

# *Summer Instructional Packets*



## *Language Arts* *Grade 8*

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Formal versus Informal English Worksheet

**Formal English** is used most often when you do not know a person or are meeting them for the first time. You pronounce words more carefully and don't use as many contractions such as aren't, isn't, wasn't... You may want to know formal English to read a book, write a letter, resume, or invitation.

**Informal English** is used in everyday conversations and in personal writing such as letters, emails, or texts. Sentences tend to be simpler and shorter. Examples may include; hey, wassup, howdy, holla, cool, awesome....

Directions: Read each sentence and label it formal or informal.

*Example A: Let us go to the park today to throw our Frisbee.*

*Answer: Formal*

1. Can you pass the potatoes please? \_\_\_\_\_
2. I am having a very good day today. \_\_\_\_\_
3. Yo, look at that zebra in the cage! \_\_\_\_\_
4. Your hair looks very nice today. \_\_\_\_\_
5. That movie was awesome! \_\_\_\_\_
6. Dude, where's my car? \_\_\_\_\_
7. Are you going to the rehearsal dinner tonight? \_\_\_\_\_
8. I haven't eaten a thing for awhile. \_\_\_\_\_
9. Holla if you hear me! \_\_\_\_\_
10. Good morning, my name is John. \_\_\_\_\_
11. Mornin' sir, nice to see ya. \_\_\_\_\_

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### General and Precise Words Worksheet (Verbs)

A general word is a word that you use in everyday language. A precise word is a higher level word that has a similar meaning to the general word.

Directions: Write a precise verb for each general verb listed on the lines given below.

*Example A: run- sprint*

1. help- \_\_\_\_\_

2. hug- \_\_\_\_\_

3. laugh- \_\_\_\_\_

4. move- \_\_\_\_\_

5. obey- \_\_\_\_\_

6. practice- \_\_\_\_\_

7. fix- \_\_\_\_\_

8. lift- \_\_\_\_\_

9. shout- \_\_\_\_\_

10. talk- \_\_\_\_\_

11. disappear- \_\_\_\_\_

12. yell- \_\_\_\_\_

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### Verbs Worksheet (Active and Passive Voice)

A verb is a word that conveys action. Use the active voice to be shorter and more direct. In the passive voice, the subject receives the action of the verb.

Directions: Read the sentences below and label them "active" or "passive."

*Example A- The pyramids were built thousands of years ago.*

*Answer- Passive Voice*

1. Barack Obama was elected president in 2008. \_\_\_\_\_
2. Jason was kicked by Susana. \_\_\_\_\_
3. The waiter dropped the tray of drinks. \_\_\_\_\_
4. Michael was hurt by the passing ball. \_\_\_\_\_
5. David is going to the movies after school. \_\_\_\_\_
6. Lauren and Christina are eating out for lunch. \_\_\_\_\_
7. The cookies were eaten by the children. \_\_\_\_\_
8. The dog dug the tunnel in the ground. \_\_\_\_\_



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**Capitalization Worksheet (Circling Part 1)** ELA-Literacy.L.8.2

Capitalization is the writing of a word with its first letter as upper case and the remaining letters in lower case. Capital letters are used to start sentences and identify proper nouns.

**Directions:** Read each group of words below. Circle the word that should be capitalized.

*Example A: school      auditorium      washington school*

*Answer- Washington School*

1. david              boy              child
2. computer        microsoft        keyboard
3. barnes park      city              park
4. restaurant      subway          dinner
5. new york        state            city
6. state              country          oregon
7. statue            statue of liberty    monument
8. nebraska        midwest          plains

**Directions:** Read each sentence. Circle the word that should be capitalized.

9. susan walked with me home after school.
10. I traveled to wisconsin for the summer.
11. los angeles is very warm in the summer.

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**Spelling Worksheet (Writing Part 1)** ELA-Literacy.L.8.2

Directions: Write a spelling word from the box below to complete each sentence.

1. I tried to \_\_\_\_\_ falling down.
2. I looked over in an \_\_\_\_\_.
3. She wore a \_\_\_\_\_ on her neck.
4. We will have to \_\_\_\_\_ tomorrow.
5. They danced with a lot of \_\_\_\_\_.
6. I \_\_\_\_\_ the tall mountain.
7. People protested for world \_\_\_\_\_.
8. We will have a \_\_\_\_\_ during the day.
9. Does the country have \_\_\_\_\_ relations?
10. She \_\_\_\_\_ to help pay for lunch.

**Spelling Words**

1. climbed
2. symbol
3. peace
4. instance
5. barbecue
6. avoid
7. foreign
8. rhythm
9. offered
10. continue

Name: \_\_\_\_\_

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**Spelling Worksheet (Writing Part 2)** ELA-Literacy.L.8.2

Directions: Write a spelling word from the box below to complete each sentence.

1. The \_\_\_\_\_ stopped working.
2. That is my \_\_\_\_\_ team.
3. It is very \_\_\_\_\_ to cross that street.
4. Will you \_\_\_\_\_ the volume?
5. Do you know your true \_\_\_\_\_?
6. He tried to \_\_\_\_\_ from prison.
7. I \_\_\_\_\_ want you to go to bed.
8. Let me know all the \_\_\_\_\_.
9. Will you \_\_\_\_\_ the party?
10. The secret \_\_\_\_\_ protects the president.

**Spelling Words**

1. escape
2. dangerous
3. immediately
4. favorite
5. details
6. motor
7. arrange
8. identity
9. service
10. increase

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### Commas Worksheet (Part 1)

Commas you use in writing are similar to pauses you use in speech.

Directions: Rewrite the following sentences on the lines below. Add commas and other punctuation where needed.

1. After school she needs to walk home clean her room wash the dishes and then do her homework

---

---

2. Once he gets to the baseball game, John is going to buy a hotdog sit in his seat and try to catch a foul ball

---

---

3. After going to work he has to go to the grocery store to pick up fruits vegetables and canned food

---

---

4. She responded "Where are you going after school can I go too"

---

---

5. One of the greatest classes he ever took was after school as many of his friends left he had to go to band practice play the drums guitar and saxophone

---

---

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### Commas Worksheet (Part 2)

Commas you use in writing are similar to pauses you use in speech.

Directions: Rewrite the following sentences on the lines below. Add commas and other punctuation where needed.

1. Some of the planets in the sky are Jupiter Mars and Earth

---

---

2. My favorite football teams are the Chiefs Saints and Steelers.

---

---

3. Let us go to the mall movies and clothing store once we get off of school

---

---

4. When it is cold outside I would like to wear a sweater parka or beanie.

---

---

5. Some furniture that a house needs is a refrigerator stove and couch.

---

---

6. I love to go the movies when it is raining my friends are there and the theatre is not so crowded

---

---

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### Commas, Ellipses, Dash (Choosing Part 1 / L.8.2a)

A comma is used to separate and enclose phrases and clauses. (,)

An ellipsis indicates an omission from a direct quotation.(...)

A dash emphasizes certain material within a sentence. (-)

Directions: For each sentence below, place a comma, ellipses or dash to correctly complete each sentence.

*Example A: John said, "forgive my guilt \_\_\_\_\_ you will be thanked."*

*Answer: John said, "forgive my guilt ... you will be thanked."*

1. I would suggest \_\_\_\_\_ or should I say argue \_\_\_\_\_ that this must change.
2. In conclusion \_\_\_\_\_ I am very proud of you.
3. Dan explained, "wash the dishes \_\_\_\_\_ someday you will learn."
4. At the end \_\_\_\_\_ we all agreed on which road to take.
5. Three leaders \_\_\_\_\_ even new members \_\_\_\_\_ agreed.
6. Yes \_\_\_\_\_ you can attend my birthday party.
7. Rachel said, "I saw a comet rise \_\_\_\_\_ it will arrive."



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**Adding Punctuation Marks Worksheet** ELA-Literacy.L.7.2

Period (.)	Exclamation Mark (!)	Question Mark (?)
Comma (,)	Apostrophe (')	Quotation Mark (" ")

**Directions:** Re-write each sentence below and add the correct punctuation mark or marks where needed.

*Example A: Congratulations \_\_\_\_\_ You graduated with honors \_\_\_\_\_*  
*Answer: Congratulations! You graduated with honors!*

1. I am so excited to see my family for Christmas \_\_\_\_\_  
\_\_\_\_\_
2. Where is an exciting place to visit \_\_\_\_\_  
\_\_\_\_\_
3. Make sure to complete all your homework on time \_\_\_\_\_  
\_\_\_\_\_
4. John asked when are we going on a vacation \_\_\_\_\_  
\_\_\_\_\_
5. Terry Sam and Jeremy went to the movies together \_\_\_\_\_  
\_\_\_\_\_
6. Wow \_\_\_\_\_ What a wonderful event \_\_\_\_\_  
\_\_\_\_\_

# *Summer Instructional Packets*



## *Grade 8 Mathematics*

# TRANSFORMATIONS CHEAT-SHEET!

## REFLECTIONS:

- ✓ Reflections are a flip.
- ✓ The flip is performed over the "line of reflection." Lines of symmetry are examples of lines of reflection.
- ✓ Reflections are isometric, but do not preserve orientation.

### Coordinate plane rules:

Over the x-axis:  $(x, y) \rightarrow (x, -y)$

Over the y-axis:  $(x, y) \rightarrow (-x, y)$

Over the line  $y = x$ :  $(x, y) \rightarrow (y, x)$

Through the origin:  $(x, y) \rightarrow (-x, -y)$

## TRANSLATIONS:

- ✓ Translations are a slide or shift.
- ✓ Translations can be achieved by performing two composite reflections over parallel lines.
- ✓ Translations are isometric, and preserve orientation.

### Coordinate plane rules:

$(x, y) \rightarrow (x \pm h, y \pm k)$  where  $h$  and  $k$  are the horizontal and vertical shifts.

*Note: If movement is left, then  $h$  is negative. If movement is down, then  $k$  is negative.*

## DILATIONS:

- ✓ Dilations are an enlargement / shrinking.
- ✓ Dilations multiply the distance from the point of projection (point of dilation) by the scale factor.
- ✓ Dilations are not isometric, and preserve orientation only if the scale factor is positive.

### Coordinate plane rules:

From the origin dilated by a factor of " $c$ ":  $(x, y) \rightarrow (cx, cy)$

*From non-origin by factor of " $c$ ": count slope from point to projection point, multiply by " $c$ ," count from projection point.*

## ROTATIONS:

- ✓ Rotations are a turn.
- ✓ Rotations can be achieved by performing two composite reflections over intersecting lines. The resulting rotation will be double the amount of the angle formed by the intersecting lines.
- ✓ Rotations are isometric, and do not preserve orientation unless the rotation is  $360^\circ$  or exhibit rotational symmetry back onto itself.
- ✓ Rotations of  $180^\circ$  are equivalent to a reflection through the origin.

### Coordinate plane rules:

Counter-clockwise:	Clockwise:	Rule:
$90^\circ$	$270^\circ$	$(x, y) \rightarrow (-y, x)$
$180^\circ$	$180^\circ$	$(x, y) \rightarrow (-x, -y)$
$270^\circ$	$90^\circ$	$(x, y) \rightarrow (y, -x)$

## Exponent Rules

For  $a \neq 0, b \neq 0$

Product Rule	$a^x \times a^y = a^{x+y}$
Quotient Rule	$a^x \div a^y = a^{x-y}$
Power Rule	$(a^x)^y = a^{xy}$
Power of a Product Rule	$(ab)^x = a^x b^x$
Power of a Fraction Rule	$\left(\frac{a}{b}\right)^x = \frac{a^x}{b^x}$
Zero Exponent	$a^0 = 1$
Negative Exponent	$a^{-x} = \frac{1}{a^x}$
Fractional Exponent	$a^{\frac{x}{y}} = \sqrt[y]{a^x}$

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## Approximating Values Lesson

Using the value: 4,875.1289

- 1) Rewrite the value using 3 significant figures.
- 2) Round the value to the nearest 100.
- 3) Round the value to 2 decimal places.



### Explanation:

1) We are asked to rewrite the value in 3 significant figures. We would need to use the 3 largest non-zero number available and round based on the position of the ending place.  $4,875.1289 = 4,880$

2) We would need to first identify the hundreds place (4,875.1289). We would look at the integer in the tens place to tell us if we round up or down. If the value is 5 or more, round up. The tens place is 7, so we round up.

$$4,875.1289 = 4,900$$

3) Locate the last decimal place in question: 4,875.1289

Look to the next place (hundredths). If the value is 5 or more, round up. The value is 8 this means that we would round up.

$$4,875.1289 = 4,875.13$$





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**Approximating All Kinds of Values Worksheet 1****READ THE COLUMN HEADINGS CAREFULLY. THIS IS A MIXED EXERCISE.**

<b>Number</b>	<b>Round off to 2 significant figures</b>	<b>Round off to the nearest 100</b>	<b>Round off to 2 decimal places</b>	<b>Round off to the nearest whole number</b>
<b>84.2684</b>				
<b>5,268.7485</b>				
<b>12,885.471</b>				
<b>0.265874</b>				
<b>102.65287</b>				
<b>14,325.874</b>				
<b>55,874.026801</b>				
<b>1,245.26819</b>				
<b>0.5214867</b>				
<b>1,874.236</b>				
<b>100,587.036</b>				
<b>827.5412</b>				

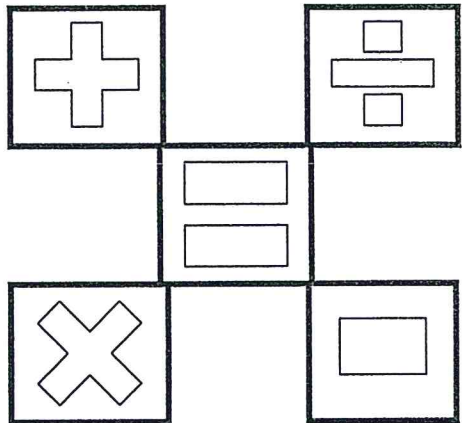




Name \_\_\_\_\_

### Order of Operations Practice Sheet 3

Solve. Round number to hundredth.

1. $14 + 12 + 6.1^2 = \underline{\hspace{2cm}}$	
2. $8 \times 2 \times 12.3^2 = \underline{\hspace{2cm}}$	
3. $5 \times 14.1 \div 2^3 = \underline{\hspace{2cm}}$	
4. $10^3 \times 6 - 6.5 = \underline{\hspace{2cm}}$	
5. $2 + 13.5^2 \div 10 = \underline{\hspace{2cm}}$	6. $10.1 \times 4.7^2 - 12 = \underline{\hspace{2cm}}$
7. $72 \div 6^2 \times 12.5 = \underline{\hspace{2cm}}$	8. $2.5^2 + 13.6 \div 1.6 = \underline{\hspace{2cm}}$
9. $6.2 - 4.7 + 3^3 = \underline{\hspace{2cm}}$	10. $10^3 \div 10 - 7.1 = \underline{\hspace{2cm}}$



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### Time Word Problems - Independent Practice Worksheet

Complete all the problems.



1. Tony takes 1 hour to bake a cake. He has to bake 15 cakes. How much time does he take to bake all the cakes?
2. Mack opens his shop at 6:30 a.m. and he closes his shop at 10:30 p.m. How long is his shop open for?
3. Lily goes to bed at 11:00 p.m. She sleeps for 8 hours. What time did she wake up?
4. An airplane takes off at 2:00 pm and lands at 3:30 p.m. How long did the plane travel?
5. A school bus takes 20 min to get each child. The bus transports 50 children every day. How much time does it take?
6. Jonson went to the doctor at 12:30 pm for a checkup. His check up was over at 3:30 p.m. How long did he spend with the doctor?
7. Alia went to the club at 2 p.m. She spent three hours there. At what time did she come out of the club?
8. Sam went to play pool at 7 p.m. He played pool for two hours. At what time did he stop playing?
9. On Wednesday, Max went to a movie at 9:30 p.m. The film was two hours long. At what time did the film end?
10. A lady went to the church for prayer at 1:00 p.m. She prayed there for two hours in church. At what time did she leave the church?



Name \_\_\_\_\_

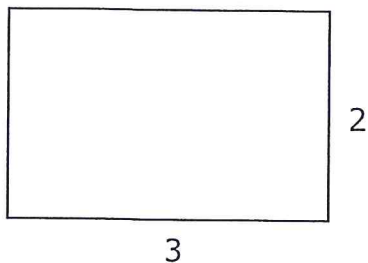
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**Simple Area of a Rectangle Independent Practice Worksheet:**

Complete all the problems. Find the area of the rectangles given below.

Find the perimeter too!

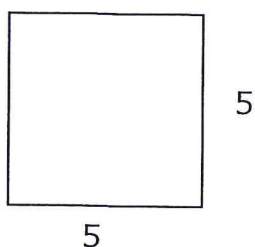
1.



$A =$  \_\_\_\_\_

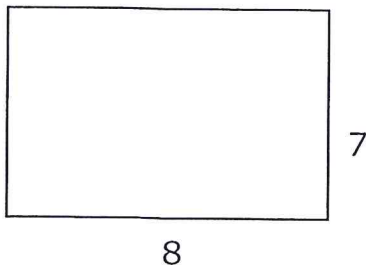
$P =$  \_\_\_\_\_

2.



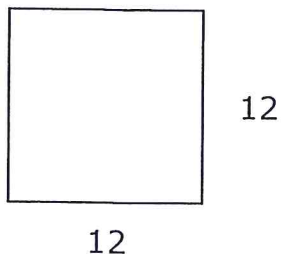
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3.



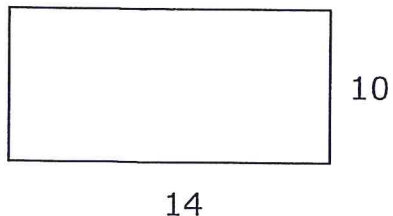
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4.



\_\_\_\_\_

5.



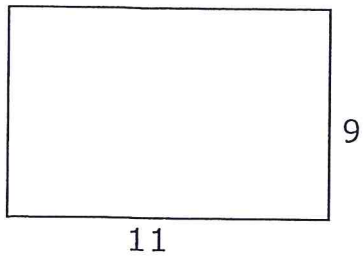
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Name \_\_\_\_\_

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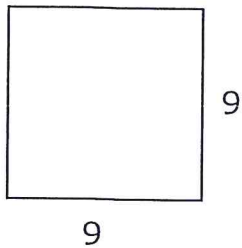
6.



$A =$  \_\_\_\_\_

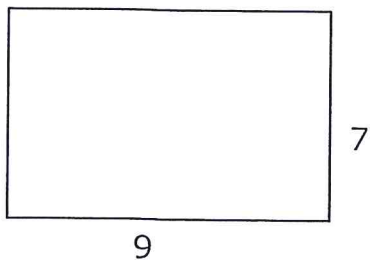
$P =$  \_\_\_\_\_

7.



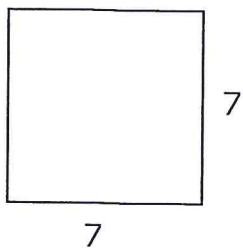
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8.



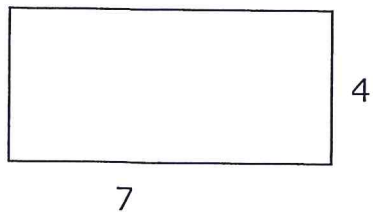
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9.



\_\_\_\_\_

10.



\_\_\_\_\_



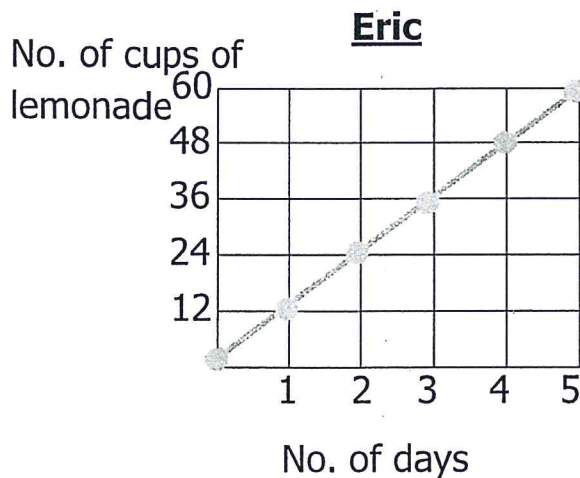
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**1.** What is  $\frac{38}{100}$  in decimal form?

- a) 38.0
- b) 3.8
- c) 0.38
- d) 0.038

**2.** Eric and Sarah both have lemonade stands. The graph below represents how many cups of lemonade Eric sells per day. The equation represents the rate at which Sarah makes lemonade. Who sold more cups of lemonade in 5 days?



**Sarah**

$$y = 10x$$

$x$  = No. of days

$y$  = No. of cups of  
lemonade

- a) Eric
- b) Sarah
- c) Neither; they sold the same amount.



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**3.** Express 754000000 in scientific notation.

a)  $75.4 \times 10^6$

b)  $7.54 \times 10^7$

c)  $7.54 \times 10^8$

d)  $75.4 \times 10^8$

**4.** Apply the negative exponent rule and simplify.

$$7^{-3}$$

a) 343

b)  $\frac{1}{343}$

c) 21

d)  $\frac{1}{21}$

**5.** Approximate the value of  $\sqrt{111}$  to the nearest tenth.

a) 10.1

b) 10.5

c) 10.9

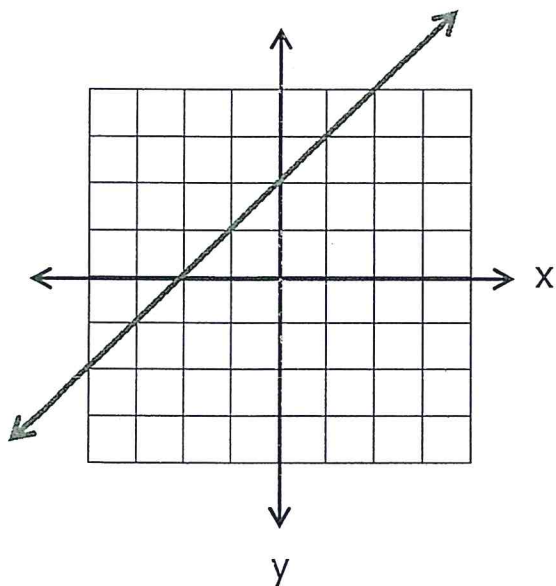
d) 11.1



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**6.** Write the equation of the line shown below.



a)  $y = 2x + 2$

b)  $y = 2x - 2$

c)  $y = x + 2$

d)  $y = x - 2$

**7.** Solve for the variable.

$$24 = 4(t + 12)$$

a)  $t = 6$

b)  $t = -6$

c)  $t = 2$

d)  $t = -2$

Name: \_\_\_\_\_

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**8.** In 2012, the population of New Zealand was approximately 4.43 million people. In the same year, the population of Belgium was approximately 11.14 million people. In 2012, how many more people lived in Belgium than in New Zealand? Express your answer using scientific notation.

- a)  $671 \times 10^6$
- b) 671,000,000
- c)  $6.71 \times 10^6$
- d)  $67.1 \times 10^6$



**9.** Simplify the expression.

$$3^4 \times 3^{-8}$$

- a)  $\frac{1}{81}$
- b) 81
- c) 6561
- d)  $\frac{1}{6561}$

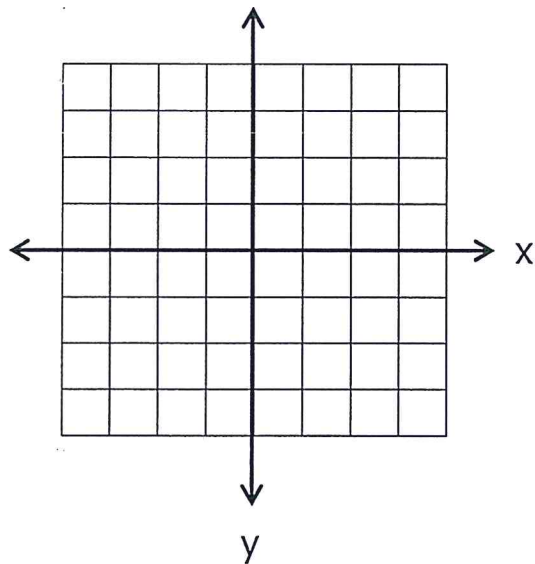
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**10.** Solve the system of equations by graphing.

$$y = 2$$

$$y = \frac{1}{2}x + 1$$



a) (0, 1)

b) (0, 2)

c) (1, 2)

d) (2, 2)

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**11.** Solve for x.

$$x^2 = \frac{16}{49}$$

a)  $x = \frac{4}{7}$

b)  $x = -\frac{4}{7}$

c) Both a and b.

d) Neither a nor b.

**12.** Jenny wants to build a square deck that is attached to the back of her house. Because the deck will be square, each side of it will be equal in length to the back of Jenny's house. When Jenny's deck is finished, its area will be  $324 \text{ ft}^2$ . What is the length of the back of Jenny's house?

a) 14 ft.

b) 16 ft.

c) 17 ft.

d) 18 ft.

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**13.** Given the equations of the lines, find the point where the two lines intersect.

Line A:  $y = 2x + 3$

Line B:  $y = -x$

a)  $(0, 0)$

b)  $(-1, 0)$

c)  $(-1, 1)$

d)  $(1, -1)$

**14.** Add. Express the sum using scientific notation.

$$5.4 \times 10^4 + 7.2 \times 10^5$$

a) 77,400

b)  $7.74 \times 10^4$

c)  $7.74 \times 10^5$

d)  $77.4 \times 10^3$

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**15.** Evaluate  $f(x) = 2x + 3$  for  $x = -5$ .

- a)  $f(x) = 5$
- b)  $f(x) = -5$
- c)  $f(x) = 7$
- d)  $f(x) = -7$

**16.** Which function has the greatest rate of change?

- a)  $y = 14x - 4$
- b)  $y = 2x + 3$
- c)  $y = 8x + 7$
- d)  $y = 10x + 12$

**17.** A line has a slope of two and passes through the point  $(-12, 8)$ . What is the equation of the line?

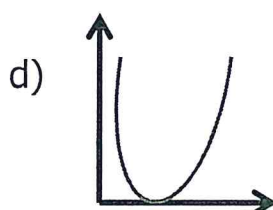
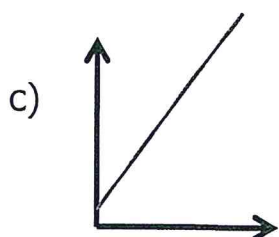
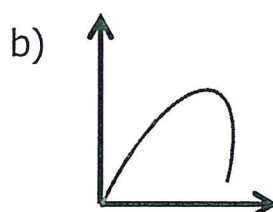
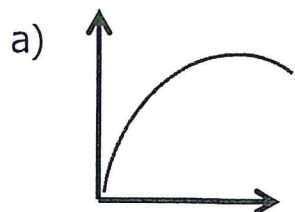
- a)  $y = 2x + 12$
- b)  $y = 2x - 12$
- c)  $y = 2x + 32$
- d)  $y = 2x - 8$



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**18.** Which graph below illustrates a linear function?



**19.** Which equation models the linear relationship shown in the table?

x	y
-6	-25
-3	-13
4	15
7	27

a)  $y = 4x + 2$

b)  $y = 4x - 1$

c)  $y = 3x + 2$

d)  $y = 3x - 1$

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**20.** Multiply. Express the product using scientific notation.

$$(3.2 \times 10^4) (5.5 \times 10^3)$$

a)  $17.6 \times 10^{12}$

b)  $17.6 \times 10^9$

c)  $1.76 \times 10^8$

d)  $1.76 \times 10^{13}$

**21.** Which of the following data tables shows a linear relationship?

a)

<b>x</b>	<b>y</b>
-2	-5
1	1
3	7
7	15

b)

<b>x</b>	<b>y</b>
-4	-9
-2	-5
4	7
12	23

c)

<b>x</b>	<b>y</b>
-6	-13
-1	-1
3	5
10	21

d)

<b>x</b>	<b>y</b>
-3	-2
0	-4
5	14
8	12

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**22.** Marina is renting a formal gown for a special event. The rental agency charges a one-time fee of \$105, plus \$75 for each day that Marina will keep the dress. Which equation below shows the cost in dollars (C), of Marina's dress rental as a function of the number of days (d) she will keep it?

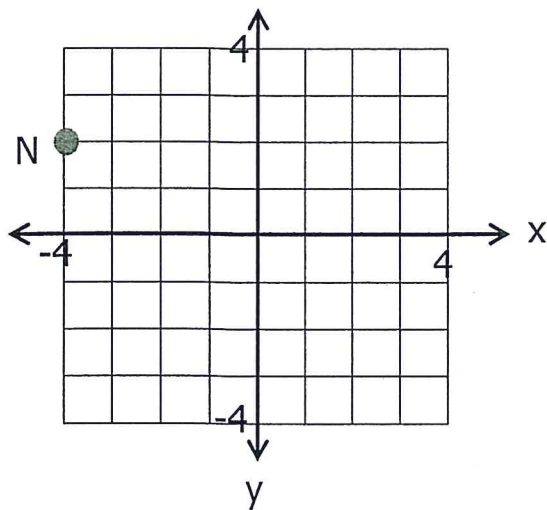
a)  $C = 75d + 105$

b)  $C = 75d - 105$

c)  $C = 105d + 75$

d)  $C = 105d - 75$

**23.** What will be the coordinates of the point N' if the point N (-4, 2) is rotated  $180^\circ$  clockwise around the origin?



a) (4, 2)

b) (4, -2)

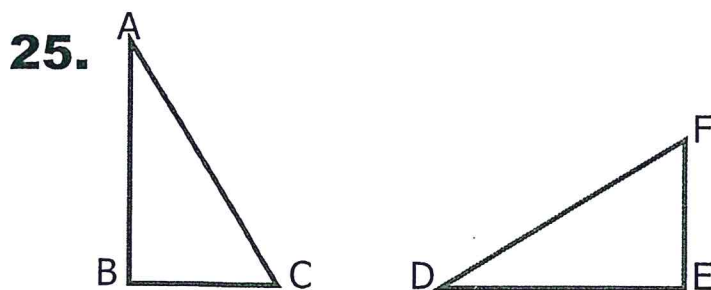
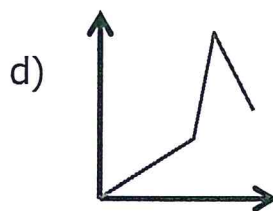
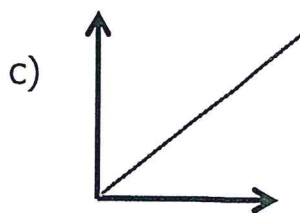
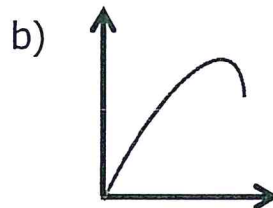
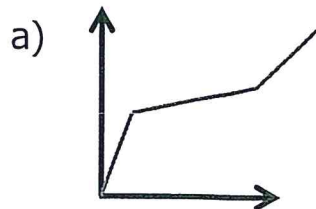
c) (-4, -2)

d) (-4, 2)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**24.** Jesse is running errands for his mother. First, he hires a taxi to drive him to the pharmacy. From there, he walks to the grocery store, and then he walks to the library. At the library, he meets his friend Gabby, who gives him a ride home in her car. Which graph below best illustrates Jesse's day?



Look at the two similar triangles. Which angle corresponds to  $\angle C$ ?

a)  $\angle B$

c)  $\angle E$

b)  $\angle D$

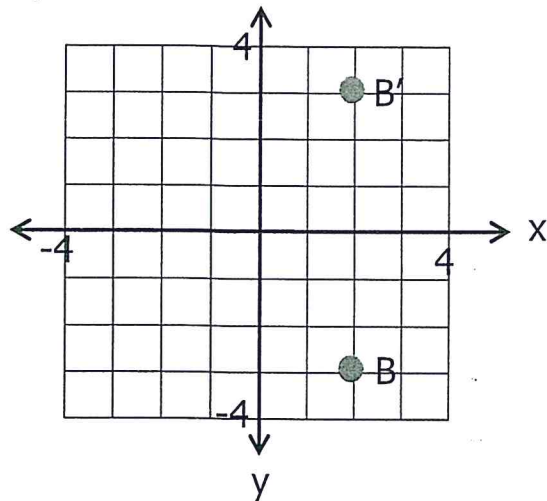
d)  $\angle F$

Name: \_\_\_\_\_

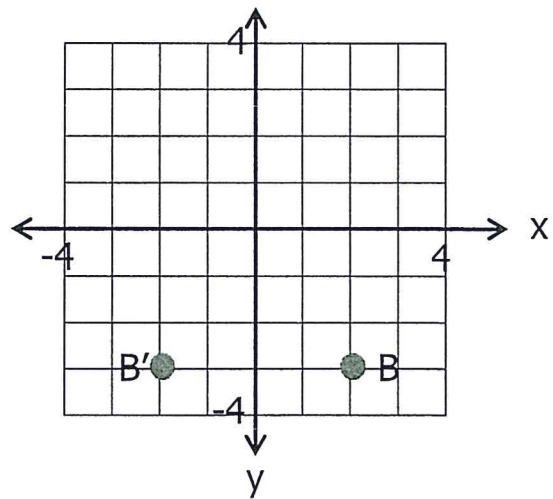
Date: \_\_\_\_\_

**26.** Choose the graph that shows the image of B (2, -3) after a reflection across the y-axis.

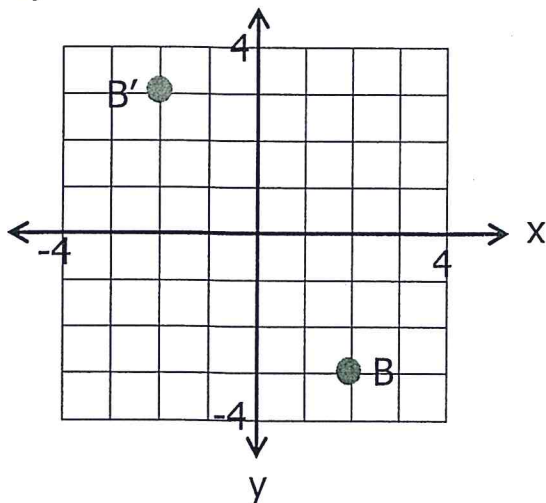
a)



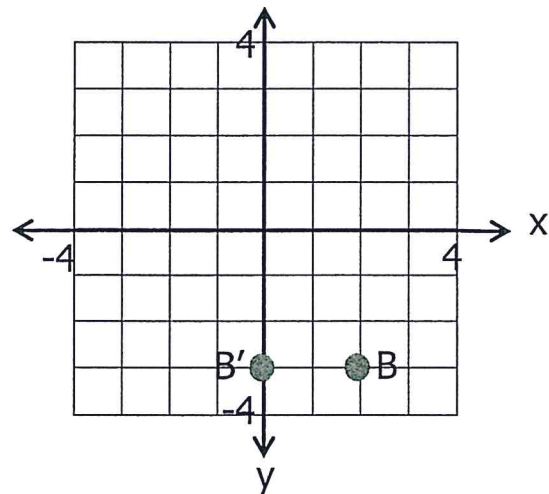
c)



b)



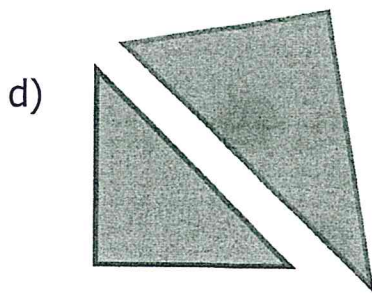
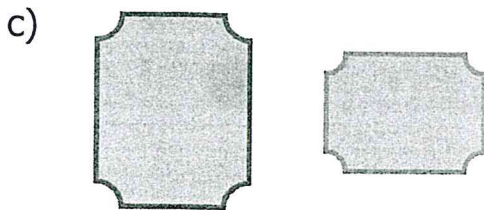
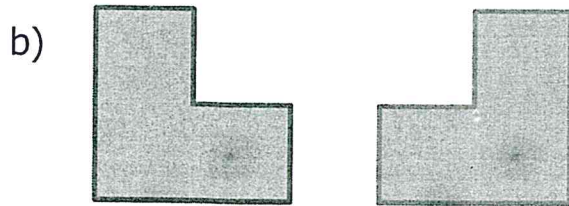
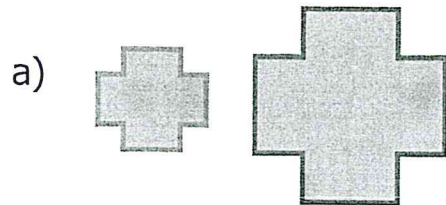
d)



Name: \_\_\_\_\_

Date: \_\_\_\_\_

**27.** Which choice shows a pair of congruent figures?

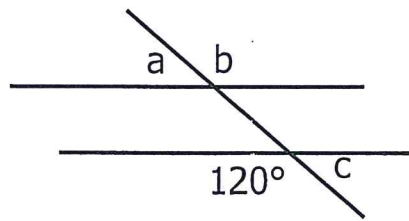




Name: \_\_\_\_\_

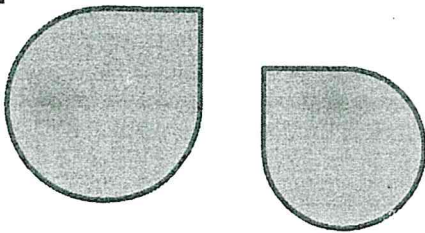
Date: \_\_\_\_\_

**28.** What is the measure of  $\angle a$  in the picture?



- a)  $120^\circ$
- b)  $60^\circ$
- c)  $180^\circ$
- d)  $90^\circ$

**29.**



The above shapes are:

- a) similar and congruent
- b) similar and not congruent
- c) congruent and not similar
- d) not congruent and not similar

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**30.** Mrs. Apple made a pan of her famous brownies for the school Fun Fair. She cut the brownies into right triangles to serve them. Each brownie had sides of 6 cm and 8 cm in length. If all the brownies were cut to the exact same size, find the length of each brownie's hypotenuse.

- a) 8 cm
- b) 10 cm
- c) 12 cm
- d) 14 cm

**31.** Barrett's mom has a flower vase that is shaped like a perfect cylinder. The vase has a height of 9 inches, and its radius is 4 inches. What is the total volume of water that the flower vase can hold?

- a)  $45.21 \text{ in}^3$
- b)  $50.24 \text{ in}^3$
- c)  $452.16 \text{ in}^3$
- d)  $502.4 \text{ in}^3$

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**32.** Research studies show that students who participate in music activities do well in school subjects such as math. The table below shows the relationship between students' time spent participating in music activities and the same students' math scores. Which choice best describes the association?

Student	1	2	3	4	5	6
Music	10	25	40	30	55	90
Math	74	83	92	86	94	99

- a) Positive association
- b) Negative association
- c) No association

**33.** Joanie notices a relationship between the amount of time she spends studying for her spelling tests (variable  $x$ ) and the number of words she spells incorrectly (variable  $y$ ). She notices that the more time she spends studying, the fewer words she spells incorrectly. What kind of association does this describe?

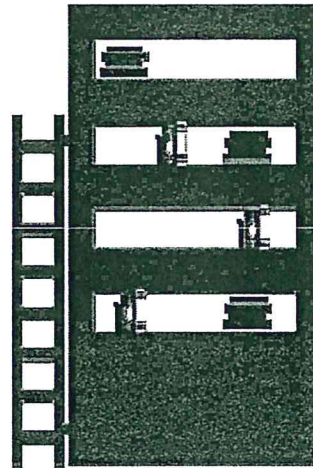
- a) Positive association
- b) Negative association
- c) No association

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**34.** Every day after school, Edy takes the bus to the library. To get there, she travels south for 3 miles. Later, her father picks her up, and they drive east for 4 miles to get home. How far away does Edy live from her school?

- a) 5 miles
- b) 7 miles
- c) 12 miles
- d) 25 miles



**35.** The table shows data collected from East Hampton and West Chadwick Schools. It shows how many students from each school buy hot lunch every day. Calculate the percentage of students at West Chadwick School who buy hot lunch every day.

School	Buy hot lunch	Do not buy hot lunch
East Hampton	210	190
West Chadwick	112	88

- a) 44%
- b) 48%
- c) 53%
- d) 56%

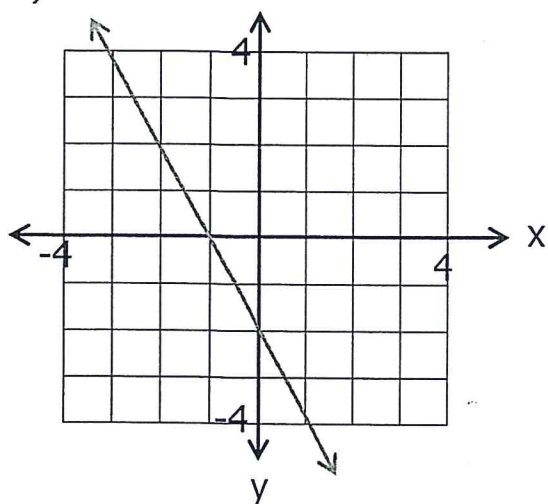
Name: \_\_\_\_\_

Date: \_\_\_\_\_

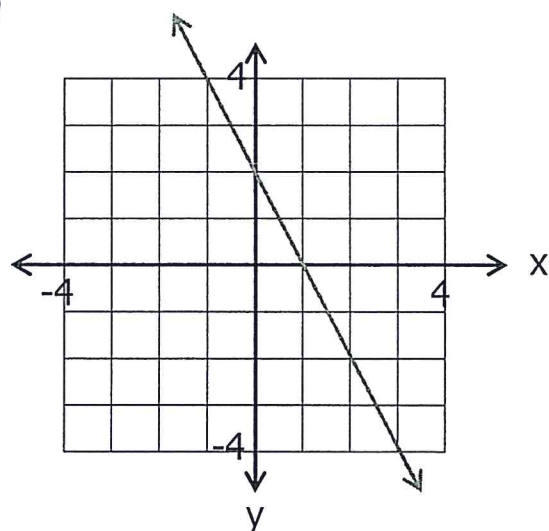
**36.** Choose the graph that shows the following function:

$$y = -2x - 2$$

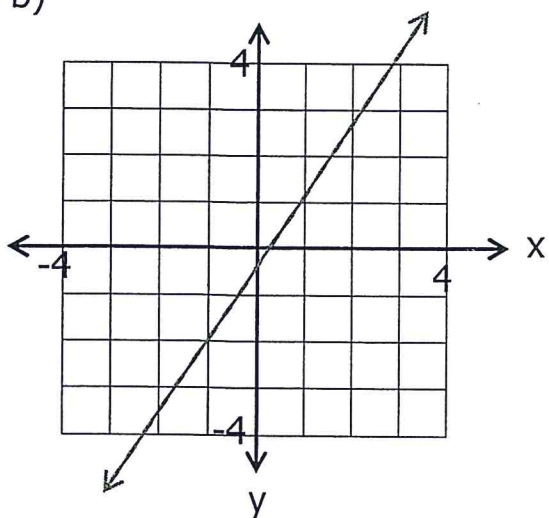
a)



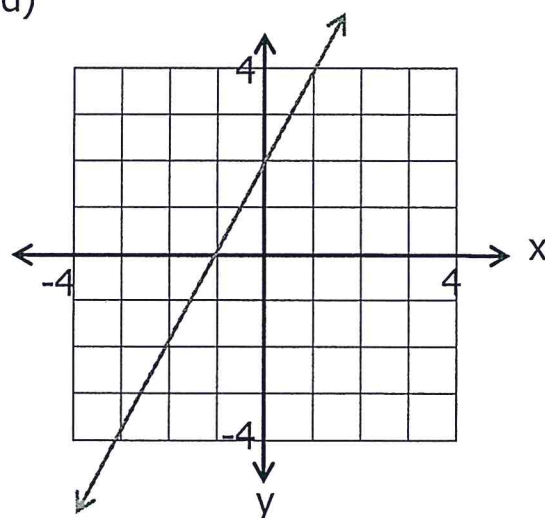
c)



b)



d)





Name : \_\_\_\_\_

Score : \_\_\_\_\_

Teacher : \_\_\_\_\_

Date : \_\_\_\_\_

**Complete the function table for each equation.**

1)  $y = x - 4$

x	y
4	
3	
7	
-5	
-7	

5)  $y = 2x$

x	y
5	
-8	
6	
-4	
-3	

9)  $y = -8x - 2$

x	y
1	
-4	
9	
-3	
-8	

2)  $y = 7x$

x	y
5	
1	
4	
-4	
-5	

6)  $y = x + 6$

x	y
3	
-6	
9	
0	
2	

10)  $y = x - 8$

x	y
4	
-6	
-9	
-4	
2	

3)  $y = 3x + 9$

x	y
-8	
-9	
9	
-1	
-4	

7)  $y = -5x + 4$

x	y
-2	
-7	
9	
2	
8	

11)  $y = \frac{1}{6}x - 7$

x	y
-7	
5	
6	
9	
-1	

4)  $y = -6x$

x	y
6	
-4	
9	
-8	
8	

8)  $y = -\frac{1}{4}x + 8$

x	y
-9	
0	
-2	
-8	
-1	

12)  $y = \frac{1}{4}x + 2$

x	y
-4	
5	
6	
2	
-6	





1.)  $5 - 5x + 2x = -4$

2.)  $x + 6 + 2x = 18$

3.)  $6x + 8 - 2x = 16$

4.)  $3x + 4 + 3x = 4$

5.)  $1 - 4x + 2x = -19$

6.)  $4 - 2x + 4x = -20$

7.)  $11 = -5x + 7x - 9$

8.)  $-4x - 2 - 4x = 86$

9.)  $6 - 3x + x = 6$

10.)  $9 - x - 2x = 36$

11.)  $-81 = -4x - 4x + 7$

12.)  $122 = 7x + 6x + 5$

# *Summer Instructional Packets*



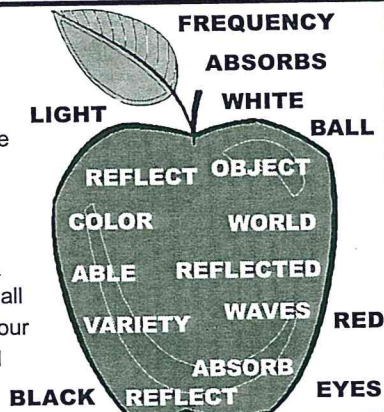
*Grade 8*  
*Science*

## Exercise 7.3

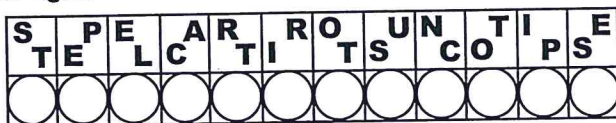
# LIGHT and COLOR

1. The 18 missing words from the following passage can be found in and around the apple.

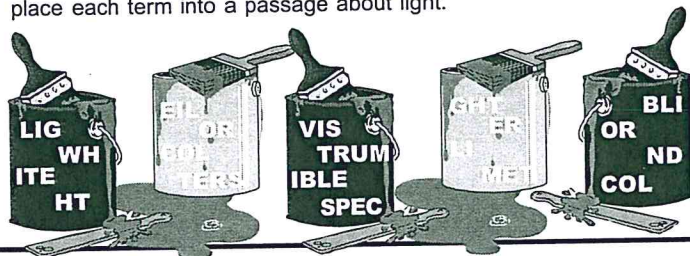
The huge \_\_\_\_\_ of color in our \_\_\_\_\_ is due to the varying \_\_\_\_\_ of visible light \_\_\_\_\_. The \_\_\_\_\_ of an \_\_\_\_\_ is the color of the \_\_\_\_\_ that the object is \_\_\_\_\_ to either transmit or \_\_\_\_\_. That is why a red \_\_\_\_\_ looks red in \_\_\_\_\_ light, because it \_\_\_\_\_ all colors except \_\_\_\_\_, which is \_\_\_\_\_ into your \_\_\_\_\_. White objects \_\_\_\_\_ all colors, and \_\_\_\_\_ objects \_\_\_\_\_ all colors.



3. By placing the correct letter from each box into its circle below, you'll form the name of an instrument used to produce and examine light.



4. In each of the paint pots is a two-word term about light. However, each of the words have come apart. Correctly put them back together again, and then place each term into a passage about light.



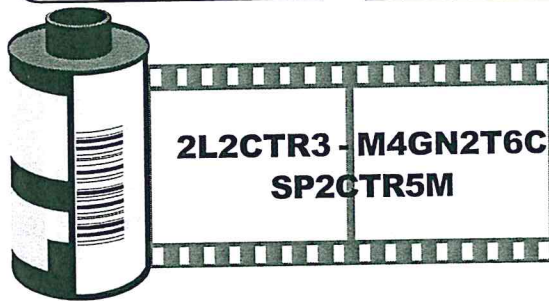
A

White  
Light

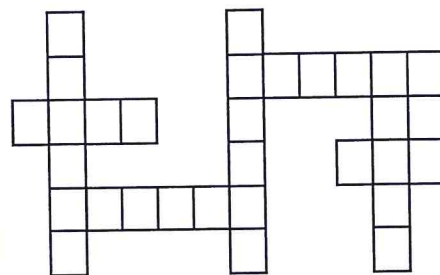
B

6. Complete diagram A, showing what happens when white light passes through a prism. Then, draw a diagram in B to show what happens when white light passes through one prism and then passes through another prism.

- How can we see brown objects when brown is not a color of the spectrum?
- Design an experiment to show how, with lights, a red ball can be made to appear black.



7. In the roll of film, each different vowel of the term has been replaced with a number. When solved, draw a detailed diagram to illustrate this term.



2. Place the seven colors of the spectrum neatly into this puzzle. Then, by correctly arranging the seven shaded letters, you'll form the name of an arc of prismatic colors in which red is always the outer color, and violet is always the inner color.

## MENTCOMPLEARY

### COLORS

CISBA

MARYIPR

5. Unjumble the three types of colors above, and then write in a definition for each one. Now, place the colors from Puzzle number 2 under their correct heading.



Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Exercise 7.4**

# SOUND

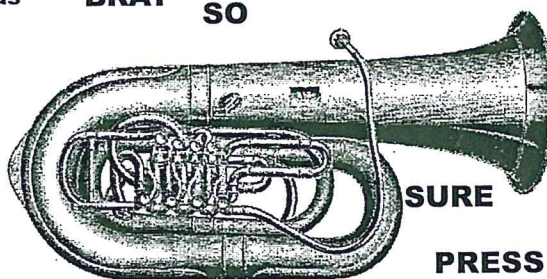


1. Complete the following terms by selecting the correct words from in and around the tuba. Then, define each term.

BRAT

SO

RAN



SURE

PRESS

COM \_\_\_\_\_ IONS

VI \_\_\_\_\_ ION

RAREFACTI \_\_\_\_\_

AIR PRES \_\_\_\_\_

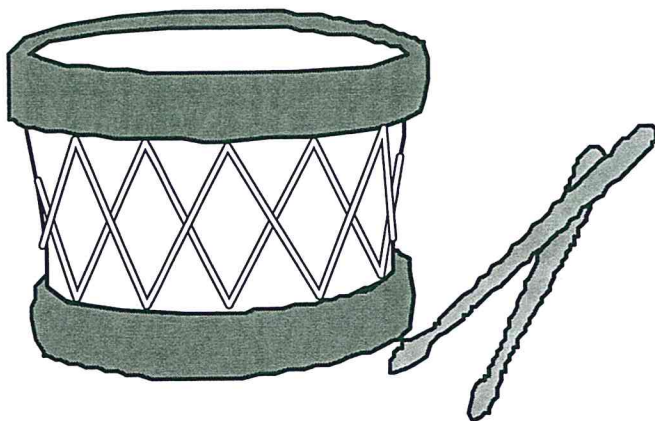
\_\_\_\_\_ UND W \_\_\_\_\_ VES

T \_\_\_\_\_ SMITTED

ON

A

2. Using the terms from number 1 (above), construct a fully labeled diagram detailing how sound is produced when the drum is struck.



3. Correctly punctuate the passage below so that it can be properly read.

Sound requires matter to travel through and it travels faster through solids and liquids than it does through gases. The speed of sound depends on the type of substance and the temperature. Sound travels nearly five times faster in water than in air. The speed of sound increases 0.6 metres per second for every one degree Celsius increase in temperature. Through air, sound travels at 343 metres per second when the temperature is 20 degrees Celsius.



Did you know that some of the loudest sounds in the animal kingdom are made by the **Howler Monkey**?

4. Match each term in the table with its correct definition.

**DEFINITION****TERM**

Distance between two neighboring compressions

FREQUENCY

The volume or loudness of sound

WAVE LENGTH

Number of vibrations made by a wave in one second

DECIBELS

Intensity of sound is measured in this.

INTENSITY

This is high if sound has a high frequency.

HERTZ

Frequency of sound is measured in this.

PITCH

• What is Noise Pollution?

Give five examples.

List three reasons as to why complaints about noise pollution are far more numerous than complaints about air and water pollution.

**Exercise 8.1**

# WATER



1. Place your answers, to each of the clues below, in to the puzzle. Then, by correctly arranging the shaded letters, you'll form the name of the element of which water is an oxide.

1									
2									
3									
4									
5									
6									
7									

A state in which water exists.

Type of water that does not easily lather with soap.

Water pressure increases as this increases.

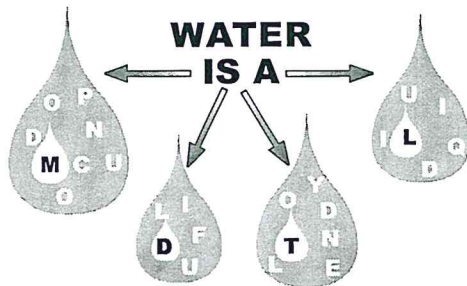
Water consists of this element and Hydrogen.

Water does this when it freezes.

A measure of the amount of water in the air.

Water is formed when hydrogen, or its \_\_\_\_\_, are burnt.

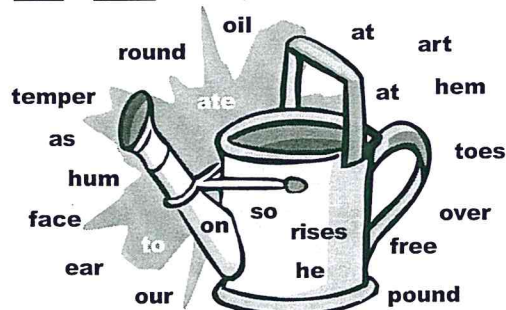
2. To find out what water is, correctly unjumble each of the words in the rain drops below, and then explain each one.



**DID YOU KNOW** - that your body loses around 1.5 liters of water each day?

3. To complete the words in the passage below, place each of the words from the jug of water back into their correct place.

At room \_\_\_\_\_ature, pure w\_\_\_\_\_ is a col\_\_\_\_\_less liquid th\_\_\_\_\_ b\_\_\_\_\_s at 100°C, \_\_\_\_\_zes at 0°C, and h\_\_\_\_\_ a neutral pH of 7. W\_\_\_\_\_er is t\_\_\_\_\_ most comm\_\_\_\_\_ c\_\_\_\_\_ical on E\_\_\_\_\_h, c\_\_\_\_\_ing more than 70% of the \_\_\_\_\_th's sur\_\_\_\_\_. The \_\_\_\_\_an body comp\_\_\_\_\_ a\_\_\_\_\_ 65% water, and \_\_\_\_\_me foods, such as \_\_\_\_\_ma\_\_\_\_\_ are more than 90% water.



S	C	S	A	C	O	A	T
I	U	F	E	H	D	E	E
V	N	R	T	E	N	G	R
E	M	N	I	S	I	E	N
S	R	S	O	R	Y	V	T
A	L	L	A	C	A	E	S
C	P	I	V	T	I	F	E
I	T	L	E	N	O	R	C
D	S	A	L	D	W	A	T
E	U	I	N	A	F	R	E
S	N	O	I	T	T	O	S
A	L	T	S	E	N	E	R

4. To find the terms below, in this brick wall puzzle, you may only proceed from one letter to the next when their bricks are touching one another. Then, define each of these terms.

**SALTS, UNIVERSAL SOLVENT, MENISCUS, DETERGENTS, SURFACE TENSION, ADHESIVE FORCES, DISTILLED WATER, DESALINATION, WATER SOFTENER, COHESIVE FORCES, CAPILLARY ACTION**

- Design a set of experiments to investigate the cohesive and adhesive forces of water.
- Compile an Info-Sheet on how we can conserve water.
- Detail how you'd prove that pressure in water increases with depth.
- Why does water run off a duck's back but soaks into towels?



Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Exercise 8.2**

# WATER USE and ABUSE



1. By placing the words, from around the tap, back into their correct places you will complete the water terms below. Then, define each of these terms.

\_\_\_CH\_\_\_T

C\_\_\_SER\_\_\_ION

\_\_\_UT\_\_\_

W\_\_\_H\_\_\_AL

RE\_\_\_CE

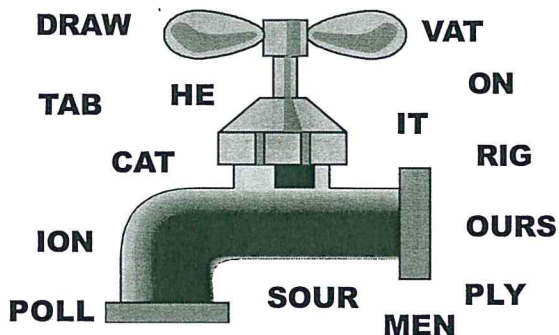
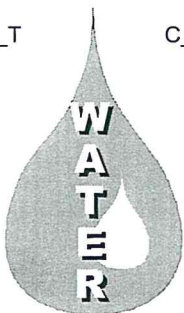
SUP\_\_\_

\_\_\_HTS

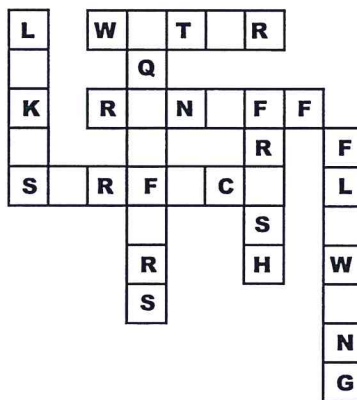
\_\_\_LE

C\_\_\_E

S\_\_\_D



2. Draw a detailed diagram of the Water Cycle. Then compile a chart of the impacts that humans can have on the water cycle.



The \_\_\_\_\_ water that we \_\_\_\_\_ comes from either groundwater (\_\_\_\_\_ accumulated in \_\_\_\_\_), or from \_\_\_\_\_ - water (water \_\_\_\_\_ into streams, \_\_\_\_\_, reservoirs, for example).

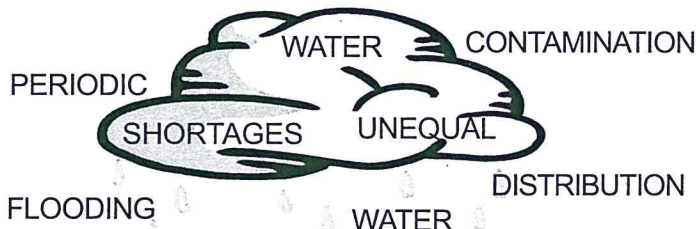
3. Place the missing vowels back into the puzzle grid to complete the eight words. Now, place these eight words back into their correct place in the passage below. Then list five ways in which these sources of water may be polluted.



4. To find out what the largest use of water is throughout the world, you'll have to solve the puzzle. The ten-letter answer is represented by ten numbers in the boxes below. Above, in the hexagons, you have a choice of two letters for each number. Now, select the correct letter for each number, and you'll form the correct answer.

8	3	5	2	7	0	9	4	1	6
---	---	---	---	---	---	---	---	---	---

- With around 75% of irrigation water being lost to evaporation and seepage, design a method to reduce this loss.
- "Water is one of the most precious, yet wasted, resources". List ten reasons why you would, or would not, agree with this statement.
- Survey your household and list all uses of water. Identify wastage. Outline measures to reduce this wastage.
- List your local areas water resources. In what ways are they used and abused.



5. Salinization and waterlogging of soil are major water resource problems. Four other major problems can be found around the cloud above, however, they've each come apart. Correctly match them up again, and then explain the nature of each problem and list measures that could be adopted to remedy the problem.



**DID YOU KNOW** - that only around three per cent of the Earth's water is fresh water.



Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Exercise 9.1**O<sub>2</sub>

He

O<sub>2</sub>CO<sub>2</sub>

Kr

Ar

N

CO<sub>2</sub>

N

Ne

Xe

**AIR**

1. Our surrounding air is a mixture of gases. To find out just which gases, you'll have to place the words from the gas cylinder below back into their correct places to complete the words.

CARB \_\_\_\_ DI \_\_\_\_ IDE

N \_\_\_\_ ROGEN

\_\_\_\_ YGEN

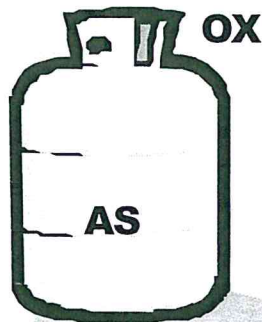
AR \_\_\_\_ N

OT \_\_\_\_ R G \_\_\_\_ ES

HE

IT

ON



2. Change **AIR** into **GAS** by changing one letter per line, with each letter you change forming a proper word. Now, explain how our atmosphere acts like a greenhouse. Then, simple items, make a model greenhouse.

**AIR****GAS**

3. If you cross out, from the string of letters below, the seven words from the gas cylinder in number 1, then you'll be left with the name of something that is also present in our air. Now, devise an experiment to detect its presence in air.

GOWOXATONERITVAHEPOOXUASR

**DID YOU KNOW**

that 80% of all air is found in our troposphere?

Oxygen and TEN+NO+RIG are MEET+LENS, whilst carbon dioxide is a MOP+NO+CUD.

5. To be able to read the passage above, you'll have to solve the word sums by combining and rearranging the letters in each sum to form the required word.

- Explain the difference between an element and a compound - what is air?
- "Our air contains tiny organisms". How would you show that it did?
- You've been asked to determine the quality of the air in your local area. Detail how you'd go about doing this.

4. The missing words, from the passages below, can all be found in this puzzle by moving from one letter to the next along connecting lines.

1) Oxygen does not \_\_\_\_\_ but allows other substances to \_\_\_\_\_ in it.

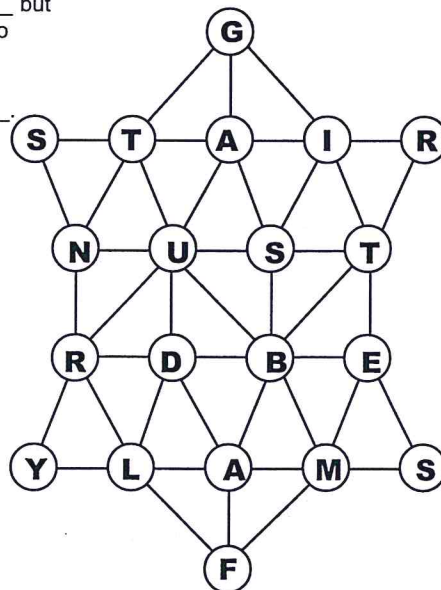
2) Argon is an inert \_\_\_\_\_.

3) Nitrogen is colourless \_\_\_\_\_ with no \_\_\_\_\_ or smell.

4) Solid particles, such as \_\_\_\_\_ are present in our \_\_\_\_\_.

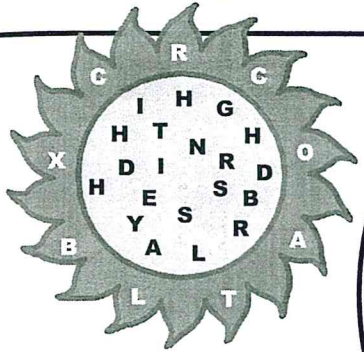
5) Oxygen causes a glowing splint to burst into \_\_\_\_\_.

6) Solid carbon dioxide is known as "\_\_\_\_\_ ice".

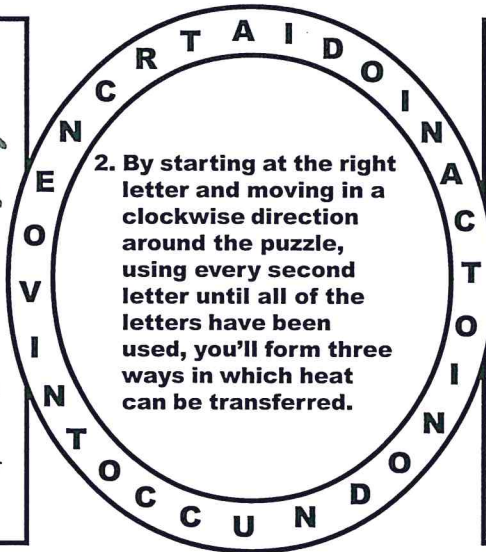


## Exercise 9.2

# OUR ATMOSPHERE



1. By selecting only those letters that appear *once* in the Sun you can form the name of the gas that comprises 21% of our atmosphere. Now, list the other gases in our atmosphere.

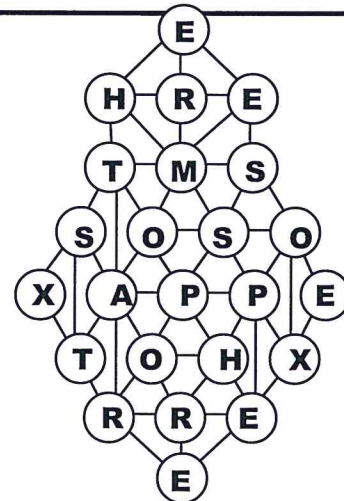


4. Change **HEAT** into **LAND** by changing one letter per line, with each letter you change forming a proper word. Then, using diagrams, explain how our Earth and atmosphere are heated.

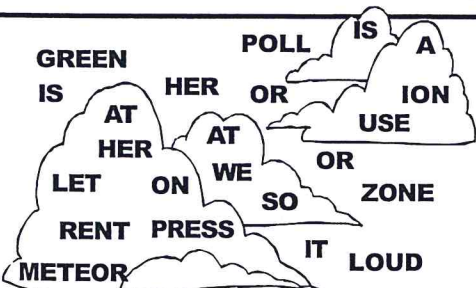
<b>HEAT</b>
<b>LAND</b>

5. To find the layers of the atmosphere below in the above puzzle you may only proceed from one letter to the next along connecting lines. Then, correctly place each one into the table below.

**STRATOSPHERE**  
**MESOSPHERE**  
**THERMOSPHERE**  
**EXOSPHERE**  
**TROPOSPHERE**



Layer	Features
	Known as Weather zone. Extends up to 18km above Earth where the temperature is about -60°C.
	Extends to around 900km above Earth where air is extremely thin.
	Extends to around 85km above Earth. Base of this layer is warmed by ozone reactions. Temperature at top of layer is around -90°C.
	Extends to around 50km above Earth, where temperature gradually increases to around 0°C.
	Temp. reaches around 2000°C. Extends to around 450km.



6. Place each word in the clouds above back into its correct place below to complete the words. Now, place each word into a passage about our atmosphere.

N\_\_\_\_rogen, aur\_\_\_\_as,  
 \_\_\_\_olog\_\_\_\_ts, ultravio\_\_\_\_  
 rad\_\_\_\_i\_\_\_\_, \_\_\_\_at\_\_\_\_, c\_\_\_\_s, air  
 \_\_\_\_ure, o\_\_\_\_, atmo\_\_\_\_ic  
 \_\_\_\_ut\_\_\_\_, \_\_\_\_ho\_\_\_\_effect, \_\_\_\_ir  
 cur\_\_\_\_s \_\_\_\_lar radi\_\_\_\_ion,  
 c\_\_\_\_iol\_\_\_\_effect.

**Draw a cross-section of the atmosphere.**

• Why aren't all clouds exactly the same? • Why does it get windy? • Why do mountaineers carry oxygen? • Why does air pressure decrease with altitude?



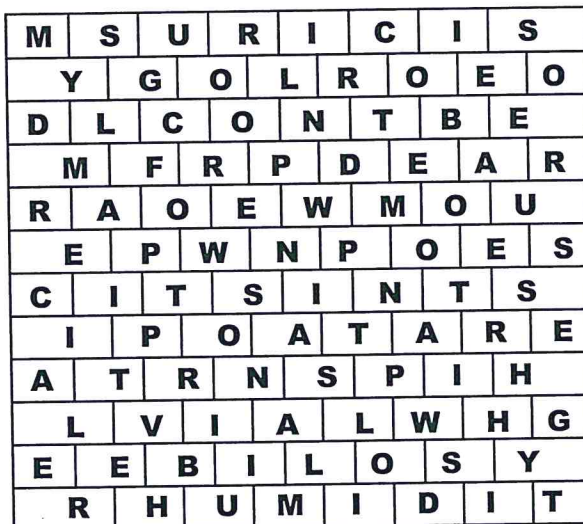
## Exercise 9.3



1. By changing one letter, in each of the words below, you'll form ten weather words. Then, using diagrams, explain how each of these develop.

**DID YOU KNOW**

- that water droplets and ice particles can move at speeds of about 300kph in the up-and down-draughts of a thunderstorm?



3. To find the 17 terms below in the above puzzle you may only proceed from one letter to the next when their bricks are touching one another. Then, by correctly arranging the eight shaded letters, you'll form the name given to rising columns of warm air.

DEW POINT, EVAPOTRANSPIRATION, COLD FRONT, RELATIVE HUMIDITY, WARM FRONT, HIGH PRESSURE, MILLIBAR, LOW PRESSURE, CONDENSATION, METEOROLOGY, CIRRUS, BAROMETER, PRECIPITATION, TRANSPIRATION, ISOBAR, EVAPORATION, HUMIDITY.

Now, define each of these terms.

2. Change the top word into the bottom word by changing one letter per line, with each letter you change forming a proper word. Then, explain why dust and salt particles, along with smoke particles, are often termed *Condensation Nucleii*.

**DUST**

**SALT**

- Design an experiment to: **a)** produce an air current, **b)** determine whether hot air or cold air holds more water vapor.
- Compile a Weather Description Chart for your local area.

4. Correctly match up the words in Column A with those in Column B to form ten weather terms. Then, place each one into a sentence about weather.

A	B
Cumulus	Air
Tropical	Crystals
Water	Scale
Saturated	Breeze
Ice	Cyclone
Beaufort	Bolt
Air	Clouds
Lightning	Chart
Sea	Mass
Synoptic	Vapor

5. Using several of the terms from Puzzle number 3, draw and label a detailed diagram of the Water Cycle.

Date:

# OUR SUN

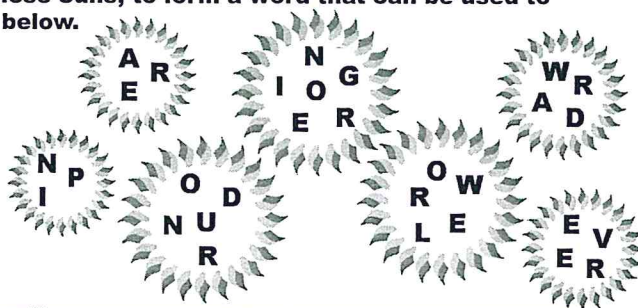
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- ```

graph TD
    FLRS --> SOLAR
    CLPS --> SOLAR
    WND5 --> SOLAR
    RPTN --> SOLAR

```

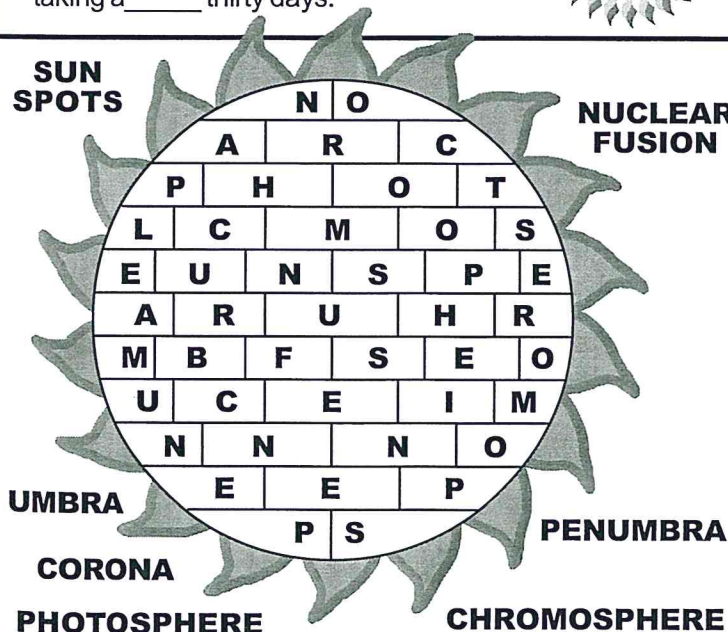
- the sun is our closest star and is approximately one hundred and fifty million kilometres from earth. its temperature ranges from around six thousand degrees celsius at its surface to around sixteen million degrees celsius at its centre. the sun is four billion years old and contains over ninety-nine per cent of our solar system's matter.

- The Sun s\_\_\_\_\_s on its axis  
\_\_\_\_\_y twenty-five days  
n\_\_\_\_\_ its equator.  
However, to \_\_\_\_\_s its polar  
\_\_\_\_\_, it spins s\_\_\_\_\_,  
taking a \_\_\_\_\_ thirty days.



- *Compile a colorful info-sheet titled, 'A Solar Eclipse'. Include details and diagrams on how an eclipse occurs, how one can be viewed, and the precautions that need to be taken when viewing one.*

## NUCLEAR FUSION



4. To find the eight terms below in this Sun puzzle, you may only proceed from one letter to the next when their letter panels are touching one another. Place each of these terms into a passage about the Sun. Then, construct a diagram of the Sun in box below, and label it using some of these terms.



**DID YOU KNOW** - that light travels at 300,000km per second?



Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Exercise 10.1**

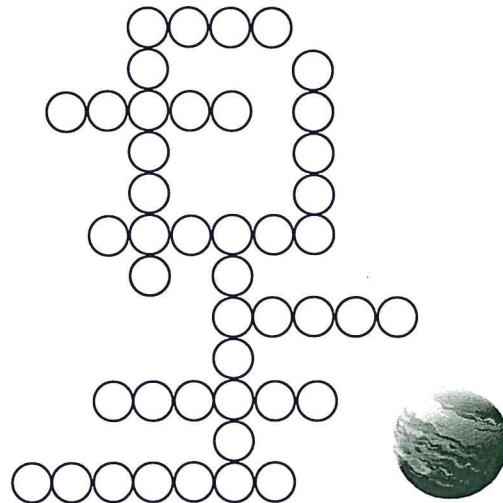

# OUT of THIS WORLD



**1. The ten astronomy terms below have all been broken. Correctly match them up again and then place each one into a sentence.**

|        |         |       |           |
|--------|---------|-------|-----------|
| SYSTEM | ECLIPSE | MILKY | TELESCOPE |
| WHITE  | SPACE   | HOLE  | SHUTTLE   |
| SOLAR  | RADIO   | LUNAR | LIGHT     |
| YEAR   | DWARF   | BLACK |           |
| WAY    | FLARE   | SUPER | NOVA      |
|        |         |       | SOLAR     |

**2. Place the names of each of the nine planets of our solar system neatly into this puzzle grid.**



**THREE** **EXISTED** **UNIVERSE**  
**YEARS** **SPHERE** **MORE**  
**YOUNG** **LIGHT**  
**HEMISPHERE** **HOT** **STARS**  
**VISIBLE** **TELESCOPE**

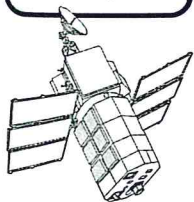
**4. Unjumble and define each term around the meteor above.**



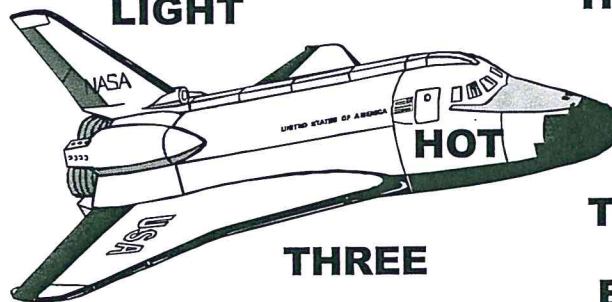
**3. Correctly arrange the passage below so that it can be properly read.**

Explosion was years believed of Bang 15  
 enormous born its the billion ago called an  
 universe the around Big.

- Design an experiment by which you could observe the apparent movement of the stars across the sky.
- Using common household items, design and construct your own telescope.



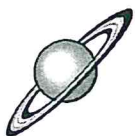
**VISIBLE** **MORE** **UNIVERSE**  
**STARS** **LIGHT** **HEMISPHERE**  
**SPHERE** **YOUNG**  
**YEARS** **HOT** **TELESCOPE**  
**THREE** **EXISTED**



**5. The missing words, from the passage below, can all be found around the space shuttle.**

In the \_\_\_\_\_ there are many millions of \_\_\_\_\_, ranging from \_\_\_\_\_ stars to stars which have \_\_\_\_\_ for millions of \_\_\_\_\_. Stars are \_\_\_\_\_-shaped bodies of extremely \_\_\_\_\_ gases that emit both heat and \_\_\_\_\_. In the southern \_\_\_\_\_ only about \_\_\_\_\_ thousand stars are \_\_\_\_\_ to the naked eye. However, with the use of a \_\_\_\_\_ a great many \_\_\_\_\_ stars can be seen.

## Exercise 10.2

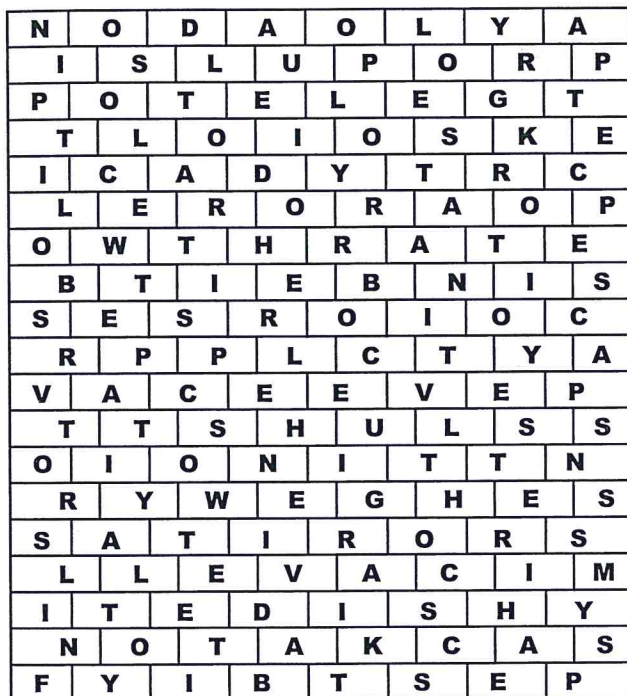


# HEAVENS ABOVE



1. To find the 17 terms below in this puzzle, you may only proceed from one letter to the next when their bricks are touching one another. Then arrange the nine shaded letters to form the name of the world's oldest science. Now, define each term.

**Observatory, Optical telescope, Radio telescope, Space probe, Geostationary orbit, Satellite, S.E.T.I. Rocket propulsion, Low-earth orbit, Microgravity, Space station, Weightlessness, Polar orbit, Space shuttle, Payload, Escape velocity, Satellite dish**



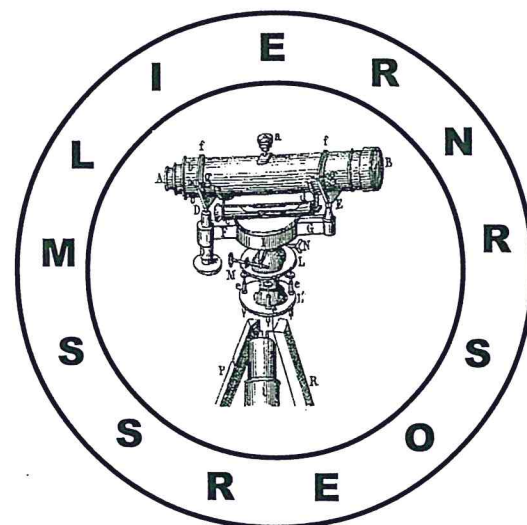
2. Crack the codes in the passage below to find out the two types of telescopes. Now, the two missing words can be found in the circle puzzle by starting at the right letter and moving in a clockwise direction around the puzzle, using every second letter until all of the letters have been used.

9,22,21,9,26,24,7,18,13,20 telescopes use

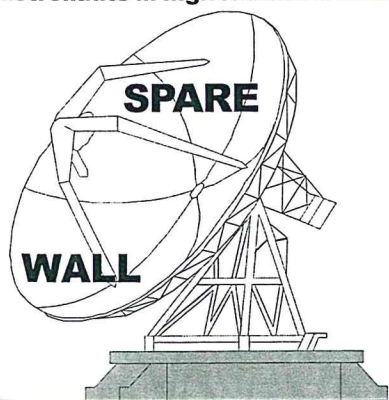
\_\_\_\_\_ to gather starlight, whereas

18,5,6,12,5,3,20,9,14,7 telescopes use

\_\_\_\_\_.



3. Change one letter, in each of the words in the receiving dish below, to form an activity performed by astronauts in high radiation levels.



4. Place each word in this box back into its correct place in the passage. Now, outline your best location for building an observatory, and give your reasons.

**invisible, x-ray, universe, astronomers, space, enable, Earth, telescopes, radiation, violet, atmosphere**

The \_\_\_\_\_ prevents a lot of \_\_\_\_\_ reaching \_\_\_\_\_. By launching \_\_\_\_\_ into space, \_\_\_\_\_ can gain views of the \_\_\_\_\_ that are \_\_\_\_\_ from Earth. Such telescopes \_\_\_\_\_ astronomers to peer in to \_\_\_\_\_ with ultra-\_\_\_\_\_, infrared and \_\_\_\_\_ eyes.



## DID YOU KNOW -

that the first living thing to be launched into space was a dog called Laika?

- Design an experiment to perform in microgravity.
- Why are rocket launch sites located near the Equator?
- Why would your bones and muscles weaken if you spent four months aboard the International Space Station?



# *Summer Instructional Packets*



*Middle School  
Social Studies  
Grade 8*

In 1838–1839, U.S. soldiers drove thousands of Cherokee from their homes. The westward journey these American Indians took is today remembered as the Trail of Tears.

## *from* The Trail of Tears *from Cowboys & Indians*

by JOHN WADSWORTH

A very long time ago, Cherokee Elders climbed today's Clingman's Dome in North Carolina to receive counsel from the Creator. They shared these visions with their people who gathered in Kituwah, the spiritual center of the Cherokee Nation.

### **You Need to Know...**

As white settlers moved into the western frontier, American Indians grew unwilling to surrender their lands. When colonists arrived in the Appalachian region in the 1760s, the Cherokee resisted. They even fought on the side of the British during the American Revolution. By the early 1800s, however, the Cherokee had begun to live more like the white colonists. Many Cherokee in Georgia were educated and owned their own farms or businesses. Soon, white Georgians began to resent the Indians. They asked the federal government to help move the Cherokee elsewhere. When the Cherokee realized that their time was running short, they took action. They organized their own nation and wrote their own constitution. In 1828, however, Georgia declared that Cherokee rights and laws did not exist. The Cherokee took their case to the U.S. Supreme Court—and won—but President Andrew Jackson ignored the ruling. The U.S. government decided that the Cherokee must leave Georgia and move west of the Mississippi. If they did not, they would be removed by force. Some Cherokee left. At least thirteen thousand stayed—and faced the consequences.

The Elders foretold the approach of their white brothers who would desire the Cherokee homeland. The Elders taught that no man could claim exclusive right to any place on earth. The Creator had prepared their new home in distant lands toward the setting sun.

I heard this account from a medicine man outside of Tahlequah, Oklahoma, the capital of the Western Band of Cherokee.

When I asked about the Trail of Tears, he shook his head with an expression of disgust.

"I wish people would just drop the whole thing," he



said. "The Trail of Tears is an embarrassment to everyone, both the Indians and the white man."

His family listened to the Elders and migrated west without incident. He is a full-blooded Cherokee, a prominent member of the Kituwah Society, whose membership preserves the oldest Cherokee traditions.

"If the Elders were obeyed, there would have been no Trail of Tears. It was never our tradition that we were given land for eternity. No man owns the earth. The people refused the protection of the old way. And the harder they struggled against the truth they were told, the warning they were given, the worse became their fate.

"The true decline of the Cherokee began when people took pride in their possessions. We once practiced communal ownership. If someone needed anything, there was always another willing to share. When the Cherokee caught the white man's sickness of private ownership, we stopped living as a united people."

A visit to Cherokee, North Carolina, offers a multi-dimensional<sup>1</sup> explanation for why the Elders' counsel was ignored. The land is majestic. When the prophecy was received, the Cherokee nation encompassed 40,000 square miles of paradise—surely, it seemed to them, enough land for all.

Today's Eastern Band of Cherokee, 11,000 in number, live on a verdant 56,000-acre fragment of their original home. Together with the Western Band's population of 200,000 centered in Oklahoma, the Cherokee comprise the second largest tribe in the United States.

The historical Trail of Tears officially begins in the Museum of the Cherokee Indian in Cherokee, North Carolina. Recently refurbished, the Museum introduces



John Elk III Photography

▲ Clingman's Dome, North Carolina.

■ What significant event occurred at this site?

**communal** (kə-myōn'əl): shared; related to a community.

**prophecy** (prəf'ə-sē): a prediction about a future event believed to be given to a person by God.

**encompassed** (en-kum'pəsd): surrounded on all sides.

**verdant** (vər'dənt): green.

**refurbished** (ri-fər'bishd): fixed up; made new again.

1. **multidimensional** (mul'tē-də-men'shə-nəl): made up of many dimensions, parts, or aspects.



**embark** (em-bärk'): to begin a journey or project.

**random** (ran'dəm): without any plan or organization.

**silhouette** (sil'ə-wet'): an outline.

visitors to Cherokee culture through sophisticated multimedia presentations and establishes a strong foundation from which to embark.

To drive the 900-mile auto route of the Trail of Tears is a slow journey, guided by random brown signs bearing the blue silhouette of a wind-swept, fate-swept warrior. Most of the original routes of the Trail pass through private land, but many important sites are still accessible.

I met Freeman Owle, a Cherokee storyteller, in the New Echota historical site near Rome, Georgia. He taught me that Indians refer to the Trail of Tears as "The Trail Where They Cried," with the "They" referring to those who witnessed the Indians' passage.

"The Cherokee internalized<sup>2</sup> their emotions. We're told of mothers carrying their dead children for days, in

2. **internalized**: hid inside; did not show.

WOOLAROC MUSEUM, BARTLESVILLE, OKLAHOMA



▲ *The Trail of Tears*, by Robert Lindneux.



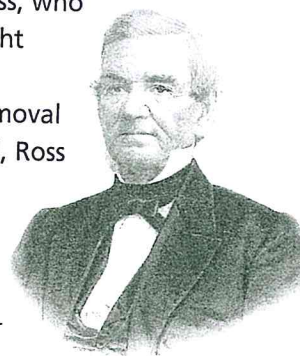
tearless, silent mourning. No, it was the people who observed us who cried. They cried for everyone.”

Red Clay, Tennessee, where the Cherokee held council in 1832 after tribal gatherings were outlawed in Georgia, is today an immaculately maintained state park. The Western and Eastern Bands of Cherokee reunited here in 1984 for the first time since the removal and dedicated a memorial, “The Eternal Flame of the Cherokee Nation.”

**immaculately** (i-mak'yə-lit-ē'): perfectly.

## Champion of the Cherokee

John Ross was elected Principal Chief of the Cherokee Nation in 1828. Ross, who was one-eighth Cherokee, grew up in Georgia. A military man, Ross fought with General Andrew Jackson in the War of 1812. Ross understood white Americans as well as Native Americans, and he worked to prevent the removal of the Cherokee through legal action, petitions, and the press. In the end, Ross was unable to save his beloved nation. Although some Cherokee agreed to leave Georgia in exchange for a sum of money, Ross refused. In 1838, he unwillingly led his people to the Indian Territory. Ross's wife, Quatie, died on this mournful journey, along with thousands of others.



The Granger Collection, New York

In Dayton, Tennessee, I met descendants of the Trail—Big Bear, Sweetie Bird, and Running Moon, the Claude Jenkins family of Triple J Ranch. Big Bear is a big man, with long reddish hair, of Scots-Irish complexion and, like his wife Sweetie Bird, of Indian heritage.

Big Bear embodies one of the most intriguing aspects of Cherokee culture. The Cherokee never associated tribal membership with bloodlines.<sup>3</sup> If anyone of another tribe, or another race, decided to live as a Cherokee, they were accepted as Cherokee. This explains how John Ross, one-eighth Cherokee by blood, could serve as Chief for over 30 years. This also explains Sam Houston's<sup>4</sup> Cherokee identity as The Raven and why Houston, adopted by a Cherokee family as a child, returned to Oklahoma to live and die as a Cherokee after retiring from public life.

**embodies** (em-bād'ēz): represents; gives form to.

3. **bloodlines:** lines of connection through one's family; lineage.

4. **Sam Houston:** president of the Republic of Texas. Houston later served as a United States senator.



Big Bear's mother revealed his Indian heritage from her deathbed and explained her parents' warning to keep her Indian identity a secret "because life is never safe for Indians." During the Cherokee roundup, sympathetic white friends protected her grandparents by identifying them as relatives on an extended visit. Many mixed-bloods were saved this way, relying on their white skin to mask their Indian identity.

"I can understand why my mother kept her secret. Now that we have assumed our Indian identities, we feel what it's like to be outcasts. Most of our friends and even our families have turned away. We've raised Running Moon to be proud of being Indian. Being Indian is the foundation of our world."

Big Bear's family reminded me of something Freeman Owle said in New Echota. Owle, who also bears Scots-Irish features, stated that the American Indian is the only race on earth measured by blood content, "like Thoroughbred horses." Officially, if someone's blood isn't at least one-sixteenth Indian, they aren't allowed to be Indian.

### ✓ Reading Check

1. Long ago, what did the Cherokee Elders predict about the Cherokee homeland?
2. According to one Cherokee member of the Kituwah Society, why did the Trail of Tears occur?
3. According to a Cherokee storyteller, what do many Indians call the Trail of Tears? What does this name mean?
4. In the past, how did the Cherokee choose or identify their members?
5. Today, how does the U.S. government define an Indian?



They joined the army with bravery and idealism in their hearts. In the end, though, many young boys' time in the army during the Civil War ended in fear, loneliness, homesickness—even death.

## *from* What a Foolish Boy

*from The Boys' War*

by JIM MURPHY

“**D**ay after day and night after night did we tramp along the rough and dusty roads,” writes sixteen-year-old Confederate soldier John Delhaney, “’neath the most broiling sun with which the month of August ever afflicted a soldier; thro’ rivers and their rocky valleys, over mountains—on, on, scarcely stopping to gather the green corn from the fields to serve us for rations. . . .<sup>1</sup> During these marches the men are sometimes unrecognizable on account of the thick coverings of dust which settle upon the hair, eye-brows and beard, filling likewise the mouth, nose, eyes, and ears.”

Boys on both sides soon learned a boring fact about life in the army. Soldiers spend more time marching from one place to another than fighting.

At each town, new units<sup>2</sup> would join the troops until

### NONFICTION BOOK

HISTORY •

**afflicted** (ə-flikt’id): caused to suffer.

#### **You Need to Know...**

At the beginning of the Civil War, neither side had an organized way to recruit soldiers. Both sides relied mainly on volunteers. Young men and boys liked the glamorous idea of becoming war heroes, and many thought the war would not last long, so the volunteer response was strong at first. Later, when the novelty of the war had worn off, both sides began drafting soldiers—choosing young men to fight in the war, whether they wanted to or not. Although boys under seventeen were never drafted, their offers of service were not usually turned down; the weary troops needed all the help they could get. Boys sixteen years old and under made up anywhere from 10 to 20 percent of all the soldiers who fought in the Civil War. Several hundred of these boys were as young as thirteen. Such boys were usually drummers, but not always. Some of them fought, just as adult soldiers did. As you will see in this selection, the long, tedious war was no picnic for these lonely teenagers looking for adventure and a sense of purpose.

1. **rations** (rash’ənz): supply of food.

2. **units** (yoo’nits): single groups of soldiers that fight together.



The Museum of the Confederacy, Richmond, Virginia.  
Photography by Katherine Wetzell



▲ A Confederate soldier.

**amass** (ə·mas'): gather together.

the column<sup>3</sup> stretched for miles with no beginning or end in sight. A messenger might fly past on horseback carrying orders for the officer in charge. The column would halt for a half hour or an hour with no explanation of what was happening up ahead. Then suddenly the order would be shouted up and down the line, the drumbeat would sound, and the troops would be on their way again.

Not that they understood what all of this maneuvering<sup>4</sup> was about. It did not take Elisha Stockwell very long to comment on this with his dry wit: "We didn't know where we were going, as a soldier isn't supposed to know any more than a mule, but has to obey orders."

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**What the common soldiers did not realize was that the commanders for both sides were engaged in a large-scale chess match in which they were the pieces.**

---

What the common soldiers did not realize was that the commanders for both sides were engaged in a large-scale chess match<sup>5</sup> in which they were the pieces. The first two commanders of the Union army, Lieutenant General Winfield Scott and then Major General George McClellan, had decided on a defensive<sup>6</sup> war, at least until they could amass, outfit, and train a vast army. Both feared that if Confederate troops were able to capture Washington, D.C., civilians and politicians in the North would become demoralized<sup>7</sup> and abandon the fight. They also hoped that the South would lose energy and give up its quest for independence.

3. **column** (käl'əm): arrangement of troops in which one soldier follows directly behind another.

4. **maneuvering** (mə·nōō'vər·īŋ): acting according to a plan.

5. **match** (mach): game; contest.

6. **defensive** (dē·fən'siv): guarding against attack.

7. **demoralized** (dē·môr'ə·līzd): frustrated and beaten down in spirit.



The Confederate commander, General Robert E. Lee, adopted a cautiously offensive<sup>8</sup> plan. He knew the Union army outnumbered his by almost two to one and that it had more supplies. He could never hope to win any head-to-head battle. Instead, he decided to use smaller, fast-moving groups of soldiers and cavalry<sup>9</sup> to strike at Union forces in many places, then wheel<sup>10</sup> around and strike again. By poking at the enemy, he hoped to hold his losses down while buying time to build up his forces. And he, like Scott and McClellan, hoped the other side would abandon the fight.

When boys enlisted in the army, they expected to fight the enemy and settle the dispute very quickly. After all, Lincoln's initial call for enlistments asked for only ninety days of service. But after what seemed like an endless amount of marching and a few hard fought battles, it became clear that neither side was going to surrender easily or quickly. And once they realized the war would last a long, long time, these boys began to miss the things they had left behind—namely their family and friends.

Homesickness was a common problem and found expression in many forms. Singing was one way to express such feelings. One of the most popular war songs for both sides, called “Tenting Tonight,” was written even before the first year of fighting was completed. A few of its lines go:

*We're tenting tonight on the old camp ground,  
Give us a song to cheer our weary hearts,  
A song of home, and the friends we love so dear.*

*We've been tenting tonight on the old camp ground,  
Thinking of days gone by, of the loved ones at home  
That gave us the hand, and the tear that said  
“good-bye!”*

8. **offensive** (ə-fen'siv): initiating an attack; aggressive.

9. **cavalry** (kav'al-rē): group of soldiers on horseback.

10. **wheel** (hwēl): turning action of a line of soldiers with one end acting as the pivot or anchor.

**initial** (i-nish'al): first.



▲ Cover of piano version of “Tenting on the Old Camp Ground” (also known as “Tenting Tonight”). **Why do you think this song was so popular?**

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reliable (ri·lī'ə·bəl): sure; stable.

Many boys simply put down what they felt in their own words. One Southerner, J. B. Lance of Buncombe County, North Carolina, was already tired of life away from home in October 1861. His message was simple and direct, and yet poignant: "Father I have Saw a rite Smart of the world Sence I left home But I have not Saw any place like Buncomb and hendern yet."

It's easy to see why these boys developed such feelings. They were so young they had little real sense of who they were and how they fit into the world. The one solid and reliable thing they knew—their families—had been left behind. Their futures were uncertain. And they had not had time to develop real friendships with the others in their units. John Delhaney managed to capture in his journal this feeling of being apart and alone: "I felt strange enough, lying down this my first night in camp. The strange faces and forms, the near and distant sounds of an army of men talking, shouting, singing, and all upon different subjects; the croaking frogs, cries of the Whip-poor-Will, the glare of the camp fires and the neighing of

## The Great Adventure

Imagine living during the time of the Civil War. Are you bored or tired of doing chores? Why not run off and join the army?

If you're too young-looking to pass for eighteen, you can get in anyway—as a drummer, fifer, or bugler. Don't know how to play? No problem: You'll pick it up soon enough. All day, every day, you play the same tunes over and over: wake-up call, call to drill, call to meals, on and on until lights out. As tired as you get of playing those tunes, you can be sure the soldiers are even more tired of hearing them.

In the heat of battle, though, when the roar of gunfire drowns out the officers' shouts, the soldiers will be glad you're there to bang out commands on your drum or blast them on your bugle. Will you be glad though? You may be too young to carry a gun, but unfortunately, you're not too young to get hit by an enemy bullet.



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▲ Portrait of Pvt. Joph White, drummer boy, Virginia Regiment, C.S.A. ■ Why was the drummer boy important? What was his job?



horses and the deep shadows of a dark night overhanging all; all these were not calculated<sup>11</sup> to allay my uneasiness of mind or lighten my heart of its cares.”

11. **calculated** (kal'kyōō-lāt'ed): intended; designed.

### ✓ Reading Check

1. What “boring fact” about life as a soldier did boys on both sides quickly learn?
2. Who were the first two commanders of the Union army? What kind of war had they decided to fight?
3. Who was the Confederate commander? What was his strategy?
4. Name two ways in which the soldiers expressed their homesickness.
5. Why did young soldiers become homesick so easily? Give two reasons.

### MEET THE *Writer*

**Jim Murphy** (1947– ) began his career as an editor of children's books. However, after helping a number of writers focus their own ideas, he realized he had some of his own. Many of his award-winning books are about historical events such as the Civil War and the Great Fire of Chicago. He has also written books about dinosaurs, trains, and tractors. *The Boys' War: Confederate and Union Soldiers Talk About the Civil War* was named an ALA Best Book for Young Adults in 1992, a *School Library Journal* Best Book of the Year, and a Junior Literary Guild Selection.

**allay** (a-lā'): to reduce; give relief.



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▲ Young boys in a Union drum corps.