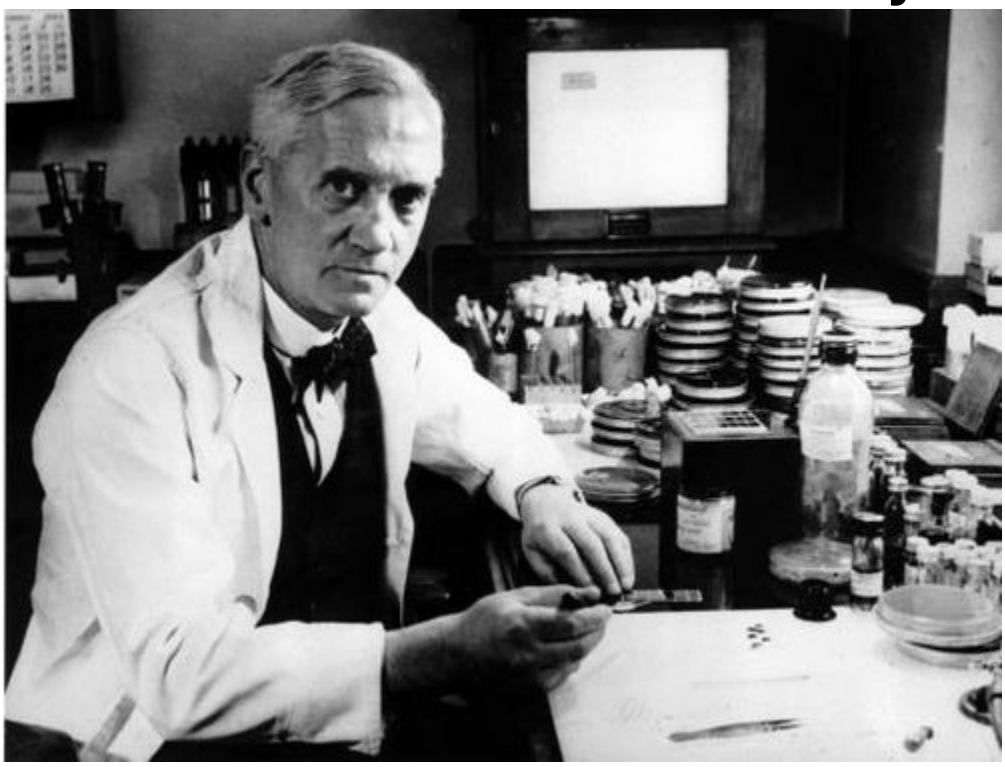
# 4th Grade
# May 18 - May 22

Wayne-Westland
COMMUNITY SCHOOLS

# Antibiotics: Use Them Wisely



*Alexander Fleming, the scientist who discovered penicillin*

Antibiotics are the best drugs we have to fight deadly bacteria, but the germs are fighting back.

Ah-choo! Carmen has been feeling miserable for the last three days, sneezing and coughing. If she doesn't get well soon, she might miss an important test at school. She might even miss the holiday parties.

Carmen asked her parents to take her to the doctor. She wanted the doctor to give her antibiotics.

Carmen's sister, Silvia, had also been feeling sick, and the doctor gave her antibiotics. Silvia had started feeling better after only a couple of days.

But after the doctor checked Carmen, he said something that she found deeply disappointing. "You don't need antibiotics."

"But you gave them to Silvia, and she's better now," replied Carmen.

"Silvia had strep throat; you have a cold," the doctor said. "Bacteria caused Silvia's strep throat, but your cold is caused by a virus. Some people call antibiotics 'miracle drugs,' but they don't kill all kinds of germs. They kill bacteria, but not viruses."

Carmen learned that antibiotics wouldn't cure her cold. Antibiotics kill the germs that cause many infections. Tuberculosis, ear infections, and some types of pneumonia (a type of lung infection) are just a few. Thanks to these drugs, most people don't die of these diseases today.

# What Are Antibiotics?

Some living things, like molds, make substances that can kill bacteria. These substances are called antibiotics. Others are not made by molds. Scientists make them in special laboratories.

Alexander Fleming discovered the first antibiotic in 1928. He was working with the mold Penicillium. Fleming discovered that Penicillium made a substance that killed bacteria.

He called it penicillin. Penicillin kills germs such as *Staphylococcus aureus* (STAFF-uh-low-KAH-kus AW-ree-us). These germs are very dangerous to people. When they get inside the bloodstream, they reproduce, or make many more of themselves, killing the person.

In the 1940s, everyone got very excited about penicillin. Doctors could now cure their patients of bacterial infections that threatened their lives. People all over the world thought that the drug would once and for all get rid of these deadly germs. But time proved everyone wrong. Bacteria are here to stay, and some are even stronger than before.

# Take Only As Directed

When the doctor gave Silvia a prescription for penicillin to treat her strep throat, he said very seriously: "You must take all the doses of this antibiotic, one with each meal, until you finish it. This will take 10 days. You have to take all of it to get rid of the germs."

Silvia started taking the antibiotic, but after a few days, she felt better and stopped taking it. She felt fine for a week or so, but then her throat started to hurt again. It got worse than the first time. Her parents took her to the doctor again. The doctor asked Silvia if she had finished all her medicine. She told him she forgot about it when she felt better.

"That's why you got sick again," the doctor said. "Most of the germs that were making your throat hurt were killed easily by a few doses of antibiotics. That's why you felt better after a few days. But some germs are tougher, and you need more doses of the drug to kill them. When you stopped taking the antibiotic, you left the toughest germs alive. These bacteria reproduced, and now you have many of the toughest kind causing your sore throat."

The medicine Silvia took the first time will not kill these tougher germs. They are "resistant" to the drug. The doctor had to kill the bacteria using a different medicine. This time the doctor gave Silvia medicine to take for only five days. Each dose had more medicine in it. And the medicine lasted longer inside her body. Silvia took all her medicine this time. She didn't want to get sick again.

## Bacteria Fight Back

Silvia and Carmen wanted to know why germs fight back. The doctor explained that some germs make substances that destroy the drugs before they can reach them. Other bugs can pump the drugs out before they hurt them. Resistance to these drugs allows germs to stay alive and make people sick.

Some germs, such as deadly *Staphylococcus aureus*, are now resistant to some of the medicines. Doctors are afraid that someday many bacteria will fight back many or all of the antibiotics. If this happens, doctors will not be able to cure deadly diseases like tuberculosis or pneumonia.

## The Good News

There are ways to help stop bacteria from becoming resistant. Take antibiotics just as the doctor ordered. Take antibiotics only when you have an illness caused by bacteria. Remember, these drugs kill only bacteria and not other germs.

Also, if people take antibiotics when they don't need them, they will kill off the "friendly" bacteria too. The friendly bacteria help keep the bad bugs from growing as quickly. When the good germs die, the bad germs grow faster.

Bacteria are here to stay. But by taking antibiotics responsibly, you can stop them from becoming a deadly enemy.

**Name:** _____ **Date:** _____

**1.** What do antibiotics kill?

A. the germs that cause many viruses

B. the germs that cause many infections

C. the germs that cause colds

D. the germs that cause mold

**2.** The text provides a description of antibiotics and how they work. The text also provides a story about two sisters who become sick. How does the story relate to the description?

A. The story contradicts the description.

B. The story disproves the description.

C. The story supports the description.

D. The story weakens the description.

**3.** The toughest germs are usually killed in the prescription's last doses of an antibiotic.

What evidence from the text supports this conclusion?

A. Doctors are afraid that someday many bacteria will fight back many or all of the antibiotics. If this happens, doctors will not be able to cure deadly diseases like tuberculosis or pneumonia.

B. The doctor said very seriously, "You must take all the doses of this antibiotic, one with each meal, until you finish it. This will take 10 days. You have to take all of it to get rid of the germs."

C. The doctor explained that some germs make substances that destroy the drugs before they can reach them. Other bugs can pump the drugs out before they hurt them.

D. Silvia started taking the antibiotic, but after a few days, she felt better and stopped taking it. When she stopped taking the antibiotic, she left the toughest germs alive.

**4.** What might happen if people take antibiotics when they don't need them?

A. These people might get a virus.

B. These people might get a bacterial infection.

C. These people might become resistant to antibiotics.

D. These people might get better more quickly.

**5.** What is the main idea of this text?

A. It is important to take antibiotics responsibly.

B. Some germs are resistant to antibiotics.

C. Viruses cannot be killed with antibiotics.

D. Penicillin can cure bacterial infections.

**6.** Read these sentences from the text.

Also, if people take antibiotics when they don't need them, they will kill off the "friendly" bacteria too. The friendly bacteria help keep the bad bugs from growing as quickly. When the good germs die, the bad germs grow faster.

Why does the author use the word "friendly" to describe some bacteria?

A. to suggest these bacteria are the same as bad bacteria

B. to suggest these bacteria are helpful to bad bacteria

C. to suggest these bacteria are bad for your body

D. to suggest these bacteria are good for your body

**7.** Choose the answer that best completes the sentence.

Silvia needed antibiotics because she had an infection caused by bacteria. _____, Carmen did not need antibiotics because she had an infection caused by a virus.

A. Previously

B. However

C. Specifically

D. Therefore

**8.** What explanation did the doctor give Silvia about why she got sick again?

Support your answer with evidence from the text.

**9.** What could happen if people take antibiotics when they do not need them?

Support your answer with evidence from the text.

**10.** Why is it important to take antibiotics responsibly?

Support your answer with evidence from the text.

# Your Recycled House

by ReadWorks


Imagine you are building a new house, but you are not using any new material. A house like this would use construction material like wood and metal from other places. By using old material, you are reusing and recycling material that already exists. If you build your house like this, you are building a house in a way that is friendly to the environment, or eco-friendly.

To reuse material is to use it again; to recycle material is to reuse it, or to find a new use for it. You could get materials to reuse or recycle from old houses being torn down, construction sites, recycling centers, junkyards, and scrap yards. Reusing and recycling can be as simple as buying a used bathtub and putting it in the new house. Or it can be more complicated, like using the metal from old umbrellas to make lighting fixtures. By using your imagination, you can recycle a lot of different things for different uses.

Find a house before it's torn down and get whatever wood you can for the frame of your new house. You could reuse doors and floors from this old house.

If you live near a beach, you can find driftwood and use it for decoration or the railing of your porch. If you live near farms, you can reuse an old grain silo. A tall grain silo gives you a

second floor! If you live near a shipping port, you may find old shipping containers that can make a great existing structure. You can use the bare sides and top as walls and a ceiling. You can then find wooden shipping crates to lay a new floor inside your shipping container.

You can stack old tires from a junkyard to make a wall. Another wall could be made out of scrap metal found in scrap yards. The scrap-metal wall would be shiny and look very different from your tire wall.

Can you imagine your eco-friendly house yet? Make sure you think about what kind of house you want and plan it well. Find the right type and amount of construction material. Also, make sure your construction material is clean and safe for reuse. If you don't plan your eco-friendly house well, you may feel like your house looks more like trash!

**Name:** _____ **Date:** _____

**1.** What does it mean to reuse and recycle material?

A. to throw away old material

B. use new material that is built from scratch

C. find a new place and use for material that is already being used

D. find a new place and use for material no one uses anymore

**2.** What does the author describe in the passage?

A. different ways old material can be used to build a new house

B. different ways new material can be used to build a new house

C. how new houses can be designed

D. how construction sites and recycling centers are organized

**3.** Different structures can be used to build a house, such as a grain silo or an old shipping container. Based on this evidence, what conclusion can be made?

A. Shipping containers should only be used to build a house if no other structures can be found.

B. Recycled houses don't have to be built from scratch using old materials.

C. Recycled houses can't be built by using old materials only.

D. The material for a recycled house has to come from a shipping port.

**4.** Eco-friendly means friendly to the environment. Why is using recycled material to build a house an eco-friendly way to build a house?

A. because it increases the amount of new material used to build the house

B. because it lessens the amount of new material used to build the house

C. because it leads to the use of more trees and wood to build the house

D. because it provides new uses for old shipping containers

**5.** What is the passage mainly about?

A. the role of junkyards in society today

B. popular construction materials used to build houses

C. different ways a house can be built with recycled materials

D. the environmental benefits of building recycled houses

**6.** Read the following sentences.

"If you live near a beach, you can find driftwood and use it for decoration or the railing of your porch. If you live near farms, you can reuse an old grain silo. A tall grain silo gives you a second floor! If you live near a shipping port, you may find old shipping containers that can make a great existing **structure**. They already come with four walls and a ceiling."

As used in the passage, what does the word "**structure**" most nearly mean?

A. something made of parts connected together in an ordered way

B. something that does not have any organization or order

C. something that can only be found near a shipping port

D. a material used to build walls and ceilings

**7.** Choose the answer that best completes the sentence below.

Recycled houses take advantage of recycled and reused materials _____ tires, old metal, wood, and more.

A. certainly

B. however

C. previously

D. such as

**8.** Based on the text, what is one place where you could get materials to use for your recycled house?

_____

_____

_____

**9.** According to the text, what are three materials you could use to build a recycled house?

**10.** The author states, "By using your imagination you can recycle a lot of different things for different uses." Use information from the passage to support this statement.

# Fourth Grade Writing Prompts

## Opinion Essay Writing Prompts

In an opinion essay, students must state their opinion and back it up with facts and reasons. Ideas should be organized logically and supported by details.

1. **Best Friends Forever.** Write an essay explaining what makes *your* best friend the *best* best friend.
2. **Awesomeness.** Describe the most awesome thing about being in fourth grade.
3. **New Worlds.** Would you rather help start a colony on a new planet or a city under the ocean? Why?
4. **School Food.** Name one thing you would like to change about your school's menu and explain why.
5. **Someday.** If you could be a race car driver, an astronaut, or president of a country, which would you choose and why?
6. **Cityscapes**. If you had a friend visit from another state, what is the one place in your city you would insist he or she had to see? What makes this place so special?
7. **Shipwrecked.** You find yourself stranded on a deserted island with only three items in your backpack. What would you want those items to be and why?
8. **Flat Earth.** Some people still believe that the Earth is flat. Do you agree or disagree? Include supporting facts.
9. **Extra! Extra!** Name one class, sport, or club you wish your school offered and explain why it should be available.
10. **Seasons.** Which season is your favorite and why?
11. **One-star**. What is the worst book you have ever read and what made it so terrible?
12. **Fandom.** Who is your favorite TV, movie, or music star? What makes him or her the best?
13. **Progress.** Identify a way in which you would like to improve as a student this school year. Explain why you would like to get better and list some steps you can take to make it happen.

## Informative Essay Writing Prompts

When writing an informative or explanatory essay, students should introduce the topic clearly, then develop the topic with facts and details. When explaining a process, students should outline the steps in a logical order.

1. **Bullied.** Explain how you would handle being bullied and the steps you would take to stop a bully.
2. **Mad Skills.** Describe an unusual talent, hobby, or skill that you possess.
3. **Cuisine.** Describe a food that is unique to your family or area of the world to someone who has never tasted it.
4. **Role Model.** Think of a person who has made an impact on your life and describe the role they've played.
5. **Pay It Forward.** What is one thing you would like to do—either now or in the future—to make the world a better place?
6. **Packing.** Explain the most effective way to pack for a trip to ensure that you have everything you need.
7. **Wild Kingdom.** Of all the animals wild or domesticated, write about your favorite. Include interesting facts about this animal in your essay.
8. **Gaming.** Explain how to play your favorite video or board game to someone who has never played it before.
9. **Problematic.** Describe a problem you're facing and three ways you could possibly solve it.
10. **Extreme Weather.** Choose an extreme weather condition or a natural disaster such as a tornado or a volcanic eruption. Explain its causes and effects.
11. **Sweet Treats.** Explain the process of making your favorite dessert.
12. **Learning Styles.** Think of the way you prefer to learn, such as by reading, listening, or doing. Explain why you think you learn best that way.
13. **Edison.** Thomas Edison said that he didn't make mistakes, he just learned 10,000 ways not to make a light bulb. Describe a mistake you made and the lesson you learned from it.

Name _____

- An **adverb** tells more about a verb, such as *how*, *when*, or *where*. Most end in *-ly* and usually tell *how*. Some adverbs describe *how often* or *how intensely* something happens, such as *annually* or *enough*.
- Adverbs can be written before or after the verbs they describe. *We **nicely** asked if we could stay. We asked **nicely** if we could stay.*

**Read each sentence and underline the adverb. Write it on the line provided.**

**1.** She slept late on Tuesday morning. _____

**2.** We leaned carefully over the fence. _____

**3.** My dad and I tried hard to fix the car. _____

**4.** The baby loudly cried for her mother. _____

**5.** He always wanted to see the national park. _____

**Read this sentence from "The Great Energy Debate." Underline the adverb. Using the sentences above as a model, write three sentences about a time you got into an argument with someone. Then check your work to make sure that you have used the adverbs correctly.**

Because fossil fuels are non-renewable resources, if we keep using them, eventually there will be none left.

_____

_____

_____

_____

_____

Name _____

- An **adverb** is a word that tells more about a verb. It can be written before or after the verb it describes. Some adverbs tell *where* an action takes place. *There are birds **everywhere**.*
- Some adverbs tell *when* an action takes place. These adverbs may describe how often an action takes place. *I'm going to school **now**.*
- Some adverbs tell *how* an action takes place. These adverbs may describe how frequently or how completely an action is performed. *The man walked his dog **daily**. / The man **briskly** walked his dog.*
- Relative adverbs (*where, when, how*) begin adjective clauses that modify nouns.

**Circle the adverb in each sentence. On the line, write if the adverb tells *where, when,* or *how* the action takes place.**

1. The little bird flew away. _____
2. The student clearly wrote her name. _____
3. That man entered the room last _____
4. We joyfully sang our favorite song. _____
5. Remember to not look down! _____
6. I never see my cousins in Europe. _____
7. She spoke angrily to the naughty children. _____
8. I will get ready for bed now. _____

**In your writer's notebook, write a paragraph about the last time someone surprised you. Include at least five adverbs that tell how often and how completely and then check that you have used them correctly.**

Name _____

- *Good* is an adjective and is used only to modify a noun. *She is a good dog.*
- *Well* is an adverb when it is used to modify a verb. It tells *how* about a verb. *The woman has always done her job well.*
- Do not confuse the adjective *good* with the adverb *well.*

**Complete each sentence by writing *good* or *well* on the line.**

1. You completed that task very _____.
2. Do you know him _____?
3. This is a _____ example of what I mean.
4. You have written a very _____ book review.
5. The girl spoke _____ even though she was tired.
6. You have received a _____ score.

Writing Connection

**Write two sentences about something good. Then write two sentences about something you do well. Include the words *good* and *well* in your sentences. Then check your work.**

_____

_____

_____

_____

_____

_____

_____

Name _____

- An **adverb** is a word that tells more about a verb.
- Adverbs tell *where, when,* or *how* an action takes place.
- *Good* is an adjective used to modify a noun.
- *Well* is an adverb when it is used to modify a verb. It tells *how* about a verb.

**COMMON ERRORS**

Not all words that end in *-ly* are adverbs. Some words ending in *-ly* are adjectives. Determine whether the word is describing a noun or a verb to identify it correctly.

**Rewrite the sentences below, correcting mistakes in adverbs and adjectives.**

**1.** We mistaken thought that there would be enough chairs for everyone.

_____

**2.** Did you search good enough for the missing shoe?

_____

**3.** I shut the door very quiet so that I would not wake the baby.

_____

**4.** The horse jumped overly the hay bale in the pasture.

_____

**5.** She did good on the difficult test.

_____

**6.** She said her name soft, and I did not hear it.

_____

Name _____

**Read the paragraphs. Then choose the best answer to each question.**

(1) _____ I went to a baseball game. (2) The batter walked out of the dugout, stretching lazy. (3) He stopped there on the plate, swinging his bat and waiting for the pitcher to throw the ball. (4) The batter _____ hit the ball, and it sailed over the fence. (5) I looked up to the sky and watched the arc of the ball.

(6) Next, my family and I went out to a café for lunch. (7) We walked _____ and sat down at a booth. (8) We excited talked about the game as we waited for our food.

**1.** What word goes in the blank in sentence 1?
- **A** Today
- **B** Wisely
- **C** Here
- **D** Terribly

**2.** What change, if any, should be made in sentence 2?
- **F** Change ***out*** to **outly.**
- **G** Change ***lazy*** to **terribly.**
- **H** Change ***lazy*** to **lazily.**
- **J** Make no change.

**3.** Which word is an adverb in sentence 3?
- **A** stopped
- **B** there
- **C** swinging
- **D** throw

**4.** What word fits best in the blank in sentence 4?
- **F** endlessly
- **G** now
- **H** delicately
- **J** easily

**5.** Which word is an adverb in sentence 5?
- **A** looked
- **B** up
- **C** watched
- **D** arc

**6.** How does the adverb describe the verb in sentence 6?
- **F** It tells where.
- **G** It tells when.
- **H** It tells how.
- **J** There are no adverbs in sentence 6.

**7.** What word fits best in the blank in sentence 7?
- **A** outside
- **B** really
- **C** inside
- **D** last

**8.** What change, if any, should be made in sentence 8?
- **F** Change ***excited*** to **excitedly.**
- **G** Change ***talked*** to **talkingly.**
- **H** Change ***waited*** to **waitly.**
- **J** Make no change.

Name _____

**Fold back the paper along the dotted line. Use the blanks to write each word as it is read aloud. When you finish the test, unfold the paper. Use the list at the right to correct any spelling mistakes.**

**Review Words**

**Challenge Words**

| | | |
|---|---|---|
| **1.** _____ | **1.** shaken |
| **2.** _____ | **2.** sunken |
| **3.** _____ | **3.** eleven |
| **4.** _____ | **4.** woven |
| **5.** _____ | **5.** widen |
| **6.** _____ | **6.** ridden |
| **7.** _____ | **7.** proven |
| **8.** _____ | **8.** often |
| **9.** _____ | **9.** robin |
| **10.** _____ | **10.** cousin |
| **11.** _____ | **11.** raisin |
| **12.** _____ | **12.** muffin |
| **13.** _____ | **13.** penguin |
| **14.** _____ | **14.** button |
| **15.** _____ | **15.** reason |
| **16.** _____ | **16.** cotton |
| **17.** _____ | **17.** wagon |
| **18.** _____ | **18.** dragon |
| **19.** _____ | **19.** common |
| **20.** _____ | **20.** skeleton |
| **21.** _____ | **21.** uncle |
| **22.** _____ | **22.** double |
| **23.** _____ | **23.** paddle |
| **24.** _____ | **24.** toughen |
| **25.** _____ | **25.** vitamin |

Name _____

Some words end with a vowel + *n*. The final syllable in these words is not accented. These word endings sound like *on* in *person*. The spelling of the word ending may differ, but the /ən/ pronunciation does not change.

**SPELLING TIP**

Possible spellings for vowel + *n* endings include *-in, -an, -en,* and *-on*.

**Read aloud and write the spelling words with the following spelling patterns.**

| | | | | |
|---|---|---|---|---|
| shaken | widen | often | penguin | ridden |
| robin | wagon | cousin | raisin | muffin |
| skeleton | proven | reason | button | common |
| woven | sunken | dragon | cotton | eleven |

***-in***

1. _____
2. _____
3. _____
4. _____
5. _____

***-on***

6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

***-en***

13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

**Use words with the spelling patterns above to write a short rhyming poem. Include four words from the spelling list. Check your work for errors.**

Name _____

Some words end with a vowel + *n*. The final syllable in these words is not accented. These word endings sound like *on* in *person*. The spelling of the word ending may differ, but the /ən/ pronunciation does not change.

**SPELLING TIP**

Possible spellings for vowel + *n* endings include *-in, -an, -en,* and *-on*.

**Read aloud and write the spelling words with the following spelling patterns.**

| | | | | |
|---|---|---|---|---|
| shaken | widen | eleven | season | wagon |
| dragon | cotton | person | open | woman |
| robin | button | garden | reason | common |
| ripen | cousin | muffin | kitten | lemon |

***-in***

**1.** _____

**2.** _____

**3.** _____

***-on***

**4.** _____

**5.** _____

**6.** _____

**7.** _____

**8.** _____

**9.** _____

**10.** _____

**11.** _____

**12.** _____

***-en***

**13.** _____

**14.** _____

**15.** _____

**16.** _____

**17.** _____

**18.** _____

**19.** _____

***-an***

**20.** _____

**Use words with the spelling patterns above to write a short rhyming poem. Include four words from the spelling list. Check your work for errors.**

Name _____

**A. Read aloud and write the spelling words with the following spelling patterns.**

| | | | | |
|---|---|---|---|---|
| fasten | straighten | certain | penguin | raisin |
| cousin | muffin | sunken | woven | mountain |
| eleven | common | oxygen | salmon | proven |
| pardon | often | kitchen | mistaken | skeleton |

***-in***

1. _____
2. _____
3. _____
4. _____

***-on***

5. _____
6. _____
7. _____
8. _____

***-en***

9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____

***-ain***

19. _____
20. _____

**B. Compare the words *robin* and *cotton*. How are they alike? How are they different?**

_____

_____

**Use words with the spelling patterns above to write a short rhyming poem. Include four words from the spelling list. Check your work for errors.**

Name _____

| | | | | |
|---|---|---|---|---|
| shaken | widen | robin | penguin | wagon |
| sunken | ridden | cousin | button | dragon |
| eleven | proven | raisin | reason | common |
| woven | often | muffin | cotton | skeleton |

**A. Write the spelling word that belongs with the other words in the group.**

**1.** prune, date, _____

**2.** zipper, buckle, _____

**3.** whale, seal, _____

**4.** knight, fire, _____

**5.** lowered, buried, _____

**6.** rarely, sometimes, _____

**7.** stirred, blended, _____

**8.** cupcake, pastry, _____

**B. Write the spelling word that best completes each sentence.**

**9.** The _____ they went shopping was to buy milk.

**10.** She had never _____ on a train before today.

**11.** Is this shirt made out of _____?

**12.** It was _____ that the man was innocent.

**13.** My older brother is _____ years old.

**14.** We put the puppies in a _____ and pulled it.

**15.** The _____ basket was made of straw.

**16.** It is _____ to see a lot of cars on the highway.

**17.** The _____ made a nest in the oak tree.

**18.** They need to _____ the opening for the truck to fit.

**19.** My _____ is my aunt's son.

**20.** The human _____ has many bones.

Name _____

**Underline the six misspelled words in the paragraphs below. Write the words correctly on the lines.**

It was elevin o'clock when the package arrived at the doorstep. It looked commen enough, except for the big red bow on top. I ran to get it because it wasn't ofton that I received a gift. Today was special, though. It was my birthday!

When I looked at the return address, I saw that the package was from my cousen, Ally. I ripped off the paper and opened the box. Inside was the most beautiful sweater I ever saw! It was wovon with my favorite colors and made with the softest cottin. I was so excited that I ran inside to call Ally right away.

**1.** _____ **4.** _____

**2.** _____ **5.** _____

**3.** _____ **6.** _____



Writing Connection

**Write about a wonderful gift that you or someone you know received. Use four words from the spelling list. Use a dictionary or electronic resource to make sure you have spelled the high-frequency words correctly.**

Name _____

## Remember

Some words end with a vowel + *n*. The final syllable in these words is not accented. These word endings sound like *on* in *person*. The spelling of the word ending may differ, but the /ən/ pronunciation does not change.

| | | | | |
|---|---|---|---|---|
| shaken | widen | robin | penguin | wagon |
| sunken | ridden | cousin | button | dragon |
| eleven | proven | raisin | reason | common |
| woven | often | muffin | cotton | skeleton |

**Fill in the missing letters of each word to form a spelling word. Write the word on the line. Then read the word aloud.**

**1.** shak ___ ___ _____

**2.** reas ___ ___ _____

**3.** muff ___ ___ _____

**4.** comm ___ ___ _____

**5.** wov ___ ___ _____

**6.** rob ___ ___ _____

**7.** prov ___ ___ _____

**8.** wag ___ ___ _____

**9.** pengu ___ ___ _____

**10.** skelet ___ ___ _____

**11.** rais ___ ___ _____

**12.** wid ___ ___ _____

**13.** sunk ___ ___ _____

**14.** cott ___ ___ _____

**15.** oft ___ ___ _____

**16.** drag ___ ___ _____

**17.** ridd ___ ___ _____

**18.** elev ___ ___ _____

**19.** cous ___ ___ _____

**20.** butt ___ ___ _____

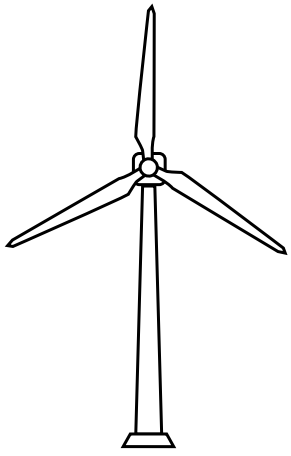
Name _____

Use context clues, word analysis, dictionaries, and online sources to help you understand the meanings, pronunciation, and syllabification of **content words** you encounter while reading. This unit features content words related to the study of energy resources and our environment, including *renewable*, *nonrenewable*, *fossil fuels*, and *wind turbines*.

**Search science texts for content words related to energy use and how humans affect the environment. Write the words below.**

## Energy and Environment Words

_____ _____ _____ _____



_____ _____ _____ _____

**Circle two words that you were able to define by using context clues. Write the words and their meanings on the lines.**

_____

_____

_____

_____

_____

_____

Name _____

**The movie poster below is missing some words. Write the correct vocabulary word from the box in each blank to complete the text.**

| | | | |
|---|---|---|---|
| permanent | triumph | document | expedition |
| typical | express | era | uncover |
| tremendous | evidence | archaeology | emotion |


He's an _____ professor searching the rainforests of Guatemala for a _____ breakthrough in his career: _____ of an undiscovered Mayan city . . .

She's a foreign spy trying to _____ an ancient _____ that will solve a 2,000-year mystery . . .

When they meet on an _____ down the San Pedro River, will they become friends or bitter rivals?

This film is a _____! Words cannot _____ how much I love it! Four Stars! –Robert Eagan, ***The West Bay Times***

***Secrets of the Rainforest*** deserves a _____ and lasting place among the best films of our _____. – Isabel Fuertes, ***The Chronicle***

Not a _____ movie. I experienced every _____, from joy to despair. –David Rashad, ***Fort Russell Daily News***

# A

Number Correct: _____

Squares and Unknown Factors

| | | |
|---|---|---|
| 1. | 2 × 2 = | |
| 2. | 2 × _____ = 4 | |
| 3. | 3 × 3 = | |
| 4. | 3 × _____ = 9 | |
| 5. | 5 × 5 = | |
| 6. | 5 × _____ = 25 | |
| 7. | 1 × _____ = 1 | |
| 8. | 1 × 1 = | |
| 9. | 4 × _____ = 16 | |
| 10. | 4 × 4 = | |
| 11. | 7 × _____ = 49 | |
| 12. | 7 × 7 = | |
| 13. | 8 × 8 = | |
| 14. | 8 × _____ = 64 | |
| 15. | 10 × 10 = | |
| 16. | 10 × _____ = 100 | |
| 17. | 9 × _____ = 81 | |
| 18. | 9 × 9 = | |
| 19. | 2 × _____ = 10 | |
| 20. | 2 × _____ = 18 | |
| 21. | 2 × 2 = | |
| 22. | 3 × _____ = 12 | |
| 23. | 3 × _____ = 21 | |
| 24. | 3 × 3 = | |
| 25. | 4 × _____ = 20 | |
| 26. | 4 × _____ = 32 | |
| 27. | 4 × 4 = | |
| 28. | 5 × _____ = 20 | |
| 29. | 5 × _____ = 40 | |
| 30. | 5 × 5 = | |
| 31. | 6 × _____ = 18 | |
| 32. | 6 × _____ = 54 | |
| 33. | 6 × 6 = | |
| 34. | 7 × _____ = 28 | |
| 35. | 7 × _____ = 56 | |
| 36. | 7 × 7 = | |
| 37. | 8 × _____ = 24 | |
| 38. | 8 × _____ = 72 | |
| 39. | 8 × 8 = | |
| 40. | 9 × _____ = 36 | |
| 41. | 9 × _____ = 63 | |
| 42. | 9 × 9 = | |
| 43. | 9 × _____ = 54 | |
| 44. | 10 × 10 = | |

Number Correct: _____

# A

Multiply Multiples of 10, 100, and 1,000

| | | |
|---|---|---|
| 1. | 3 × 2 = | |
| 2. | 30 × 2 = | |
| 3. | 300 × 2 = | |
| 4. | 3,000 × 2 = | |
| 5. | 2 × 3,000 = | |
| 6. | 2 × 4 = | |
| 7. | 2 × 40 = | |
| 8. | 2 × 400 = | |
| 9. | 2 × 4,000 = | |
| 10. | 3 × 3 = | |
| 11. | 30 × 3 = | |
| 12. | 300 × 3 = | |
| 13. | 3,000 × 3 = | |
| 14. | 4,000 × 3 = | |
| 15. | 400 × 3 = | |
| 16. | 40 × 3 = | |
| 17. | 5 × 3 = | |
| 18. | 500 × 3 = | |
| 19. | 7 × 2 = | |
| 20. | 70 × 2 = | |
| 21. | 4 × 4 = | |
| 22. | 4,000 × 4 = | |

| | | |
|---|---|---|
| 23. | 7 × 5 = | |
| 24. | 700 × 5 = | |
| 25. | 8 × 3 = | |
| 26. | 80 × 3 = | |
| 27. | 9 × 4 = | |
| 28. | 9,000 × 4 = | |
| 29. | 7 × 6 = | |
| 30. | 7 × 600 = | |
| 31. | 8 × 9 = | |
| 32. | 8 × 90 = | |
| 33. | 6 × 9 = | |
| 34. | 6 × 9,000 = | |
| 35. | 900 × 9 = | |
| 36. | 8,000 × 8 = | |
| 37. | 7 × 70 = | |
| 38. | 6 × 600 = | |
| 39. | 800 × 7 = | |
| 40. | 7 × 9,000 = | |
| 41. | 200 × 5 = | |
| 42. | 5 × 60 = | |
| 43. | 4,000 × 5 = | |
| 44. | 800 × 5 = | |

Number Correct: _____

# A

Mental Multiplication

| | | |
|---|---|---|
| 1. | 1 × 4 = | |
| 2. | 10 × 4 = | |
| 3. | 11 × 4 = | |
| 4. | 1 × 2 = | |
| 5. | 20 × 2 = | |
| 6. | 21 × 2 = | |
| 7. | 2 × 3 = | |
| 8. | 30 × 3 = | |
| 9. | 32 × 3 = | |
| 10. | 3 × 5= | |
| 11. | 20 × 5 = | |
| 12. | 23 × 5 = | |
| 13. | 3 × 3 = | |
| 14. | 40 × 3 = | |
| 15. | 43 × 3 = | |
| 16. | 4 × 2 = | |
| 17. | 70 × 2 = | |
| 18. | 74 × 2 = | |
| 19. | 2 × 3 = | |
| 20. | 60 × 3 = | |
| 21. | 62 × 3 = | |
| 22. | 63 × 3 = | |

| | | |
|---|---|---|
| 23. | 21 × 3 = | |
| 24. | 121 × 3 = | |
| 25. | 42 × 2 = | |
| 26. | 142 × 2 = | |
| 27. | 242 × 2 = | |
| 28. | 342 × 2 = | |
| 29. | 442 × 2 = | |
| 30. | 3 × 3 = | |
| 31. | 13 × 3 = | |
| 32. | 213 × 3 = | |
| 33. | 1,213 × 3 = | |
| 34. | 2,113 × 3 = | |
| 35. | 2,131 × 3 = | |
| 36. | 2,311 × 3 = | |
| 37. | 24 × 4 = | |
| 38. | 35 × 5 = | |
| 39. | 54 × 3 = | |
| 40. | 63 × 6 = | |
| 41. | 125 × 4 = | |
| 42. | 214 × 3 = | |
| 43. | 5,213 × 2 = | |
| 44. | 2,135 × 4 = | |

## 4th Grade Day 1

**Math.Content.4.OA.A.3** Solve multistep division word problems

**Problem:** Janet uses 4 feet of ribbon to decorate each pillow. The ribbon comes in 225-foot rolls. How many pillows will she be able to decorate with one roll of ribbon? Will there be any ribbon left over?

| Pillows | Ribbon | Amount of Ribbon Used |
|---|---|---|
| 1 | 4 feet | 4 x 1 = 4 |
| 2 | 4 feet + 4 feet | 4 x 2 = 8 |
| 3 | 4 + 4 + 4 | |
| 4 | | |
| 5 | | |
| 6 | | |
| 10 | | |

As you work through this chart, you have to use 225 feet of ribbon. Using this process, it would take a while. You could find the answer using multiplication, but we have another skill that we can use which is much faster.

Since we are sharing 4 feet of ribbon for each pillow, we can use **division**. To solve this much quicker.

---

***Hint:*** *You are sharing 4 feet of ribbon for each pillow. The problem is asking you to share 225 feet of ribbon for each pillow until you run out. Every pillow gets 4 feet. They want you to think, "How many pillows can I share this ribbon with until it is all gone.?"*

***So far, 10 pillows equals a total of 40 feet.***

*Video Help:* https://www.youtube.com/watch?v=LGqBQrUYua4

***Work Space***

**Answer:** Janet was able to make _____ pillows.
She has _____ feet of ribbon left over.

# 4th Grade Day 2

**Math.Content.4.OA.A.3** Solve multistep division word problems

**Problem:** The store wanted to put 1,455 bottles of juice into packs of 4. How many complete packs can they make? How many more bottles do they need to make another pack?

| Packs of juice | Bottles | Amount of Bottles Stacked |
|---|---|---|
| 1 | 4 bottles | 4 x 1 = 4 |
| 2 | 4 bottle + 4 bottles | 4 x 2 = 8 |
| 3 | 4 + 4 + 4 | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 10 | | |
| 100 | x | |
| 100 packs of juice equals 400 bottles. We need to stack 1,455 bottles. To help speed this up, we can use division | | |

*Video Help:* https://www.youtube.com/watch?v=LGqBQrUYua4

***Work Space***

**Answer:** The store would have _____ complete packs of juice.

They would need to add _____ bottles to finish the last pack.

# 4th Grade Day 3

**Math.Content.4.OA.A.3** Solve multistep word problems

**Problem:** Mr. Grey planted 10 rows of beans, 10 rows of squash, 10 rows of tomatoes, and 10 rows of cucumbers in his garden. He put 22 plants in each row. What is the total number of plants in Mr. Grey's garden?

**Step 1.** To solve, each row gets 22 plants. What is 22 x 10?

22 x 10 _____

| Beans | Plants | Squash | Plants | Tomatoes | Plants | Cucumbers | Plants |
|---|---|---|---|---|---|---|---|
| 10 | | 10 | | 10 | | 10 | |

---

**Step 2:** Fill in the chart and find the total amount of plants in the garden.

| | **Plants** |
|---|---|
| **Beans** | |
| **Squash** | |
| **Tomatoes** | |
| **Cucumbers** | |
| **Total** | |

**Answer:** Mr. Grey has _____ plants in the garden.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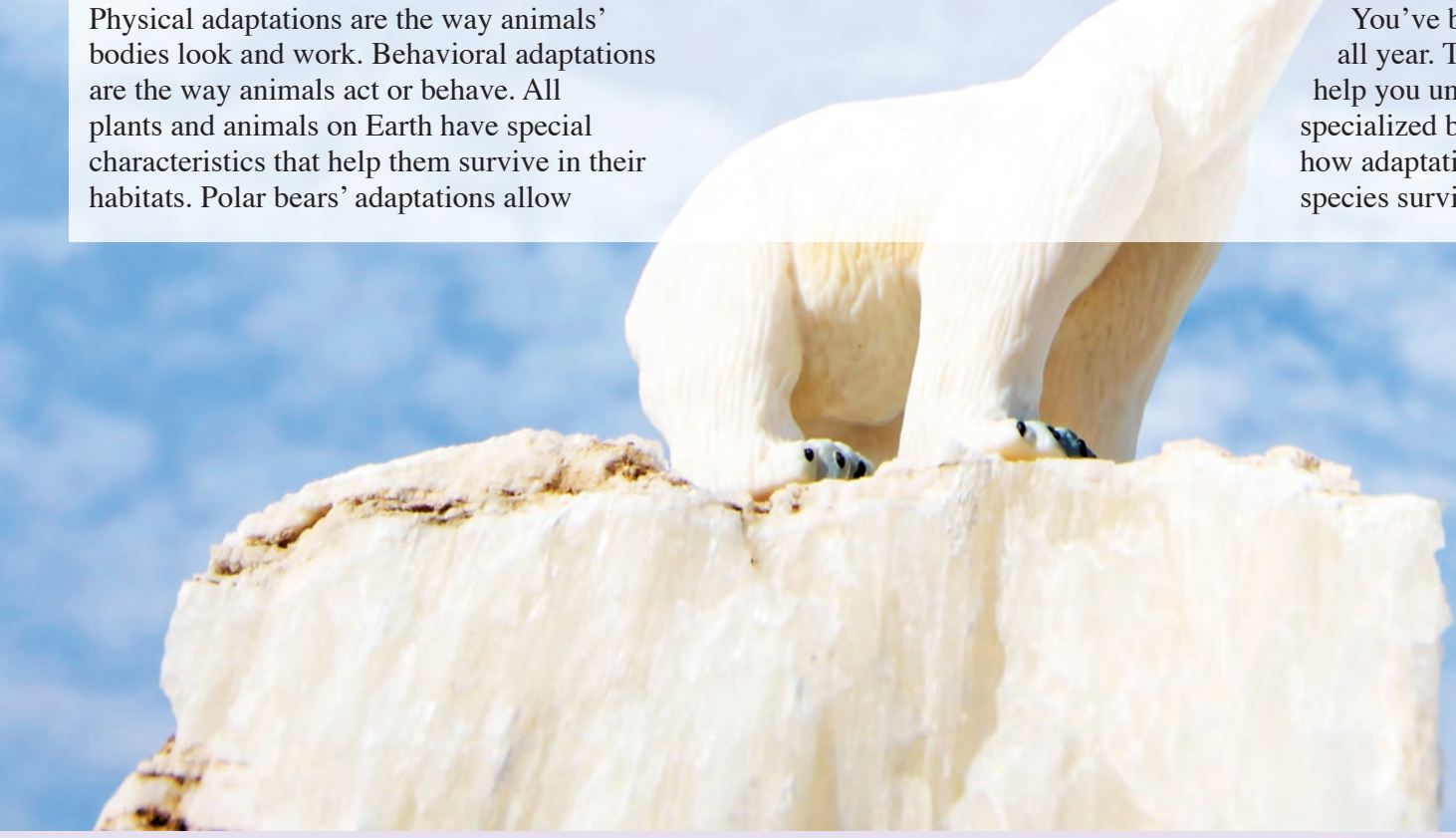
# Wings, Beaks, Legs, Tails and Feet

Do you ever wonder why a cereal company chose a toucan as a mascot and placed it on the front of every box of colorful, fruity cereal? Can you figure out the scientific connection between the bird and the cereal? Check out the investigation on Page 3 to help you figure it out.

Polar bears are often used as symbols on cold or frozen foods. How do you suppose a real polar bear can survive in such a harsh, frozen area as the Arctic? Polar bears are powerful and amazing creatures. They have special physical and behavioral adaptations. Physical adaptations are the way animals' bodies look and work. Behavioral adaptations are the way animals act or behave. All plants and animals on Earth have special characteristics that help them survive in their habitats. Polar bears' adaptations allow them to walk on ice and snow, swim in freezing temperatures, and capture their food. Without these adaptations, polar bears could not survive.

Can you think of any other animals that have adapted to their environment? You are probably familiar with the way many animals blend in with their environment for protection. Those animals have colors that make it very difficult for humans or animal predators to spot them. Colors that blend with an animal's environment are called camouflage. What do you think would happen to these animals if their environment changed suddenly? Think about animals that hide in the leaves on trees and bushes. After a hurricane or tropical storm passes through an area, the leaves are often blown off the plants. How do you think this change affects the animals' survival?

If you are searching for the answers to these and other questions about the way animals look and behave, you'll love this week's Science Studies Weekly. You've been performing investigations all year. This week you'll use models to help you understand why animals have a specialized body design. You will also see how adaptations help animals and entire species survive.



Connections

## *Alex the Talking Parrot*

Alex was pretty smart, all things considered. He knew about 150 words and could recognize 50 different objects. Alex understood when some things were bigger than other things, or smaller, or over or under.

What's the big deal with that? You know way more than that, and we're not talking about you in a newspaper! Well, there was one huge difference between you and Alex. Alex was a parrot.

Alex was a 31 year old African Grey Parrot who lived at Harvard University with his colleague, Dr. Irene Pepperberg. Dr. Pepperberg studied Alex's ability to learn and communicate. Could Alex take a test for you at your school? He probably couldn't. He was one smart bird, but emotionally he was more like a 2 year old. He would get bored and throw things with his beak, run into his cage and slam the door, and intentionally give wrong answers when he was tired of working with Dr. Pepperberg.

Alex died in 2007, because of a heart condition that he likely inherited at birth. Usually, African Grey Parrots live about 50 years! In spite of Alex's walnut sized brain, he was an amazing bird that changed how scientists look at learning and the abilities of animals to communicate with people.

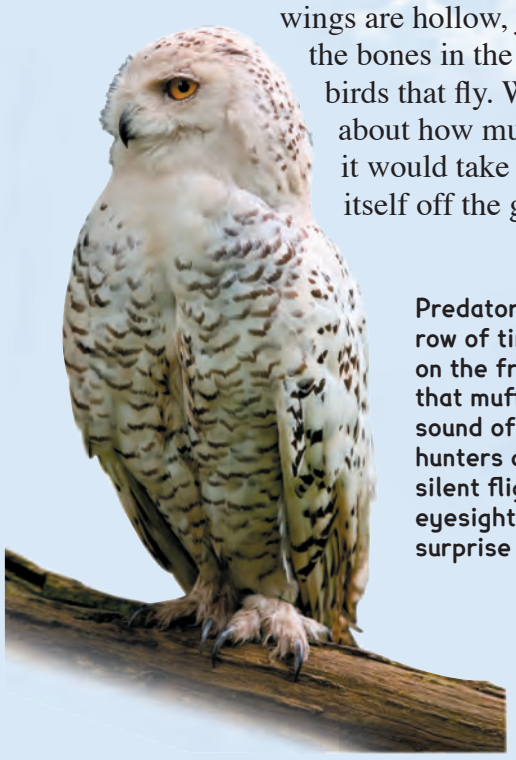
Want to learn more about Alex? Find a copy of Dr. Pepperberg's book "Alex and Me" at your local library. It tells the story of their remarkable working relationship and 30 year friendship.


# Wings, Beaks, Legs, Tails and Feet

In this issue we will look at the physical and behavioral characteristics of some of the birds in the southeastern United States. Depending on where you live, some of these birds may live in your area all year. Others may migrate (move with the seasons). You might see those birds only at certain times of the year. One way to study birds is to observe, research, and compare different birds' wings, beaks, legs, tails and feet. This will help us understand how birds, like other organisms, have developed special features (adaptations) that allow their species to survive on Earth.

Ornithologists (scientists who study birds) often look at the design of birds' beaks, wings, feet, legs and tails to learn how birds survive. You can be an ornithologist, too. Take a closer look at the drawings of birds in this paper. Focus on the different body parts. Study the shapes of their beaks. Do the beaks remind you of any tools? Examine their feet. How are the feet of birds that swim different from the feet of birds that wade into the water or eat at the water's edge? Look at the birds' legs. Why are some so long and others so short? What about the birds' tails? Tail shape is what gives a bird balance, helps them soar in the air, and helps them make quick turns or dips while hunting. Think about which birds live near, or search for food in, a watery habitat. Which birds live, nest, and eat in trees or bushes? How does the design of a bird's body help it survive in different habitats?

Let's begin by comparing wings, the primary feature that makes a bird, well, a bird! The bones in a bird's wings are hollow, just like all the bones in the bodies of birds that fly. Why? Think about how much more energy it would take for a bird to lift itself off the ground if it had the



Predators' wings have a row of tiny feathers on the front edge that muffle (soften) the sound of the wind. These hunters can use their silent flight and keen eyesight to find and surprise small animals.

What about beaks (sometimes called bills)? Many birds use their beaks to rip and tear at their food.

The design of a bird's feet can be very important to its survival. Predators use their sharp-clawed feet to grab their prey.

## Beak Breakfast Bonanza

In the Lab

**Materials: (per class)**

Tools (three of each): eyedropper or pipette, tweezers, metal or plastic slotted spoons, pliers, small aquarium net or tea strainer, bamboo skewers (for shish kabob), sets of two chopsticks. (Insert a folded piece of index card between the large ends of the chopsticks. Hold them together at the large end with a rubber band.)

**Habitat/Food**

1. tank of water (2-4 gallons), punched green paper dots, golf tees, rubber bands (tools: bamboo skewer, small net or strainer, eyedropper)
2. tank of water (2-4 gallons), small plastic fish (tools: pliers, tweezers, slotted spoon)
3. small branch to represent a "log" or tree trunk, plastic ants, spiders, beetles, caterpillars (tools: tweezers, slotted spoon, small net)
4. bud vase, water and red food coloring (tools: pliers, tweezers, eyedropper)
5. tank of soil, water to make mud, plastic fishing worms (tools: small net, slotted spoon, chopsticks)
6. peanuts in the shell, sunflower seeds, corn kernels (tools: chopsticks, pliers, bamboo skewer)
7. tank with 3-4 inches of water, plastic foam fish and frogs (tools: chopsticks, bamboo skewer, eyedropper)

**Procedure**

1. Gather the materials. Set up the food/habitats and assigned tools. (Your teacher will help you.)
2. Number each food station from 1-7, and set up a recording sheet for the investigation. (You may use the one to the right.)
3. With a partner, test the three tools at each food station. Decide which of the tools gets the food most easily and efficiently. (Stations can be visited in any order so that seven teams can be testing at the same time.)
4. Write the name of the tool and the food next to the station number you are testing.
5. Look at the pictures/photos of the birds. Choose the bird that has a beak that most closely resembles the tool you have written and write its name next to the tool/food.
6. Share your findings with the rest of the class.

How do your choices compare with the other teams' results? If you do not agree, can you justify your choice? Have a "scientific argument." That means you give an explanation of your investigation and results. In a scientific argument, it is OK to disagree; it is not considered fighting. Remember to be respectful of your peers and allow each team to express the opinion they have made based on their investigation.

The wings of the tiny hummingbird move so quickly that they look like a blur to our eyes. The hummingbird's wings allow it to hover over flowers and drink nectar, the bird's food source. Hummingbirds get their name because the beating of their wings causes a buzzing or humming sound.

added weight of more solid bones. Birds' wings are moved by powerful muscles. Their wings are designed to take them on long-distance trips when they migrate or to help them soar and turn in the air.

At first glance, it may seem difficult to see some of the differences between birds. If you take the time to observe them and study pictures of different species, you will see that their physical characteristics are essential for their survival. The same is true for all animals, even humans, because adaptation is not just "for the birds."

Birds that live in or near water often have webbed feet that allow them to swim.

Birds also use their beaks to build nests. Imagine trying to weave grass and twigs with your mouth!

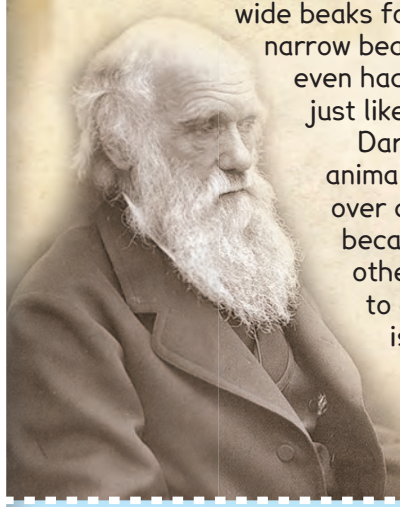


# Charles Darwin

Spotlight

Charles Darwin was born in England in 1809. He loved to study animals and nature. Anyone who is interested in nature is called a naturalist. Darwin was a naturalist who lived in England all of his life. He only left his home to travel and study—you guessed it—nature. During one of his trips, he went to the Galapagos Islands in the Pacific Ocean. He observed the animals that lived there.

One of the first observations he made was about a little bird called a finch. He noticed their beaks first, and that got his attention. The beaks of the finches on the islands looked different from the finches in England. Some of the island finches had wide beaks for eating seeds, and some had long, narrow beaks for drinking nectar. Some of them even had beaks that could drill holes in wood, just like woodpeckers.



Darwin studied all of the Galapagos animals and decided they had changed over a long time. He believed they changed because they lived so far away from other animals of their species. They had to change to be able to survive in their island habitat. The animals that were not born with the changes did not survive. Darwin called his idea natural selection.

## How do birds know how to get back home after flying south?

This Week's Question

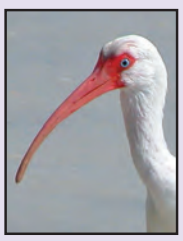
For years and years, scientists have studied how birds seem to know how to head south for the winter and then return in the spring to the exact place they left. Humans have wondered how homing pigeons could find their way home when released hundreds of miles away. We've discovered that many birds (like pigeons) are somehow aware of the north and south magnetic fields of the Earth. So, even at night, when they can't see the land, they know where to go.

But, knowing about magnetic fields isn't the only way to get around! Many animals also remember the way places smell and follow their noses home. During the day, some birds watch the position of the sun. And at night, birds also use the positions of stars as guides. Birds will change their position when they are released inside a planetarium (a building that has stars projected on the ceiling like in the sky). If the stars are rotated, the birds will rotate. Amazingly, birds seem to watch for the North Star, just as human sailors do!

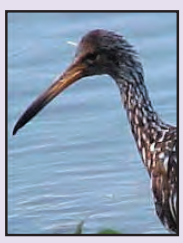
**Recording Sheet**

Ornithologist(s) _____

| | Food/Habitat | Tool | Bird |
|---|---|---|---|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| 13. | | | |

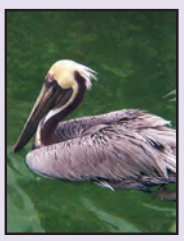


White Ibis



Limpkin

Grosbeak

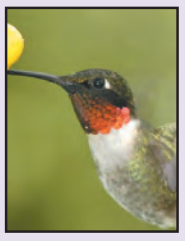


Brown Pelican

Cardinal

Roseate Spoonbill

Great Blue Heron



Ruby-throated Hummingbird

Belted Kingfisher

Red-bellied Woodpecker

American White Pelican

Northern Mockingbird

Purple Gallinule

*Food for thought...Can you use the experience you have had with this investigation to make a scientific connection between a toucan and a box of colorful, fruity cereal?

Name _____

Activity

# Avian Designer: Build the Bird of Your Dreams

Use the information you have learned from your investigations to design a new species of bird. (You may have to do some more research.) Draw a sketch of your bird below. Name its species. Identify and describe its natural habitat and food. Explain how each physical adaptation (how its body looks and works) will help your species survive. Add behavioral adaptations (the way your bird acts) to complete your report.

Wouldn't it be fun to make a clay or papier maché model of your bird? Maybe your art teacher would like to have you do this. You can display your models with your data sheets.

## Document your bird species:

Name of Bird:

Ornithologist-Artist:

Habitat:

Food:

**How it Looks (Physical Adaptations or Characteristics)**

Beak (bill):

Feet:

Legs:

Wings:

Tail:

Colors:

**How it Acts (Behavioral Adaptations or Characteristics)**

## Draw your bird species here:

## Hybrids

A hybrid is the offspring of two different species. Most species cannot have offspring with other species. Hybrids are usually sterile, which means they cannot have their own offspring. Hybrids like certain mice can also have more health problems than their parents.

A mule is a hybrid. It is the cross between a horse and a donkey, and it cannot reproduce. Mules have attributes from both useful horses and good, sturdy donkeys. Since mules can't reproduce, there aren't as many of them around.

Hybrids don't always have to be animals. Plants can be hybrids, too. Plant hybrids are found in nature quite frequently. To create plant hybrids, the pollen of one plant must come in contact with another plant of a different variety. Many farmers also experiment with hybrid crops, such as types of corn, to produce and harvest. Can you think of any other hybrids?

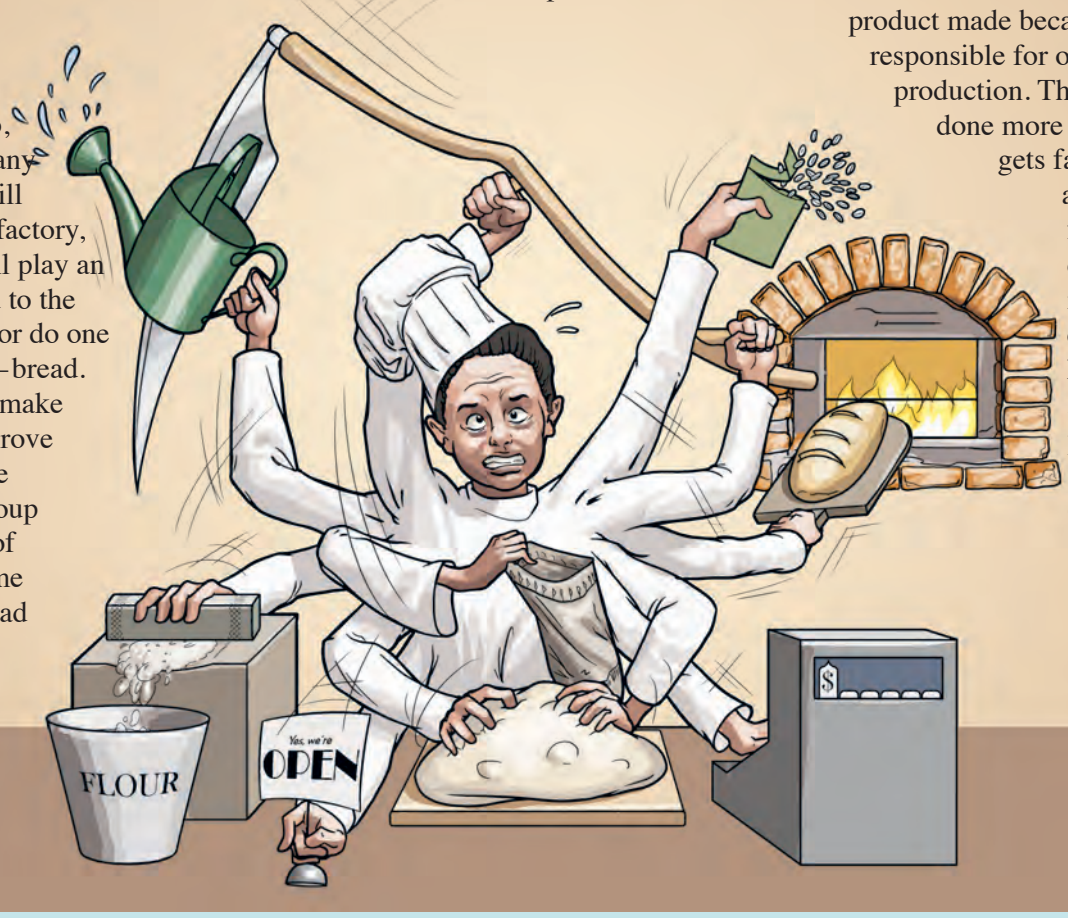

# Specialization and Interdependence

Imagine a day in the life of a bread baker. First, the baker buys the wheat seeds. Then he plants the seeds and takes care of the farm until the wheat is ready to be harvested. After harvesting the wheat, the baker grinds it into flour. He uses the flour to make the dough and then bakes the bread. But he is not done yet! After the bread is baked, he has to package it, write the advertisements and manage the store that sells the bread. How could one person possibly do all those tasks? That poor bread baker would not have a very successful business because he would be exhausted and too busy focusing on things besides baking the bread. That is exactly why businesses specialize to produce one type of product or provide one certain service.

Thanks to specialization, today's bread baker is only responsible for making the dough and baking his delicious bread. So, who does the rest of the work? Many other people including farmers, mill workers, people in the packaging factory, advertisers and store employees all play an important role in getting the bread to the consumers. They each specialize, or do one specific job, to make the product—bread. Specializing allows companies to make more product in less time and improve the quality of the product. Because one specific worker (or a small group of workers) focuses on each step of production, the baker has more time to focus on his special talent—bread baking.

So what would happen if one of the people along the way didn't do his or her job well or didn't do it at all? What if the packaging factory didn't make any bags for the bread? The bread would get stale before it made it to the store. Then no one would buy the bread, and the farmer, baker, mill workers, advertisers and store employees would all lose income. All the workers in the process are interdependent. That means each worker relies or depends on the others for help or resources to make the final product.

When you think of specialization and interdependence, you might picture an assembly line. Each worker on the line has a job to do before the product moves on to the next worker. This increases the amount of product made because each person is responsible for only one part or phase of production. Therefore the work gets done more quickly. The worker gets faster and more efficient at his or her job by only focusing on that one duty. In an assembly line it is very important that each worker does his or her part. Everyone else is counting on the other people to help get to the finish. Now that takes cooperation!




Connections

## *How Blueberries Make it to You*

**Part 1**

Let's take what we have learned about specialization and interdependence and apply it to a different type of production—blueberry farming. The following sentences are out of order. Think about all the things that happen before you buy fruit at the store. Imagine all the people who were involved in getting the berries to your house. After reading each sentence, write the numbers 1 through 6 on the lines next to the sentences that would show the correct sequence of steps.

_____ Trucks take the blueberries to the packaging company.
_____ The farmer plants the blueberries.
_____ The packaging company sends the containers of blueberries to the grocery store.
_____ The workers pick the ripe blueberries.
_____ Consumers buy the berries at the store.
_____ The berries are washed and checked for quality.

**Part 2**

Now that the steps are in the correct sequence, on the lines below list three human resources, or people, and their role in the production of blueberries. An example has been done for you.

farmer - responsible for planting the seeds and taking care of the blueberry bushes

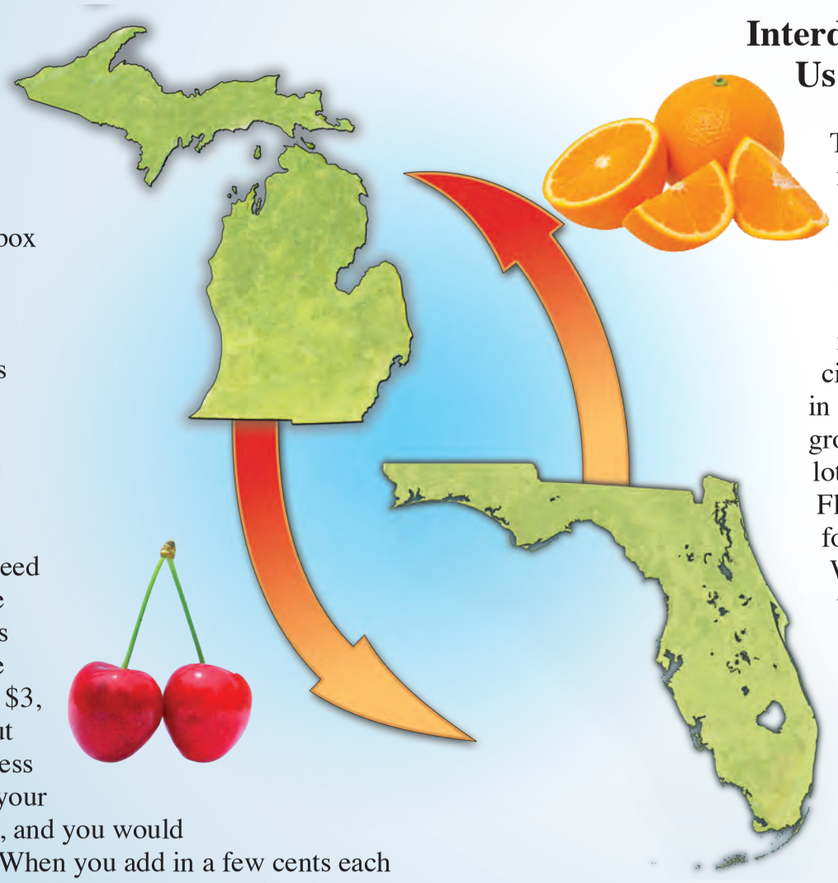
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____


# Making Choices

What factors help you choose what to buy? There are many answers, like what products you prefer, which ones are easy to find, and most of all price. Usually, consumers will buy more of a product at a lower price and less of a product at a higher price.

You can make some products yourself for a cheaper price than they are sold for in a store. Do you like those gooey, marshmallowy treats made from crispy rice cereal? A box of 24 pre-made crispy rice treats sells for around $12. That comes to 50 cents a piece, and many consumers think that is a fair enough price, so they buy them. But let's look at how much it would cost to make the same number of treats at home. The resources you need are six cups of cereal, three cups of mini marshmallows and ¼ cup butter. The price for a box of cereal is about $3, the marshmallows are about $1 and ¼ cup butter costs less than 50 cents. That brings your total for resources to $5.50, and you would have some items left over. When you add in a few cents each for plastic bags to put the treats in, your homemade crispy rice squares would cost about 25 cents each. That means your homemade treats cost about half as much as the store-bought ones!

OK. There are a couple other things to consider. Do your treats taste as good as the store-bought ones? Is it convenient to make the treats yourself? Convenience plays a big part in most decisions. For many consumers, the time they save is worth the extra cost.



## Interdependence Gives Us Choices

Do you like oranges? They're delicious and good for you, but they don't grow in Michigan. Lots of the oranges you see in stores come from Florida, because the climate there is just right for growing citrus fruit. The climate in Michigan is great for growing cherries, so we sell lots of our extra cherries to Florida. The same is true for many other products. Without interdependence, we wouldn't have as many choices!

## Supply and Demand

Another factor that influences the price is supply and demand. Supply is the amount of something that is available, and demand is the amount that is needed. If there is too much supply and not enough demand, the prices go down. If there is too much demand and not enough supply, the prices go up. Let's think about your crispy rice treats. If you make 100 treats, that is your supply. If you only sell 30, that is the demand for your treats. In that example, you would have wasted 70 treats and lost money. What if you only make 20, but 40 kids want to buy the treats? You might be able to charge a higher price because a lot of consumers want to purchase the treats (demand) and not enough product (supply).

In a market economy (like we have in the United States), things that are scarce tend to cost more money. Diamonds and gold have a higher price than shells because the supply of diamonds and gold is low and the demand is high. There are a lot of shells and they are pretty easy to find, so their price is low. Can you think of something else that has a high price because the supply is low?

These illustrations show the relationship between supply and demand and price.


High supply and low demand = low price

Low supply and high demand = high price

## Words to Know

**specialization:** a system in which each worker concentrates on a specific task
**interdependent:** relying or depending on one another
**assembly line:** a system of manufacturing in which each worker performs a certain job and passes the product on for another worker to complete the next stage in production
**supply:** how much of something is available
**demand:** how much of something is needed
**geology:** the study of the Earth
**product:** a good made to be sold to consumers
**production:** the process of making a product



Michigan Places

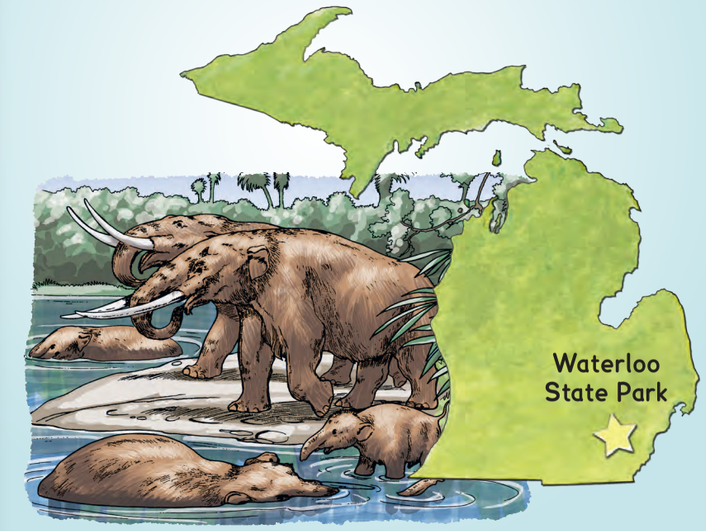
## Waterloo State Park

Michigan has 97 state parks, including Waterloo State Park near Chelsea. Hold up your right hand with the palm facing you. Point to the spot about 1 inch to the left of the base of your thumb. That is the area where Waterloo State Park is located. Is that far from where you live?

Waterloo is the largest state park in the Lower Peninsula and it covers 20,000 acres. (That is about 20,000 football fields!) You can learn a lot about the geology of Michigan at this park. Geology is the study of the Earth. Part of Waterloo's geology is the 16 lakes that were created thousands of years ago by glaciers. These huge pieces of ice moved across the land digging out basins, which were later filled with water to form these inland lakes. The five Great Lakes were also created by glaciers.

At Waterloo State Park, you can visit marshes and bogs rich with plants and wildlife native to the region. You might even find a fossil of an animal that lived there long ago, like the mastodon. This elephant-like animal once roamed our land, and more than 250 mastodon remains have been found in our state. Because of this, the mastodon is our official state fossil.

You never know what you will find in Michigan's great outdoors. There is always adventure waiting for you at our state parks, so get out there and explore.




## Crispy Rice Squares

Economics

Lots of groups make money by having bake sales. Here's a recipe for some yummy treats that would be a great addition to your team or scout troop's next fundraiser. Make sure you have your parents' permission and help as you follow the recipe below. Good luck!


**What you need**

- 1/4 cup butter
- 3 cups miniature marshmallows
- 6 cups crispy rice cereal
- 13 x 9-inch pan

**What to do**

1. In a large saucepan, melt butter over low heat. Add the marshmallows and continue to stir until the marshmallows have completely melted. Remove from heat carefully.
2. Stir in the cereal, coating the pieces well with the melted marshmallow mixture.
3. Using a buttered spatula, press the mixture evenly into a 13 x 9-inch buttered pan.
4. Cut into squares when the mixture cools. Makes 24 squares.

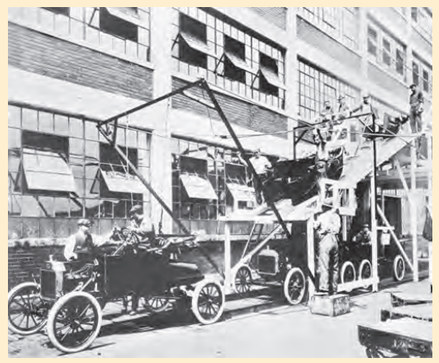


## Timeline of Michigan

Michigan Timeline

**1930 - The population of Michigan reaches 4,842,325**

In 1930, Michigan was the seventh largest state in the country. Many people came to Michigan looking for jobs, especially in the automobile factories in Detroit. This allowed the city to continue its economic growth and made it the fourth largest city in the United States.



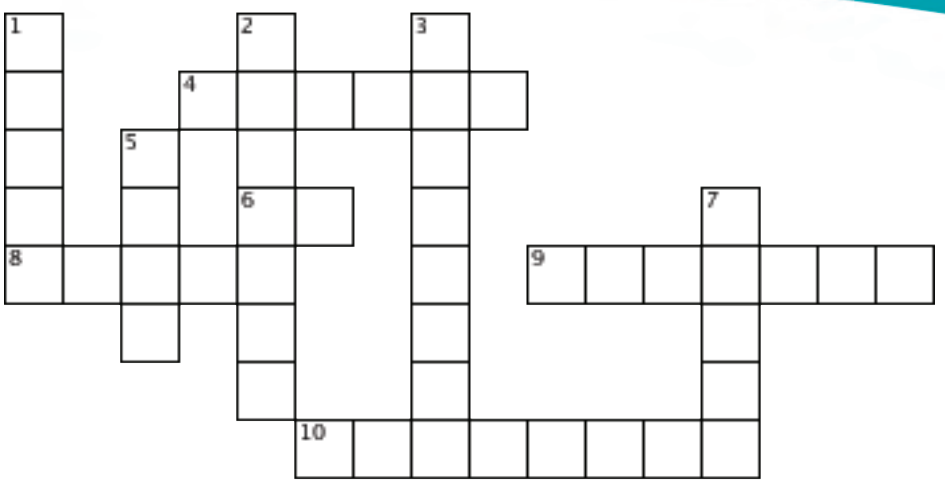
**Great Depression**

The Great Depression was a time in our country's history when millions of people had no jobs and the economy was in the worst shape ever. It began in 1929 and by 1933 nearly 25 percent of U.S. citizens were unemployed. Tens of thousands of families flocked to Michigan hoping to find work in the automobile industry. When the Depression finally ended, many stayed and made Michigan their home.

**Rural to Urban to Suburban**

Before the 1930s, most people lived on farms and grew their own food. However, by the 1930s 62 percent of the people in Michigan lived in urban (city) areas. That means that more people lived in cities than in rural (farm or country) areas. Over time, people began to move out of the crowded urban areas to the suburbs, or smaller towns near large cities. They wanted more space and a slower paced life. Today only 55 percent of Michigan's citizens live in urban areas. Is your hometown rural, urban or suburban?

Name _____



**ACROSS**

4. amount of something that is available
6. When the supply is low, price goes _____.
8. peninsula where you'll find Waterloo State Park
9. fourth largest city in the United States in the 1930s
10. Michigan state fossil

**DOWN**

1. word that describes farms or country areas
2. smaller towns near large cities
3. These formed the Great Lakes.
5. When the supply is high, price goes _____.
7. word that describes city areas



As you read this week's lesson, circle or highlight all proper nouns with any color pen or highlighter. This will help you find some of the crossword answers and get ready for this week's test.

Activity

## Activity for Compassion Garden

Complete one of the activities provided below. Then write about what you did on the flower pattern from your teacher. Check your writing for correct spelling, punctuation and grammar.

Ask someone who is alone at recess to come join your game.

OR

Call a classmate who was absent from school and let him or her know what was taught in class and what assignments were given.

Never, never, never, give up.
–Winston Churchill

COMMITMENT
Pass It On.
VALUES.COM

Did You Know?

## Michigan Astronauts

Have you ever dreamed of being an astronaut? Over the years many astronauts have come from our state. In 1971 Apollo 15 flew with Alfred Worden on board, and in 1973 Jack Lousma flew on the Skylab mission. He flew again in 1982 on a space shuttle flight. David Leestma flew two shuttle missions in 1984 and 1989, while Brewster Shaw Jr. topped that with three shuttle missions in 1983, 1985 and 1989. The year 1991 was a busy one with both Richard Searfoss and Donald McMonagle flying into space. Many Michiganians have been brave enough to be astronauts and serve our country. If you were lucky enough to be a Michigan astronaut, where would you want to go?

Use any color to circle or highlight five words in this week's magazine that have a prefix or suffix. On a piece of paper, write the words and the meaning of the prefixes or suffixes. (CC ELA RF.4.3)

Let's Write

Draw the people and jobs that are needed in the production of a good of your choice. Use blank paper and draw at least three pictures in sequence showing the product being made. For example, in the production of bread, you might draw the farmer, the baker and the store clerk specializing in their individual jobs.

If you'd like to make any editorial comments about our paper, please write to us at support@studiesweekly.com.

Teachers may want to enlarge and post this timeline in the classroom for reference and to use as a periodic review.

# Michigan Timeline

**1618** – Etienne Brulé passes through the North Channel of Lake Huron.
**1668** – Father Jacques Marquette takes over the Sault Ste. Marie mission.
**1671** – The first military outpost, Fort Michilimackinac, is established at St. Ignace.
**1701** – Detroit is founded as Fort Pontchartrain by French explorers led by Antoine de la Cadillac.
**1702** – Madame Cadillac and Madame Tonty (wife of Antoine Cadillac's first officer) arrive at Fort Pontchartrain. They are the first non–American Indian women in Michigan.
**1763** – During the American Indian wars in the area, Chief Pontiac leads a 153-day battle against the British. American Indians capture all the forts in Michigan, except one.
**1781** – Spanish forces from St. Louis take over Fort St. Joseph.
**1787** – Congress passes the Northwest Ordinance of 1787. Michigan becomes part of this territory.
**1796** – The British withdraw from Detroit. Michiganians raise the U.S. flag for the first time.
**1805** – Michigan Territory
**1818** – Public land sales begin in Detroit; immigrants come to Michigan.
**1825** – Erie Canal opens, providing transportation for immigrants coming to Michigan and farm products going to the East Coast of the United States.
**1830** – Michigan issues a charter to the Pontiac and Detroit Railway.
**1831** – Stevens T. Mason becomes acting secretary of the territory at age 19.
**1834** – Mason becomes acting governor of the territory.
**1835** – The Toledo War causes problems for Michigan and Ohio.
**1844** – Copper mining begins in the Keweenaw area; iron ore discovered in Upper Peninsula
**1845** – State legislature holds first session in new capitol building in Lansing
**1855** – Soo Locks open, allowing ships to travel from Lake Superior to the other Great Lakes.
**1861** – The first Michigan regiments join the Civil War. More than 90,000 men from Michigan served in the Civil War.
**April 24, 1901** – The Detroit Tigers are scheduled to play their first official American League baseball game.
**1899–1903** – The Michigan Government began to establish a state school system.
**1900** – Michigan's population is 2,420,982.
**1903** – Henry Ford established an auto factory in Michigan and sold its first car—the Model A. This changed our state forever.
**1904** – Buick Motor Company was founded in Flint.
**1908** – Model T Ford was introduced and made on assembly lines.
**1914** – Henry Ford announced the $5 minimum wage per day and reduced the workday from nine to eight hours.
**1917-1918** – 135,485 men from Michigan fought in World War I.
**1930** – The population of Michigan reaches 4,842,325.

**Wayne Westland Community Schools**
**Elementary Art**
**Distance Learning Lessons**

**Week of 5/18/20**

# PORTRAITS


**DIRECTIONS:**

**Using materials available in your house, create a portrait or a self-portrait. You may draw it, paint it, create a collage, or build it with found objects.**

**DEFINITIONS:**

**Portrait is an artwork that has been created about a person or persons (*sometimes animals*). It should tell us something about the people in the work of art.**

**Self-portrait is a work of art that the artist does of themself.**

**Found object is a natural or man-made object or part of an object that is found by the artist and kept because of some interest or value to the artist. It can be changed or left whole before using in larger works.**

**Collage describes both the technique and the resulting work of art, in which paper is torn or cut, arranged and stuck to a supporting surface.**

**Assemblage is art made by assembling unlike object's often every day, common objects scavenged by the artist. It is a 3-D collage.**

**INSPIRATION:**

***Portrait by Kehinde Wiley a Contemporary Artist who celebrates the proud Heritage of Black Women and Men in sculpture, painting and stained glass.***

**Found object faces:**
**https://artsandactivities.com/found-object-faces/**

**Collage self-portraits:**
**http://www.artteacherinla.com/funky-collage-self-portraits/**

**Lego style self-portraits:**
**https://www.artwithmrsnguyen.com/2014/03/lego-style-self-portraits**

**Must see video featuring Kehinde Wiley describing his Art:**
**https://youtu.be/dHx4lFPqPiI**

**If you choose to create a self-portrait, this may be a great time for self-reflection. Try to answer at least 6 of these questions about him/herself. You can talk to someone about it, have someone read it to you or read and write them all by yourself.**

**1. What is your name?**
**2. What is your favorite food?**
**3 If you could make the world a better place what would you do?**
**4. Who do you spend the most time with?**
**5. What is your favorite season?**
**6. What is your favorite thing to do?**
**7. If you could spend time with anyone, who would it be?**
**8. What would you like to learn from that person?**
**9. If you had a superhero power what would it be?**
**10. What do you miss most about school?**
**11. What would you like to learn that you have not yet?**
**12. What do you want to do some day or when you grow up?**

**Now, collect your materials and create your portrait! Have fun and stick with your choice.**

**ASSESSING YOUR WORK:**

**1. Did you include a person or persons?**

**2. Does your portrait tell the viewer something about the person or people in the work of art? For example: What do they look like? What they're doing?**

**3. Did you use as many elements of art as possible? (*line, color, shape,etc.*)**

**PORTRAIT RESOURCES:**

**YouTube Videos:**

**Symmetry Song for Kids | A Day at Symmetry Land | Lines of Symmetry**

[ARTY PANTS (Episode 1) - Portraiture]

[How to Make a Self Portrait | Miss Brushes Art Academy (Sesame Studios)]

[The History of Portraits]
[Sesame Street: Chuck Close And Self Portrait]

**Books:**

[How Mona Lisa Got Her Smile]

[Seeing Symmetry]

**Famous Portraits:**

[Famous Portrait Paintings]

**Games:**

[Mona Lisa Puzzle | Online Arts Game]

[Free art game for kids- Draw a Portrait]

[Symmetry Painter . Games . peg + cat]

[Van Gogh self Jigsaw Puzzle]

[Disney Yourself]

[Vermeer: Girl with a Pearl Earring Breakout Game | Arcade style arts game for kids | Based on a Vermeer painting]

[Andy Warhol's Marilyn Prints]

**We would love to see your creations! You can post photos of them to your Dojo story or email them directly to your art teacher!**

**Ms. Huhn** huhnb@wwcsd.net

**Ms. Kurtz** kurtzd@wwcsd.net

**Mrs. Windley** WindleyA@wwcsd.net

**Ms. Peck** peckme@wwcsd.net

**Mrs. Smith** smitha@wwcsd.net

**Mr. Wilburn** wilburnp@wwcsd.net

**Wayne-Westland Physical Education Elementary Distance Learning Lessons**

# Week of May 18th

## Move It Monday

Today we are going to have some fun with balloons! Try to do this outside if you have space and the weather is cooperating! If you don't have a balloon, try using a light weight ball. This will also make it more challenging!

Balloon Fun

## Turn It Up Tuesday

Time to get moving! Click on the link below and get a great workout! Invite your family to join in on the fun too!

20 minute workout for kids

## Walk Around Wednesday

Get outside and walk around your backyard, around your block or around your neighborhood. Walk at a fast pace for at least 30 minutes to get your heart pumping! Being outside and in the sun helps your body produce vitamin D which gives you energy and makes you feel better!

## Team Spirit Thursday

Put on your favorite school t-shirt and let's do some running!!!

20 Meter Pacer Demonstration
20 Meter Cadence w/ music - approximately 65 feet

## Fun Time Friday

Today you are going to create a new game! It can be anything from using a ball or jump rope or any other sports or fitness equipment you might have at home or it could even be a new tag game. You can make the rules as easy or complex as you'd like. Make sure everyone in your family plays with you!

**Topic: Develop, implement, and model effective decision making skills to responsibly deal with daily academic and social situations.**

Kindergarten Read Curious George Gets a Bike. Discuss decision making and brainstorm decision making situations that you could be in at home or at school.

1st Good vs bad choice activity- use the "If ____ then ____" model to explain what you would do in certain situations to make a good choice.

2nd Repeat 1st grade lesson.

3rd Discuss strategies you could use to help make a decision (pros and cons list, ask someone's opinion, flip a coin etc) and explain how some strategies work better for certain situations. For example, you might flip a coin to choose where to go for lunch but not for what house you're going to buy.

4th Discuss choices and consequences. Have the student veralize or write about multiple choices they have made and what the consequences are to them (good or bad). How can we learn from the bad choices?

5th Repeat 4th grade lesson.

All grades: Please feel free to play the games we do at the end of each class that help practice teamwork, communication, active listening, cooperation, etc. Even ask your child at the end of the game why the game is played in life skills and they'll have an answer for you!

Game Ideas:
Simon Says
Four Corners
Would You Rather
Telephone
Hot Potato
Pictionary
Charades

**3rd - 4th Grade Media Choice Board**

**Please choose ONE activity to do per WEEK**

These can be completed in any order - Just try to complete one box a week!

We Miss you!

## Choose reading, letter, math, strategy or skills games:

- https://www.abcya.com/
- https://www.funbrain.com/
- https://www.fuelthebrain.com/
- http://www.fun4thebrain.com/
- https://www.roomrecess.com/

## Listen to online stories:

- https://www.storylineonline.net/
- https://www.weareteachers.com/storytime/?utm_source=WAT_MDR&utm_medium=CVEnews&utm_campaign=WAT_Enews03182020

## Practice typing skills:

- https://typingclub.com **(***If you cannot remember your login for typing club, just click on* ***get started*** *and choose a lesson to practice your typing skills.)*
- https://typetastic.com/
- https://www.typing.com/student/game/keyboard-jump
- https://www.typing.com/student/game/keyboard-ninja
- https://www.typing.com/student/game/type-a-balloon

## Coding Websites:

- https://www.k5technologycurriculum.com/extras/hour-of-code/
- https://code.org/

## Virtual Field Trips:

https://www.weareteachers.com/best-virtual-field-trips/

**Internet Safety:** Watch these videos on how to be safe using the internet.

Super Digital Citizen(3-5)
https://www.commonsense.org/education/lesson/super-digital-citizen-3-5

NetSmartz Videos
http://www.missingkids.org/netsmartz/videos#elementary

Create a **doc** on any topic. Change font size, style and color. Add an image if you'd like.
Some examples…

- Type a letter to a friend.
- Type a story about something fun that you have done recently.
- Type an adventure story.
- Type a poem.
- Type a list of fun summer activities.
- Or another topic for your choice.

Create a **slideshow** on any topic. Change font size, style and color. Add an image on each slide and create transitions
Some examples…

- Create a slideshow on your favorite animal.
- Create a slideshow on your favorite food.
- Create a slideshow on your favorite place to eat.
- Create a slideshow on your favorite vacation.
- Create a slideshow on your family activities.
- Or another topic for your choice.

**Other activities you may choose to do can include the following:**

- Use Google Drawing to edit or create your own picture
- Use Google Sheets to create pixel artwork
- Use Google Sheets to create a graph