



# ASCEND

## SUMMER HOMEWORK

### RISING 4<sup>TH</sup> GRADE

Dear Families,

In this packet, you will find reading, math, and science activities for your scholar to complete over the summer. These activities are meant to challenge your scholar's thinking, while also being fun and engaging. Please feel free to complete this work along with your scholar, asking questions and taking part in conversation as you go. This will make their experience even richer!

Research shows that kids who read over the summer are much more prepared for the next school year than those who do not. **For this reason, in addition to our selected book, your scholar should read 2-3 other age-appropriate chapter books over the summer.** On pages 4-6, you will find a reading log for your scholar to track their summer reading and for you to certify this with your signature. Your scholar will be better off if they complete these chapters and activities over time throughout the summer—switching back and forth between reading, math, and science—than if they try cramming them into the last few days.

Thank you for supporting your scholar's learning. Together, we can push them to new heights!

Happy summer!

Ascend Public Charter Schools

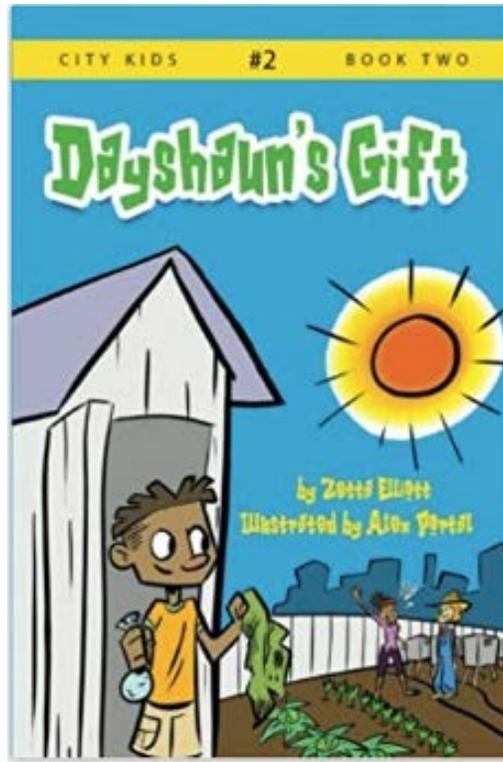
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## RISING 4<sup>TH</sup> GRADE READING



We know that kids love this book and have chosen it because we hope it will encourage your love of reading this summer! As you read *Dayshaun's Gift*, take notes about major character insights and plot elements—as you have all year—and complete the chapter-by-chapter questions and activities in this packet.

In addition to *Dayshaun's Gift*, we hope you'll choose at least a few other books to read over the summer. Please track your summer reading on the reading log that is on the following pages and ask your family members to sign.







RISING 4<sup>TH</sup> GRADE *Dayshaun's Gift* READING LOG

Book Title	Chapter	Date	Signature
<i>Dayshaun's Gift</i>	1		
<i>Dayshaun's Gift</i>	2		
<i>Dayshaun's Gift</i>	3		
<i>Dayshaun's Gift</i>	4		
<i>Dayshaun's Gift</i>	5		
<i>Dayshaun's Gift</i>	6		
<i>Dayshaun's Gift</i>	7		
<i>Dayshaun's Gift</i>	8		

### Chapter 1

Use three words to describe Dayshaun, based on the text. Think carefully and review the text if you need to.

\_\_\_\_\_

Choose one of the words above. In 2-4 sentences, explain why you think that is a good word to describe Dayshaun based on what he thinks, says, and does throughout the story.

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Draw a 3 box comic strip of Dayshaun and his mother's interaction at the beginning of the chapter (p 1-4). Think about what happens first, next, and last. Use drawings, dialogue bubbles and labels.

(1)	(2)	(3)
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How does Dayshaun feel about going to the garden? Use 2 details from the text and 4-6 sentences in your answer.

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If a family member asked you to go gardening with them, would your opinion be similar or different from Dayshaun's? Explain why in 2-3 sentences.

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## Chapter 2

How is the setting important to the story? Use two details from the text in your response. Answer in 5-7 sentences.

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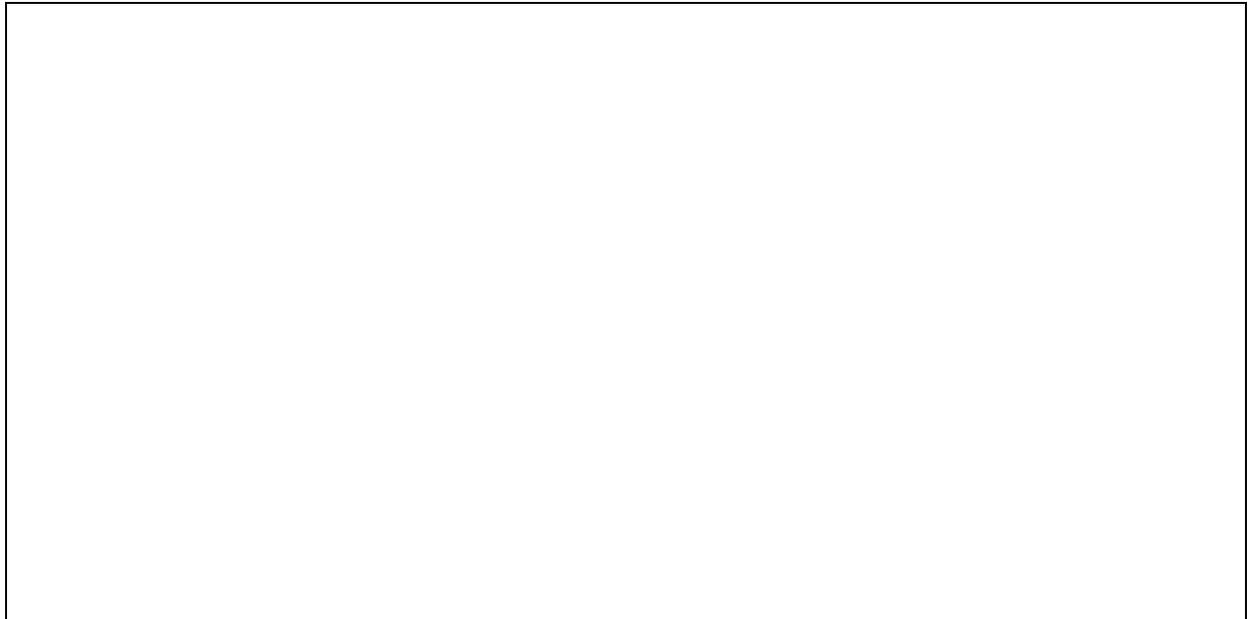
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Draw a picture of the Weeksville Community Garden based on the text.



Dayshaun’s dad tells him, “We have to live in the here and now.” These words of wisdom help Dayshaun. What are some words of wisdom that your family (think parents, grandparents, older siblings) share with you? What do they mean? Answer in 2-3 sentences.

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Dayshaun’s mom and fellow gardeners are excited about the heirloom seeds, seeds that have been passed down from generation to generation. What is an important heirloom that you have in your family? It might be a blanket, a book, a piece of jewelry. If you’re not sure, ask someone at home! You may find out an exciting story.

Family heirloom: \_\_\_\_\_

What is the story behind this heirloom? Consider: Who is it from? How old is it? Why is it important? Answer using 3-5 sentences.

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### Chapter 3

Readers have to be detectives! What clues does the author give the reader about how the setting has changed? Use at least three clues from the text.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Solve the mystery! Where is Dayshaun? \_\_\_\_\_

If you had a chance to time travel, when and where would you want to time travel to?

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Why would you want to go to that time period? Respond in 2-3 sentences.

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We meet two new characters in this section. Draw a picture of each of them using details from the text.

**Teddy**

**Susan**

Chapter 4

Authors often give us clues that allow us to compare what is similar and different about events, characters, settings, etc. We can use these clues to **compare** (find what is similar) and **contrast** (find what is different). Find at least 4 similarities or differences between Weeksville in 1860 and Weeksville today. The first row is completed for you.

Weeksville Then vs. Now

Similar or Different?	Weeksville in 1860	Weeksville Today
<i>Different</i>	<i>No indoor plumbing, use privies</i>	<i>Air Conditioning/indoor plumbing</i>

## Chapter 5

Draw a picture of the camp of survivors from NY Draft Riots based on Dayshaun's description in this chapter.





Did you know that this book is based on real historical events and people? Even though time travel doesn't happen and Dayshaun is a fictional character, Zetta Elliot, the author, used her research about Brooklyn in 1860 and Brooklyn now to write this book.

Now it's your turn to do some research on the real-life topics of this book! All of the following are real people, places, things or events that Elliot was inspired by. Choose one to research:

- Susan McKinney Smith
- Weeksville Heritage Center
- New York Draft Riots
- Community Gardens
- Food Deserts
- Another topic you choose!

First, select your topic and write it here: \_\_\_\_\_

Then, to start your research, try typing into Google things like:

- *Who was Susan McKinney Smith?*
- *What were the New York Draft Riots?*
- *Information about community gardens for kids*

Try to learn as much information as you can about your topic. You can also go to the library to find books on the topic you choose, if you would like. Write down notes about information that seems important and interesting. You won't be able to write everything about your topic, so think about what is the most important information to include.

Once you've completed your research, you can write a brief report. Your report should be at least 10 sentences long and should include facts, explanations, and descriptions about your topic. Don't forget to include a title and a picture.





### Chapter 6

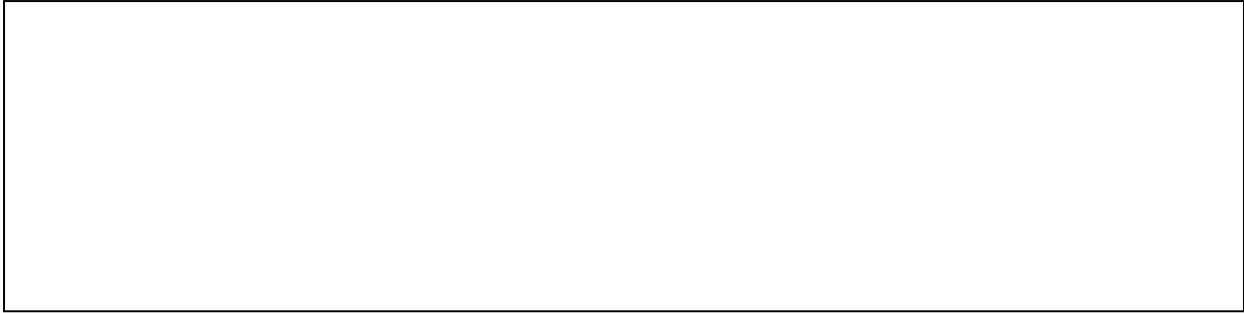
Dayshaun and Teddy design a crutch to help Mr. Williams. When we design or invent, we go through a process of **trial and error**. This means we try things out and see if they work. If they don't work, we make adjustments or fix the errors until we end up with our finished design. What is the process of trial and error that Dayshaun and Teddy go through? In the boxes below, name or draw what they try, the problem, and how they fix it (their solution).

Trial	Error	Solution

Think of someone in your life who you would like to help. Design an invention to help them, like Teddy and Dayshaun do for Mr. Williams. For example, if your mom is always losing her glasses, you may design an alarm that beeps so she can find them more easily.

My invention: \_\_\_\_\_

Invention Picture:



Who will this invention help? How will it help them? Respond in 3-5 sentences.

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What is an important gift you have received?

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Why is this gift important to you? Respond in 2-3 sentences.

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Did you like this story? Would you recommend it to a sibling, classmate, or friend? Why or why not? On the following pages you will write a short book report, including details about the story and your own opinion about it. You will need to review portions of the book to remember some of the specifics.

### Book Report

Title: \_\_\_\_\_

Author: \_\_\_\_\_

Main Characters (list as many as you think are important):

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Setting (when and where the story takes place.) Note: You may want to list multiple settings:

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Plot Summary (you can't include every little detail, so think about the most important parts – the main problems, solutions, turning points, exciting action). Your summary should be 7-10 sentences long.

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How many STARS would you give this book?



What was your favorite part about the story? Use 2-4 sentences. Be specific.

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Would you recommend this book? \_\_\_\_\_ Why or why not?

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# RISING 4<sup>TH</sup> GRADE MATH

## Skills to master before entering fourth grade:

- Memorizing multiplication facts within 100
- Adding and subtracting within 1,000
- Drawing fractions in picture form and on the number line:
  - Halves
  - Thirds
  - Fourths
  - Sixths
  - Eighths
- Rounding any number to the nearest **ten** or **hundred**
- Telling time to the nearest minute

## Activities to do this summer to prepare for fourth grade:

- Math flashcards (see next page for instructions)
- Math games (included in this packet)
- Math practice sheets (included in this packet)

## Recommended materials

- 1 pack of 3 x 5" index cards
- 3 dice
- 1 deck of playing cards (with jokers and face cards removed)
- 2 paper clips

RISING 4<sup>TH</sup> GRADE MATH FACTS

Learning and practicing these basic math facts is the best way to get ready for fourth grade. You may have brought home a set of flashcards. If not, you can make your own!

Instructions: Each day, run through the flash cards. Make two piles: one for the facts you can recall automatically (in less than 3 seconds, without counting on fingers), and one for the facts you need to practice more. Run through this pile 2-3 more times. The next day, shuffle the piles and repeat. Practicing daily will ensure you are ready for fourth grade!

**Multiplication within 100**

On the front of a 3 x 5" index card, write the fact *without the answer*.

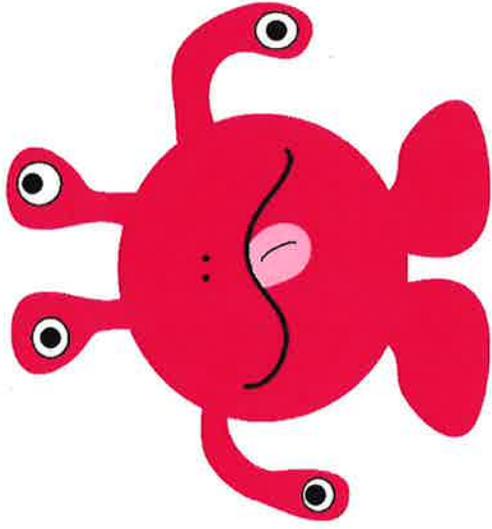
On the back of each card, write the answer.

0	1	2	3	4	5
$0 \times 0 = 0$	$1 \times 0 = 0$	$2 \times 0 = 0$	$3 \times 0 = 0$	$4 \times 0 = 0$	$5 \times 0 = 0$
$0 \times 1 = 0$	$1 \times 1 = 1$	$2 \times 1 = 2$	$3 \times 1 = 3$	$4 \times 1 = 4$	$5 \times 1 = 5$
$0 \times 2 = 0$	$1 \times 2 = 2$	$2 \times 2 = 4$	$3 \times 2 = 6$	$4 \times 2 = 8$	$5 \times 2 = 10$
$0 \times 3 = 0$	$1 \times 3 = 3$	$2 \times 3 = 6$	$3 \times 3 = 9$	$4 \times 3 = 12$	$5 \times 3 = 15$
$0 \times 4 = 0$	$1 \times 4 = 4$	$2 \times 4 = 8$	$3 \times 4 = 12$	$4 \times 4 = 16$	$5 \times 4 = 20$
$0 \times 5 = 0$	$1 \times 5 = 5$	$2 \times 5 = 10$	$3 \times 5 = 15$	$4 \times 5 = 20$	$5 \times 5 = 25$
$0 \times 6 = 0$	$1 \times 6 = 6$	$2 \times 6 = 12$	$3 \times 6 = 18$	$4 \times 6 = 24$	$5 \times 6 = 30$
$0 \times 7 = 0$	$1 \times 7 = 7$	$2 \times 7 = 14$	$3 \times 7 = 21$	$4 \times 7 = 28$	$5 \times 7 = 35$
$0 \times 8 = 0$	$1 \times 8 = 8$	$2 \times 8 = 16$	$3 \times 8 = 24$	$4 \times 8 = 32$	$5 \times 8 = 40$
$0 \times 9 = 0$	$1 \times 9 = 9$	$2 \times 9 = 18$	$3 \times 9 = 27$	$4 \times 9 = 36$	$5 \times 9 = 45$
6	7	8	9	10	
$6 \times 0 = 0$	$7 \times 0 = 0$	$8 \times 0 = 0$	$9 \times 0 = 0$	$10 \times 0 = 0$	
$6 \times 1 = 6$	$7 \times 1 = 7$	$8 \times 1 = 8$	$9 \times 1 = 9$	$10 \times 1 = 10$	
$6 \times 2 = 12$	$7 \times 2 = 14$	$8 \times 2 = 16$	$9 \times 2 = 18$	$10 \times 2 = 20$	
$6 \times 3 = 18$	$7 \times 3 = 21$	$8 \times 3 = 24$	$9 \times 3 = 27$	$10 \times 3 = 30$	
$6 \times 4 = 24$	$7 \times 4 = 28$	$8 \times 4 = 32$	$9 \times 4 = 36$	$10 \times 4 = 40$	
$6 \times 5 = 30$	$7 \times 5 = 35$	$8 \times 5 = 40$	$9 \times 5 = 45$	$10 \times 5 = 50$	
$6 \times 6 = 36$	$7 \times 6 = 42$	$8 \times 6 = 48$	$9 \times 6 = 54$	$10 \times 6 = 60$	
$6 \times 7 = 42$	$7 \times 7 = 49$	$8 \times 7 = 56$	$9 \times 7 = 63$	$10 \times 7 = 70$	
$6 \times 8 = 48$	$7 \times 8 = 56$	$8 \times 8 = 64$	$9 \times 8 = 72$	$10 \times 8 = 80$	
$6 \times 9 = 54$	$7 \times 9 = 63$	$8 \times 9 = 72$	$9 \times 9 = 81$	$10 \times 9 = 90$	

RISING 4<sup>TH</sup> GRADE MATH GAMES

Playing games is a great way to practice your facts! The chart below provides a list of math games you can play. Below, read directions for how to play.

Game	Number of Players	Materials Needed	Directions
Monster Multiplication Games	2	<ul style="list-style-type: none"> <li>• Monster multiplication game board <math>3 \times \underline{\quad}</math> (provided in this packet)</li> <li>• Space markers (beans, small pieces of paper, etc.)</li> <li>• 2 dice</li> </ul>	<p>Take turns rolling two dice (ex. 3 and 4). Add the numbers (ex. <math>3 + 4 = 7</math>) and multiply the sum by 3 (ex. <math>7 \times 3 = 21</math>). Cover up the product (21).</p> <p>*NOTE: The rules are the same for all of the game boards marked <math>4 \times \underline{\quad}</math>, <math>5 \times \underline{\quad}</math>, etc. You just change the number you're multiplying by!</p>
Multiplication Madness	2	<ul style="list-style-type: none"> <li>• Multiplication Madness game board (provided in this packet)</li> <li>• 2 different sets of colored space markers</li> <li>• 2 paper clips</li> </ul>	<p>Player A places a paper clip on two numbers at the bottom of the game board (ex. 5 and 8), multiplies them, and covers the product (ex. 40) on the game board with a game marker. Player B moves ONE of the paper clips to a different number (ex. <math>5 \rightarrow 2</math>) and covers the new product on the game board (ex. <math>2 \times 8 = 16</math>) with a different colored marker. Continue taking turns. The first one with three in a row (vertically, horizontally, or diagonally) wins!</p>
Make 20	2	<ul style="list-style-type: none"> <li>• Make 20 instructions (included in this packet)</li> <li>• 1 deck of cards (remove the jokers and face cards)</li> </ul>	<p>You have to see it to understand it! Read the "Make 20" instructions in your packet.</p>
Race to 500	2-4	<ul style="list-style-type: none"> <li>• 1 deck of cards (remove the jokers and face cards)</li> <li>• 1 blank piece of paper per person</li> </ul>	<p>You have to see it to understand it! Read the "Race to 500" instructions in your packet.</p>
3-Digit Subtraction Action	2	<ul style="list-style-type: none"> <li>• 1 deck of cards (remove the jokers and face cards)</li> <li>• 1 blank piece of paper per person</li> </ul>	<p>You have to see it to understand it! Read the "3-Digit Subtraction Action" instructions in your packet.</p>



$$3 \times \underline{\quad} = \underline{\quad}$$

**DIRECTIONS:**  
 Roll two dice. Add up the sums.  
 Multiply that number by 3.  
 Cover up the product.

6

27

18

30

21

36

12

33

9

15

24

$$4 \times \underline{\quad}$$

**DIRECTIONS:**

Roll two dice. Add up the sums.  
Multiply that number by 4.  
Cover up the product.



48

12

28

20

32

16

40

44

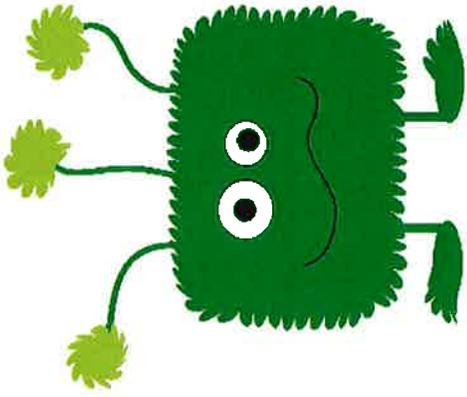
36

24

8

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

**DIRECTIONS:**  
Roll two dice. Add up the sums.  
Multiply that number by 5.  
Cover up the product.



A collection of colorful circles containing numbers, scattered across the page. The numbers are: 50, 25, 30, 15, 35, 20, 45, 10, 55, 40, and 60. The circles are in shades of green and yellow. Small colored dots (red, blue, orange, purple) are scattered around the numbers.

**DIRECTIONS:**

Roll two dice. Add up the sums.  
 Multiply that number by 6.  
 Cover up the product.

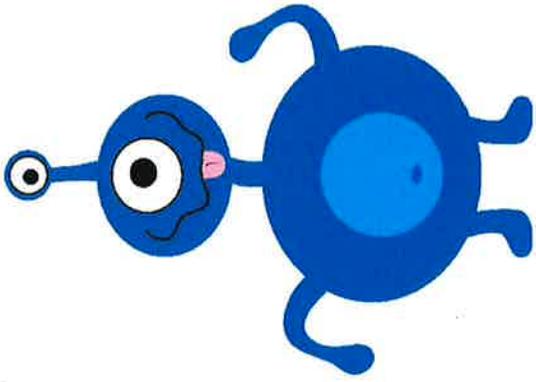
$$6 \times \underline{\quad} = \underline{\quad}$$

72, 48, 30, 60, 12, 18, 36, 24, 42, 66, 54

**DIRECTIONS:**

Roll two dice. Add up the sums.  
 Multiply that number by 7.  
 Cover up the product.

$$7 \times \underline{\quad}$$



28

56

42

77

35

21

63

70

49

84

14

**DIRECTIONS:**

Roll two dice. Add up the sums.  
 Multiply that number by 8.  
 Cover up the product.

8	x	—
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A collection of colorful circles and shapes containing numbers: 64, 32, 72, 48, 88, 96, 56, 24, 40, 16, 80. Includes a pink character with eyes and a red squiggle.

**DIRECTIONS:**

Roll two dice. Add up the sums.  
 Multiply that number by 9.  
 Cover up the product.

$$9 \times \underline{\quad} = \underline{\quad}$$



A collection of colorful circles containing numbers, scattered across the page. The numbers are: 90, 36, 81, 108, 27, 63, 45, 54, 18, 72, and 99. There are also several small colored dots (red, blue, purple, yellow, orange) scattered around the circles.



# Multiplication Madness!

1	2	3	4	5	6
7	8	9	10	12	14
15	16	18	20	21	24
25	27	28	30	32	35
36	40	42	45	48	49
54	56	63	64	72	81

**1 2 3 4 5 6 7 8 9**

# Make 20

**\*Two players\***

**Materials:** One deck of cards with jokers and face cards removed.

**The Way to Play:**

- Deal 5 cards face up between the 2 players and stack the remaining cards face down in a pile.
- Players try to Make 20 using the 5 cards with any operation (add, subtract, multiply, or divide) as many times as necessary.
- If the player can make 20 they say, **'20!'** then must verbalize how they reached the total. The player that can make 20 using the most cards wins.
- When all cards have been used, the player with the most cards is the winner.

7

2

5

8

9

**Example:**

**Player 1:**  $9 - 7 = 2 \times 5 = 10 + 2 = 12 + 8 = 20$

**Player 2:**  $7 + 5 = 12 + 8 = 20$

**Player 1 wins and collects all five cards.**

**Variation:**

- Use the face cards as 11's, 12's, or even 0.
- Each player is only allowed to use each operation once.
- Change the number of cards (use 4 or 6 instead of 5)
- With younger students, make 10
- Be creative and have fun playing!

# Race to 500



You will need: something to write on (paper, journal or whiteboard), digit cards (0-9)

1. Deal four digit cards to each person.
2. Use your four digit cards to make two 2-digit numbers.  
**Example:** Mary has the cards 3, 5, 7, 2.  
She makes the numbers 57 and 23.
3. Find the difference between your two numbers. This is your score for round one.  
**Example:**  $57 - 23 = 34$ .  
Mary's score for round one is 34.
4. Shuffle the cards and repeat. Add your score to your score from the previous round.
5. Continue playing until one player's score reaches 500.

# 3-Digit Subtraction Action

You will need: 4 sets of digit cards (0-9), journal and a pencil

1. Find a partner. Shuffle the digit cards and place them in a pile facedown between you and your partner.
2. Draw 6 cards from the pile. Arrange them cards to make a subtraction expression with two 3-digit numbers.
3. The goal is to make a expression with the difference as close to 0 as possible.

3	7	4	-	2	9	8
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4. Record your thinking in your journal to prove your difference to your partner. You and your partner will check each other's work.
5. The player with the difference closest to 0 gets one point.
6. The first player to reach 10 points wins!

## RISING 4TH GRADE MATH PRACTICE PAGES

In addition to the games and flashcards, you should practice math skills by completing the pages provided. You should complete about 2 pages (front and back = 1 page) per week.

1. Ms. Burress has 48 cookies that she wants to put into boxes. She put 3 cookies in each box. How many boxes will she need?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

2. Bianca has 61 pieces of candy to put into bags for her birthday party with 8 pieces of candy in each bag. How many bags of candy can she make?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

3. Twenty nine girls and 34 boys arrived at camp. For the first activity, the children are organized into nine equal teams. How many children are on each team?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

4. Matt is reading a mystery book. He read 97 pages. Now he has 128 pages left to read. How many pages are in the book?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

5. Leo went on vacation for 7 days. On each day he ran for 13 minutes. How many minutes did he run in all?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

6. Edgar saved 73 quarters and earned 29 more quarters delivering newspapers on Sunday. He has 45 more quarters than Fran. How many quarters does Fran have?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

7. Nyla was collecting shells on her vacation for 4 days. On each day she collected 3 bags with 6 shells in each bag. How many shells did she collect in all?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

8. The total weight of 4 potatoes is 3 pounds. If they each weigh the same amount, how much does each potato weigh?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

9. Eight friends went out to lunch and their bill came to a total of \$96. If they split the bill evenly, how much money will each friend need to pay?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

10. Three hundred eighty-three children were eating lunch in the cafeteria. One hundred twenty-three children chose pizza, some children chose corn dogs, and 124 children chose hamburgers. How many children chose corn dogs?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

11. At a community meeting, there were 3 classes of 20 first graders, 254 second graders and some third graders. All together there were 500 students at the community meeting. How many third graders were there?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

12. Libby had 4 chapters left to read in her book. Each chapter had 15 pages. On Sunday, she read some of the pages. Now she only has 17 pages left to read. How many pages did Libby read on Sunday?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

13. Dad bought 9 boxes of granola bars for a snack at the birthday party. Each box contained 12 granola bars. We ate some of the granola bars and now there are 46 granola bars left. How many granola bars did we eat at the birthday party?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

14. Your sister started to put together a puzzle and invited you to finish it. You put together 111 pieces to finish the 200-piece puzzle. How many puzzle pieces did your sister put together?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

15. A grocery store has 5 boxes of soup cans. There are 30 soup cans in each box. They want to arrange the cans on 10 shelves with the same amount of cans on each shelf. How many cans will they put on each shelf?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.

16. Pete has 7 packages of apples with 8 apples in each package to sell at the farmer's market. Will has 124 more apples than Pete. How many apples does Will have?

Answer: \_\_\_\_\_

Write a number sentence that matches the problem.





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

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

$$\begin{array}{r} 701 \\ + 777 \\ \hline \end{array}$$

$$\begin{array}{r} 285 \\ + 994 \\ \hline \end{array}$$

$$\begin{array}{r} 396 \\ + 978 \\ \hline \end{array}$$

$$\begin{array}{r} 661 \\ - 397 \\ \hline \end{array}$$

$$\begin{array}{r} 952 \\ - 462 \\ \hline \end{array}$$

$$\begin{array}{r} 332 \\ + 352 \\ \hline \end{array}$$

$$\begin{array}{r} 324 \\ + 811 \\ \hline \end{array}$$

$$\begin{array}{r} 793 \\ - 610 \\ \hline \end{array}$$

$$\begin{array}{r} 483 \\ - 158 \\ \hline \end{array}$$

$$\begin{array}{r} 250 \\ + 665 \\ \hline \end{array}$$

$$\begin{array}{r} 331 \\ + 973 \\ \hline \end{array}$$

$$\begin{array}{r} 213 \\ - 203 \\ \hline \end{array}$$

$$\begin{array}{r} 492 \\ - 325 \\ \hline \end{array}$$

$$\begin{array}{r} 568 \\ - 258 \\ \hline \end{array}$$

$$\begin{array}{r} 866 \\ + 764 \\ \hline \end{array}$$

$$\begin{array}{r} 365 \\ + 257 \\ \hline \end{array}$$



Name \_\_\_\_\_

# Common Core Standards Practice

**3.NBT.A.1** Use place value understanding to round whole numbers to the nearest 10 or 100.

**Round each number to the nearest ten.**

1. 118

2. 731

3. 1,552

4. 2,219

5. 6,382

6. 925

7. Which of these numbers, when rounded to the nearest 10, is 780?  
Circle all that round to 780.

784      789      773      776      758

8. Explain how to use place value to round 286 to the nearest 10.

**Round each number to the nearest hundred.**

9. 210

10. 2,547

11. 1,472

12. 889

13. 2,149

14. 7,975

15. Ryan says that 472 rounded to the nearest 10 is 500. Is Ryan correct? Explain.

16. Which of these is equal to 360? Circle all that are equal to 360.

$4 \times 90$

$80 \times 4$

$12 \times 30$

$40 \times 9$

$50 \times 7$

$6 \times 60$

$40 \times 8$

$5 \times 60$

# Common Core Standards Practice

**3.NBT.A.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

## Add.

1. 
$$\begin{array}{r} 237 \\ + 194 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 359 \\ + 209 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 808 \\ + 115 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 556 \\ + 436 \\ \hline \end{array}$$

5. What is  $438 + 194$ ?

- A 522
- B 564
- C 622
- D 632

6. What is  $703 + 167$ ?

- A 800
- B 810
- C 860
- D 870

7. a. Find the sum,  $243 + 239$ .

b. Explain how you added 243 and 239.

**Subtract.**

$$\begin{array}{r} 8. \quad 320 \\ - \quad 16 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 334 \\ - \quad 53 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 289 \\ - \quad 122 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 901 \\ - \quad 576 \\ \hline \end{array}$$

12. What is  $487 - 158$ ?

- A 321
- B 329
- C 331
- D 339

13. What is  $901 - 76$ ?

- A 825
- B 835
- C 925
- D 975

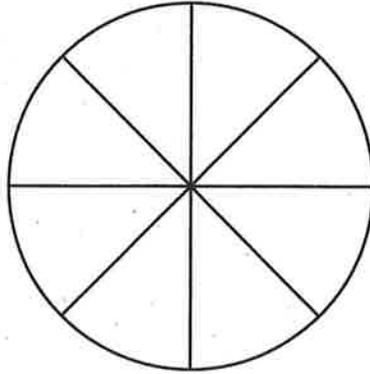
14. Lilly says that  $512 - 392$  is 280.

- a. How can Lily use addition to check her answer?
  
- b. Explain how you know that Lily's answer is incorrect.
  
- c. What is the correct answer?

# Common Core Standards Practice

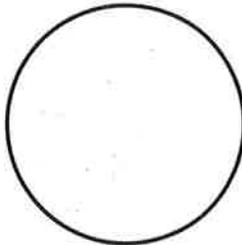
**3.NF.A.1** Understand a fraction  $\frac{1}{b}$  as the quantity formed by 1 part when a whole is partitioned into  $b$  equal parts; understand a fraction  $\frac{a}{b}$  as the quantity formed by  $a$  parts of size  $\frac{1}{b}$ .

1. Lucy divided the circle into equal parts as shown.

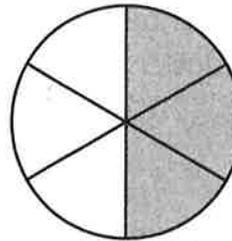


- a. How many equal parts does the circle have?
- b. Shade 5 parts of the circle.
- c. What fraction of the circle is shaded? Tell how you know.

2. Divide the circle into 4 equal parts. Then shade  $\frac{1}{4}$ .

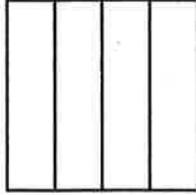


3. What fraction of the circle is shaded?



- A  $\frac{1}{3}$
- B  $\frac{3}{6}$
- C  $\frac{1}{6}$
- D  $\frac{3}{3}$

4. Look at the square below. It is divided into 4 equal parts.



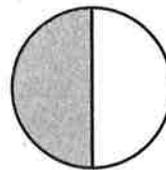
- a. What fraction of the square is each equal part? How do you know?
- b. Shade three parts of the square. What fraction of the square did you shade? How do you know?

5. a. Shade the circle to show  $\frac{2}{3}$ .



- b. Explain how you showed the fraction  $\frac{2}{3}$ .

6. Sean divided a circle into 2 equal parts. He shaded 1 part. Write a fraction to name the part Sean shaded.

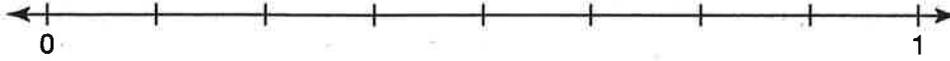


# Common Core Standards Practice

**3.NF.A.2a** Understand a fraction as a number on the number line; represent fractions on a number line diagram.

a. Represent a fraction  $\frac{1}{b}$  on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into  $b$  equal parts. Recognize that each part has size  $\frac{1}{b}$  and that the endpoint of the part based at 0 locates the number  $\frac{1}{b}$  on the number line.

1. Ella divides the distance between 0 and 1 on a number line into 8 equal parts.

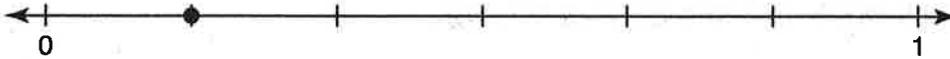


- a. What fraction names the size of each equal part?

\_\_\_\_\_

- b. Draw and label the point on the number line that shows  $\frac{1}{8}$ .

2. Look at the point on the number line.



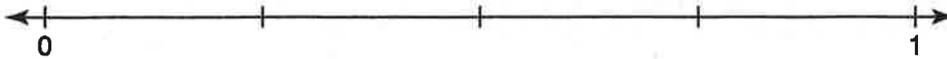
- a. What fraction does the point show?

- b. Explain how you know.

3. Divide the number line between 0 and 1 into four equal sections. Then draw and label a point to show  $\frac{1}{4}$ .



4. a. Draw and label a point to show  $\frac{3}{4}$  on the number line.



- b. Explain how you knew where to draw the point for  $\frac{3}{4}$ .

5. a. Divide the number line between 0 and 1 into three equal parts.



- b. What fraction names the size of each equal part? \_\_\_\_\_

- c. Draw and label a point at  $\frac{2}{3}$  on the number line.

6. a. Divide the number line between 0 and 1 into six equal parts.



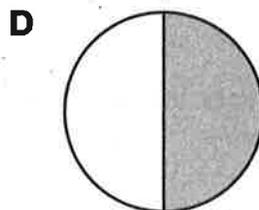
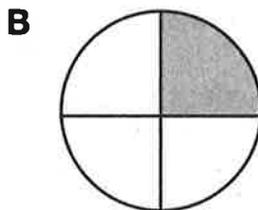
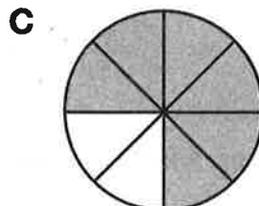
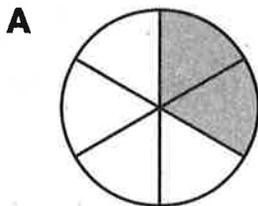
- b. Explain how you used tick marks to show sixths on the number line.

- c. Draw and label a point to show  $\frac{3}{6}$  on the number line.

# Common Core Standards Practice

**3.NF.A.3b** Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Recognize and generate simple equivalent fractions, e.g.,  $\frac{1}{2} = \frac{2}{4}$ ,  $\frac{4}{6} = \frac{2}{3}$ . Explain why the fractions are equivalent, e.g., by using a visual fraction model.

1. Which model shows a fraction equivalent to  $\frac{3}{6}$ ?



2. a. Which of these fractions are equivalent to  $\frac{6}{8}$ ?

$\frac{4}{6}$        $\frac{8}{12}$        $\frac{2}{4}$        $\frac{3}{4}$        $\frac{9}{12}$

b. Draw models to show why the fractions are equivalent.

3. a. Name a fraction that is equivalent to  $\frac{1}{3}$ .

b. Explain why the fraction you named is equivalent to  $\frac{1}{3}$ . Use both words and a drawing.

4. a. Which of these fractions are equivalent to  $\frac{2}{8}$ .

$\frac{3}{12}$

$\frac{4}{12}$

$\frac{1}{4}$

$\frac{2}{4}$

$\frac{3}{6}$

b. Draw models to show why the fractions are equivalent.

5. a. Which of these fractions are equivalent to  $\frac{1}{2}$ .

$\frac{4}{6}$

$\frac{3}{6}$

$\frac{2}{3}$

$\frac{2}{4}$

$\frac{4}{8}$

b. Use the number line to show why the fractions are equivalent.



6. a. Name a fraction that is equivalent to  $\frac{4}{6}$ .

b. Explain why the fraction you named is equivalent to  $\frac{4}{6}$ . Use both words and a drawing.

7. Miguel ate  $\frac{2}{4}$  of an apple. April ate an equivalent fraction of an apple. Which could be the fraction that April ate?

A  $\frac{2}{8}$

B  $\frac{1}{3}$

C  $\frac{3}{6}$

D  $\frac{3}{4}$

# RISING 4<sup>TH</sup> GRADE SCIENCE

Activities to do this summer to prepare for fourth grade:

- Light Investigation
  - Look up the definitions of transparent, opaque, and translucent.
  - Complete the experiment about light and write the final paragraph.
- Maple Seeds
  - Read about maple seeds.
  - Draw the life cycle of a maple seed.
  - Plant seeds and take notes on the life cycle of another plant.
  - Do research on the life cycle of an animal that goes through metamorphosis. Then compare different life cycles
- Build Your Own Electromagnet
  - Work with an adult. You can buy the materials needed at your local hardware store.
  - Make an electromagnet and experiment.
  - Write down your observations.
  - Why are electromagnets useful? How can electromagnets be used in everyday life?
- Feature Creature
  - Choose an animal to research this summer.
  - Use the internet with an adult or find a book at the library.
  - Complete a draft on lined paper using the categories in Feature Creature.
  - Fill out Feature Creature and present to your friends and family.
- Matter and Energy
  - Read an article about evaporation and condensation.
  - Write your own experiment about evaporation, condensation, or both!
  - Take notes on your whole process. Make sure to include a testable question, clear steps, data, analysis, and a scientific explanation.
- Game of Chains
  - Follow the directions to set up the game.
  - Play the game with a friend or relative.
  - Make the game harder by creating your own cards to make new food chains or to make the food chains longer.

Science Books

Look for these great books about science at your local library!

<b>Titles</b>	<b>Author</b>	<b>Topic</b>
Amazing Champion of the Earth Rachel Carson	Mary Dodson Wade	This biography introduces readers to Rachel Carson, who wrote about why we need to protect the environment.
Mars	Elizabeth Carney	Provides information about the planet, including its location in the solar system, size, geology, temperature, atmosphere, and the technology used in Mars exploration.
A Crash Course in Forces and Motion with Max Axiom, Super Scientist (Graphic Science)	Emily Sohn	Follows the adventures of Max Axiom as he explains the science behind forces and motion. Written in graphic-novel format.
What Color Is My World?: The Lost History of African-American Inventors	Kareem Abdul-Jabar	Did you know that James West invented the microphone in your cell phone? That Fred Jones invented the refrigerated truck that makes supermarkets possible? Or that Dr. Percy Julian synthesized cortisone from soy, easing untold people's pain? These are just some of the black inventors and innovators scoring big points in this dynamic look at several unsung heroes who shared a desire to improve people's lives. Learn more in this book by basketball legend Kareem Abdul-Jabar

Virtual Trips

Summer is a great time to explore science in the city. Consider visiting some of these great places as a family.

<b>Place</b>	<b>Website</b>	<b>What to do</b>
American Museum of Natural History	<a href="https://www.amnh.org/">https://www.amnh.org/</a>	Visit any of the exciting exhibits to learn more about science.
Brooklyn Botanic Gardens	<a href="https://www.bbg.org/">https://www.bbg.org/</a>	Visit the Brooklyn Botanic Gardens as a family. Look for plants in different stages of their life cycles.
Prospect Park Zoo (or any zoo!)	<a href="https://prospectparkzoo.com/">https://prospectparkzoo.com/</a>	Visit the zoo with your family. Have your scholar take notes on animals and their adaptations.

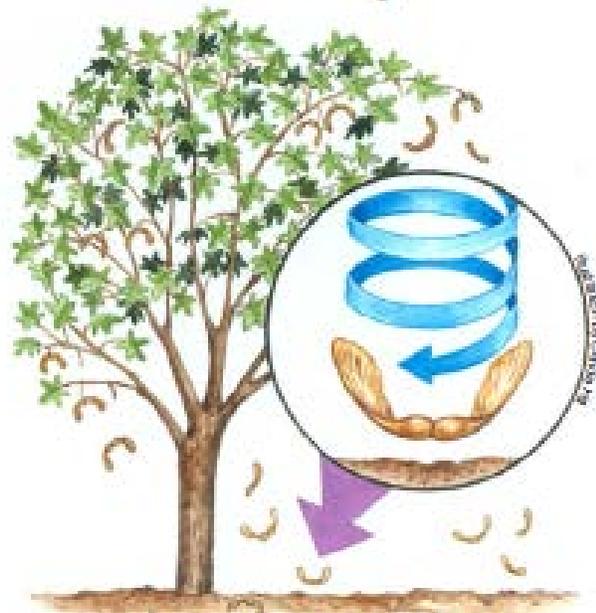


**Science a-z**  
**QUICK READ**

LIFE CYCLES

**Maple Seeds**

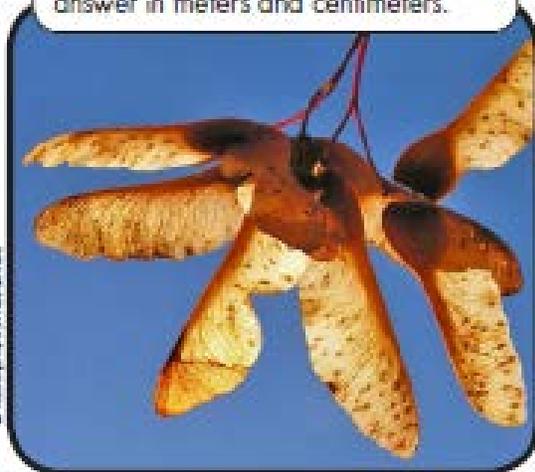
Maple trees start their life cycle as seeds. The wind scatters the maple seeds far apart. The seeds have wide, flat wings like airplanes. Even in a gentle wind, the seeds spin like helicopters and fly away. They land far away from the parent tree. Young maple trees need room to grow without other trees close by. They need plenty of sunlight and water to grow strong.



Maple seeds twirl as they fall to the ground.

**Math Moment**

Drop a maple seed. Or make a model of a maple seed and drop it. Measure how far the seed traveled. Use a ruler to see how far the seed is from the parent plant. Report your answer in meters and centimeters.



Maple seeds often grow in groups.

Maple trees can live several hundred years. Each tree makes thousands of seeds. Some of these seeds will land in good places and grow into new trees. Every fall, their leaves turn bright red and fall off. The trees grow new leaves and flowers in the spring. The flowers make more seeds, and the maple tree life cycle begins again.

**Brain Check**

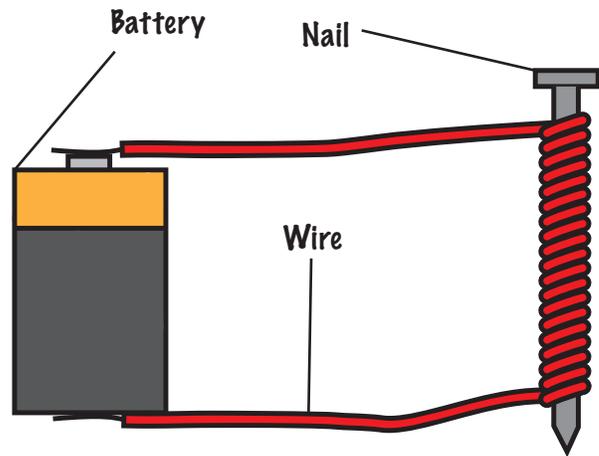
- Why are maple seeds shaped like wings?
- What do young trees need so they can grow?

# Build Your Own Electromagnet!

In this worksheet, you will learn how to build your own electromagnet, as well as experiments to try, and how electromagnets work!

## Materials:

- One D battery
- About 3-4 feet of thinly coated copper wire
- A large iron nail, about 3-4 inches long
- Electrical tape
- Some paper clips or other metal objects that are attracted to magnets.



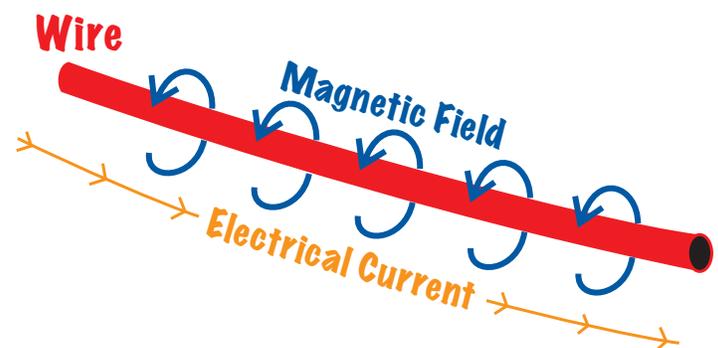
## Directions:

- 1) Leaving about 8-10 inches of loose wire, tightly wrap the wire around the nail, trying not to overlap any of the loops.
- 2) Trim the wire if needed so that there is another 8-10 inches of loose wire hanging from the other end of the nail.
- 3) Now carefully remove about an inch of the insulation from both ends of the wire, and tape one end of the wire to the top of the battery, and the other end to the bottom of the battery. Be careful, because the wire can get hot once it is connected to the battery!
- 4) Now current is flowing from the battery through the wire, and has turned the nail into an electromagnet! Test your new electromagnet by putting the point of the nail close to some paperclips.

**Note:** The electromagnet can use up the power in the battery fairly quickly. When you are done, be sure to disconnect the wires from the battery to keep the wires from getting too hot! Never put your electromagnet near a household outlet!

## Interesting things to try:

- See if the number of times you wrap the wire around the nail will affect the strength of the electromagnet.
- Does the thickness of the core (the nail) affect the strength of the electromagnet?
- Does the thickness of the wire affect the strength of the electromagnet?



## How does it work?

When electricity passes through a wire, a very small magnetic field is generated. By looping the wire around a core, the lines of the magnetic field are concentrated inside the coil, and this is an electromagnet. When the electrical current stops, the magnetic field disappears.

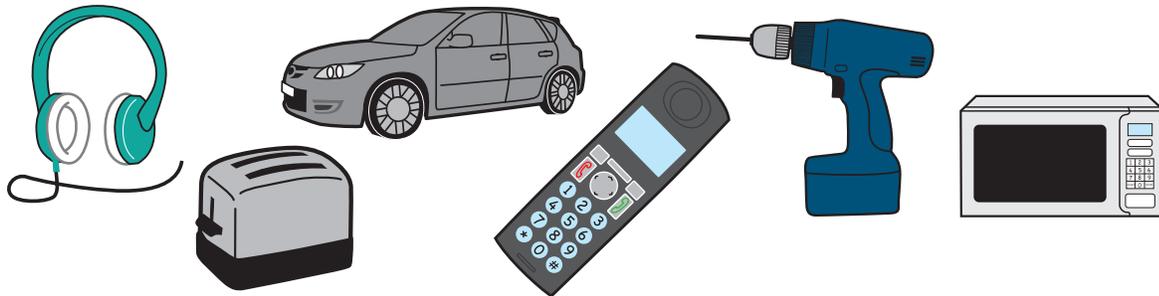
# All About Electromagnets!

## Did You Know:

- The type of core used today (the nail) would be called a ferromagnetic core, because it is made of material that reacts to magnets. Ferromagnetic cores make much more powerful electromagnets than cores that are not ferromagnetic.
- When you disconnect the electromagnet from the battery, it will no longer be magnetic.
- If you were to wrap some of the wire in one direction, and some of the wire in the opposite direction, the forces created by the electricity would cancel each other out and reduce or eliminate the power of your electromagnet.
- If you switch which end of the wire is connected to what end of the battery, your electromagnet will reverse poles. What used to be the north pole would become the south pole, and vice versa!
- The coil of wire you used to make your electromagnet is called a "solenoid". A solenoid that is bent so that the ends meet, forming a doughnut shape, is called a "toroid".

## What uses electromagnets?

Electromagnets aren't just used for picking up scrap metal at the dump! All kinds of things in our daily lives use electromagnets. Anything with a motor, that produces sound, that uses magnetic recording (such as the hard drives in computers) all contain electromagnets! Our lives would certainly be very different without electromagnets.



**Can you think of other items that would use electromagnets?**

Draw them below!

# Matter and Energy: Evaporation and condensation

By Encyclopaedia Britannica, adapted by Newsela staff on 06.02.17

Word Count **396**

Level **330L**



Condensation on a cold bottle of water. Condensation is when a gas becomes a liquid. It happens when a gas, like water vapor, cools down. Photo from: Wikimedia Commons.

Everything in the world is made of matter. Matter is anything that takes up space. This includes air, water and rocks. It even includes people.

There are different forms of matter. These forms are called states. On Earth, there are three main states. They are solid, liquid and gas.

Matter can change from one state to another. One way this can happen is through evaporation. That is when a liquid becomes a gas. Another way is through condensation. That is when a gas becomes a liquid.

All matter is made up of tiny particles. These are called molecules. Molecules like to move around. When they get hotter, they speed up. This leads to evaporation. But when molecules get colder, they slow down. This leads to condensation.

## Evaporation

Evaporation happens when a liquid warms up. This can be seen in a small puddle. The sun heats the water in the puddle. This makes the puddle smaller. The water seems to disappear. But actually the water becomes a gas. This gas is called water vapor.

All molecules in a liquid move. But some molecules move faster than others. The fastest molecules are usually at the top of a liquid. As they get hotter, they move faster. This gives them more energy. It helps them break away from other molecules. Then they can "escape." They become gas molecules.



## Evaporation Versus Boiling

Evaporation is one way a liquid becomes a gas. Another is boiling. This happens when a liquid is heated. Heating makes the molecules move faster. Then bubbles form in the liquid. The bubbles are water vapor. They rise to the top. It has to get very hot for a liquid to boil. This only happens at a certain temperature. It is called the boiling point.



# Feature Creature

Snapshot

Animal name

Weight

Length

THIS or THAT?

warm-blooded       cold-blooded

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fish                       amphibian               reptile

bird                         mammal                 insect

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herbivore               carnivore               omnivore

Body parts used for survival:

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Body covering used for survival:

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Actions done to survive:

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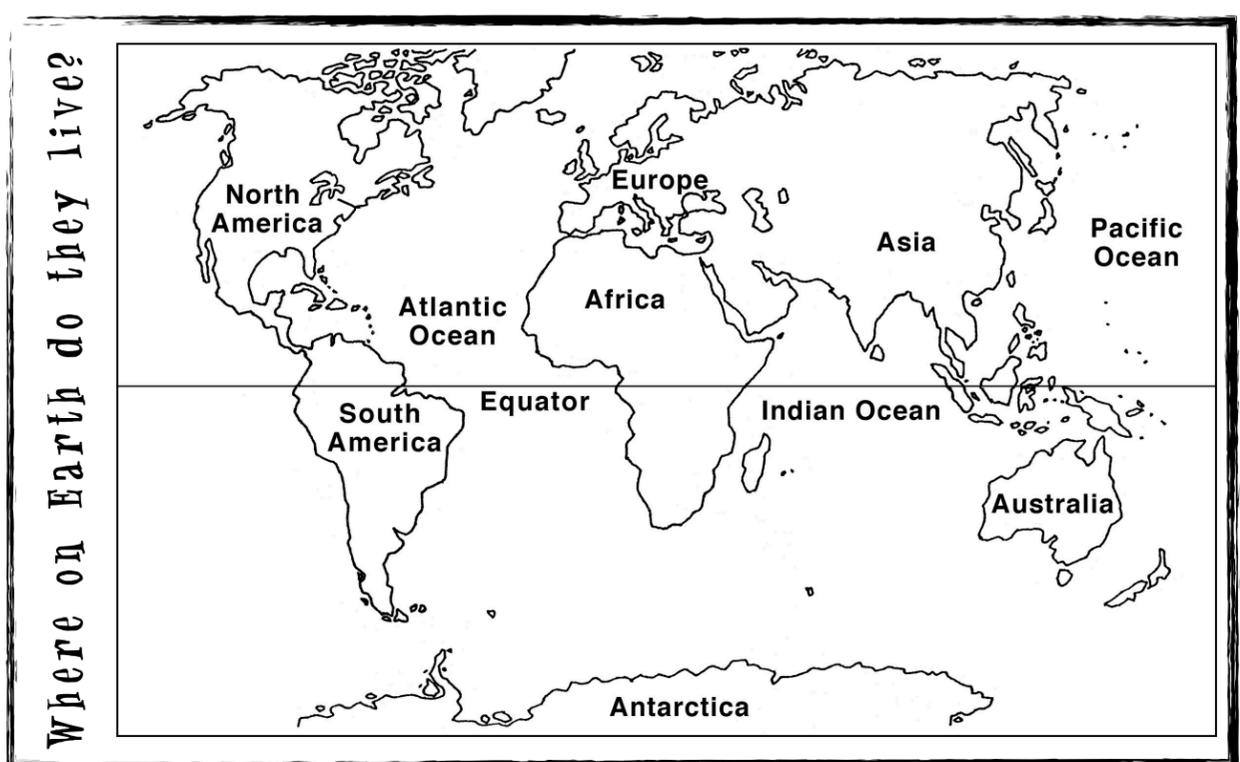
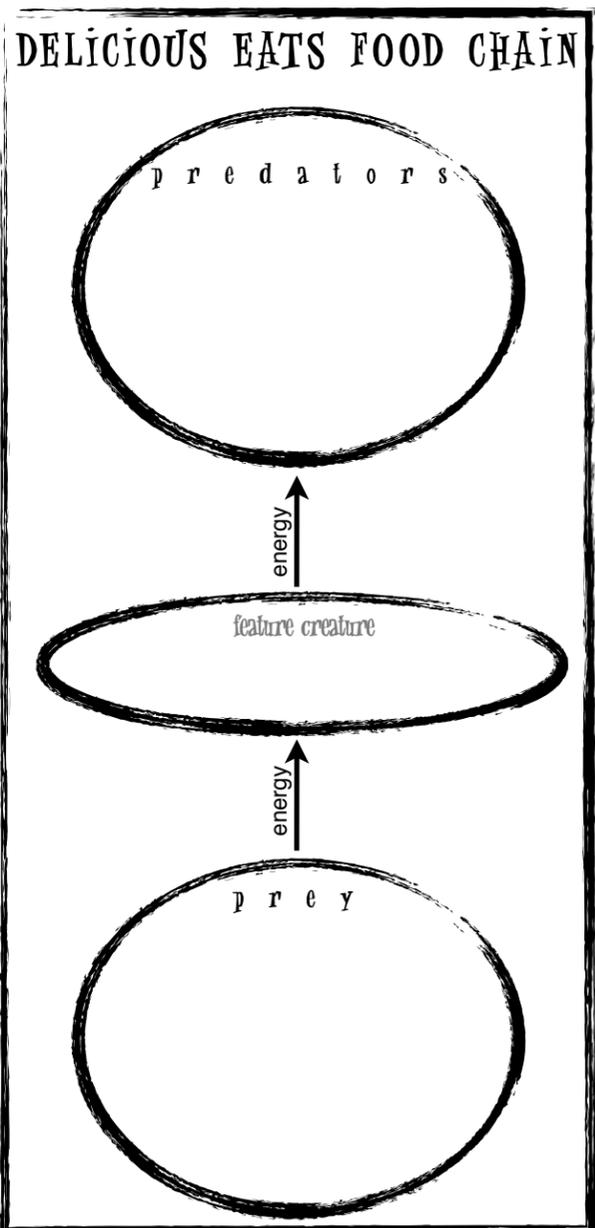
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Key vocabulary connections

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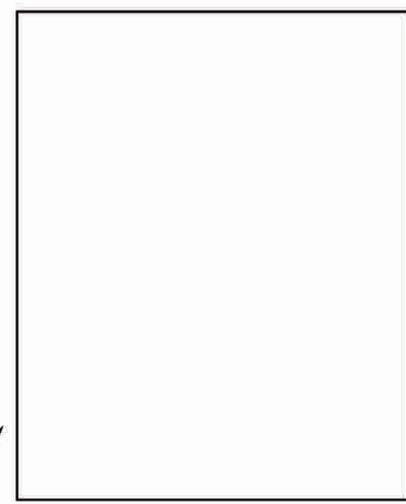
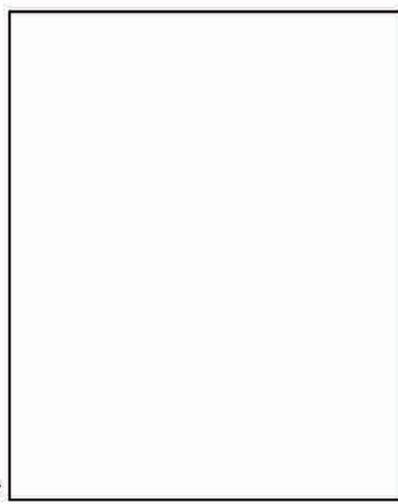
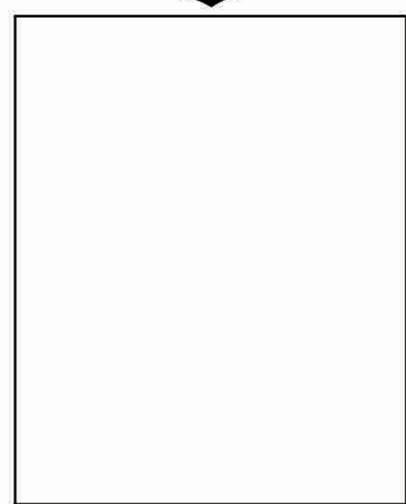
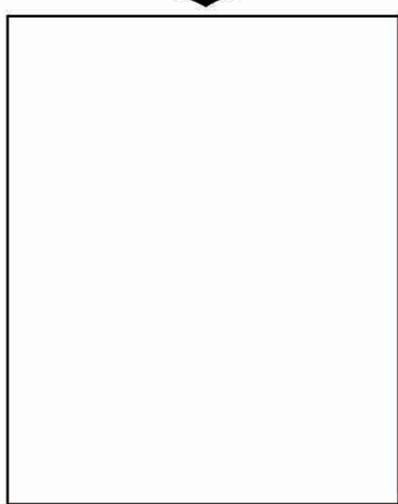
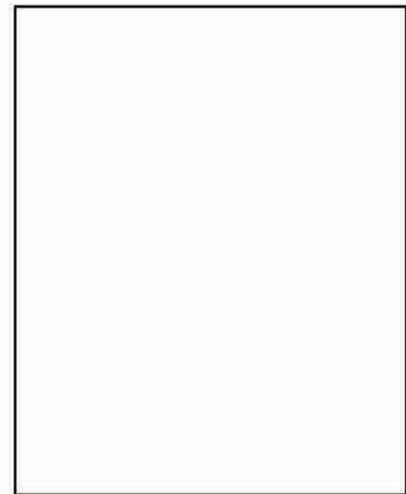
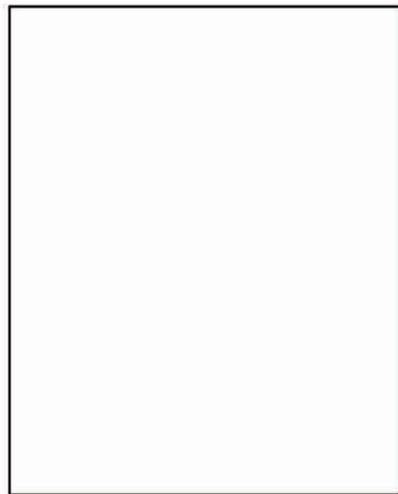
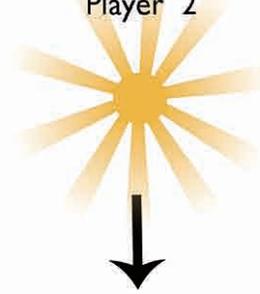
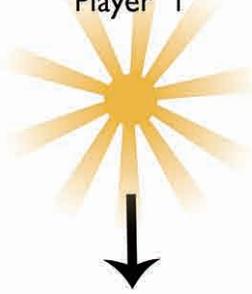
# The Game of Chains

How to play:

- Cut out the game boards and cards along the dotted lines.
- Each player gets a board.
- Shuffle the cards and set them in a stack facing down.
- Take turns drawing cards one at a time.
- Place the card in the right space on your game board.
- If there is no empty space on your board for a card you draw, put the card back into the stack at the bottom.
- The player who fills his or her game board first wins!

Player 1

Player 2



Meadow



producer

Leaf



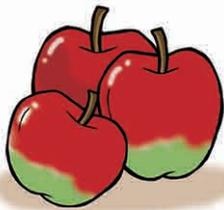
producer

Tree



producer

Apples



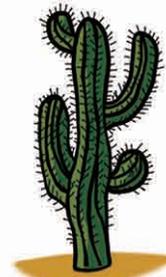
producer

Corn field



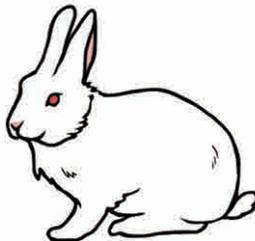
producer

Cactus



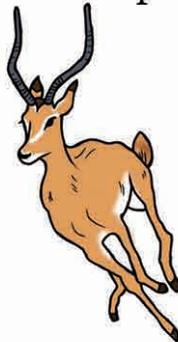
producer

Rabbit



herbivore

Antelope



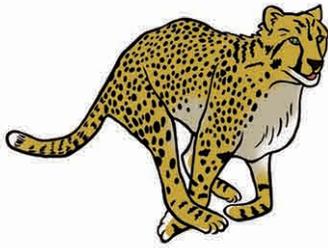
herbivore

Squirrel



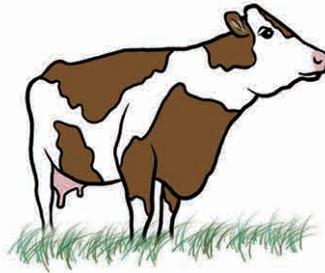
herbivore

Cheetah



carnivore

Cow



herbivore

Sloth



omnivore

Wolf



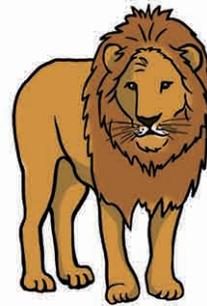
carnivore

Giant Panda



herbivore

Lion



carnivore

Zebra



herbivore

Honey badger



carnivore

Human



omnivore