

2020

Erie Rise Leadership
Academy Charter School

Parent Lesson Plan

[PARENT LESSON PLAN]

4TH GRADE BOYS WEEK 2 MARCH 30-APRIL 3

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INTRODUCTION

Hello Parents!

Included in this packet is a week's worth of printed ELA and Mathematics work for your students while they are at home. Each day is separated into the 2 content areas for the printed material. If you have access to the digital curriculum, a pacing guide is also provided outlining the digital component assigned for each specific day. If you need technology, please contact the school and we can make it available to you. Also remember, USATestPrep is always an option!

We know some of this material maybe be challenging, but try your best to complete it! Hopefully we will see you back in the classroom soon and will be able to go over all the information.

Printed materials may be turned into to the distribution centers once completed, but it is not a requirement.

Mrs. Will will be available on Youtube Live every day from 10AM-11AM to assist with curriculum questions and/or any resource questions for parents or students.

Stay safe and healthy everyone!

Missing seeing everyone's smiling face! Remember to wash your hands!

Educationally Yours ,
Mrs. Veronica Will

HELPFUL INFORMATION

Distribution Sites/Information

Food/Curriculum distribution will take place at:

Erie Rise Leadership Academy Charter School
1006 West 10th Street
Erie, PA 16502

Leadership Team

Mr. Terry Lang, CEO: 814 812-0503
Mrs. Veronica Will, Principal: 814 873-5158
Mr. Aubrey Favors, HR: 814 812-3026
Mr. Kirk Paskell, Transportation: 814 566-0002
Mr. Homer Smith, PR: 814 392-3413
Mrs. Pearl Jeffries, Social Services: 814 722-5056

DIGITAL LESSON PACING GUIDE

ConnectED Instructions

Please see attached instructions for accessing the digital curriculum.

USATestPrep Instructions

Please see attached instructions for accessing this test-prep site.

If you have access to high speed internet, below are the assignments the teachers have assigned for the various content areas:

USA Test Prep Week 1 Assignments:

Math Assignments: *Math 3/30, Math 3/31, Math 4/1, Math 4/2, Math 4/3*

ELA Assignments: *ELA 3/30, ELA 3/31, ELA 4/1, ELA 4/2, ELA 4/3*

Science Assignments: *Science 3/30, Science 3/31, Science 4/1, Science 4/2, Science 4/3*

Pacing Guide for Online Curriculum

	Monday	Tuesday	Wednesday	Thursday	Friday
ELA/Writing	<u>Lesson:</u> Unit 4 Lesson 5 Day 1 March 30	<u>Lesson:</u> Unit 4 Lesson 5 Day 2 March 31	<u>Lesson:</u> Unit 4 Lesson 5 Day 3 April 1	<u>Lesson:</u> Unit 4 Lesson 5 Day 4 April 2	<u>Lesson:</u> Unit 4 Lesson 5 Day 4 April 3
Math	<u>Lesson:</u> Chapter 7 Lesson 7 March 30	<u>Lesson:</u> Chapter 7 Check my Progress March 31	<u>Lesson:</u> Chapter 7 Lesson 8 April 1	<u>Lesson:</u> Chapter 7 Lesson 9 April 2	<u>Lesson:</u> Chapter 7 Review April 3

ELA PRINT MATERIAL

Monday, March 30th

Unit 4 Lesson 5 Day 1

- Read Story
- Go over Spelling Words
- Go over Vocabulary Words
- Write Spelling Words 4 times each

Tuesday March 31st

Unit 4 Lesson 5 Day 2

- Reread Story
- Review Spelling Words
- Review Vocabulary Words
- Skills Practice Pg. 59-60
- Write 10 Spelling Word Sentences

Wednesday, April 1st

Unit 4 Lesson 5 Day 3

- Read Story
- Go over Spelling Words
- Go over Vocabulary Words
- Skills Practice pg. 61-22
- Skills Practice pg. 63-64
- Skills Practice pg. 67-68
- Write other 10 Spelling Word Sentences

Thursday, April 2nd

Unit 4 Lesson 5 Day 4

- Reread story
- Review Spelling Words
- Review Vocabulary Words
- Skills Practice pg. 69-70
- Answer Text Connection and Looking Closer Questions pg. 430-431
- Read and Answer Social Studies Connect: The Creation of Nunavut Territory Questions pg. 432-433
- Write Vocabulary Definitions
- Write Spelling Words in ABC Order

Friday, April 3rd

Unit 4 Lesson 5 Day 5

- Reread Story
- Review Spelling Words
- Review Vocabulary Words
- Complete Assessment: Vocabulary, Comprehension, Analyzing the Selection
- Have an adult give you your Spelling Test

MATH PRINT MATERIALS

Monday, March 30th **Chapter 7 Lesson 7**

Reteach Worksheet Lesson 7

Homework Worksheet Lesson 7

Tuesday, March 31st

Chapter 7 Check My Progress

Check My Progress Worksheet

Wednesday, April 1st

Chapter 7 Lesson 8

Problem Solving Worksheet

My Homework Lesson 8 Worksheet

Thursday, April 2nd

Chapter 7 Lesson 9

Reteach Lesson 9 Worksheet

My Homework Lesson 9 Worksheet

Friday, April 3rd

Chapter 7 Review

Pretest Worksheet

Am I Ready? Review Worksheet

Am I Ready? Practice Worksheet

Am I Ready? Apply Worksheet

ADDITIONAL RESOURCES (EDUCATIONAL)

Included are a list of hand selected resources for students with internet to use at home.

Virtual Fieldtrips

https://docs.google.com/document/d/1SvldgTx9djKO6SjyvPDsoGkkgE3iExmi3qh2KRRku_w/mo bilebasic

VOOKS- storybooks brought to life

www.vooks.com/parent-resources

XtraMath- basic math facts

<https://xtramath.org/#/home/index>

GoNoodle

<https://www.gonoodle.com/>

ABCYa

<https://www.abcya.com/grades/3>

StudyJams

<http://studyjams.scholastic.com/studyjams/>



Use the different sections of this letter to begin conversations with your child about what he or she is learning.

Big Idea: How do adaptations help plants and animals?

Ask your child how this week's reading selection helps him or her answer this question.

This week's reading selection: *Survival at 40 Below*

Summary: In the Gates of the Arctic National Park and Preserve, animals have developed a surprising number of adaptations to survive the freezing temperatures. Many of them stay cozy beneath thick fur, and some burrow underground to stay warm. One species of frog can even stop its heart to conserve energy!

► **DISCUSS** with your child different animals that live in cold habitats.

Vocabulary Encourage your child to use these words while discussing the reading selection.

sheer	adjective	steep
grazing	verb	feeding on growing grass
cache	verb	to place or store something in a hidden or secret place
esophagus	noun	the muscular tube through which food moves from the throat to the stomach
insulating	adjective	covering or surrounding with a material that slows or stops the flow of electricity, heat, or sound
browses	verb	feeds or nibbles on
ceases	verb	comes or brings to an end; stops
vital	adjective	necessary to or supporting life
conserve	verb	to keep and protect from harm, loss, or change
prey	noun	an animal that is hunted by another animal for food
withered	adjective	dried up or shriveled

Spelling Practice these words with your child.

- | | | |
|---------------|-------------------|---------------|
| 1. antibiotic | 8. audiovisual | 15. biologist |
| 2. audible | 9. auditorium | 16. biology |
| 3. audience | 10. auditory | 17. biome |
| 4. audio | 11. biodegradable | 18. biopsy |
| 5. audiobook | 12. biodiversity | 19. biosphere |
| 6. audiology | 13. biographer | 20. inaudible |
| 7. audiotape | 14. biography | |

Challenge

- | | | |
|-------------------|----------------|--------------|
| 1. microbiologist | 2. audiologist | 3. symbiotic |
|-------------------|----------------|--------------|

Language Arts

Writing: Your child will draft and revise his or her research report.

Grammar: Your child will learn about, identify, and practice using irregular verbs.

► **GIVE** your child a list of verbs, such as *sit, eat, sleep, see, and grow*. Then have your child identify the past-tense form for each verb. (*sat, ate, slept, saw, and grew*)

Genre Informational Text**Essential Questions**

What animals can be found in cold habitats?
What adaptations are necessary to survive there?

Survival at 40 Below

by *Debbie S. Miller*
illustrated by *Jon Van Zyle*

Along the Koyukuk River, towering mountains guard the magnificent valley. Their sheer faces watch the seasons change. *Click ... click ... click.* Snapping hooves and grumbling voices fill the autumn air. With heads held high, a herd of caribou follows the river through Gates of the Arctic National Park.



These regal deer wear new coats of dense fur; with velvet antlers curving toward the sky. Ready for winter, the caribou have gained a thick layer of fat from summer grazing on the tundra.

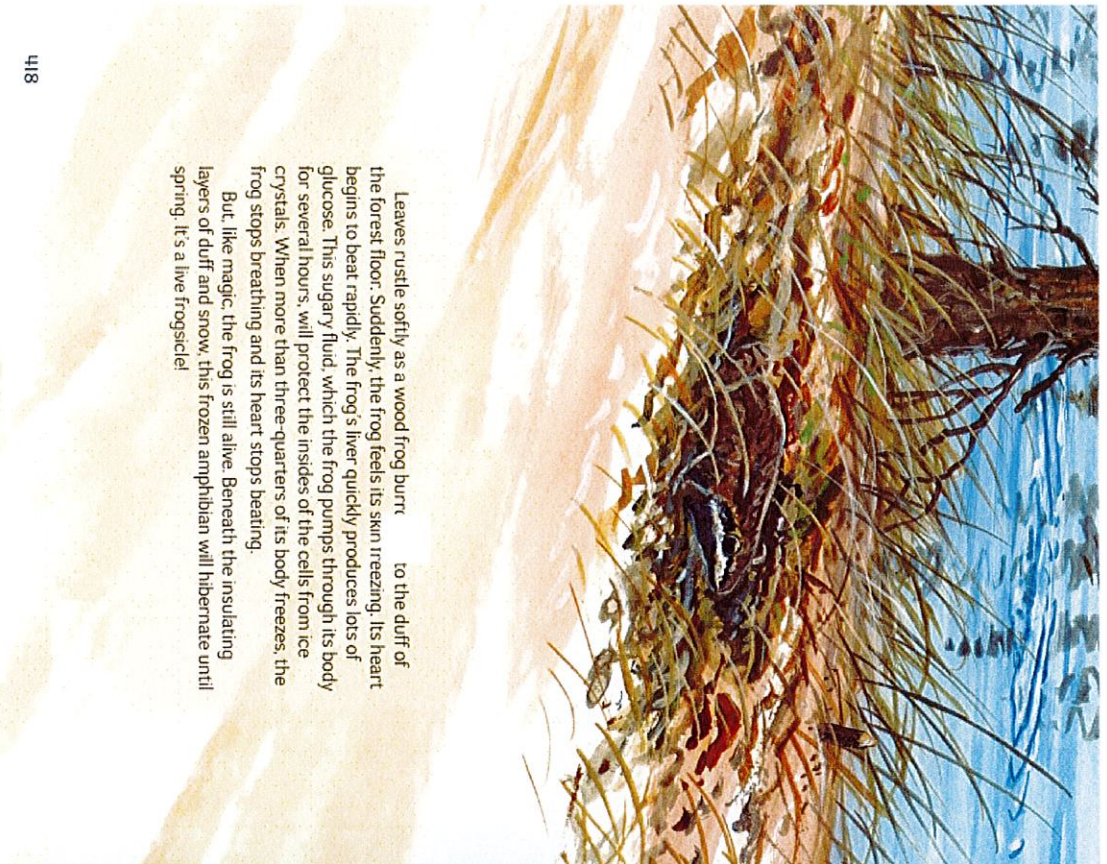


Other arctic animals scurry and prepare for the coming eight months of snow. Chickadees and gray jays cache seeds and morsels of carrion, hiding the food in cracks beneath tree bark. Red squirrels pluck spruce cones and hurl them to the ground. They will tear open the cones and eat the spruce seeds through the winter. A weasel snatches a brown lemming and carries it to an underground food cache.

Nights grow colder. A thin layer of ice creeps across a pond near the river. Snug in their lodge, beavers rest after cutting many saplings for their underwater cache. Near their food pile, an Alaska blackfish paddles slowly through pond vegetation, searching for insect larvae. This bottom dweller can survive the winter in shallow frozen ponds with little oxygen. Along with gills, the blackfish has an unusual esophagus that can work like a lung, absorbing oxygen from the air. During the winter, this fish will find holes in the ice and breathe through its mouth.



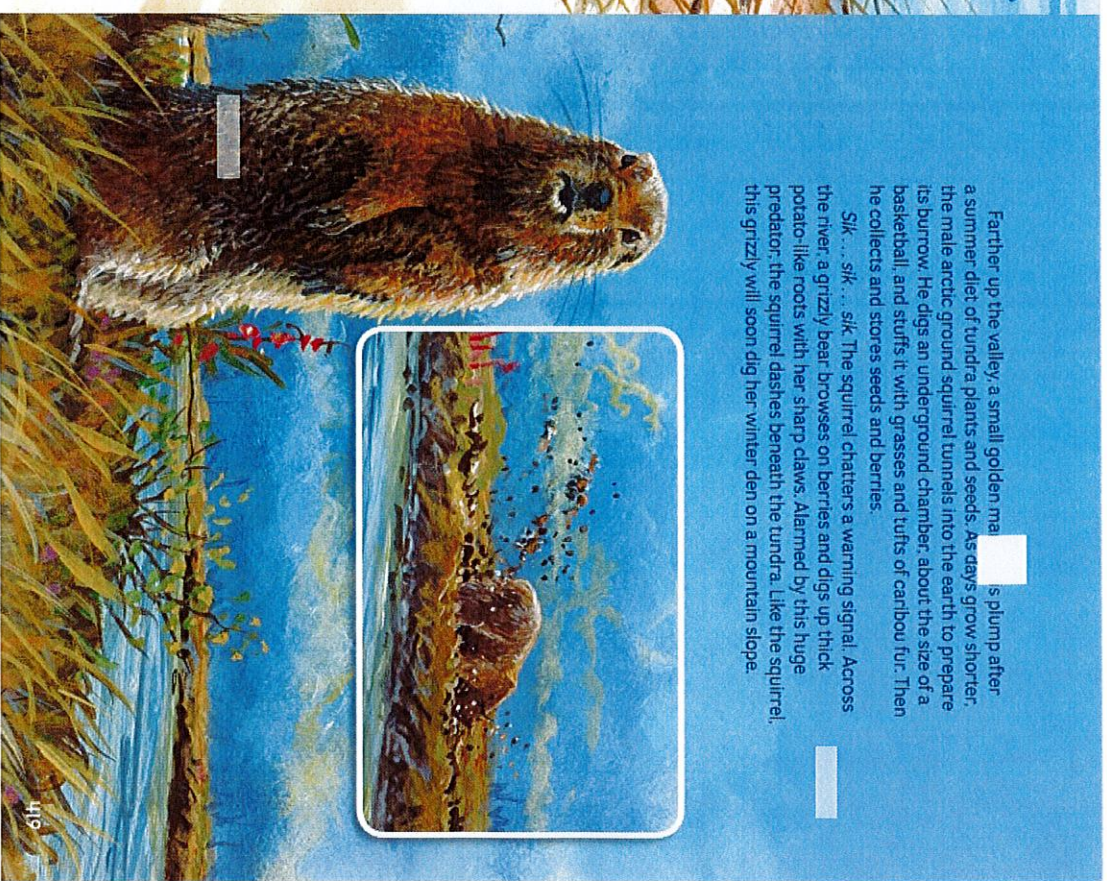
418-419



Leaves rustle softly as a wood frog burrs to the duff of the forest floor. Suddenly, the frog feels its skin freezing; its heart begins to beat rapidly. The frog's liver quickly produces lots of glucose. This sugary fluid, which the frog pumps through its body for several hours, will protect the insides of the cells from ice crystals. When more than three-quarters of its body freezes, the frog stops breathing and its heart stops beating.

But like magic, the frog is still alive. Beneath the insulating layers of duff and snow, this frozen amphibian will hibernate until spring. It's a live frog-sicle!

418



Farther up the valley, a small golden marmot is plump after a summer diet of tundra plants and seeds. As days grow shorter, the male arctic ground squirrel tunnels into the earth to prepare its burrow. He digs an underground chamber, about the size of a basketball, and stuffs it with grasses and tufts of caribou fur. Then he collects and stores seeds and berries.

Sik . . . sik . . . sik. The squirrel chatters a warning signal. Across the river, a grizzly bear browses on berries and digs up thick potato-like roots with her sharp claws. Alarmed by this huge predator, the squirrel dashes beneath the tundra. Like the squirrel, this grizzly will soon dig her winter den on a mountain slope.

419

420-421

As snowflakes swirl, the squirrel is ready to hibernate. He curls into a ball in his burrow, then slowly supercools his body, lowering his temperature to just below the freezing point of water. His heart rate gradually drops to three beats per minute, and his brain activity ceases. This ice-cold furry squirrel looks dead, but amazingly, he is only in the inactive state of torpor.

After three weeks, something triggers the squirrel to wake up. His heart rate increases. He warms his body by burning brown fat. This insulating fat protects his vital organs and acts like a heating pad. Within several hours, his heartbeat and temperature are normal.

After rearranging his nest, the squirrel curls back into a ball and falls asleep. He dreams and sleeps soundly for about twelve hours. Then his body supercools again. Like a yo-yo, the squirrel warms himself, sleeps, and supercools about a dozen times during the winter to conserve enough energy to survive.

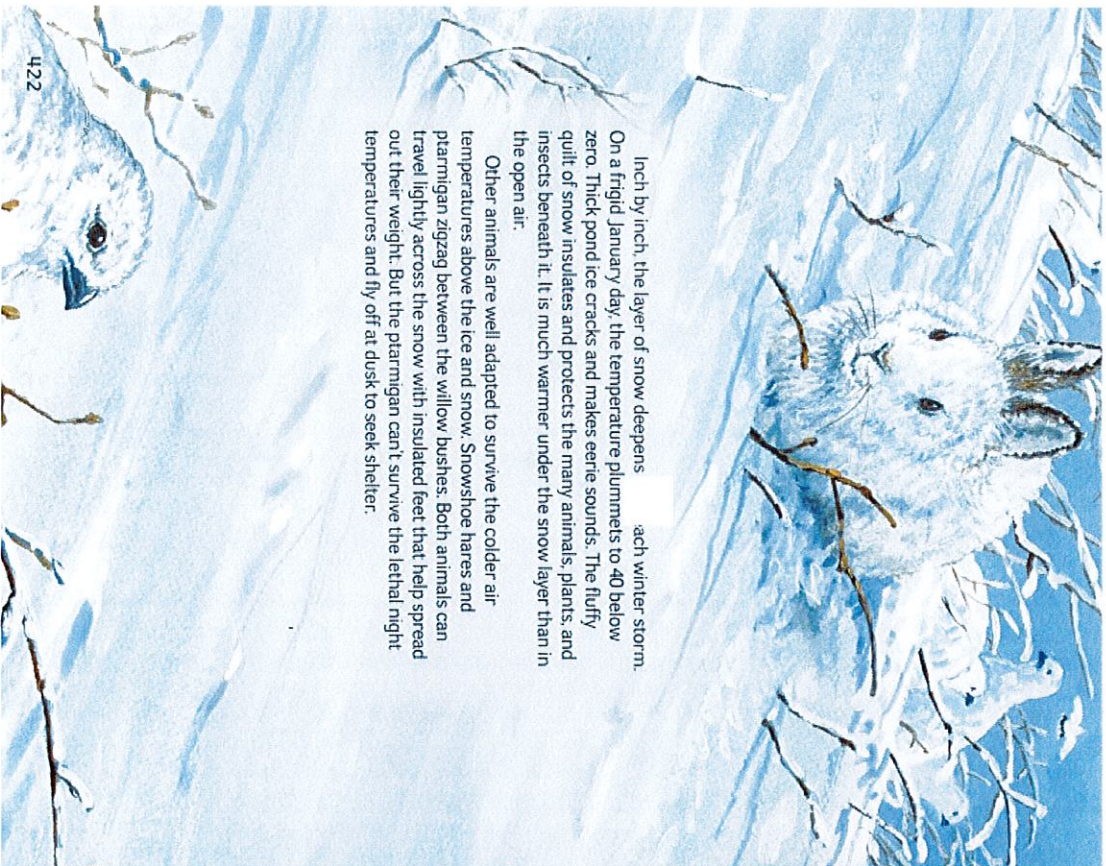


Above the squirrel's burrow, an arctic fox chases for prey. The fox picks up the scent of voles beneath the snow. These mouse-like animals are huddling in their nest to keep warm. Like an acrobat, the fox springs high into the air and pounces on the voles. Breaking through the snow, he traps one by surprise.

The arctic fox keeps warm in frigid temperatures because he wears two winter coats. His dense underfur insulates him like the down in a fluffy sleeping bag. His thick outer coat has tiny air pockets inside the hair shafts, instead of color pigment. The snow-white coat perfectly camouflages the fox for hunting prey and escaping predators. Fur also covers the soles of his paws, and his big, bushy tail provides extra warmth.



422-423



Inch by inch, the layer of snow deepens each winter storm. On a frigid January day, the temperature plummets to 40 below zero. Thick pond ice cracks and makes eerie sounds. The fluffy quilt of snow insulates and protects the many animals, plants, and insects beneath it. It is much warmer under the snow layer than in the open air.

Other animals are well adapted to survive the colder air temperatures above the ice and snow. Snowshoe hares and ptarmigan zigzag between the willow bushes. Both animals can travel lightly across the snow with insulated feet that help spread out their weight. But the ptarmigan can't survive the lethal night temperatures and fly off at dusk to seek shelter.

422



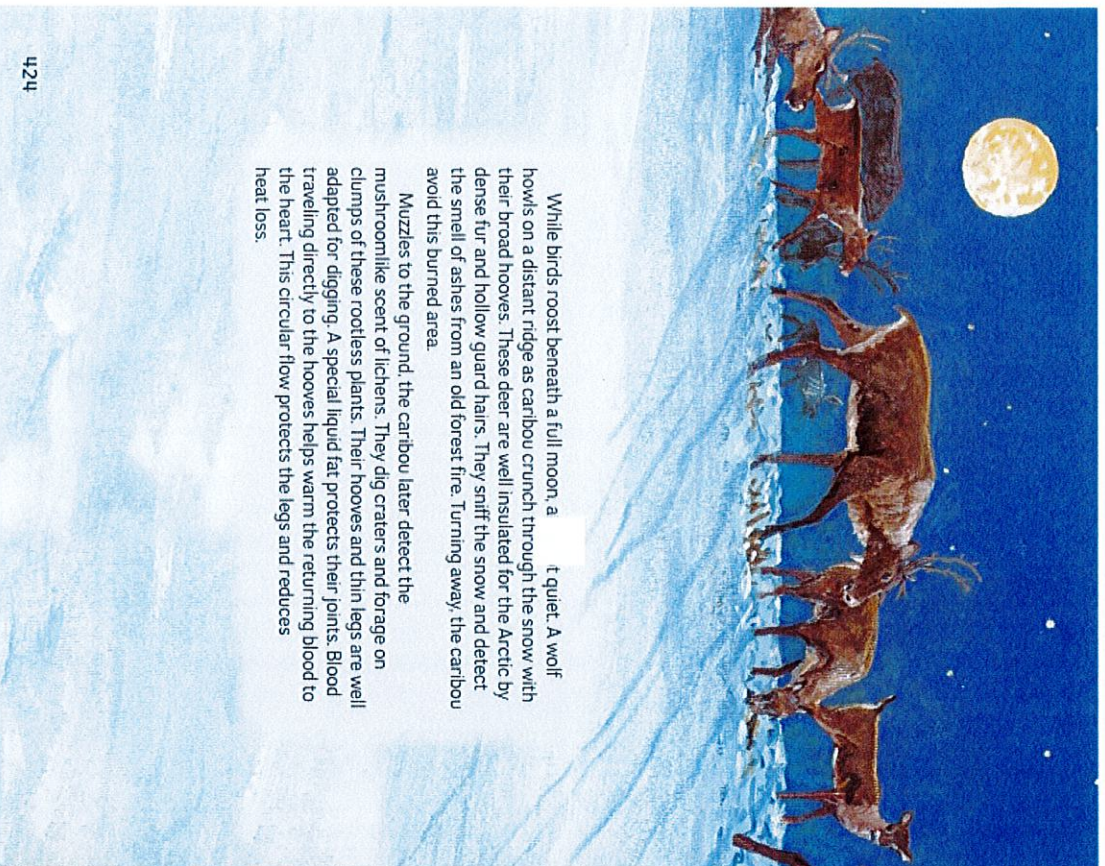
Puff! They dive into a drift of powdery snow. Invisible to the world, the ptarmigan roost inside their snow burrows, protected from predators and the extreme cold.

Another bird combats the deep freeze: A black-capped chickadee flits from tree to tree, eating his cached food. He must gain enough fat each day to survive the night.

But this small bird needs more than food to survive. He fluffs up his dense feathers for better insulation. Tiny muscles control the angle of each feather, while other muscles shiver to produce heat. The chickadee can also lower his temperature and metabolism to save energy. He roosts in a thick forest or in tree cavities that give him the best shelter.

423

424-425



While birds roost beneath a full moon, a wolf howls on a distant ridge as caribou crunch through the snow with their broad hooves. These deer are well insulated for the Arctic by dense fur and hollow guard hairs. They sniff the snow and detect the smell of ashes from an old forest fire. Turning away, the caribou avoid this burned area.

Muzzles to the ground, the caribou later detect the mushroomlike scent of lichens. They dig craters and forage on clumps of these rootless plants. Their hooves and thin legs are well adapted for digging. A special liquid fat protects their joints. Blood traveling directly to the hooves helps warm the returning blood to the heart. This circular flow protects the legs and reduces heat loss.

424



While caribou wander, the grizzly bear is in her den with two newborn cubs. The drowsy bear nurses them and rests to save energy. The three survive off her large storehouse of fat. As she sleepily feeds her fast-growing cubs, she doesn't notice the faint sound of steps across the snow.

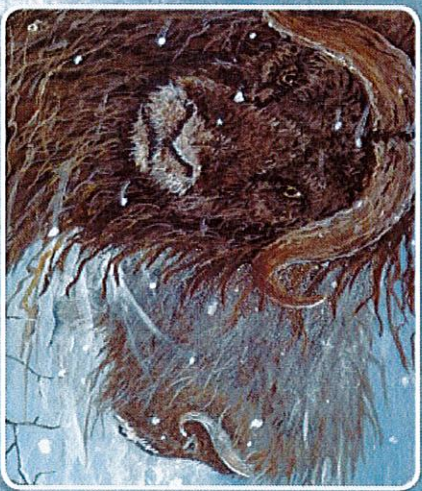
Sure-footed and agile, Dall sheep pick their way across the mountain slope. Fierce winds have blown snow off the alpine tundra, exposing frozen grasses and sedges. The sheep graze on these withered plants, then seek shelter from the wind by bedding down in the lee of some rocky crags.

425

426-427

Month by month, winter passes slowly. **E**ven to the wind, a group of musk oxen stands on the snow-covered tundra, conserving energy. Short legs, small ears, and fluffy underwool, known as *qivuit*, insulate musk oxen from even the deepest cold. As a newborn calf suckles milk from its mother, one musk ox sees wolves approaching and senses danger. Immediately, the musk oxen gather together. Shoulder to shoulder, they form a circular wall of thick fur and horns. As one wolf draws near, a large bull lowers his deadly sharp horns. With a sudden burst, he charges the wolf.

Wheeling away, the wolf quickly retreats. The musk oxen continue to work as a team, charging and driving off the hungry wolves.



426

Trickle . . . trickle . . . drip. The snow and ice **begin** to melt. As temperatures rise, bumblebees, butterflies, and other dormant insects begin to stir. A woolly bear caterpillar basks in the sun after being snow-covered for eight months. His dark, furry body traps the sun's heat. Inching his way to a budding willow, he chews on a tiny leaf.

These fuzzy creatures, and other northern insects, have antifreeze substances that prevent ice crystals from forming in their bodies. The woolly bear will spend up to fourteen winters in the Arctic as a caterpillar. Then this amazing survivor will transform into a moth, but for only one short summer!



427

428-429

One by one, moist leaves rustle near the [redacted] The wood frog slowly thaws out, and its heart beats once again. *rrrrRuk...* *rrrrRuk*! The frog begins calling for a mate, making a ducklike sound near the pond's edge. Slapping their tails in the open water, the beavers dive while the blackfish dart after prey on the pond's bottom. Farther up the valley, the male ground squirrel eats his stored cache of food, then leaves his burrow in search of a mate.

Hour by hour, day by day, the pulse of life [redacted] asses with warmer June days and greening plants. Caribou rest upon a summer buffer, while playful grizzly bear cubs tussle and explore the tundra as their mother searches for prey. Birds that migrated south for the winter return to their birthplace, building nests on the tundra and filling the air with music. For more than two months the days will be endless, as the top of the world tilts toward the sun and the magical Land of the Midnight Sun explodes with life.



430-431

Respond

You will answer the comprehension questions on these pages as a class.

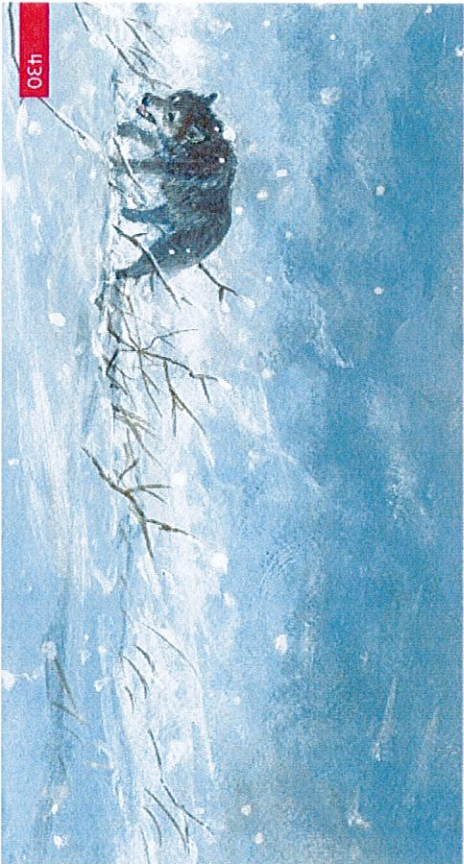
Did You Know?

Gates of the Arctic National Park and Preserve protects plants and animals living on over 8 million acres of land. This designated wilderness is in the Brooks mountain range. It is the second-largest national park in the United States.

Comprehension

Text Connections

1. How do musk oxen survive the Arctic winter without needing to hibernate?
2. Give an example of an adaptation that provides insulation, and explain why insulation is so important in the Arctic.
3. Why doesn't the mother grizzly bear need to eat food during the winter?
4. Using information in "Masters of Illusion," what color change occurs for many Arctic animals in the summer that is not mentioned in "Survival at 40 Below"? Explain why it is necessary.
5. Name a way people could imitate an animal adaptation when doing things outside during the Arctic winter.
6. Why is it important for so many Arctic animals to limit movement during the winter?



430

Look Closer

Keys to Comprehension

1. Infer why a cold Arctic winter with little snow would cause problems for many animals, based on details in the text.
2. Compare and contrast the processes by which the wood frog and male arctic ground squirrel hibernate.

Writer's Craft

3. Explain what *antifreeze substances* are, based on examples from the text.
4. How does the author organize animal adaptation facts in "Survival at 40 Below"?

Concept Development

5. With what evidence does the author support the point that during summer the Arctic "explodes with life"?
6. Describe adaptations the snowshoe hare and ptarmigan have to help them survive the Arctic. Combine information from both "Survival at 40 Below" and "Animal Defense Academy" in your answer.

Write

Imagine you are visiting Gates of the Arctic National Park during the late autumn described in "Survival at 40 Below." Write a short letter to a friend describing your experience.

431

Vocabulary

FOCUS Review the selection vocabulary words from "Survival at 40 Below."

browses	insulating
cache	prey
ceases	sheer
conserve	vital
esophagus	withered
grazing	

PRACTICE Circle the word that matches each sentence.

- Jeff keeps his money in a secret hiding place in his room.
prey sheer insulating cache
- A fish is a tasty treat for a grizzly bear.
sheer ceases prey withered
- You will need a safety rope to climb the walls of the canyon.
insulating sheer grazing conserve
- During the drought, the corn dried up in the fields.
vital withered browses conserve
- Living things must have food and water to survive.
ceases insulating vital cache
- The cows wander the fields all day and eat grass.
grazing sheer withered prey
- As soon as the rain stops, we can continue with the game.
esophagus browses ceases conserve
- Chad swallowed the bite of apple and felt it move down his throat.
cache insulating grazing esophagus

APPLY Read each sentence. Use the underlined clues to select the vocabulary word that best completes each sentence. Write the word in the blank.

9. When the moose wants a little snack, it _____ on water lilies and other plants near the water.
10. Frank hopes that _____ the cabin will help keep it warm in the winter.
11. We don't like to use too many resources, so we take short showers to _____ water.
12. The squirrel likes to _____ nuts for the winter; it will store them in the oak tree in front of our house.
13. The museum _____ its summer programs in September; all events and workshops end by the 10th.
14. Because they give off the oxygen we need to live, trees and plants are _____ to humans.
15. That _____ cliff in Rocky Mountain National Park is the steepest rock I've ever climbed.
16. Mice are _____ for various kinds of hawks and are hunted by snakes and other reptiles too.
17. The horses spend most of their time _____ and will eat grass for hours a day.
18. Not only had the marigolds dried up, but the daisies were _____ as well.

The Test

"I can't believe the test is tomorrow already!" Jaclynn exclaimed. The fear in her voice was obvious.

"I know," said Nate. "Why did we wait until the last minute to study? Now the whole task feels like a real uphill climb."

"An uphill climb? How about scaling the side of a sheer cliff a million feet tall?" Jaclynn had now moved past fear and into panic mode.

"Okay, let's try to calm down," Nate replied. "We can do this. We can memorize the parts of the digestive system. We just need a little help. Have you ever heard of a mnemonic device?"

"A nemo . . . what?"

"It's a little trick or saying you use to memorize something. You know how we use the name Roy G. Biv to remember the colors of the rainbow? That's a mnemonic device."

"Okay, I get it," Jaclynn said. Her heart had ceased its wild knocking in her chest. "So, what should we do? We have to know what each organ does. Should we make up a rhyme or poem? Wait . . . I know! How about a rap?"

"That sounds fun!" Nate exclaimed. "Okay, I'll get us started . . .

"My name is Nate, and I like to graze.
Chicken fingers and apples are my usual prey.
Three times a day, I get hungry and I browse.
That food starts breaking down right here in my mouth."

"That is awesome, Nate! Jaclynn was impressed. "Okay, let me try . . .

“Listen up, my friends, to this vital information:
The esophagus is food’s next location.
Muscles force the grub down this super cool tube.
Heading for the stomach, that food is on the move.”

“Excellent! I knew you could do it!” Nate cried. “Okay, here’s one more . . .

“Food is cached in the stomach for four hours flat.
That organ’s breaking food into proteins and fats.
The fat gives insulation that you need for winter.
Proteins build you up so your body won’t wither.”

“This is really helping,” Jaclynn said. “Thanks, Nate. I feel so much better.
These mnemonic devices really work. I think we should use them to study for
next week’s energy conservation quiz, too!”

“Absolutely!” Nate replied. “But let’s stay focused on the digestive system for
now. Shall we move on to the small intestine?”

Sequence

FOCUS Remember that **sequence** is the order in which events take place in a text. Time and order words, such as *yesterday, in December, first, next, then, and finally*, will help you identify the sequence.

PRACTICE Complete each sentence by writing a time or order word or phrase in the blank.

1. _____ I was feeling sick, but I felt just fine by the afternoon.
2. Tom began by practicing his scales on the piano; _____ he played a new song.
3. The school fundraiser will be on _____, only _____ the last day of classes.
4. Be sure to wipe the mud off your feet _____ you come into the house.
5. Julio's dentist appointment is _____ and his swimming lesson is _____.
6. _____ Jenna began studying with a tutor, she _____ began to improve her grades.
7. The first song Imari sang was sad, but the _____ one was more upbeat.
8. Kris's birthday is just _____ mine, on _____.
9. You can join us for breakfast _____ or for lunch _____.
10. The play's cast will have a party _____ their opening night performance _____.

APPLY Follow the directions below. Make sure your responses are written in complete sentences.

11. Write a paragraph that tells what you did last week. Use time and order words to organize events in the correct sequence. _____

12. Write a paragraph that explains how to cook, build, or create something. Use time and order words to make the sequence clear. _____

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Greek Root *bio*, Latin Root *aud*

FOCUS

Many English words contain **Latin** and **Greek roots**. Knowing the spellings and meanings of common Greek roots can help you figure out how to spell and define words that contain the roots.

- The **Greek root *bio*** means “life”
- The **Latin root *aud*** means “hear.”

PRACTICE Add the Greek root *bio* or the Latin root *aud* to the following base words or word parts to form spelling words. Then write the spelling word on the line.

Word List

- | | |
|----------------|-------------------|
| 1. antibiotic | 11. biodegradable |
| 2. audible | 12. biodiversity |
| 3. audience | 13. biographer |
| 4. audio | 14. biography |
| 5. audiobook | 15. biologist |
| 6. audiology | 16. biology |
| 7. audiotape | 17. biomes |
| 8. audiovisual | 18. biopsy |
| 9. auditorium | 19. biosphere |
| 10. auditory | 20. inaudible |

Challenge Words

21. microbiologist
22. audiologist
23. symbiotic

- | | |
|----------------------|--------------------------|
| 1. _____mes _____ | 7. _____iotape _____ |
| 2. _____logist _____ | 8. _____degradable _____ |
| 3. _____io _____ | 9. _____itorium _____ |
| 4. _____iobook _____ | 10. _____psy _____ |
| 5. _____sphere _____ | 11. _____ible _____ |
| 6. in_____ible _____ | 12. _____iology _____ |

13. _____diversity _____
14. _____iovisual _____
15. _____graphy _____
16. anti_____tic _____
17. _____logy _____
18. _____grapher _____
19. _____itory _____
20. _____ience _____

APPLY Circle the word that is spelled correctly.

21. biographer biogripher
22. audiaulogist audiologist
23. audouble audible
24. biodiversity biodyvercity
25. biopsie biopsy
26. audiovisual audeovisual
27. biodegradable biodigradible
28. bioligest biologist
29. inaudible inaudibel
30. antibiotec antibiotic
31. audutory auditory
32. biosphear biosphere

Irregular Verbs

FOCUS **Irregular verbs** do not follow the regular rule of adding *-ed* to form the past tense. Instead, the past tense form of an irregular verb is a different word altogether.

- The verb *be* is one of the most familiar irregular verbs.

Present	Past
I am .	I was .
He is .	He was .
They are .	They were .

- Since they do not follow a regular rule, the past tense forms of irregular verbs must be learned.

She speaks .	She spoke .
They go .	They went .
I hear .	I heard .
You buy .	You bought .

PRACTICE Circle the verb form in parentheses that correctly completes the sentence.

- The puppy (runned, ran) across the yard.
- Your sisters (was, were) wondering where you went.
- The mother bird (fed, feeded) its baby in the nest.
- Xavier and Lily (leaved, left) for school at six thirty.
- The sun (rose, rised) while they were still on their way.
- Kit (fitted, fit) the last piece into the puzzle.

APPLY Read the paragraph. Correct the underlined verbs.
Use proofreading marks to make each correction.

Melissa's family was moving, and everyone had came to her going-away party. The music was so loud that no one heard the delivery person when he ringed the doorbell. He knocked several times before Melissa's friend, Macy, finally goed to the door and letted him in. Melissa's little brother singed some songs, and everyone thinked he was really cute. Melissa does not think her brother was so cute. He taked the last piece of pizza before she eated any herself! Her parents gived her some more money, though, and she ordered another pizza. Melissa feeled relieved and thankful.

Write a sentence using the past tense form of each verb.

7. catch _____

8. make _____

9. ride _____

10. lose _____



Order the words from A to Z.

Audience	Biome	Antibiotic	Audiotape
Audio	Biodiversity	Audiology	Biodegradable
Auditorium	Auditory	Audiovisual	Biopsy
Inaudible	Biographer	Biologist	Audiobook
Biosphere	Audible	Biology	Biography

Answers

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____
- 7) _____
- 8) _____
- 9) _____
- 10) _____
- 11) _____
- 12) _____
- 13) _____
- 14) _____
- 15) _____
- 16) _____
- 17) _____
- 18) _____
- 19) _____
- 20) _____

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

Use the word listed in a sentence.

Antibiotic	Audible	Audience	Audio
Audiobook	Audiology	Audiotape	Audiovisual
Auditorium	Auditory	Biodegradable	Biodiversity
Biographer	Biography	Biologist	Biology
Biome	Biopsy	Biosphere	Inaudible

1) Biography _____

2) Biology _____

3) Audiobook _____

4) Audiovisual _____

5) Audio _____

6) Biographer _____

7) Biosphere _____

8) Auditorium _____

9) Audible _____

10) Biodegradable _____

11) Biome _____

12) Auditory

13) Biodiversity

14) Antibiotic

15) Biologist

16) Inaudible

17) Audience

18) Biopsy

19) Audiology

20) Audiotape

Write each word 4 times (twice lowercase, twice UPPERCASE).

Antibiotic	Audible	Audience	Audio
Audiobook	Audiology	Audiotape	Audiovisual
Auditorium	Auditory	Biodegradable	Biodiversity
Biographer	Biography	Biologist	Biology
Biome	Biopsy	Biosphere	Inaudible

1) Biodegradable

2) Auditory

3) Auditorium

4) Biopsy

5) Audiobook

6) Biome

7) Antibiotic

8) Biography

9) Inaudible

10) Audiovisual

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

11) Audiology

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

12) Biology

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

13) Biographer

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

14) Audiotape

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

15) Audience

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

16) Biosphere

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

17) Biologist

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

18) Biodiversity

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

19) Audible

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

20) Audio

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Survival at 40 Below

Vocabulary

Read each item carefully. Choose the correct answer.

- If something is *vital*, it is
 - easy to put together.
 - found in many places.
 - made of natural materials.
 - necessary for life.
- What does the word *sheer* mean in this sentence?
A *sheer* cliff is beside the trail.
 - snowy
 - steep
 - sandy
 - rocky
- Which word means *to protect from harm or loss*?
 - conserve
 - advertise
 - vibrate
 - beacon
- Animals that are hunted by other animals are called
 - moor.
 - hurl.
 - prey.
 - lint.
- Which word fits best in this sentence?
A herd of deer was _____ at the edge of the forest.
 - hitching
 - pumping
 - matting
 - grazing

Survival at 40 Below (continued)

Comprehension

Read the items carefully and choose the correct answer.
You may look back at the selection to answer the questions.

1. The following question has two parts. First, answer **Part A**.
Then, answer **Part B**.

Part A Why do so many plants and animals go under the snow in the Arctic?

- (A) The snow gets really deep. (C) The ground is cracked.
(B) It is not so cold there. (D) There are too many bushes.

Part B Which sentence from the selection **best** supports your answer for **Part A**?

- (A) It is much warmer under the snow layer than in the open air.
(B) Snowshoe hares and ptarmigan zigzag between the willow bushes.
(C) Inch by inch, the layer of snow deepens with each winter storm.
(D) Thick pond ice cracks and makes eerie sounds.

2. How long is the Arctic winter?

- (A) three months (C) eight months
(B) six months (D) ten months

3. What is duff in the selection?

- (A) thick fur
(B) layers of fat on some animals
(C) leaves on the forest floor
(D) a layer of frozen water

4. What does a chickadee eat in the winter?

- (A) almost nothing at all (C) dense and fluffy feathers
(B) bugs that are called flits (D) food that has been cached

Lesson 7 Reteach

Order of Operations

Order of Operations
1. Perform operations in parentheses.
2. Multiply and divide in order from left to right.
3. Add and subtract in order from left to right.

Find the value of the expression.

$$(2 + 3) - 9 \times 2 - 12 \div 3$$

$$5 + 9 \times 2 - 12 \div 3$$

$$5 + 18 - 4$$

$$19$$

Add 2 and 3.

Multiply 9 by 2. Then divide 12 by 3.

Add 5 and 18. Then subtract 4 from 23.

Find the value of each expression.

1. $(36 - 10) + (5 \times 4)$ _____

2. $6 \times (81 - 4)$ _____

3. $7 \times (3 + 9) =$ _____

4. $(12 \times 3) - (3 \times 7) =$ _____

5. $(9 \times 4) + (8 - 5) =$ _____

6. $(100 - 10) \times (6 - 3) =$ _____

7. $36 \times (10 - 3) =$ _____

8. $5 \times 2 - 64 =$ _____

9. $36 \div (9 - 5) =$ _____

10. $(25 - 8) \times (6 + 16) =$ _____

Name

MY Homework

Lesson 7

Order of Operations

Homework Helper



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Find the value of each expression.

$$8 \times 7 - (9 \div 3) = ?$$

$$8 \times 7 - (9 \div 3)$$

$$8 \times 7 - 3$$

$$56 - 3$$

$$53$$

Perform the operations in parentheses first.

Multiply.

Subtract.

So, $8 \times 7 - (9 \div 3) = 53$.

$$24 - 2 + 6 \times 3 = ?$$

$$24 - 2 + 6 \times 3$$

$$24 - 2 + 18$$

$$22 + 18$$

$$40$$

Multiply.

Subtract.

Add.

So, $24 - 2 + 6 \times 3 = 40$.

Practice

Find the value of each expression.

1. $5 + 9 \div 3 =$ _____

2. $46 - (6 \times 5) =$ _____

Find the value of each expression.

3. $(3 + 1) + 27 \div 9 =$ _____


4. $5 \times 5 - 8 =$ _____

5. $(4 + 20) \div 2 + 6 =$ _____

6. $2 \times 9 + 14 \div 2 =$ _____



Problem Solving

7. **Mathematical PRACTICE**  **Model Math** Tami buys two books that cost \$14 each. She pays an additional \$2 in tax. How much did Tami pay altogether?
-



Brain Builders

8. Claudio had 34 toy cars. He lost two at the park. Then he divided the rest of the cars evenly among himself and 3 cousins. Write an expression to represent the situation. How many cars did each child get?
-
9. Last week, Jean did two sit-ups on Monday and three sit-ups on Wednesday. This week, Jean did three times as many sit-ups as last week. Jean used the expression $2 + 3 \times 3$ to find the number of sit-ups she did this week. Explain and correct her error.
-
-

10. **Test Practice** Which expression has a value of 20?

(A) $2 \times 5 + 5$

(C) $3 \times 7 - 1$

(B) $3 \times (5 + 5)$

(D) $40 \div 5 - 3$

Check My Progress *(Lessons 5 through 7)*

Write an equation that describes the pattern. Then use the equation to find the next three numbers.

1.

Input (<i>a</i>)	2	4	6	8	10	12
Output (<i>b</i>)	7	9	11			

1. _____

2.

Input (<i>x</i>)	10	13	16	19	22	25
Output (<i>y</i>)	8	11	14			

2. _____

3.

Input (<i>c</i>)	2	4	6	8	10	12
Output (<i>d</i>)	6	12	18			

3. _____

4.

Input (<i>r</i>)	30	36	42	48	54	60
Output (<i>s</i>)	5	6	7			

4. _____

Find the value of each expression.

5. $7 - 2 \times 3$

5. _____

6. $14 - 1 \times 10$

6. _____

7. $8 \times 3 - 5$

7. _____

8. $(11 - 3) \div 4$

8. _____

9. $6 \times (9 + 1)$

9. _____

If Darma babysits 2 hours, she earns \$14. If she babysits 4 hours, she earns \$28.

10. Write an equation that describes the relationship between the amount of money that Darma earns, b , and the number of hours that she babysits, a .

10. _____

11. How much money does Darma earn if she babysits 6 hours?

11. _____

Problem Solving Reading for Math

SKILL: Choose an Operation

Model the skill using a word problem.

Understand

Tina wants to put 2 balloons and 6 marbles in each party bag. She has a bag of 24 balloons and a box of 50 marbles. She wants to make 9 party bags. Does she have enough balloons and marbles?

Plan

I have to decide what to do first. I can multiply the number of bags by the number of items. Then I can compare to the number of items she has.

Solve

Think: I can multiply to find out how many balloons she needs. $9 \times 2 = 18$. $18 < 24$

Think: I can multiply to find out how many marbles she needs. $9 \times 6 = 54$. $54 > 50$
She has enough balloons, but not enough marbles.

Check

I can divide to check.
 $24 \div 2 = 12$. $50 \div 6 = 8 R 2$

Distribute **Math Center Card 3** to students.

Understand



Plan



Solve



Check

Remind students of the basic steps of problem solving.

Reading for Math Skill



CHOOSE AN OPERATION • MAKE CHOICES

Class	Number of Students	Items to Bring
Mrs. Romero	17 students	cupcakes
Mr. Mullany	19 students	paper plates, cups, and napkins
Mrs. Parker	18 students	bottles of juice

The first-grade classes at Richmond School have decided to have a picnic on the first day of spring. Each class will bring something for the picnic. Use the information in the table to help you solve each problem.

1. Mrs. Romero's class is bringing 60 cupcakes to the picnic. Are there enough cupcakes for each student to have one? Are there any cupcakes left? If so, how many?

2. Are there enough cupcakes for each teacher to have one?
3. Mr. Mullany's class is bringing paper plates, cups, and napkins to the picnic. One package contains 24 of each item. How many packages of each item should Mr. Mullany's class buy to be sure there are enough?
4. Mrs. Parker's class is bringing bottles of juice. Each bottle contains about 10 cups of juice. How many bottles of juice should Mrs. Parker's class bring so that everyone can have 1 cup of juice?

Name _____

Lesson 8

Hands On:
Equations with
Two Operations

MY Homework

Homework Helper



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Use the equation $(t \times 3) + 5 = w$ to find w when $t = 4$.

$$(t \times 3) + 5 = w$$

$$(4 \times 3) + 5 = w \quad t = 4$$

$$12 + 5 = w$$

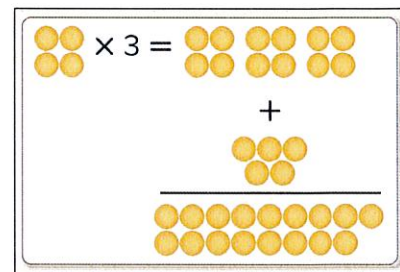
Perform the operation inside parentheses.

$$17 = w$$

Add.

When $t = 4$, $w = 17$.

The counters at the right model this equation.



Practice

Use each equation to find each unknown. Draw models if needed.

1. $(z + 3) \times 2 = y$

When $z = 2$, $y = \underline{\hspace{2cm}}$.

2. $4 + (g \times 3) = m$

When $g = 3$, $m = \underline{\hspace{2cm}}$.

Use each equation to find each unknown. Draw models if needed.

3. $2 + (n \times 7) = p$

When $n = 1$, $p =$ _____.

4. $(r \times 2) + 6 = v$

When $r = 4$, $v =$ _____.

5. $6 + (a \times 3) = b$

When $a = 5$, $b =$ _____.

6. $(j \div 4) + 8 = k$

When $j = 16$, $k =$ _____.



Problem Solving

7. Set up an equation machine to show $(x + 2) \times 5 = y$.

Find the values of y when $x = 5$, $x = 8$, and $x = 12$.

When $x = 5$, $y =$ _____.

When $x = 8$, $y =$ _____.

When $x = 12$, $y =$ _____.

8. **Mathematical PRACTICE**  **Understand Symbols** Bryan made up a game.

Each team starts with seven points. Each time a team answers a question correctly, they earn five points. The equation used to find the total number of points is $7 + (5 \times q) = t$. Find the total number of points (t) when a team answers six questions (q) correctly.

Lesson 9 Reteach

Equations with Multiple Operations

The relationship between two variables in which one input quantity is paired with one output quantity sometimes uses more than one operation.

Keiko earns an allowance of \$5 every week. She also earns \$6 for every hour she babysits her little brother. Keiko wants to find out what she will earn if she babysits for 1, 2, or 3 hours each week.

Step 1 Write an equation.

List what you know: She earns \$5 every week. She earns \$6 per hour babysitting.

List the variables: hours babysitting (h) and money earned each week (m)

Since she earns \$5 every week, this will be added no matter how many hours she babysits.

$$\$5 + (\$6 \times h) = m$$

You know to multiply because she will earn \$6 for each hour she babysits.

Step 2 Make a table.

To set up the table, include the equation, the input (h), and the output (m).

Keiko's Money Earned in 1 week: $\$5 + (\$6 \times h) = m$	
Input (h)	Output (m)
1	\$11
2	\$17
3	\$23

To find the output, put the input number in the equation for h . The answer will give you the output (m), which is how much money Keiko would earn.

So, Keiko would earn \$11, \$17, or \$23 if she babysat 1, 2, or 3 hours.

Complete each table.

1.

$(3 \times g) + 4 = k$	
Input (g)	Output (k)
1	7
2	10
3	

2.

$(12 \div b) + 7 = c$	
Input (b)	Output (c)
1	19
2	13
3	

Pretest

Write your answer on the line provided.

Identify, describe, and extend each pattern.

1. 43, 35, 27, 19, 11, _____, _____ 1. _____
2. 2, 6, 18, 54, _____, _____ 2. _____
3. Eli has gym class on Monday and Tuesday and art class on Wednesday, Thursday, and Friday. Finish the pattern for Eli's gym and art class schedule for two weeks. 3. _____

Eli's Class Schedule for Two Weeks									
M	T	W	T	F	M	T	W	T	F
Gym	Gym	Art	Art	Art	Gym				

4. Write an equation that describes the pattern. Then use the equation to find the next two numbers. 4. _____

Input (a)	6	10	14	18	22
Output (b)	13	17	21		

Find the value of each expression.

5. $2 + 8 \div 2 =$ 6. $3 \times (18 \div 6) - 1 =$ 5. _____
7. $(10 - 3) \times 9 =$ 8. $(28 \div 4) - (3 \times 2) =$ 6. _____
9. Erin has 8 sweaters in each of 3 drawers. If she also has 6 sweaters hanging in her closet, how many sweaters does she have in all? 7. _____
10. Cole is making 5 sandwiches. He puts 8 pieces of bacon on the first sandwich, 6 on the second and 4 on the third. How many pieces of bacon will be on the fifth sandwich? 8. _____

Use each equation to find each unknown.

11. $(8 + x) \times 2 = y$; if $x = 5$, $y =$ 11. _____
12. $14 - (a \times 4) = b$; if $a = 3$, $b =$ 12. _____

Name _____

Operations and Algebraic Thinking
4.OA.3, 4.OA.5

MY Homework

Lesson 9

Equations with Multiple Operations

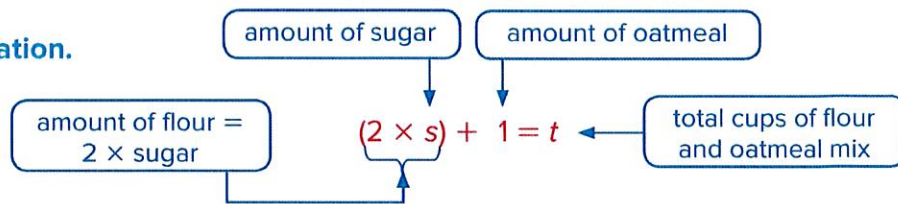
Homework Helper



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Lauren's recipe calls for 2 times as many cups of flour as sugar. She always adds 1 cup of oatmeal. If she uses 2, 3, or 4 cups of sugar, how many cups of flour and oatmeal mix will she use?

1 Write an equation.



2 Make a table.

$(2 \times s) + 1 = t$		
Input (x)	Output (t)	
2	5	$(2 \times 2) + 1 = 5$
3	7	$(2 \times 3) + 1 = 7$
4	9	$(2 \times 4) + 1 = 9$

If she uses 2 cups of sugar, she will use 5 cups of flour and oatmeal mix.
If she uses 3 cups of sugar, she will use 7 cups of flour and oatmeal mix.
If she uses 4 cups of sugar, she will use 9 cups of flour and oatmeal mix.

Practice

1. Complete the table.

$(3 \times x) + 2 = y$	
Input (x)	Output (y)
1	5
2	8
3	
4	

Complete each table.

2.

$(12 \div x) + 3 = y$	
Input (x)	Output (y)
1	15
2	9
3	
4	

3.

$(4 + x) \times 6 = y$	
Input (x)	Output (y)
1	30
2	36
3	
4	

4.

$(10 - x) \times 7 = y$	
Input (x)	Output (y)
1	63
2	56
3	
4	

5.

$(5 \times x) + 5 = y$	
Input (x)	Output (y)
1	10
2	15
3	
4	

6.

$(6 + x) \times 2 + 3 = y$	
Input (x)	Output (y)
1	17
2	19
3	
4	

7.

$2 \times (24 \div x) - 2 = y$	
Input (x)	Output (y)
1	46
2	22
3	
4	

Brain Builders

8. Mathematical PRACTICE 1 **Make Sense of Problems** Mauricio hits a baseball 4 times as often as Tony each game. He also hits 20 baseballs every Monday at practice. Tony hits 4 balls at the game Saturday. Write and solve the an equation to find the number of baseballs Mauricio hit this week.

9. Callie loves flowers. She picks 4 tulips for every daisy she picks. Callie's mom also gave her 6 tulips this week from her garden. How many flowers will Callie have this week if she picks 3 daisies? Explain.

10. Test Practice Refer to the equation $(x \times 3) - 2 = y$. If $x = 7$, what is the value of y ?

(A) $y = 27$

(B) $y = 23$

(C) $y = 21$

(D) $y = 19$

Am I Ready?

Apply

Use the table to answer Exercises 1 through 3.

Ella's Tennis Schedule			
Month	Number of Tennis Matches	Month	Number of Tennis Matches
March	8	June	
April	12	July	24
May		August	

1. Ella plays 28 tennis matches in April and May. Write a number sentence to find how many tennis matches Ella plays in May. Identify the missing number. _____
2. Ella plays 4 more tennis matches in July than in June. Write a number sentence to find how many more tennis matches Ella plays in July than in June. Identify the missing number.

3. Ella has 48 tennis matches in March, April, and August. Write a number sentence to find how many tennis matches Ella plays in August. Identify the missing number. _____
4. Myla made 30 pies for the bake sale. She made 10 apple pies and 12 cherry pies. Write a number sentence to find how many blueberry pies Myla made and identify the missing number.

5. Carol has 12 red apples and 8 green apples. She gave 5 apples to Ty. How many apples does Carol have now? _____
6. Robert is making jackets. Each jacket needs 3 buttons. How many buttons will he need if he makes 6, 9, or 12 jackets? Identify the pattern. _____
7. Carla makes \$4 an hour babysitting. How much will she make if she babysits 2, 3, or 4 hours? _____

Name _____ Date _____

Am I Ready?

Practice

Find each unknown.

1. $6 + \underline{\hspace{2cm}} = 11$

2. $\underline{\hspace{2cm}} + 7 = 15$

3. $18 - \underline{\hspace{2cm}} = 9$

4. $\underline{\hspace{2cm}} - 3 = 8$

5. Hunter won 29 prize tickets at the arcade. He won 14 for skee ball and 7 for the ring toss. Use the number sentence $14 - 7 + \underline{\hspace{2cm}} = 29$ to find out how many prize tickets Hunter won for the horse racing game.

Find each value.

6. $9 + 3 + 4 = \underline{\hspace{2cm}}$

7. $5 + 6 - 2 = \underline{\hspace{2cm}}$

8. $7 - 13 - 5 = \underline{\hspace{2cm}}$

9. $23 - 4 - 8 = \underline{\hspace{2cm}}$

10. $15 - 8 + 3 = \underline{\hspace{2cm}}$

11. $16 - 5 + 2 = \underline{\hspace{2cm}}$

12. Each small pizza has 5 pieces of pepperoni. Complete the table to find out how many pieces of pepperoni are needed for 20 pizzas.

Pizzas	5	10	15	20
Pepperonis	25	50	75	<u> </u>

Am I Ready?

Review

Example

Find the missing number.

$$8 + \underline{\hspace{2cm}} = 11$$

THINK 8 plus what equals 11?

Count on from 8 to 11.

8 9 10 11

So, $8 + \underline{3} = 11$.

Find the missing number.

1. $2 + \underline{\hspace{2cm}} = 5$

2. $4 + \underline{\hspace{2cm}} = 6$

3. $7 + \underline{\hspace{2cm}} = 11$

4. $5 + \underline{\hspace{2cm}} = 10$

5. $\underline{\hspace{2cm}} + 3 = 9$

6. $\underline{\hspace{2cm}} + 7 = 8$

7. $\underline{\hspace{2cm}} + 4 = 7$

8. $\underline{\hspace{2cm}} + 5 = 12$

9. $14 - \underline{\hspace{2cm}} = 6$

10. $11 - \underline{\hspace{2cm}} = 7$

11. $9 - \underline{\hspace{2cm}} = 4$

12. $17 - \underline{\hspace{2cm}} = 10$

13. $\underline{\hspace{2cm}} - 3 = 16$

14. $\underline{\hspace{2cm}} - 8 = 12$

15. $\underline{\hspace{2cm}} - 2 = 8$

16. $\underline{\hspace{2cm}} - 9 = 9$