

At Home Learning Resources

Grade 4 - Week 8

Content	Time Suggestions
Literacy Instruction (Watch a mini lesson, and/or complete online learning)	10-20 minutes daily
Reading (Read books, watch books read aloud, listen to a book)	At least 20 minutes daily (Could be about science, social studies, etc)
Writing or Word Work or Phonics/Vocabulary	20-30 minutes daily
Math	30 minutes daily
Science	45 minutes per week
Social Studies	30 minutes per week
Arts, Physical Education, or Social Emotional Learning	30 minutes daily

These are some time recommendations for each subject. We know everyone's schedule is different, so do what you can. These times do not need to be in a row/in order, but can be spread throughout the day.

Grade 4 ELA Week 8

Your child can complete any of the activities in weeks 1-7. These can be found on the Lowell Public Schools website: <u>https://www.lowell.k12.ma.us/Page/3800</u>

This week begins a focus on informational or nonfiction reading and writing. Your child should be reading, writing, talking and writing about reading, and working on exploring synonyms this week.

Reading: Students need to read each day. They can read the articles included in this packet and/or read any of the nonfiction/informational books that they have at home, or can access online at Epic Books, Tumblebooks, Raz Kids, or other online books. All resources are on the LPS website. There is something for everyone.

Talking and Writing about Reading: As students are reading, they can think about their reading, then talk about their reading with a family member and/or write about their reading using the prompts/questions included.

Writing: Students will continue working on informational books for the next weeks. The resources in this packet will be the same for next week for writing as well. These resources are charts with examples to help your child write. They are available online in an interactive form with video tutorials here: Grade 4 Nonfiction Writing Choice Board. Click on the images/starbursts to watch the video tutorials. This writing should last throughout the weeks. Students will be planning their writing, then writing, then making it even better by revising, writing some more, and at the end, fixing it up by editing. Your child might write 1 informational book and work to refine it throughout, or might write multiple books, getting better each time.

Word Work: Students can work on learning synonyms and using the in sentences. Play go fish and see if students can match the words that mean about the same thing.

Nonfiction Questions You Might Ask Your Children During and After Reading Aloud

Grade 4 Students

1. What are the multiple main ideas in the text and find details to support them?



2. Look and think about the ideas the author gives you in the text. How are those ideas related? Make an inference?



3. How are the ideas in your book connected to each other?



4. What is the author's perspective...how does the author feel about his topic?



PERSPECTIVES?

5. What strategies can you use to help you figure out tricky vocabulary words.



Connections

Writing

Research to learn more about one of Thomas Edison's inventions. Create a brochure about the invention to share with your classmates.

Social Studies

Make a timeline of Thomas Edison's life. Include at least five of his inventions on your timeline.



Visit **www.readinga-z.com** for thousands of books and materials.



www.readinga-z.com



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Thomas Alva Edison in 1914

A Curious Boy

Thomas Edison loved to question things. He loved to learn how things worked. He also loved to make things work better. Many people think of him as one of the greatest **inventors** of all time.

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Young Al

Thomas Alva Edison was born on February 11, 1847. Al, as he was called, did not do well in school. He wanted to question and explore. At that time, school was mostly about remembering facts. Al's mom took him out of school and taught him at home. She taught him to love to read. Al sold food and newspapers on trains when he was twelve years old. He used the money he earned to buy books and materials for **experiments**. He set up a lab in a train car. Also around this time, Al lost most of his hearing.

When he was fifteen, Al saved a boy's life. The boy was about to be run over by a boxcar when Al grabbed him. The child's father offered to teach Al how

to be a telegraph **operator**.

As Al grew older, he traveled around as a telegraph operator. He continued to be interested in science.

> A drawing of a train telegraph operator



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Edison's improved telegraph

Edison the Inventor

Edison wanted to invent things fulltime. He invented ways to make the telegraph better. He earned his first **patent**, for an electric vote counter, in

1869. The invention did not do well. Edison continued to invent. He said he would not give up, no matter what happened.



Edison's electric vote counter

Do You Know?

The telegraph let people communicate before the invention of the telephone. It used a code of dots and dashes, or short and long beeps, to form letters.



Edison at work in his Menlo Park lab (top) and the outside of the lab (bottom)

A New Lab

Edison began building and selling some of his inventions. In 1876, he built a lab in Menlo Park, New Jersey. It was the first **research** lab in the world built to make money. Many people called it the "invention factory." Edison and his workers were there many hours each day.



Edison put his ideas in notebooks. He gave the notebooks to his workers, who then made the inventions. Edison filled 3,500 notebooks with ideas. Not all of those ideas worked. Edison continued to work. He said he needed to find out all the ways something didn't work to find out the way it did.



Important Inventions

The telephone was invented in 1876, but it didn't work well. People had to yell into the phone to be heard. In 1877, Edison and his team invented a way to make the telephone work better. improvements



A telephone from 1877 with Edison's



Edison's Family

Edison married Mary Stilwell in 1871. They had three children—Marion, Thomas Jr., and William. Mary died in 1884. Edison married his second wife, Mina Miller, in 1886. They had three children—Madeleine, Charles, and Theodore.



Edison working on an early phonograph

Edison also invented a machine that could record words and then play them back. The first thing Edison recorded was "Mary Had a Little Lamb." Some people didn't believe the machine worked. They thought someone was talking in another room! The phonograph made Edison famous.

A Special Project

For years, people had tried to make a safe light bulb that most people could

buy. Many inventors had tried and failed. First, Edison and his team had to find the right filament the part of a light bulb that glows. They tried thousands of materials. They finally found one that worked. People were amazed by Edison's electric lights.

> One of Edison's first electric light bulbs



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Edison then had to make a system that could light a building and even a city. In 1881, Edison moved to New York City. He helped start the first electric power plant. In time, many places began to use electric lights.



The War of the Currents

In the 1880s and 1890s, Edison competed with another electric company. Edison's method of delivering electricity was called *direct current*, or DC. The other company said the method called *alternating current*, or AC, was better. AC was invented by Nikola Tesla. AC would later win the competition.



Edison's movie camera (left) and his machine that showed movies (right)

Other Exciting Ideas

In 1887, Edison moved to a new lab in New Jersey. Around that time, he saw a machine that quickly played many images one after another. The things in the images looked as if they were moving!

Edison had his team work on two machines. One machine would record the images, and the other would show them. Edison and his team invented a movie camera. They also invented a machine to show the images. Edison tried to put sound with the images, but it did not work.

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Edison doing an experiment in 1910

A Remarkable Man

Edison continued to invent. Some of his other inventions included machines to mine materials, better batteries, and new uses for cement.

During his life, Edison had 1,093 patents, which was a record at the time. He worked until he was more than eighty years old.

Thomas Edison died on October 18, 1931. President Herbert Hoover asked people to turn out their lights for a short time. He asked them to think about the great changes Thomas Edison had made in their lives.

Glossary

experiments (*n*.) scientific tests (p. 6)

- filament (n.) a thread or threadlike object that conducts electricity, such as that found in a light bulb (p. 12)
- **inventors** (*n*.) people who create, design, or build things that did not exist before (p. 4)
- **operator** (*n*.) a person who controls a machine or other equipment (p. 6)
- patent (n.)a document giving
someone the right to
make money from an
invention (p. 7)
 - a detailed study of a subject, especially to discover new information or to find facts (p. 8)

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research (*n*.)

Edison's Ideas

August

What if you went to the movies And nothing was there on the screen? It wouldn't be much of a movie Without pictures there to be seen!

Now imagine your favorite music, And think about what you would do If the only way that you could hear it Was to have the whole band come to you!

Think of your house in the darkness; Not a light switch to flip on a wall. On second thought, no— Think of none of these things— Because Edison thought of them all!



Thomas Edison (Born: 1847; Died: 1931)

As a boy, Tom was always doing experiments. Once, he sat on a nest of eggs to see if he could hatch them! (He couldn't, but he could break them.) As he grew



up, Thomas kept doing experiments. One of his first inventions was a machine to count votes. But no one wanted it. Thomas didn't give up, though.

In 1877, Thomas invented the phonograph, or record player. It was the first time anyone had recorded a voice! It led to CD players, and then MP3s. In 1879, Thomas invented an electric light bulb that stayed on for thirteen hours. It was a lot safer than candles, gas, or oil. Now, we couldn't live without electric lights! In 1891, Thomas invented an early movie camera. It led to the kind of movies we go to see today. In his life, Thomas Edison created more than a thousand inventions. He was always inventing. He never gave up. Guess what? He changed the world! After reading the text, *Thomas Edison*, the poem, *Edison's Ideas*, and the mini-biography of *Thomas Edison*, explain what happened and why during Edison's life, using specific information in the texts.

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Grade 4 Informational Writing Choice Board - Visit the online option for an interactive board with tutorials. Use the anchor charts to help you write your own informational book that teaches others.

















Students know that words that mean about the same thing are called synonyms.

Use the enclosed materials to play Go Fish with your child. When you get a pair of synonyms, try to use them in the same sentence. If both words don't make sense, think of another sentence for the second word. This will help your child increase the ability to determine the appropriate words to use in writing.

Hope you *like* and *enjoy* the game!















Name: _____

Adding and	Subtracting	Large	Numbers
~			

Α.	+	4 2	2, 3,	3 9	5 1	6 6			В.		+	3	0, 7,	5 5	6 8	2 8
C		6	7	5	7				Γ		1	Λ	2	0	4	Λ
С.	+	о, 2,	/ 9	5 4	/ 4				U.	+	1 6	4 8	3, 8,	o 1	o 4	4 3

Circle any problems below that **DO NOT** correctly show the standard algorithm for subtraction. If there are errors, explain.



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Name:



Understanding Multiplying By 10s Name:	
Solve each problem.	Answers
1) If $9 \times 8 = 72$, then $90 \times 8 =$	
	1.
2) If $4 \times 6 = 24$, then $40 \times 6 =$	
	2
3) If $6 \times 9 = 54$, then $60 \times 9 =$	
	3
4) If $1 \times 7 = 7$, then $10 \times 7 =$	
	4
5) If $2 \times 1 = 2$, then $20 \times 1 =$	
6) If $9 \times 0 = 72$ then $90 \times 0 =$	5
b) If $8 \times 9 = 72$, then $80 \times 9 =$	
7) If $5 \times 7 = 35$ then $50 \times 7 =$	0
·/ II 5 X / = 55 , tion 50 X / =	
8) If $10 \times 10 = 100$, then $100 \times 10 =$	
	8.
9) If $7 \times 3 = 21$, then $70 \times 3 =$	
	9
10) If $4 \times 10 = 40$, then $40 \times 10 =$	
	10
11) If $3 \times 6 = 18$, then $3 \times 60 =$	
12) If $0 \le 2$, 18 , then $0 \le 20$.	11
12) If $9 \times 2 = 18$, then $9 \times 20 =$	
13) If $7 \times 5 = 35$, then $7 \times 50 = 100$	12
$10^{-11} + 10^{-55}$, then 1×50^{-55} .	12
14) If $3 \times 8 = 24$, then $3 \times 80 =$	13
	14
15) If $3 \times 3 = 9$, then $3 \times 30 =$	
	15.
16) If $2 \times 10 = 20$, then $2 \times 100 =$	
	16
17) If $9 \times 9 = 81$, then $9 \times 90 =$	
	17
18) If $8 \times 7 = 56$, then $8 \times 70 =$	
19) If $6 \times 6 = 36$, then $6 \times 60 = 100$	18
20) If $8 \times 1 = 8$, then $8 \times 10 =$	19
	20
	5 80 75 70 29 60 55 50
Wiath www.CommonCoreSheets.com	5 30 25 20 15 10 5 0

Number Correct: _____

A

Find the Midpoint

1.	0	10	
2.	0	100	
3.	0	1000	
4.	10	20	
5.	100	200	
6.	1000	2000	
7.	30	40	
8.	300	400	
9.	400	500	
10.	20	30	
11.	30	40	
12.	40	50	
13.	50	60	
14.	500	600	
15.	5000	6000	
16.	200	300	
17.	300	400	
18.	700	800	
19.	5700	5800	
20.	70	80	
21.	670	680	
22.	6700	6800	

23.	6000	7000	
24.	600	700	
25.	60	70	
26.	260	270	
27.	9260	9270	
28.	80	90	
29.	90	100	
30.	990	1000	
31.	9990	10,000	
32.	440	450	
33.	8300	8400	
34.	680	690	
35.	9400	9500	
36.	3900	4000	
37.	2450	2460	
38.	7080	7090	
39.	3200	3210	
40.	8630	8640	
41.	8190	8200	
42.	2510	2520	
43.	4890	4900	
44.	6660	6670	



Number Correct: _____

Α
Multiply and Divide by 10

1.	2 × 10 =	
2.	3 × 10 =	
3.	4 × 10 =	
4.	5 × 10 =	
5.	1 × 10 =	
6.	20 ÷ 10 =	
7.	30 ÷ 10 =	
8.	50 ÷ 10 =	
9.	10 ÷ 10 =	
10.	40 ÷ 10 =	
11.	6 × 10 =	
12.	7 × 10 =	
13.	8 × 10 =	
14.	9 × 10 =	
15.	10 × 10 =	
16.	80 ÷ 10 =	
17.	70 ÷ 10 =	
18.	90 ÷ 10 =	
19.	60 ÷ 10 =	
20.	100 ÷ 10 =	
21.	× 10 = 50	
22.	× 10 = 10	

23.	× 10 = 100	
24.	× 10 = 20	
25.	× 10 = 30	
26.	100 ÷ 10 =	
27.	50 ÷ 10 =	
28.	10 ÷ 10 =	
29.	20 ÷ 10 =	
30.	30 ÷ 10 =	
31.	× 10 = 60	
32.	× 10 = 70	
33.	× 10 = 90	
34.	× 10 = 80	
35.	70 ÷ 10 =	
36.	90 ÷ 10 =	
37.	60 ÷ 10 =	
38.	80 ÷ 10 =	
39.	11 × 10 =	
40.	110 ÷ 10 =	
41.	30 ÷ 10 =	
42.	120 ÷ 10 =	
43.	14 × 10 =	
44.	140 ÷ 10 =	



An elephant at the zoo weighs 14,648 lbs. A shark at the aquarium weighs 12,632 less pounds than the elephant. How much does the shark weigh?

Estimate:			
Q.1 . F			
Solve. Explain your answ	er with pictures	or words:	

Directions: Use the whole numbers 1 through 6, at most one time each, to fill in the boxes and make the largest number that rounds to 50,000.



Directions: Use the whole numbers 1 through 6, at most one time each, to fill in the boxes and make the smallest number that rounds to 50,000.



Check out the website below for inspiration for creating your own chain reaction machine like Rube Goldberg. Send a video of the results to your teacher!

RUBE GOLDBERG MACHINE

https://tinkerlab.com/engineering-kids-rube-goldberg-machine/

THINGS THAT ROLL

RECYCLABLES

Marbles Balls: Tennis, Baseball, Bowling, etc. Toy Cars Dominoes Skateboard Roller Skate

THINGS THAT MOVE

Mousetrap Dominoes Toaster Fan

RAMPS

Toy Train Tracks Marble Runs Books Trays PVC pipe Plastic tubing Gutters Cardboard Cereal Boxes Cardboard Rolls Plastic Water Bottles Cans Aluminum Foil

EVERYDAY MATERIALS

Chopsticks Popsicle Sticks Ruler Wooden Blocks Bowl String Tape Sand Pins Hammer Balloons Water Fan

Vinegar and Baking Soda

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What are Erosion and Weathering?

Weathering is the breaking apart of rocks into smaller pieces. Water or wind can cause physical weathering by cracking rocks or grinding them down. Chemical weathering happens when minerals in rocks are changed by chemicals in water and air. Some examples are when iron in rocks rusts, or when acid in rain causes holes in rocks like limestone and marble.

Erosion is the taking away of rock that has been weathered. After rocks have been weathered into small pieces, those small pieces can be carried away by water or wind.

To learn more, click on the link below to learn about the effects of weathering (wind, water, ice) on landforms. The host (Bill Nye) uses the term "erosion" as a general term, including weathering. While you watch, write down examples of rock being broken apart (weathering) and rock particles being taken away (erosion).

Examples of Weathering	Examples of Erosion		

Bill Nye the Science Guy: Erosion https://www.youtube.com/watch?v=HkralMIDmSA

We're Free... Let's Grow!

Name:

C. The Northwest Ordinance. Read each excerpt from the Northwest Ordinance and answer the questions.
There shall be appointed from time to time by Congress, a governor, whose commission shall continue in force for
I. If Congress appointed the governor, who was really in control of the territory's government?

- 2. <u>Underline</u> the length of the governor's term.
- 3. <u>Underline</u> the number of residents who had to live in the district before citizens could elect their own general assembly.

So soon as there shall be five thousand free male inhabitants of full age in the district... they shall receive authority... to elect a representative... to represent them in the general assembly:

the term of three years...

4. The district has 5,103 women and 4,998 men. Time to elect representatives?

🗆 Yes 🛛 No

saying:

Any person escaping into the territory, from whom labor or service is lawfully claimed ..., such fugitive may be lawfully reclaimed and conveyed to the person claiming his or her labor or service as aforesaid.

- 5. Who do you think this excerpt is talking about? 6. Fill in the blanks to paraphrase what this is
 - a. Free male inhabitants
 - b. Runaway slaves

c. People accused of a crime

d. People who work a lot

Whenever any of the said States shall have sixty thousand free inhabitants therein, such State shall be admitted... into the Congress of the United States, on an equal footing with the original States... and shall be at liberty to form a permanent constitution and State government.

- 7. <u>Underline</u> the number of people required for a state to be admitted.
- 8. Did women count toward this number?

□ Yes □ No

Circle the evidence for your answer.

9. Would a runaway slave count toward this number?

🗆 Yes 🛛 No

territory will be ______ to their owners.

____ who _____ into this

10. Would the people still have the government Congress appointed for them?

🗆 Yes 🛛 No

Box the evidence for your answer.

Art. 1. No person, demeaning himself in a peaceable and orderly manner, shall ever be [bothered] on account of his mode of worship or religious sentiments, in the said territory.

Art. 2. The inhabitants of the said territory shall always be entitled to the benefits of the writ of habeas corpus, and of the trial by jury; of a proportionate representation of the people in the legislature; and of judicial proceedings according to the course of the common law. All persons shall be bailable, unless for capital offenses ... All fines shall be moderate; and no cruel or unusual punishments shall be inflicted.

No man shall be deprived of his liberty or property, but by the judgment of his peers or the law of the land...

11. There are nine rights listed in this excerpt. Find and circle them.

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We're Free... Let's Grow!

Name:

D. Label the Land. Five states formed in the Northwest Territory. Label them on the map using the state names in the blue box. The names already on the map are the Native tribes that lived in the territory at the time of the Northwest Ordinance.



E. Perspectives. U.S. Westward expansion affected the lives, lifestyle, and livelihood of many Native American tribes. What would have been each side's perspective on the Northwest Ordinance of 1787?

Native Tribes	American Government & Settlers	

F. Northwest Ordinance. Read the section of the Northwest Ordinance of 1787 below and answer the questions.

The utmost good faith shall always be observed towards the Indians; their lands and property shall never be taken from them without their consent; and... they shall never be invaded or disturbed, unless in just and lawful wars authorized by Congress.

1. In your own words, what does this section from the Northwest Ordinance mean?

2. Based on what your learned in the reading, did America live up to its words? Why or why not?

ESL at Home 3-5 Weeks 7-8 Use notebook paper to complete these activities. Do one each day!

Monday	Tuesday	Wednesday	Thursday	Friday
Choose a book page, magazine, or newspaper article. Tally how many times you find the words that start with letters: S A T	Go on a shape hunt. Find five things in your house for each shape: Rhombus Trapezoid Equilateral	How many words can you make from this word? educational	List 5 things in your home that are solids . List 5 things in your home that are liquids . List 5 things in your home that are gases .	Imagine two of your friends went to your school when no one was there. Write or draw their adventure.
Monday	Tuesday	Wednesday	Thursday	Friday
Hide something in your home. Make a treasure map and let a family member try to find it.	 Find four things in your home that are magnetic. Find four things in your home that are mixtures. Find four things in your home that are transparent. 	Imagine you ran a zoo. Write an advertisement telling people why they should come to your zoo.	Line up all the soap, shampoo, and lotion in your house from smallest to tallest.	Put a little bit of soap into a cup. Fill the cup with water. Count how many minutes it takes for the bubbles to disappear.