed with information for students and adults. The singer Demi Lovato volunteers with both groups. Lovato joined musicians Jojo and Naturally 7, to promote National Bullying Awareness Week last October.

Many schools have established anti-bullying programs. Some, such as Mountain Trail Middle School in Phoenix, Arizona, use a bullying prevention program called Olweus (ol-VEY-us). The program includes training for school staff members and meetings for students, parents, and community members.
Teacher Betsy Kaufman is on Mountain Trail’s Olweus committee. She says she has seen a difference at her school since starting the program last year. "It created a new awareness, and we have a common language now," she says.

Other schools have set up their own anti-bullying programs. Some have tip lines that students can call anonymously to report bullying, or peer counseling systems that help with bullying situations. Many schools have also established clear consequences for bullying.

**Speak up**

National awareness campaigns and school programs can do a lot—but only with students’ help. Both victims and bystanders (those who witness bullying) must speak up. And yet, many students are reluctant to do so.

Some students don’t report bullying because they don’t want to be labeled a "tattler." But telling an adult about bullying has nothing to do with tattling. Mountain Trail student counselor Teresa Young puts it this way: "You tattle to get someone into trouble. You report to get someone out of trouble."

Another reason both victims and bystanders may keep quiet is fear of retaliation. Mountain Trail student Sarah McCarthy, 12, says that some kids think "if they were to speak up, they would be bullied even more."

So what’s the solution? The experts agree: Be strong, and speak up anyway. It’s the only way to send the message to bullies that what they are doing is not going to be tolerated. Trust that adults can help—because they can. "More often than not, adults' intervening makes the situation get resolved," says Young. "If we continue to let someone rob our house because we’re afraid of tattling on the robbers, well, that person is going to continue to rob our house. I see [bullying] as very similar."

-JENNIFER DIGNAN

SCHOLASTIC SCOPE FEBRUARY 8, 2010
Extended Response Question for Nonfiction Article "Stomp Out Bullying"

Directions: Imagine that you have been asked to give a speech encouraging other students to speak up when they witness bullying. Write that speech.