



# **AcadeMir Charter Schools**

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**2024 SUMMER  
4<sup>th</sup> GRADE PACKET**

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## AcadeMir Charter School West 2024 Summer Learning Requirements

Dear Parent(s)/Guardian(s),

In preparation for the 2024 – 2025 school year and to ensure that our students maintain growth-oriented academia during the summer, the school curriculum team has created the following Summer Learning assignment for each student to complete by the first day of school. Each student must complete the Summer Learning Packet over the summer and turn it in to your classroom teacher by August 23, 2024.

### Summer Reading

ACSW students will be expected to read the novel from the reading list for their incoming grade level. For example, if your child is entering 1<sup>st</sup> grade in the fall, he/she would read the 1<sup>st</sup> grade novel and complete the activity. Please note that this assignment will be worth one grade for Reading and one grade for Language Arts.

### Mathematics Activities

ACSW students are required to complete the mathematics packet that pertains to their incoming grade level and/or assignment. For example, if your child is in the Accelerated Mathematics course in the elementary level, he/she needs to complete the Accelerated packet. For middle school, Algebra, Geometry, etc. is separated from the ELA, Science, and Social Studies packet. Please ensure that you do all the components.

Thank you for your partnership in ensuring your child continues to strive for excellence over the summer!  
We look forward to an outstanding 2024 – 2025 school year!

Sincerely,

Susie Bello, Principal  
AcadeMir Charter School West  
bello@academircharterschoolwest.com

# ACADEMIR CHARTER SCHOOLS



## ACADEMIR SUMMER READING 2023-2024

Summer provides a plethora of opportunities for students and their families to enjoy unforgettable books and create lifetime memories.

AcadeMir students entering K-8<sup>th</sup> grade are required to read from the summer reading lists developed by our Academic Team for the upcoming grade.

Creating lifelong readers is one of the greatest gifts that we can give our children. We want our students to have a fun summer break while also pursuing reading for enjoyment at the same time.

Research has shown that the single greatest factor in predicting reading success is whether a child is read to when they are young. All of our students are to read the selected book for their grade.

These assignments are for a grade and should be completed and turned in to your student's new ELA teacher by Friday, August 23<sup>rd</sup>.

Happy Reading and enjoy your summer break!!!



# ACADEMIR CHARTER SCHOOLS



## 2024 Summer Reading List

Grade	Summer Reading	Author	Book Synopsis	Front Cover
Kindergarten	Swimmy	Leo Lionni	Deep in the sea there lives a happy school of little fish. Their watery world is full of wonders, but there is also danger, and the little fish are afraid to come out of hiding . . . until Swimmy comes along. Swimmy shows his friends how—with ingenuity and teamwork—they can overcome any danger.	
First Grade	From Seed to Pumpkin	Wendy Pfeffer	Pumpkins can be baked in a pie, carved into jack-o'-lanterns, and roasted for a healthy snack. But how does a tiny seed turn into a big pumpkin? With clear text and detailed, colorful illustrations, this book explains what a pumpkin seed needs to help it grow!	
Second Grade	Mango, Abuela, and Me	Meg Medina	Mia's abuela has left her sunny house with parrots and palm trees to live with Mia and her parents in the city. The night she arrives, Mia tries to share her favorite book with Abuela before they go to sleep and discovers that Abuela can't read the words inside. Then Mia sees a parrot in the pet-shop window and has the perfect idea for how to help them all communicate a little better.	
Third Grade	The Boxcar Children	Gertrude Chandler Warner	The Aldens begin their adventure by making a home in a boxcar. Their goal is to stay together, and in the process, they find a grandfather.	
Fourth Grade	The Lion, the Witch and the Wardrobe	C.S. Lewis	Narnia... the land beyond the wardrobe door, a secret place frozen in eternal winter, a magical country waiting to be set free. Lucy is the first to find the secret of the wardrobe in the professor's mysterious old house. At first her brothers and sister don't believe her when she tells of her visit to the land of Narnia. wardrobe themselves.	



# ACADEMIR CHARTER SCHOOLS



## 2024 Summer Reading List

Grade	Summer Reading	Author	Book Synopsis	Front Cover
Fifth Grade	The City of Ember	Jeanne DuPrau	Many hundreds of years ago, the city of Ember was created by the Builders to contain everything needed for human survival. It worked...but now the storerooms are almost out of food, crops are blighted, corruption is spreading through the city and worst of all— the lights are failing. Soon Ember could be engulfed by darkness...	
Sixth Grade	Hatchet	Gary Paulsen	Brian is on his way to Canada to visit his estranged father when the pilot of his small prop plane suffers a heart attack. Brian is forced to crash-land the plane in a lake--and finds himself stranded in the remote Canadian wilderness with only his clothing and the hatchet his mother gave him as a present before his departure.	
Seventh Grade	Old Yeller	Fred Gipson	At first, Travis couldn't stand the sight of Old Yeller. The stray dog was ugly, and a thieving rascal, too. But he sure was clever, and a smart dog could be a big help on the wild Texas frontier, especially with Papa away on long cattle drive up to Abilene.	
Eighth Grade	The Swiss Family Robinson	John David Wyss	The Robinsons leave their home in Switzerland planning to settle half a world away. But things do not turn out as they had expected. The sole survivors of a terrible shipwreck, they wash ashore to learn that the danger has only begun. Their new world will test their courage, cleverness, endurance, and faith as they struggle to survive and create a civilization of their own in the wilderness.	
Ninth Grade	1984	George Orwell	The scene is London, where there has been no new housing since 1950 and where the city-wide slums are called Victory Mansions. Science has abandoned Man for the State. As every citizen knows only too well, war is peace. To Winston Smith, a young man who works in the Ministry of Truth (Minitru for short), come two people who transform this life completely.	



# AcadeMir Charter Schools

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## ELA

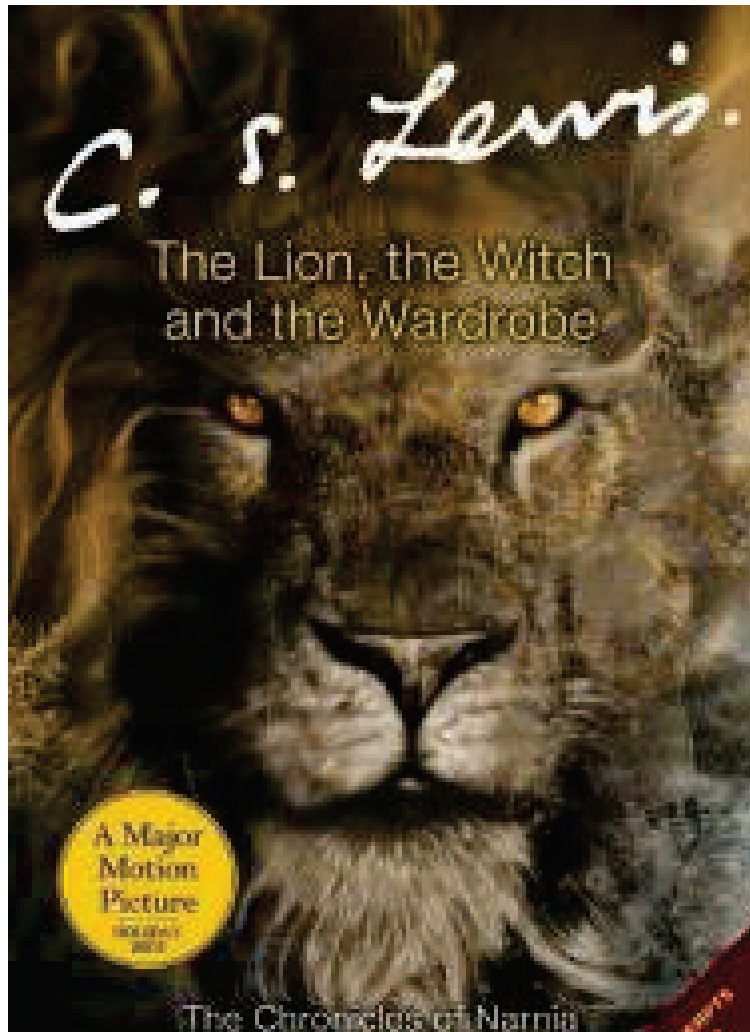
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# ACADEMIR CHARTER SCHOOLS



## Fourth Grade



Narnia... the land beyond the wardrobe door, a secret place frozen in eternal winter, a magical country waiting to be set free.

Lucy is the first to find the secret of the wardrobe in the professor's mysterious old house. At first her brothers and sister don't believe her when she tells of her visit to the land of Narnia. wardrobe themselves.



# ACADEMIR CHARTER SCHOOLS



**WRITE A COMPLETE RESPONSE FOR THE FOLLOWING QUESTIONS**

**Students Name:** \_\_\_\_\_

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

**Title of book and authors name:**

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**Describe the setting of the book:**

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**State the main character's name and describe the character:**

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**What does that character value?**

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**What is that character's personality like?**

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# ACADEMIR CHARTER SCHOOLS



**On a scale from 1-10 (10 being the best book you've ever read), how would you rate this book? Explain your reasoning.**

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**List the sequence of events in the story. Circle the conflict, highlight in yellow the main idea, underline the resolution, and highlight in orange the main characters.**

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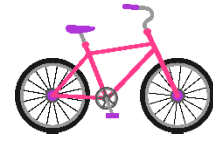
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**Summarize the story on a separate sheet of paper.**

# Cursive passages: The Bicycle

## Cursive Writing Worksheet



Trace and copy the passage:

Emma has a new bicycle. It is bright pink and shiny. It was a gift from her uncle. He hid it behind a bush to surprise her.

When Emma looked behind the bush and saw the bicycle, she jumped for joy. It was just what she wanted. She gave her uncle a big hug.

Blank cursive writing lines for practice, consisting of multiple sets of solid top and bottom lines with a dashed midline.





# AcadeMir Charter Schools

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# MATH

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Name \_\_\_\_\_

## Numbers to Ten Thousand

Complete the packing chart. Use the fewest packages possible.  
When there is a zero, use the next smaller size package.

	Number of Blocks Ordered	Crates (Ten Thousands)	Boxes (Thousands)	Cases (Hundreds)	Stacks (Tens)	Single Blocks (Ones)
1.	1,492	0	1	4	9	2
2.	3,016					
3.	2,804					
4.	4,675					
5.	1,727					
6.	2,351					
7.	5,008					
8.	4,976					

### Problem Solving

9. A worker at the block factory packed blocks in 3 boxes of 1,000, 4 cases of 100, and 9 single blocks. How many blocks did the worker pack?

\_\_\_\_\_

10. Matt needs to pack an order for 1,816 blocks. How can Matt pack the blocks without using boxes of 1,000?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

## Read and Write Numbers to Ten Thousands

Write the number in standard form.

1.  $2,000 + 600 + 30 + 5$  2,635

2. five thousand, three hundred sixty \_\_\_\_\_

3.  $8,000 + 800 + 90 + 9$  \_\_\_\_\_

4. one thousand, fifty-one \_\_\_\_\_

5. three thousand, six hundred nine \_\_\_\_\_

Write the value of the underlined digit two ways.

6. 5,896

7. 4,492

\_\_\_\_\_

\_\_\_\_\_

8. 1,350

9. 3,413

\_\_\_\_\_

\_\_\_\_\_

10. Rename 4,180 as hundreds and tens.

\_\_\_\_\_ hundreds \_\_\_\_\_ tens

11. Rename 7,168 as tens and ones.

\_\_\_\_\_ tens \_\_\_\_\_ ones

### Problem Solving



12. The population of a town is 4,951 people. What is the value of the digit 4 in the number?

\_\_\_\_\_

13. The number of tourists who visited a national park in one day was nine thousand, four hundred twelve. Write this number in two other ways.

\_\_\_\_\_

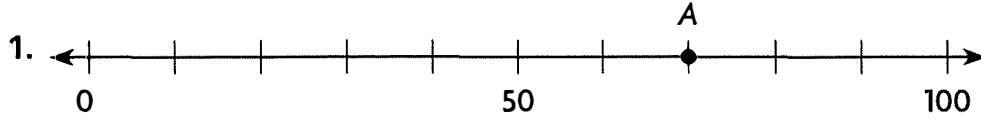
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Name \_\_\_\_\_

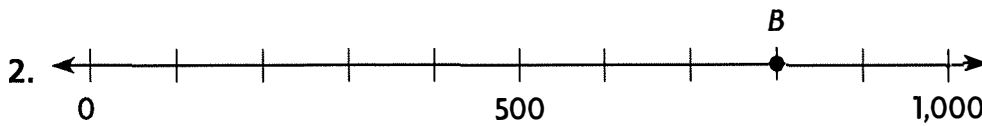
## Relative Size on a Number Line

Find the number represented by the point.



7 tens is 70

70

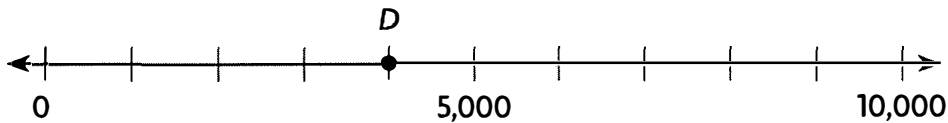


### Problem Solving



For 3–4, use the number line below.

Colin and Sophia score points in a game.  
They show their score on a number line.



3. Colin's score is shown by point *D* on the number line.  
How many points has he scored?

\_\_\_\_\_

4. Sophia scored 3,000 points more than Colin.  
Draw a point on the number line to show Sophia's  
score. What is her score?

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

## Compare 3- and 4-Digit Numbers

Compare the numbers. Write  $<$ ,  $>$ , or  $=$  in the  $\bigcirc$ .

1.  $576 \bigcirc 567$

2.  $9,876 \bigcirc 9,886$

3.  $490 \bigcirc 409$

4.  $7,245 \bigcirc 7,245$

5.  $2,145 \bigcirc 2,245$

6.  $9,304 \bigcirc 9,034$

7.  $8,691 \bigcirc 8,691$

8.  $245 \bigcirc 254$

9.  $1,807 \bigcirc 807$

10.  $5,247 \bigcirc 5,247$

11.  $3,485 \bigcirc 3,548$

12.  $1,953 \bigcirc 9,351$

13.  $6,310 \bigcirc 6,310$

14.  $589 \bigcirc 5,890$

15.  $760 \bigcirc 1,760$

16.  $5,123 \bigcirc 5,321$

17.  $7,645 \bigcirc 7,546$

18.  $5,612 \bigcirc 5,622$

### Problem Solving



19. On Saturday, 4,567 people saw the new animal movie. On Sunday, 4,078 people saw the movie. Use  $<$ ,  $>$ , or  $=$  to compare the number of people who saw the movie on the two days.

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20. Captain Fry flies 1,764 miles. Captain Hale flies 764 miles. Who flies more miles?

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21. Adam says he is 1,352 millimeters tall. Bobby says that he is 1,452 millimeters tall. Who is shorter?

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Name \_\_\_\_\_

## Multiply with 11 and 12

Find the product.

1.  $\underline{99} = 9 \times 11$   
Think:  $9 \times 10 = 90$  and  
 $9 \times 1 = 9$   
So,  $9 \times 11 = 90 + 9 = 99$ .

2.  $12 \times 9 = \underline{\hspace{2cm}}$

3.  $\underline{\hspace{2cm}} = 1 \times 11$

4.  $2 \times 11 = \underline{\hspace{2cm}}$

5.  $\underline{\hspace{2cm}} = 12 \times 0$

6.  $\underline{\hspace{2cm}} = 5 \times 11$

7.  $\underline{\hspace{2cm}} = 7 \times 12$

8.  $4 \times 11 = \underline{\hspace{2cm}}$

9.  $\underline{\hspace{2cm}} = 12 \times 4$

10.  $8 \times 11 = \underline{\hspace{2cm}}$

11.  $\underline{\hspace{2cm}} = 3 \times 12$

12.  $\underline{\hspace{2cm}} = 9 \times 12$

## Problem Solving

Use the table for 13–14.

13. Mr. Wang buys 6 packs of pencils. How many pencils does Mr. Wang buy?

\_\_\_\_\_

14. Mr. Wang buys 12 packs of pens and 11 packs of erasers. Does Mr. Wang buy more pens or erasers? **Explain.**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Supplies	
Item	Number in Each Pack
Pencils	12
Pens	8
Erasers	9

Name \_\_\_\_\_

## Divide with 11 and 12

Find the unknown factor and quotient.

$$1. \quad 11 \times \square = 88 \quad 88 \div 11 = \square$$
$$\square = \underline{8} \quad \square = \underline{8}$$

$$2. \quad 11 \times \square = 55 \quad 55 \div 11 = \square$$
$$\square = \underline{\quad} \quad \square = \underline{\quad}$$

$$3. \quad 12 \times p = 36 \quad 36 \div 12 = p$$
$$p = \underline{\quad} \quad p = \underline{\quad}$$

$$4. \quad 12 \times g = 84 \quad 84 \div 12 = g$$
$$g = \underline{\quad} \quad g = \underline{\quad}$$

Find the quotient.

$$5. \quad \underline{\quad} = 96 \div 8$$

$$6. \quad 44 \div 4 = \underline{\quad}$$

$$7. \quad \underline{\quad} = 60 \div 5$$

$$8. \quad 55 \div 5 = \underline{\quad}$$

$$9. \quad \underline{\quad} = 66 \div 6$$

$$10. \quad \underline{\quad} = 48 \div 4$$

$$11. \quad 72 \div 6 = \underline{\quad}$$

$$12. \quad 88 \div 8 = \underline{\quad}$$

$$13. \quad \underline{\quad} = 108 \div 9$$

$$14. \quad \underline{\quad} = 12 \div 1$$

$$15. \quad \underline{\quad} = 24 \div 2$$

$$16. \quad 33 \div 3 = \underline{\quad}$$

Compare. Write  $<$ ,  $>$ , or  $=$  for each  $\bigcirc$ .

$$17. \quad 60 \div 12 \bigcirc 55 \div 11$$

$$18. \quad 22 \div 2 \bigcirc 48 \div 4$$

$$19. \quad 96 \div 8 \bigcirc 84 \div 12$$

## Problem Solving



20. Mrs. Green bought 72 pencils for her class. There were 12 pencils in each box. How many boxes of pencils did Mrs. Green buy?

\_\_\_\_\_

21. Henry baked 33 cookies. He put the same number of cookies in each of 11 bags. How many cookies did he put in each bag?

\_\_\_\_\_



Name \_\_\_\_\_

## Multiplication and Division Relationships

Complete the related multiplication and division equations.

1.  $4 \times 12 = \underline{48}$

$\underline{12} \times 4 = 48$

$48 \div \underline{4} = 12$

$\underline{48} \div 12 = 4$

2.  $5 \times \underline{\quad} = 55$

$11 \times 5 = \underline{\quad}$

$\underline{\quad} \div 5 = 11$

$55 \div \underline{\quad} = 5$

3.  $\underline{\quad} \times 12 = 72$

$\underline{\quad} \times 6 = 72$

$72 \div \underline{\quad} = 12$

$\underline{\quad} \div 12 = 6$

4.  $\underline{\quad} \times 11 = 88$

$\underline{\quad} \times 8 = 88$

$\underline{\quad} \div 8 = 11$

$88 \div \underline{\quad} = 8$

5.  $3 \times \underline{\quad} = 36$

$12 \times \underline{\quad} = 36$

$36 \div 3 = \underline{\quad}$

$36 \div 12 = \underline{\quad}$

6.  $4 \times 11 = \underline{\quad}$

$11 \times \underline{\quad} = 44$

$44 \div \underline{\quad} = 11$

$44 \div 11 = \underline{\quad}$

7.  $8 \times 12 = \underline{\quad}$

$\underline{\quad} \times 8 = 96$

$96 \div \underline{\quad} = 12$

$\underline{\quad} \div 12 = 8$

8.  $\underline{\quad} \times 11 = 22$

$11 \times 2 = \underline{\quad}$

$22 \div \underline{\quad} = 11$

$22 \div 11 = \underline{\quad}$

9.  $1 \times \underline{\quad} = 12$

$\underline{\quad} \times 1 = 12$

$\underline{\quad} \div 1 = 12$

$12 \div \underline{\quad} = 1$

### Problem Solving

10. Lisa put 66 flowers in vases. She put the same number of flowers in each of 6 vases. How many flowers did Lisa put in each vase?

\_\_\_\_\_

11. Lisa used 84 flowers to make bouquets. She used 7 flowers in each bouquet. How many bouquets did Lisa make?

\_\_\_\_\_

Name \_\_\_\_\_

## Use Multiplication Patterns

Use a basic fact and a pattern to find the products.

1.  $3 \times 10 = \underline{30}$       2.  $10 \times 2 = \underline{\hspace{2cm}}$       3.  $8 \times 10 = \underline{\hspace{2cm}}$   
    $3 \times 100 = \underline{300}$        $100 \times 2 = \underline{\hspace{2cm}}$        $8 \times 100 = \underline{\hspace{2cm}}$   
    $3 \times 1,000 = \underline{3,000}$        $1,000 \times 2 = \underline{\hspace{2cm}}$        $8 \times 1,000 = \underline{\hspace{2cm}}$
4.  $10 \times 6 = \underline{\hspace{2cm}}$       5.  $5 \times 10 = \underline{\hspace{2cm}}$       6.  $10 \times 7 = \underline{\hspace{2cm}}$   
    $100 \times 6 = \underline{\hspace{2cm}}$        $5 \times 100 = \underline{\hspace{2cm}}$        $100 \times 7 = \underline{\hspace{2cm}}$   
    $1,000 \times 6 = \underline{\hspace{2cm}}$        $5 \times 1,000 = \underline{\hspace{2cm}}$        $1,000 \times 7 = \underline{\hspace{2cm}}$

Find the product.

7.  $10 \times 3 = \underline{\hspace{2cm}}$       8.  $9 \times 100 = \underline{\hspace{2cm}}$       9.  $\underline{\hspace{2cm}} = 6 \times 100$   
10.  $1,000 \times 9 = \underline{\hspace{2cm}}$       11.  $\underline{\hspace{2cm}} = 5 \times 10$       12.  $4 \times 100 = \underline{\hspace{2cm}}$   
13.  $\underline{\hspace{2cm}} = 2 \times 10$       14.  $\underline{\hspace{2cm}} = 1,000 \times 1$       15.  $7 \times 1,000 = \underline{\hspace{2cm}}$

## Problem Solving



Use the picture graph for 16–17.

16. How many rocks does Eva have? Explain how you found your answer.

\_\_\_\_\_



\_\_\_\_\_


17. Sam has 30 more rocks in his collection than Tim. Draw rocks in the picture graph to show the number of rocks in Sam's collection. Explain your answer.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Rock Collections	
Name	Number of Rocks
Eva	
Tim	
Sam	

Key: Each  = 10 rocks.

Name \_\_\_\_\_

## Model Division with Remainders

Complete.

1. Divide 15 hats into 4 equal groups.

There are 3 hats in each group and 3 hats left over.

3. Divide 29 cookies into groups of 3.

There are \_\_\_\_\_ groups and \_\_\_\_\_ cookies left over.

2. Divide 50 forks into 6 equal groups.

There are \_\_\_\_\_ forks in each group and \_\_\_\_\_ forks left over.

4. Divide 46 paper cups into groups of 5.

There are \_\_\_\_\_ groups and \_\_\_\_\_ paper cup left over.

Find the total number of objects.

5. There are 8 books in each of 3 groups and 4 books left over.

There are \_\_\_\_\_ books in all.

6. There are 7 muffins in each of 5 groups and 1 muffin left over.

There are \_\_\_\_\_ muffins in all.

## Problem Solving

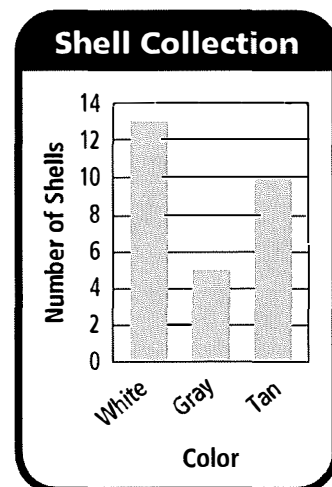
Use the bar graph for 7–8.

7. If Sarah divides the white shells evenly onto 2 shelves, how many shells will be on each shelf? How many shells will be left over?

\_\_\_\_\_

8. If Sarah puts an equal number of tan shells into some boxes and has 1 shell left over, how many boxes will she use? How many shells will be in each box?

\_\_\_\_\_

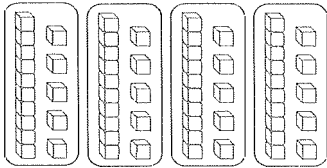


Name \_\_\_\_\_

## Use Models to Divide Tens and Ones

Use base-ten blocks and your MathBoard to divide.

1.  $60 \div 4 = \underline{15}$



2.  $65 \div 5 = \underline{\hspace{2cm}}$

3.  $54 \div 3 = \underline{\hspace{2cm}}$

4.  $90 \div 5 = \underline{\hspace{2cm}}$

5.  $74 \div 2 = \underline{\hspace{2cm}}$

6.  $98 \div 7 = \underline{\hspace{2cm}}$

7.  $75 \div 5 = \underline{\hspace{2cm}}$

8.  $60 \div 3 = \underline{\hspace{2cm}}$

9.  $78 \div 6 = \underline{\hspace{2cm}}$

10.  $84 \div 4 = \underline{\hspace{2cm}}$

11.  $96 \div 6 = \underline{\hspace{2cm}}$

12.  $95 \div 5 = \underline{\hspace{2cm}}$

### Problem Solving



13. The third-grade students collected 90 cans of food for a food drive. They want to put an equal number of cans into each of 6 boxes. How many cans will they put into each box?

\_\_\_\_\_





**AcadeMir  
Charter Schools**

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**SOCIAL  
STUDIES**

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Name \_\_\_\_\_

Date \_\_\_\_\_

# Name the 13 Colonies

Use the word bank below to label the map of the 13 colonies.

A map of the eastern United States showing the 13 colonies. Each colony is a different color and has a line pointing to an empty rectangular box for labeling. The boxes are arranged as follows: one on the far left; two on the left side; one on the top left; one on the top right; one on the right side; one on the bottom right; and two on the bottom left.

**Word Bank:**

- Connecticut
- Delaware
- Georgia
- Maryland
- Massachusetts
- New Hampshire
- New Jersey
- New York
- North Carolina
- Pennsylvania
- Rhode Island
- South Carolina
- Virginia

During the age of exploration - a new land was discovered by the Europeans. Although there were people already living on this continent, the Europeans wanted to colonize this land for a number of reasons. Some people were searching for religious freedom, some kings wanted the resources that this new land had to offer and others just wanted a new opportunity and some adventure. The 13 colonies were the result and years later these colonies came together to form the United States of America.





**AcadeMir  
Charter Schools**

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**SCIENCE**

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Name \_\_\_\_\_

Date \_\_\_\_\_

## Atmospheric Pressure & Light

Planet Earth is the only known planet that has conditions suitable enough for living organisms to grow, and reproduce and survive. These conditions are a combination of non-living components like water, sunlight, temperature and living components like micro-organisms, plants and animals. The non-living components (forces) of a particular environment that make the conditions ideal for sustenance of life are known as the **A-biotic factors**.



Some of the important abiotic factors that affect living organisms are:

### Light

Light is the main source of energy for many organisms. Natural light plays an important part in the life of most plants as they utilize it in the process of photosynthesis. During photosynthesis, light energy is converted into chemical energy and into complex organic substances that are vital for growth, flowering and germination. Plants are a food source that indirectly transfers energy to animals. For animals, the intensity of light affects their skin color, sensitivity, and sight

### Atmospheric Pressure

Because of the gravitational force of the earth, atmospheric gases are pulled towards the surface of the earth. Many organisms can only survive in particular ranges of atmospheric pressure and when air pressure is low, especially in higher altitudes some may find it difficult to breathe. This is due to the insufficient amount of oxygen present at a certain height. Deep underwater in an ocean the atmospheric pressure increases as the depth of the water increases and again this causes only certain kinds of plants and animals to survive in certain specific ocean regions.



Name \_\_\_\_\_

Date \_\_\_\_\_

## **Atmospheric Pressure & Light Multiple Choice Questions**

- 1. Light (sunlight) helps in the process of**
  - a) Photosynthesis
  - b) Reproduction
  - c) Survival
  - d) None of these
  
- 2. Intensity of light affects the \_\_\_\_\_ of animals.**
  - a) Skin color
  - b) Sensitivity
  - c) Sight
  - d) All of the above
  
- 3. The non-living components (forces) of environment that makes survival possible are known as \_\_\_\_\_**
  - a) Biotic Factors
  - b) A-Biotic Factors
  - c) Non-Biotic Factors
  - d) None of these
  
- 4. Atmospheric gases are pulled towards the surface because of**
  - a) Atmospheric pressure
  - b) Gravitational Forces
  - c) High temperature
  - d) All of these

# ACADEMIR CHARTER SCHOOLS



## 4<sup>th</sup> Grade Summer Science Activity

### “The Power of Air Pressure”

#### Introduction

Air pressure is a powerful force. Here’s a small, but significant example of how you can use air pressure to exert force on an object.

#### Materials

- 1 Raw potato
- 1 to 3 sturdy drinking straws

#### Procedures

1. Hold the straw without blocking the hole at the top.
2. Stab the potato with a straw. Were you able to pierce the potato with the straw?
3. Stab the potato with a straw again, BUT this time make sure you block the whole with your thumb. Were you able to pierce the potato with the straw this time?
4. Try Step #2 and Step #3 again. Did you get a different result?



#### Your task

On a separate sheet of paper, write your name and explain what happened when you tried step #2. Now write about what happened when you tried step #3. Give your reasoning why you think the results were different for step #2 and step #3.

#### Explanation

When you covered the hole with your thumb and stabbed the potato, you could push the straw deeper than before. This is because your thumb trapped the air inside the straw and created enough pressure to stab the potato successfully.

