SIUSLAW MIDDLE SCHOOL



2525 Oak Street ♦ Florence, Oregon 97439 ♦ Phone (541) 997-8241 ♦ Fax (541) 902-7478 School Website - www.siuslaw.k12.or.us

Motivating and Preparing All Students to Reach Their Greatest Potential
Andy Marohl, Principal ♦ Darci Stuller, Asst. Principal ♦ Sarah Girard, Counselor

April 30th, 2020

Dear Student,

We hope this letter finds you well! Siuslaw Middle School wanted to let you know that we appreciate all of your hard work while you are away from school. We wanted to let you know that to acknowledge what you are doing, that each week when you return your work, your name is put into weekly prize drawing. If you win, we will mail out your prize in the next homework packet.

Keep up the good work!!

Sincerely,

Sarah Girard

School Counselor

Siuslaw Middle School

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Motivating and Preparing All Students to Reach Their Greatest Potential

Andy Marohl, Principal Darci Stuller, Vice Principal Sarah Girard, Counselor Jeromy Graybill, Athletic Director

Elective Forecasting Sheet 2020-2021 School Year Name: Last Name First Name Student ID # (lunch number):_____Grade Next Year:_____ The following are Core Classes. All students for each grade take the following: Language Arts Social Studies Science Mathematics Physical Education **Exploratory Rotation Advisory** *Siuslaw Middle School has some new electives this year. Make sure to read all the way through! Elective Options - Student Choice - please pick classes from the list below to fill out your schedule for next school year. We will do our best to see that you get one that you really like! Put your top choice first, second choice second, etc. 1st Choice 2nd Choice 3rd Choice

Students that are not at grade level in reading or math may have their elective replaced with a support class in those subject areas.

Art 1:

This course will follow the Elements of Art (Line, Shape, Value, Form, Space, Color, Pattern and Texture) while learning about the Studio Habits of Mind (Develop Craft and Skills, Observe, Engage and Persist, Stretch and Explore, Reflect, Envision, Express, and Understand Our World). We will experiment with a variety of art media including pencil, pen, watercolor, pastels, charcoal, tempera and acrylic paints, printmaking, clay, and more.

Art 2:In this class, students will utilize their knowledge of the elements of art and the studio habits of mind learned in Art 1 to take their artwork to their personal next level. We collaboratively create the syllabus of projects, based on students' interests and creative ideas. Each unit will combine several elements of art, a theme of exploration, and a final project that illustrates the students' understanding of both. This class will also focus on viewing and discussing works of art and critiquing each other's art in a supportive creative environment.

Intermediate Band:

Join our award winning band! In this class you will continue to learn your instrument. Many students in band will continue on with it for the rest of their school careers! This is a year-long commitment, first enrollment needs to be in the first semester. If you are interested in continuing with band make this your number #1!

Junior Choir: Have you ever heard someone say "I wish I could sing"? The truth is, you can't do anything until you learn how. SMS Choir is where stars are born!

In the Junior Choir, beginning singers learn how to make their voices beautiful and expressive. This class is for 6th graders who want to sing together with their friends, and also 7th graders who've never been in a choir before. You'll perform in concerts right here on the SMS stage, and have the opportunity to advance to our mighty varsity choir.

Viking Chorus: This highly honored group is where 7th and 8th graders who are serious about performing continue to improve their singing skills, taking their music to festivals and other special events. You'll sing pop, classical, and every kind of music, as well as solos! Ask any choir kid and they'll tell you: There's nothing like learning to sing!

Computer Science Class: This is a semester long introduction to computer science and programming. This class will explore our world of computers from microwave ovens to smartphones; computers are everywhere! Students will create games, interactive apps, a website and other experiences as they explore and practice basic coding languages, methods and concepts such as Javascript, HTML and CSS.

Digital Graphics: Learn how to design and produce logos, Tshirts, stickers, posters, coffee mugs... Turn your own doodles and artwork into products.

Drama:This will be an introduction to the theatre arts and to acting as a craft. You will be introduced to all aspects of theatre arts including: theatre history, theatre terminology, playwriting, character development, costume and makeup, improvisation, pantomime, technical theater, and of course, acting.

Each day may include a number of theatre games and/or activities. A large portion of this class requires activities such as going to the theater in the commons and actual stage-work. Students will be required to perform, design and create. It doesn't matter if you're introverted or extroverted because just as the theatre provides the "ham" an acceptable outlet, it helps the shy students find a way out of their shells.

Foundational Math:

This is a math support class for students who need extra time catching up on math skills.

Game Development: From Scratch to other powerful game design engines, learn how to program your own video games.

Home Economics:

Life 101- In this part of the class, students learn how to fill out a job application, complete a job description, learn about budgeting and taxes, how to wash clothes, etc. Crafts- This portion of the semester includes painting, making a collage and homemade cards, sewing on a button, and other crafts. Home Ec- Also included in the semester is Home Ec/Cooking. Students will learn how to make various (mostly) healthy, easy, quick foods. All students will be asked to complete a cookbook of the recipes they learn, in class. Grading is based on notes, bell ringers, being prepared for class, class participation and completing projects.

Lego Robotics: This class teaches the basics of computer programming and engineering design using the programmable Lego learning robotics kits. Students will compete in competition. (one semester).

Remotely Operated Vehicle (ROV): In this class students will be building and programming an underwater robot. You will go to competitions where you will put your robot in a pool and see how well you do against other schools. (one semester)

Tutorial:

This course is to help students who need some homework support and increase reading strategies.

Wood Shop 1: Students will learn the basics of carpentry, with a focus on safety and proper tool use. We have a very skilled new woodshop teacher this year who can't wait to start teaching you how to build!

Woodshop 2: This is a course for students who want to continue their love of building. This is going to be a great class for students who have already completed Wood Shop 1. The instructor this year is a dynamic teacher that is excited to teach you more about carpentry and building!

LEARNING PACKET

LANGUAGE ARTS:

Hi again Readers,

This week you will read chapter 9-12.

Monday: Read chapter 9 and complete questions

Tuesday: Read chapter 10 and complete questions

Wednesday: Read chapter 11 and complete questions

Thursday: Read chapter 12 and complete questions

Friday: Revise and edit your work. Return your assignment.

Take care and enjoy this week's reading!

Mrs. Dotson

MATH:

Happy May, mathematicians!

This week I have a fun project for you to work on. You are going to work on your fraction skills with a fun bakery project! Attached, you will find a packet that will walk you through the steps. In addition to this project, you will have 5 "spiral review" problems to complete each day.

Monday:

- Complete the "Week 11" spiral review problems (Monday-Friday).
- Work on your Bakery Project. Try and do 2 pages a day.

Tuesday:

- Complete the "Week 12" spiral review problems (Monday-Friday).
- Work on your Bakery Project. Try and do 2 pages a day.

Wednesday:

- Complete the "Week 13" spiral review problems (Monday-Friday).
- Work on your Bakery Project. Try and do 2 pages a day.

Thursday:

- Complete the "Week 14" spiral review problems (Monday-Friday).
- Work on your Bakery Project. Try and do 2 pages a day.

Friday:

- Complete the "Week 15" spiral review problems (Monday-Friday).
- Work on your Bakery Project. Try and do 2 pages a day.

I miss you all!
-Mrs. Decker :)

SCIENCE:

This week we start our 2 week unit on Energy Transfer.

Mon.→ Read & study <u>Energy Transfer Vocabulary</u> by highlighting important parts Tues.→ Assignment: Read and complete <u>"Energy Transfer Reading & Questions"</u> Weds.→ Read & study <u>Energy Transfer Notes</u> by highlighting important parts Thurs.→ Read & study <u>Conduction Lab Notes</u> by highlighting important parts Fri.→ Complete the <u>Conduction Lab</u>

*Be sure to keep all notes pages from this packet that don't need to be returned for credit for use on the Energy Transfer Quiz next week. Only return Bell Ringers, Energy Transfer Reading & Questions and Conduction Lab!

SOCIAL STUDIES:

For our first project, we are going to build on last week's packet work, which talked about Ancient Egypt.

Egypt was known for preserving their dead by making them into mummies. Egyptians believed in an afterlife, and that they needed to be well-prepared for that afterlife. They dried out their bodies and built elaborate tombs (the pyramids). They also believed in preparing for the afterlife by burying themselves with whatever they might need for the life to come.

In this exercise, you will have the opportunity to imagine life in Ancient Egypt. First, choose a mummy from the coloring pages to decorate the way you would decorate your mummy (the outside case is called a sarcophagus). Then, think of the items YOU would choose to be buried with. Think about the important objects in your life for help. After making your choice, draw these objects in the margins around your mummy.

The second part of our lesson has us transitioning to Eastern Africa. This study guide gives important information about the physical geography (landscape) of the Eastern part of the continent. Read the information and complete the reading activities throughout the packet.

As always, please call or email with any questions.

You got this!

ART:

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CHAPTER 9

ACONSTANT RAIN and shrouded gray sky masked the passing of hours, leaving Cole in a cruel time warp with only one possible end. He tried not to think about the end, but he could not ignore the maddening pain from his wounds.

As gusts of wind drove the chill deeper into his body, rain kept falling, penetrating his will, seeping into his consciousness, and flooding his soul. This rain fully intended to kill.

As Cole weakened, he stared up at the giant spruce tree towering above him. Desperate tears welled up inside and squeezed past his eyelids. The wind gusted harder.

What did it matter anymore if he died? Nobody else cared about him, so why should he care about himself? As Cole's gaze drifted among the branches of the tree, a small bird's nest tucked into the fork of two branches caught his attention. The nest rested near the trunk, protected from both the wind and the rain. As Cole watched, a small gray sparrow landed in the nest, twitched about with a flurry of activity, then flew off. Soon it returned again.

Each time the sparrow returned, it carried a bug or a worm in its beak and busied itself over the nest. The visits brought faint chirping sounds. Cole squinted and made out little heads jutting above the nest. This was a mother bird feeding her young. Up there on a branch, barely spitting distance away, little sparrows rested dry and warm, having food brought to them in the comfort of a nest built by their mother.

The sight of the baby birds irritated Cole. Without his injuries, he could easily have crawled up and knocked the nest down. That's what the stupid birds deserved.

After feeding, the mother flitted to a branch near the nest. She ruffled her wings and chest feathers, keeping an eye on her young. Watching the bird made Cole curse every second of his miserable and haphazard life. If he were the mother bird, he would just leave the babies to fend for themselves. She didn't owe them anything.

That's how Cole felt—he didn't owe anyone anything. Nobody had ever cared for him, so why should he care about anyone else? He wouldn't even be here on this island, injured, if it weren't for other people and their lame ideas. Nothing had been his fault. Cole's bitterness flickered to life once more. His anger helped to focus his thoughts, but it could not stop the frigid drizzle or the torturing pain that wracked his body. Nor could it ward off the loneliness.

The wind that tugged at Cole's tattered clothing seemed distant. As his attention drifted and his senses dulled, rain numbed his face. Cole stared blankly at the thin sliver of blue sky on the western horizon. Exhaustion finally dragged him into a stuporous sleep.

Unconscious, he dreamed of the colorful at.óow blanket. His left hand twitched and moved back and forth, pretending to pull the at.óow over his freezing body. The imaginary blanket shielded him from the cold as it had protected many generations before him. Under the imaginary blanket, he slept soundly.

A loud rumble woke Cole from his sleep. At first he thought he had gone blind. Then slowly he realized it was nighttime. The wind had let up, but the cold rain still fell relentlessly from some endless reservoir in the sky. Then a blinding flash of lightning lit the horizon. Seconds later,

deep rumbling thunder rolled overhead, followed by another flash of lightning.

Before the light collapsed back into darkness, Cole realized the at.óow he had dreamed of was not covering him. And he sensed a presence. He peered wide-eyed into the black night but could see nothing. Then lightning flashed again with a sharp crack, closer this time. In that instant, Cole saw it, ghostlike. Barely fifty feet away, the giant Spirit Bear stood motionless in the rain.

Then the night went black again.

Terrified, Cole waited, his eyes prying at the darkness. Had the bear returned to kill him? As he waited, the storm worsened. The wind picked up, gusting harder. Rain fell in torrents, and thunder rumbled across the sky like empty barrels rolling toward the horizon. When the next bolt of lightning lit the bay, Cole searched frantically.

Nothing! Gone! Again the Spirit Bear had vanished.

Cole grimaced. He hated this bear. What a coward. This creature was waiting until he grew so weak he couldn't fight back. Then it would finish him off. Cole moaned as a violent gust of wind pummeled his body. Would the bear just kill him and leave him to the seagulls, or would it eat him?

Lightning flashed closer, stabbing down with long, probing fingers. The rumbling thunder started crashing and exploding. To protect himself, Cole tried to curl into a ball, but pain stung at his chest, lungs, and useless hip, and he cried out, "Help me! Somebody help me!" The black night and the wind drowned out his voice. Now the lightning flashed so often that the sky stayed lit for several long seconds at a time and the thunder came in a continuous roar. Trees swayed and bent with the wind. White-capped waves frothed and churned in the bay.

Cole pinched his eyes closed against the piercing rain. Suddenly a prickling sensation, as if ants were swarming over him, covered his whole body. A searing light flashed, and a deafening explosion detonated beside him. He heard a cracking sound as the sky crashed to earth with a violent impact that shook the ground. Splinters of branches rained down. Then came silence and calm, as if the impact had paralyzed the sky. The rain and wind paused, and an acrid smell like burning wire filled the air.

Cole lay frozen by fear. A sobering power had attacked the earth. This power made the bear's attack seem gentle. "No more! No more!" he moaned. "Please, no more!"

But there was more. The storm raged on as Cole lay trembling, his eyes frantic. The explosion had shocked his mind awake. Never in his life had he felt so exposed, so vulnerable, so helpless. He had no control. To this storm, he was as insignificant as a leaf. Cole blinked in stunned realization. He had always been this weak. How could he have ever thought he truly controlled anything?

The acid electrical smell burned his nose and mixed with the smell of wet vomit on the ground. Cole swallowed hard to keep from throwing up again as the storm kept attacking the sky and earth around him.

Finally the wind lost its fury, and the sky ran out of rain. The thunder subsided, rumbling back and forth across the sky, searching for someplace else to go. Cole swallowed the taste of bile in his throat and listened to the rumbling overhead. Then once more he lost consciousness.

When he awoke next, the rain had stopped. Vaguely, he could make out the big spruce tree lying on the ground only feet away from where he lay. Moment by moment, he sorted out what had happened during the storm. Lightning had struck the tree. The splitting sound, the thunderous impact, the splintering and bits of branches showering him, all had happened when the huge tree crashed to earth.

Cole gazed up at the night sky. A bright full moon drifted ghostlike among the broken clouds. The tortured air had calmed but still shifted back and forth. Cole felt desperately weak. Fighting to survive, he could stay here a short while longer. Giving up, he could pass quickly over the edge. Which way did he want to go? He clenched his teeth against the pain and despair. Which way did he want to go?

Cole focused his blurred vision on the full moon. It helped him to remain on this side. As he stared, he puzzled at the moon's shape. Something in that hazy shape held meaning. Edwin had said something about a circle. So had Garvey. What had they said? Cole could not remember, but he kept staring up.

Later, Cole flopped his head to the side. He could make out the bay and see moonlight reflecting against one shore. The shoreline faded into darkness in the shadow of the trees. Seeing no sign of the Spirit Bear, Cole returned his attention to the fallen tree beside him.

That was when he remembered the baby sparrows. He tried to make out where they might be now among the fallen and twisted branches. He squinted harder, but all he saw was black. What had happened to the baby birds?

Mustering all his strength, he raised his head, and with a weak and pinched voice he called into the darkened branches, "Are you okay?"

CHAPTER 10

As Cole Lay thinking about the sparrows, pain surged back and forth through his body. He felt himself slipping into darkness and blinked hard, doggedly clinging to life, willing himself to not let go. For hours he kept blinking, but by dawn, staying conscious seemed less important. Now he hung on the edge of existence, detached from the real world, weightless and moved by the wind. Thoughts of the sparrows disappeared.

As daylight seeped through thick curtains of haze, a new pain arrived and gradually worsened until it could not be ignored. Pressure had built in his lower gut. He needed desperately to go to the bathroom but held back, grimacing. He had no way to squirm away from his own waste. Finally the pain became so sharp, Cole let out a deep groan. He couldn't fight his own body any longer.

Painful shame gripped Cole as waste slipped from his body and a raw stench filled the air. He jerked his head and arm to drive away the mosquitoes swarming around him, but they returned instantly. Finally he gave up. An absolute and utter hopelessness overwhelmed him. He felt like a helpless baby, not able to roll away from his own filth. He wanted to hate somebody, to be angry, and to place blame on everything and everyone for this moment. But anger took energy, and Cole no longer had energy.

As the sun climbed over the trees, black horse flies started attacking. Unable to drive them away, Cole felt the huge insects bite him. He gazed desperately away at the fallen tree beside him. A ten-foot trunk remained upright, its ragged top charred where lightning had struck. Whiffs of smoke still curled upward. Beside the trunk lay a tangle of broken timber.

Cole watched the birds flitting among the downed branches, feeding on bugs and worms. For them the storm was over and life continued. The falling of the tree was simply a natural reality, like the passing of another day. Cole eyed the birds as he struggled to concentrate. Something in those branches had been important. His gaze wandered to the ripped-up grass under the splintered branches and crushed boughs. What had been so important in that maze of destruction? He spotted a small, brown, fist-sized clump of twigs not ten feet away.

The nest.

That was it! That was what he had been searching for. Something about that nest was important. But what?

And then he found them.

First one, then two, then a third and fourth—four lifeless baby sparrows, scattered in the short grass where they had been thrown from their nest. Matted fuzz covered the twisted little bodies. Two had died with their big yellow beaks open as if searching for food. The other two lay facing the nest, their necks reaching out. Even in death, the sparrows had strained toward their nest. They had tried to make it back to the safety of their home.

Cole envied the dead sparrows. He had never really known any home. It sure wasn't the big brick building that his parents landscaped and fixed up to impress the neighbors. Nor was it the empty space he returned to most days after school. Even before his parents' divorce, Cole had always wanted to run away from that place.

As Cole stared at the tiny bodies, sadness flooded through him. The sparrows were so frail, helpless, and innocent. They hadn't deserved to die. Then again, what right did they have to live? This haunted Cole. Did the birds' insignificant little existences have any meaning at all? Or did his?

He watched one solitary gray sparrow hopping among the broken branches near the nest. Was that the mother? Was she looking for her young? Cole licked his cracked and dried lips. At least the babies had a mother to search for them. Nobody, not even a scrawny gray bird, was looking for him.

Cole's eyes grew moist. He couldn't stop thinking about the tiny birds strewn in the grass. Had they suffered before they died? Or did their fragile existence just suddenly stop? And what had happened to their energy when their hearts quit beating? It didn't seem right that now maggots would eat the bodies. Or maybe they would just rot into the ground to help the grass grow. Maybe that was the circle Edwin had spoken of. You live, die, and rot, then something else lives, dies, and rots.

Cole understood this cycle. Beside him a tree had died. Already, ants and bugs crawled among the cracked bark and splintered wood. For them life went on. In a few weeks they would make new homes from the wood. With time, the tree would rot and become dirt. Then a new seed would fall and grow, and another tree would push upward. Years later, that tree would fall back to earth and begin the cycle all over again.

Yes, death was part of living. Cole knew his own body would eventually die and decay and be reduced to dirt. That was okay. That was how the world worked. But how had the world benefited from his living? Was he no better than a tree or some weed? Was his life just fertilizer for the soil?

Cole grunted angrily—he didn't want to die yet. Yes, someday that would be part of his circle. Someday he would lie in his own waste and be eaten by maggots. But not now! Suddenly, in that moment, Cole made a simple decision.

He wanted to live.

In death there was no control, no anger, no one to blame, no choices, no nothing. To be alive was to have choice. The power to choose was real power, not the fake power of making others afraid. Cole knew he had used that fake power many times. All of his life he had squandered his choices, wallowing in revenge and self-pity, keeping himself down. Now, as he lay near death, those he had hated were safe and warm. Those he had blamed were still alive and well. He had hurt himself most. Life was empty and meaningless unless he found some meaning.

Maybe it was a vision or maybe just a thought. Maybe a hallucination. A simple image entered Cole's mind: a tiny sparrow in a nest, helpless, neck straining upward, mouth gaping open. The sparrow Cole imagined was not angry. The young bird was helpless. It knew nothing of pride or control. It pleaded only for help, wanting nothing more than a worm brought by its mother. A worm was food, food was energy, and energy was life. The baby begged simply for life.

Mosquitoes and horseflies swarmed around Cole's face. He grunted and jerked his head. It didn't matter who was at fault for his dismal life. All that mattered was living. Cole wanted to live and once again make choices. But to live he needed food. And soon!

But how? Every ounce of food he had eaten earlier lay in vomited chunks beside his body.

Cole fingered blades of grass under his left hand, then broke off a few and brought them to his lips. His dry, swollen tongue felt stuffed into his mouth. Deliberately, he opened his crusted lips and poked the grass inside. As he worked his jaws to chew, he reached for more grass.

Gradually the stringy green blades formed a wad in his mouth, and he swallowed. Without water, the clump caught in his throat. Again he tried to swallow, but gagged. The clump was stuck and refused to go down or come back up.

Panicking, Cole stifled a cough—he didn't dare cough. Frantically he gagged harder, twisting his head, straining until he felt blood vessels bulge on his face. He couldn't breathe. The clump was suffocating him. Raising his head, mouth wide open, he convulsed, frantic and desperate to dislodge the grass. His body screamed for air. Then suddenly, explosively, he coughed, ejecting the wad of grass.

Violent pain, like the claws of the Spirit Bear, ripped at his ribs. Cole gasped and clenched his teeth, hugging his side with his left arm while his head swam in a fog. A long grueling minute passed before the pain eased and he dared allow a shallow breath to seep past his lips.

Sweat beaded his forehead. When he opened his eyes again, he glanced around and found the stringy lump of grass on the ground beside his chest. He stared. What other choice did he have if he wanted to live? Reluctantly he picked up the wad and returned it to his mouth. This time he chewed a very long time before swallowing. He exhaled with relief when the grass went down.

As Cole reached for more grass, he spotted a worm near his hand and grabbed it instead. The long worm bunched up and squirmed to get free, so he brought it quickly to his mouth and poked it safely past his cracked lips. It coiled against his tongue as he bit it and started chewing. The worm was easier to chew than grass and went down with the first swallow. Cole searched for another. As he searched, the rain began again. He opened his mouth and let the drops tickle his tongue. Maybe the rain would bring out more worms.

The second and third worms Cole found were smaller, and he ate them quickly. His teeth crunched on dirt, and there wasn't much flavor, but he chewed as he watched another big worm creep slowly past his hand just inches beyond his reach. Failing to find more worms, he turned his attention to bugs. The ground teemed with insects, and he began putting ants, beetles, spiders, and even a fuzzy caterpillar into his mouth. With each insect, he closed his eyes and imagined a baby sparrow reaching upward with an opened beak.

Finally, exhausted, Cole rested. Sometime later, the rain stopped, and a warm sun brought back the thick clouds of mosquitoes and horseflies. They swarmed over Cole's body as if it were a dead carcass. He tried to shoo them away with an awkward swing of his hand, but they returned before his fingers touched the ground. Dozens blanketed his bloody face, neck, chest, and arms.

The only place Cole felt no bites was on his broken right arm. He raised his head to look. His right arm was shaded black with mosquitoes, as thick as hair. Cole could only stare, and finally he closed his eyes. In the darkness, he still felt the sharp bites of the horseflies, and he felt the mosquitoes, dozens and dozens of tiny pins pricking him, sucking at him, leaving their itchy venom behind. If only he had the at.óow blanket for protection. He had no idea where the blanket was. How could he have ever tried to burn it? It would have protected him from the cold, the rain, the wind, and the insects. It might even have protected him from himself.

Cole lost consciousness again.

Hours later, drifting awake, Cole became aware of a tickling sensation on his left arm. He opened his eyes to find a small gray mouse perched on his elbow, working its way toward his wrist. It stopped every step to poke a whiskered nose about. Cole lay motionless as the skittish mouse ventured across his forearm and sniffed at his wrist, then inched onto his upturned palm. Cole held his breath. He would have only one chance. Catching this mouse would be better than a dozen worms or a hundred bugs.

The mosquitoes had not slowed their feasting. Hundreds covered Cole's exposed skin, their tiny torsos swollen with blood. Several landed on his eyelids, and Cole blinked to drive them away—he dared not move his hand to swat at them. Focusing his gaze on the mouse, he waited for it to take one more step. It moved its whiskered head back and forth with jerky caution, then stepped forward.

Cole clamped his hand closed.

CHAPTER 11

THE MOUSE STRUGGLED, biting at Cole's fingers with razor-sharp teeth, its tiny feet clawing frantically to escape. Cole pitied the scared little mouse, but he held on, gripping with all his strength. This mouse was his quarry, like a gull catching a herring or an owl catching a rabbit. He squeezed the mouse but was too weak to stop the struggling.

Cole felt the mouse squirming free, so quickly he brought his fist to his mouth. He pressed his hand against his lips and forced the struggling rodent between his teeth. It kept struggling, biting at Cole's lips and tongue.

Cole bit down, too, and a tiny bone crunched. The mouse spasmed but kept squirming. Cole bit again but his jaw lacked strength. Still the mouse wiggled and twisted, frantically chewing at Cole's tongue. For a brief second, Cole felt a furry head pass between his back teeth and he willed his jaws together with every ounce of strength he could gather. The small skull crushed, and then the mouse stiffened and quit squirming.

With the dead mouse bunched in his cheek, Cole rested his jaw. Occasionally the tiny body twitched. Gradually, Cole worked his teeth together, gnawing on the body. Salty fluids filled his mouth, and he forced himself to again imagine a baby sparrow with an opened beak. Food was energy, and energy was life.

Eating the mouse exhausted Cole, and by the time he had chewed up the tiny bones and swallowed the wad of tough furry skin, he lay spent, mouth gaping open. His jaw ached and felt hollow. Mosquitoes landed on his lips and tongue at will. His skin had become swollen and puffy, burning with a fiery itch.

Cole wanted desperately to live, but how? The wretched insects sucked life from him faster than he could replenish it. He closed his eyes to the bloodletting, but that did not stop the torment. In the maddening darkness he sensed another movement. Again he opened his eyes, half expecting to see the Spirit Bear. Instead, he found two seagulls near his head, pecking fish chunks from the vomit he had thrown up in the grass.

My puke, Cole thought. They're eating my puke.

In that moment, Cole realized how badly he wanted to live. The food he had thrown up was still food. Those fish bits still contained energy, and energy was life. No thieving seagull was going to steal life from him. He jerked his arm at the gulls. "Mine," he grunted. "That's mine." Squawking, the gulls hopped beyond his reach.

Cole stretched his arm out, picked a small chunk of fish from the grass, and brought it to his mouth. After swallowing, he reached for more. Bit by bit he ate until the few remaining pieces were too small to pinch between his fingers. Finally he relaxed. Eating had taken his last ounce of energy. He closed his eyes as drizzle fell again. The falling moisture felt like more mosquitoes landing, but as it turned to rain, it cooled Cole's burning skin. He opened his cracked lips and let rain hit his swollen, chalky tongue.

Earlier, Cole had felt hollow and weak, as if all the blood had emptied from his body. Now he felt something difficult to describe. Despite the cold, energy seeped through his body, letting him grasp thoughts and hold them in his mind. He felt satisfaction. He had provided for himself

and could feel his body absorbing the food he had eaten. But still his body desperately needed water. He was thirsty. So very thirsty.

As the rain fell again, the ground softened. Cole dug with his fingers and brought mud up to smear onto his swollen neck and face. He smeared mud over his broken arm and onto his ripped-open chest. Maybe this would help keep the mosquitoes away. The wet dirt soothed Cole's burning skin. When his arm tired, he rested again.

Gradually, rain pooled where he had dug up mud beside him. He stared at the muddy water, then placed his hand into the puddle. Each movement was forced as he cupped his palm and brought the brown murky liquid up to his mouth. Again and again, he reached for more water. Sometimes only a few drops made it past his dried lips, but gradually moisture coated his throat and finally allowed him to swallow.

Cole let his weary arm collapse to the ground. Resting, he gazed out toward the bay at the eagles snatching fish from the surface. Nearer the shore swam a mother seal with her pups, their heads bobbing in the water as they worked the fish schools near the rocks. Cole scanned the ground once more and caught two more worms that surfaced with the new rain. He dropped them into his mouth, and chewed. The animals weren't the only ones who could forage to survive.

The sound of a twig breaking was Cole's only warning. He turned his head to find the Spirit Bear standing barely twenty feet away, staring at him, one paw forward as if frozen in midstride. The bear's shiny nose twitched as raindrops beaded into splashed pearls on its shaggy hair. Its eyes glinted and flickered.

Cole's heart raced, and his wounds throbbed. He felt the ripping of his skin all over again and heard once more the breaking of his bones. Too numb with cold and fear to even cry out, he eyed the Spirit Bear standing like a carved statue.

Cole licked at his cracked lips. Had the bear returned to kill him, or was it just toying with him? He found himself trembling with fear, not of death, but of helplessness. He hated being at the mercy of the world around him. Why didn't this monstrous white creature just walk in and finish what it had started? A single bite from its massive jaw, one hard swat from its powerful paw, anything now would tip the balance and end this nightmare.

One way or another, Cole decided to bring this moment to a conclusion. His mouth held little moisture, but deliberately he dredged up spit from deep in his throat, all the while meeting the bear's intense gaze with one of his own.

When not one more drop of moisture would form, Cole painfully lifted his head. He sucked in the deepest breath he dared. He was spitting at more than the Spirit Bear. He was spitting at his life. The world would take him to the grave with a slimy goober on its face. Cole Matthews would still have the last word.

Preparing for his final act of defiance, Cole drew his chin back, then he spit hard, flinging the saliva with a desperate throw of his head. Pain attacked him from all sides, but he kept his eyes open. He wanted the satisfaction of watching this last moment.

As if in slow motion, the glob of spit arched weakly toward the Spirit Bear but landed in the grass far short of its mark. Cole collapsed. That was it then, he had done all he could. Now the world could do as it pleased with him.

The Spirit Bear raised its head slightly and sniffed the air with a long curious breath, then it started forward. Cole tensed. This was how the first attack should have ended.

CHAPTER 12

THE SPIRIT BEAR approached Cole with a slow lazy stride, its head held low. Cole clenched his fist. Maybe he could hold up his arm. Maybe he had energy for one last swing.

Ten feet away, the bear paused where Cole's spit had hit the grass. It lowered its head and sniffed. Still eyeing Cole, the Spirit Bear casually licked up the spit, raised its head, eyes mild and curious, then turned and sauntered away.

Cole felt a sudden rush of tears and emotion. Death would be okay if it came fast, existence ending in one last violent moment of defiance. Cole could understand that kind of death. But here, he lay exposed, alone, ignored, his life leaking from his body like water from some rusty bucket. Even a bear considered him insignificant, licking up his spit as casually as if it were dew.

The Spirit Bear never once slowed or looked back. Cole fought back his tears until the last trace of white faded into the thick underbrush, and then he began to sob. He was dying, alone and insignificant, and nobody cared.

Drifting off into a dream world, Cole imagined he was a baby bird in a nest. Around him, a storm raged and the trees swayed violently. Driving rain pelted him like hail.

Frantic, Cole struggled to fly, but he couldn't escape the nest. All he could do was open his beak wide and raise it upward toward the sky, the action a simple admission that he was powerless. There were no conditions, no vices, no lies, no deceit, no manipulation. Only submission and a simple desire to live. He wanted to live, but for that he needed help; otherwise his life would end in the nest.

Suddenly, the violent winds calmed, and the rain stopped. Cole strained upward with his opened beak as his senses drifted back into the real world of pain. Again he was in his wounded body on an island prison. The storm had stopped, and something had awakened him. An overpowering animal smell. His eyes opened.

Looming over Cole, its breath warm and musty, towered the Spirit Bear. Inches away. Its legs rose like pillars beside Cole's arms, and mist glistened on its white hair.

The world stopped.

For Cole there was no wind, no cold, no time, no pain, no sound. There existed only one object, the Spirit Bear. Its shiny black eyes held eternity. Its intense gaze penetrated, never wavering.

Surprisingly, Cole did not feel the terror he had once known. Maybe the Spirit Bear had come to kill him. Maybe it was only curious. Whatever the reason, Cole gazed calmly back up at the bear. He knew he would fight to the last moment to live. Any animal would do that. Even worms coiled back and forth to escape capture and death. But Cole also knew that if he died, his time had arrived. It would be like the baby birds, or like the worms, or the mouse. It was his turn.

Cole's eyes watered, and he blinked. This was the end, then. Resigned to his fate, he gazed into the bear's eyes but found no aggression—only curiosity. It was as if the bear were waiting. But waiting for what? Instinctively, Cole gathered what little spit he could in his mouth. When the meager fluid bathed his tongue, he stopped, paused, and then swallowed.

Cole did not understand why he had swallowed or what happened next. Hesitantly he raised his left hand off the ground. As if reaching for an electric fence, he cautiously extended his fingers toward the Spirit Bear's shoulder. Inches away, he paused.

Awareness flickered in the bear's eyes.

Cole forced his hand forward until his fingers touched the bear's moist white coat. If he was going to die, he wanted to know what the animal felt like that killed him.

Still the bear remained motionless.

Cole's fingers sank into the bushy white hair until he touched solid body. With his fingertips, he felt warmth. He felt the bear's breath and heartbeat. And he felt one more thing. He felt trust. But why? Already he had tried to kill the bear. He had spit at it. This bear had defied him, and he had hated it with every fiber of his existence. Still touching the bear, Cole paused. Then he drew his hand away.

The Spirit Bear never blinked, never twitched a muscle. Only when Cole's hand again rested on the ground, only then did the towering animal lower its huge head as if nodding. A second time it dipped its head, then stepped back away. With one fluid motion, it swung around and ambled silently down toward the waterline.

Cole watched, forgetting to breathe. He expected the bear to stop when it reached the shoreline, but the great white animal waded into the water and swam with powerful strokes out into the bay toward the open ocean. A thin wake spread like a giant V behind the departing creature until it became a silhouetted speck, finally disappearing. Cole let his imagination keep the bear visible awhile longer. Finally, even that image faded.

Cole blinked and took a breath, as if he were awakening.

Around him, the land had come alive. A clear horizon showed under a dark blanket of clouds. Reflections of blue and gray swirled on the water as a fresh breeze ruffled the spruce boughs and sent ripples along the shoreline. Seagulls screeched and squawked their way out over the bay, diving and hunting for food. Barely a hundred feet away, the mother seal and her spotted pups appeared, their doglike heads peeking out of the water.

The air still carried the rotten smells of vomit and death, but also the fresh odor of seaweed and moss and cedar and salt. Vivid colors glistened wet in the bright light.

A strange thought occurred to Cole: the world was beautiful. Yes, the world was beautiful! Even the wet moss and crushed grass near his hand was beautiful. Staring at the delicate patterns, he wondered why he had never noticed this all before. How much beauty had he missed in his lifetime? How much beauty had he destroyed?

But the past was another time and another life that Cole could never recapture—and didn't want to. He knew only the moment, and this moment he was alive, the most alive he had ever felt. It struck Cole as odd that he should feel this way at the very moment when his body had reached the point at which it could no longer exist. Even as he stared at the moss, deep inside him the balance was shifting to the other side. Clinging to life was like hanging from a bar on the playground at school. On the playground he could hold on for a long time, but when his grip finally tired, his fingers slipped quickly and he fell.

Now Cole felt himself slipping fast. He had struggled too long to hold on, his energy bleeding

away. Now it was his turn to die. This thought made Cole sad, but he accepted it. He felt content. Before the end of life he had seen beauty. He had trusted and been trusted.

That was enough.

Cole's head rested on a patch of spongy moss that acted as a pillow. His pain seemed to float, like a haze, outside his body. He closed his eyes, relaxed, and let the balance shift. And as it shifted, Cole felt himself floating upward into a cloud. Gradually a buzzing sound gathered in his head, growing louder and louder. The sound bothered Cole. He wanted quiet now.

Abruptly the buzzing stopped and squawking seagulls surrounded his body. He could hear them arguing over him. This was what it felt like to die. He hadn't imagined it being so noisy. The seagulls began pecking at his arms and legs. Cole could not open his eyes, but he jerked his arm. Why couldn't the seagulls leave him alone? Why couldn't they wait just a little longer until he had died? Did they have to pick meat off his bones while he was still breathing?

Instead of stopping, the pecking grew worse. Now the gulls were pulling at his legs and shoulders with giant beaks, trying to lift him. Bizarre sensations bombarded Cole as his body was dragged and bumped across the rocks. Sharp pain stabbed through his wounds. Then the loud cry of the seagulls turned into garbled gibberish as they tugged at his shirt and shoes. What were they doing to him?

Gradually, soft and warm sensations enveloped Cole, like being wrapped in a blanket. His head was tilted forward, and warm liquid filled his mouth. It didn't make sense. How could rain be warm? His head must be in a puddle with muddy water running past his lips. Or maybe it was blood. He spit out the liquid, and felt it warm on his neck. He didn't want to drown in blood or muddy water. But again warm liquid flowed past his lips, and Cole gave in. It didn't matter anymore how he died. He could drown, freeze, or be pecked apart by seagulls. All that mattered was that the balance had changed, and now he was drifting over the edge.

"Hang in there, Champ! Hang in there!" a voice sounded.

The buzzing sounded again, louder, deafening, like a swarm of giant bees preparing to attack. Then the world tilted and bounced. With each bounce, pain throbbed in Cole's chest. Something cradled his neck and steadied his head when the jarring grew too intense. He kept trying to push himself over the edge, but again his head was lifted and more warm fluid flowed past his lips.

"Hang with me, Champ!"

Cole spit out another mouthful. The sweet fluid was keeping his pain alive, allowing all the bouncing and the noise to continue. But nothing could stop it from leaking past his teeth and swollen parched tongue. The warm fluid flowed down into his throat and brought back the cold. Chills wracked his body in uncontrolled spasms. He moaned. When would this horrible nightmare ever end?

Then, suddenly, he awoke.

His eyes opened.

And nothing made sense.

Gone were the bay and the fallen tree. A dark and restless sky still moved overhead, but where

was the hard ground, the wet, the mud, the dead birds? A thick blanket held both of his arms in close to his chest. The blanket was brown and not the colorful at.óow. Where was the at.óow?

Cole's vision was blurred, but he understood that he was lying in the bottom of a shallow aluminum skiff. Kneeling on one knee, steering, was Edwin, the Tlingit elder who had helped bring him out to the island. Instead of his normal detached faraway look, Edwin's eyebrows furrowed with concern.

Cole blinked hard to focus. His head rested on someone's lap. Then he recognized Garvey, leahing over him, his face haggard with worry. "We'll be home soon!" Garvey shouted above the roar of the engine.

Too weak to answer, Cole let his eyes close again. He struggled to recall what had happened but couldn't.

Garvey shouted something to Edwin, and the engine revved louder. Spray whipped across the bow as the boat surged into the waves. Cole held his breath and tensed to lessen the pain in his ribs. It was as if somebody were beating on his chest with a bat. He felt Garvey's strong grip tighten each time they hit a big wave.

The hard bucking lasted forever, and Cole was drunk with pain by the time the boat finally slowed. The screaming of the engine grew muted, replaced by anxious voices shouting to them. Garvey and Edwin shouted back. Then the boat bumped against something.

Cole opened his eyes. They had pulled alongside a dock. A cluster of people crowded next to the boat, staring down at him. People were moving, reaching, shouting. Cole cried out in pain as he was lifted from the boat. His ribs and leg felt as if they were being ripped from his body. Someone slipped, and Cole's leg scraped against the edge of the dock. He heard himself cry out. More footsteps pounded and voices shouted. The dock swayed, and Cole grabbed blindly at the air to stop the world from moving. He couldn't take any more of this torture. It had become violent.

The commotion continued. Tilting dangerously back and forth, Cole felt himself lifted onto a stretcher and carried up the dock to a waiting van. Doors slammed, a motor revved, and there was more bouncing as the van raced down the road. Cole's pain faded into delirium.

The next sensation was of entering a room and being lifted onto a soft warm bed. Careful hands dried him and worked his pants off. He dreamed that the Spirit Bear was ripping at his leg. But instead of a growl, a woman's soft voice said, "Easy, easy—you'll be okay. Just relax." Cole's uncontrollable shivers were replaced by hot sweating as a towel patted his forehead.

When the commotion finally stopped, Cole lay completely spent, drifting in and out of consciousness. He felt a warm blanket being tucked in around his neck, and he opened his eyes. Where was the at.óow?

Seeing Cole's eyes open, Edwin and Garvey stepped forward, one on each side of his bed. Edwin studied Cole. "Sure busted yourself up," he said plainly.

Garvey nodded agreement. "Lightning knocked down a big tree. The branches must have hit you."

Cole tried to speak, but no words came to his throat.

A short round-faced Tlingit woman crowded in beside the bed. "His wounds aren't from any tree," she said, pulling back the blanket. "Look."

Edwin glanced down at the bloody red gashes surrounded by puffy ashen skin and whistled low. "Those are bite and claw wounds."

The woman nodded. "He's been attacked by a bear."

Cole nodded.

Fear flashed in Garvey's eyes.

"I'm okay," Cole succeeded in grunting weakly.

A thin smile failed to hide Garvey's concern. "Half your bones are busted, your body is swollen like one huge mosquito bite, and you're nearly starved to death. Believe me, Champ, you're not okay."

Cole forced a nod. "I am okay," he grunted again.

Touching Spirit Bear Chapter 9-12 Assignment

Complete by Friday

Formative Assignment: 10 points

Directions: Answer the questions using complete sentences, restate the question in your answer, add details to your writing, use correct spelling (Spellcheck), and choose strong words. Remember, anytime you use a specific example or quote from the book you strengthen your answer.

You need to answer at least 2 questions per chapter, there are 5 choices.

Monday, Chapter 9 (Choose 2 or more to answer)

1. Why does the sight of the baby birds irritate Cole?

2. What wakes Cole from his sleep? Describe this scene.

3. What happens to the tree with the sparrow's nest?

4. Why do you think Cole calls out to see if the baby birds are okay? What does this tell you about Cole?

5. Give at least two signs that Cole is changing. Explain.
Tuesday, Chapter 10 (Choose 2 or more to answer)
1. What impact do the dead sparrows have on Cole in chapter 10?
2.What realizations does Cole make after he decides he wants to live?
3.What does Cole do to try to sustain himself?
4.Cole begins to think about the Circle of Life. According to Cole, what is this circle, and how does he feel about his role in it?
5.What does Cole catch at the end of this chapter, and what is his plan?

Wednesday Chapter 11 (Choose 2 or more to answer) 1. In this chapter, what does Cole do to survive? (Give at least three examples)
2. Write a quote from the book that you had a strong reaction to. Explain how you felt when reading this part of the book.
3. How does Cole feel after eating and resting? Include a quote from the text.
4. What does Cole do when he sees the Spirit Bear again?
5. At the end of this chapter what does Cole want to happen?

Thursday Chapter 12 (Choose 2 or more to answer)

1. What causes Cole's sudden rush of tears and emotions?

2. What does Cole feel as he touches the Spirit Bear?			
3. What strange thought occurs to Cole? Why does this thought occur to him now, while he is lying helpless and in so much pain?			
4. How would Garvey have described what he found when he came to check on Cole?			
5. Garvey says, "Half your bones are busted, your body is swollen like one huge mosquito bite, and you're nearly starved to death. Believe me, Champ, you're not okay." How does Cole reply to this, and what does he mean?			
Friday - Submit this assignment for grading. Please reread all of your answers and revise to make improvements. You should be turning in your very best work.			

DAILY MATH PRACTICE

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4	2	2	
C)
5	5		•

/e.	2. Circle the coldest
6.256 x 0.25	temperature from this list.

•		
10°C	-4°C	-15°C
6°C	12°C '	-2°C
2°C	-8°C	14°C

5. I bought two containers of yogurt. Each contains 2/3 cup yogurt. I am making parfaits for breakfasts this week. If I need 3/4 cup yogurt for each, how many parfaits can I make?

3. Evaluate.

1. Solve.

10% of 40

4. Use the distributive property to write an equivalent expression.

5(72 - a)

JESDAY

1. Solve.2. Circle the warmest temperature from this list.

-4°C 23°C 20°C -16°C -25°C -2°C

16°C 8°C 14°C

3. Evaluate.

15% of 100

 14.75×0.25

4. Use the distributive property to write an equivalent expression.

y(6 + 15)

5. A baker uses 1/4 of a quart of blueberries in each batch of muffins. Yesterday, the baker used 3/4 of a quart of blueberries. How many batches of muffins did the baker make yesterday?

MEDNESDAY

1. Solve. 8.12 x 5.109 2. Circle the coldest temperature from this list.

12°C -13°C 15°C -16°C 23°C 2°C 17°C -8°C 19°C 5. A restaurant had 4/5 of a gallon of pizza sauce and divided it equally among 10 pizzas. How much sauce did they put on each pizza?

3. Evaluate.

50% of 60

4. Use the distributive property to write an equivalent expression.

 $18(b \div 4)$

me, per en ea

SDAY	1. Solve. 9.345 x 0.5	2. Circle the coldest temperature from this list. -4°C 23°C 20°C -16°C -25°C -2°C 16°C 8°C 14°C	5. Ali picked 3/5 of a pound of blackberries at a local farm. She divided the berries evenly among 6 containers. How many pounds of blackberries were in each container?
THURSDAY	3. Evaluate. 80% of 50	4. Use the distributive property to write an equivalent expression. 7(a ² + b ²)	
DAY	1. Solve. 8.420 x 1.2	2. Circle the warmest temperature from this list. 10°C -4°C -15°C 6°C 12°C -2°C 2°C -8°C 14°C	5. TJ made a block of fudge that weighed 1/2 pound. He divided the fudge into 4 equal pieces for each of his siblings. How much fudge did each sibling receive?
FRIDAY	3. Evaluate. 20% of 25	4. Use the distributive property to write an equivalent expression. 7(66 + b)	
MO	CORRECTION *I	REFLECT: Describe your strates box 3 this week.	gy for solving the questions in

REFLECT & GROV

CORRECTION *2 TEACHER NOTES:

GRADE:

O DAILY MATH PRACTICE OF



10NDAY

1. Compare using <, >, or =.

2. Solve.

 $\frac{3}{8} * 5 = \Box$

5. For every 3 math problems Sanika completed, Teddy completed 4 problems. If Sanika completed 1 problem during math class today, how many did Teddy complete?

3. Evaluate.

20% of 60

4. Convert to feet.

72 inches

1. Compare using <, >, or =.

2. Solve.

 $\frac{6}{8} * \frac{3}{4} =$

5. The driver earned \$75 for every 5 hours he worked. How much does the driver earn per hour?

3. Evaluate.

10% of 85

4. Convert to inches.

3.5 yards

1. Compare using <, >, or =.

2. Solve.

5. The sticker company uses 4 ounces of glue per 100 stickers. How much glue do they use per sticker?

3. Evaluate:

5% of 50

4. Convert to feet.

42 inches



2. Solve. 1. Compare using <, >, or =. 5. A cookie recipe calls for 3 cups of chocolate chips for every 4 cups flour. If Jay is making a small batch -15 and only uses one cup of flour, how many cups of chocolate chips should he use? 3. Evaluate. 4. Convert to inches. 6 feet 1 inch 75% of 80 2. Solve. 1. Compare using <, >, or =. 5. The coach purchased pizzas for the soccer team after their game. If she $\frac{2}{7} * \frac{4}{6} =$ paid \$75 for 15 pizzas, what was the cost per pizza? 4. Convert to yards. 3. Evaluate. 54 inches 20% of 85 CODDECTION ... **REFLECT**: How did the pictures help you solve the problems

	CORRECTION	for box 5?
& GROW		
REFLECT	CORRECTION #2	TEACHER NOTES:
R		GRADE:

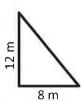
IIIIII DAILY MATH PRACTICE IIIIIIII

TONDAY

1. Convert.

24 pints = ____ gallons

2. What is the area of this right triangle?



3. Solve.

7.4 + 4.5 + 9.2

4. What is the mean?

7 4 8 9 12 4 5

5. The equation shows the amount of minutes it takes to complete math homework is related to the number of problems.

t = 2m

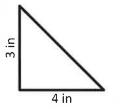
The variable t represents time and m represents number of math problems. How long would it take to complete 10 math problems?

ESDAY

1. Convert.

6 gallons = ____ pints

2. What is the area of this right triangle?



t= 20c

5. The equation shows the

when eating carrots.

number of calories consumed

The variable t represents total calories and c represents number of carrots eaten. If I eat 21 carrots this week, how many calories did I consume?

5. This equation shows how many batches of donuts can

be made related to hours of

3. Solve.

9.12 + 5.78 + 6.01

4. What is the mean?

36 42 66 54 23

EDNESDAY

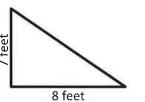
1. Convert.

3. Solve.

14 quarts = ____ pints

0.53 + 0.05 + 5.2

2. What is the area of this right triangle?



 $d = \frac{1}{2}h$

preparation.

29

4. What is the mean?

23 34 31 25 27

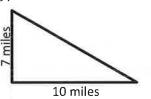
If d represents batches of donuts and h represents hours, how many batches of donuts can a bakery make in 8 hours?

HURSDAY

1. Convert.

2 quarts = ____ cups

2. What is the area of this right triangle?



3. Solve.

20.53 + 1.55 + .02

4. What is the mean?

18 9 15 11 13 15

5. The equation shows the amount of money a library spends on new books.

c = 5b

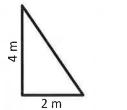
If c represents the total cost and b is the number of books purchased, how much will the library spend on 55 new books?

RIDAY

1. Convert.

12 pints = ____ gallons

2. What is the area of this right triangle?



s= 5p

5. The equation shows the

purchased.

time it takes to check out at the store based on items

The variable s represents seconds and p represents number of purchased items. If I plan to buy 16 items today, how long will it take me to check out?

3. Solve.

6.03 + 0.55 + 1.12

4. What is the mean?

70 68 72 75 66

FLECT & GROW

CORRECTION *I

REFLECT: Which question was easiest this week? Why do you think it was so simple for you?

CORRECTION *2

TEACHER NOTES:

GRADE:

NAME:

DAILY MATH PRACTICE «««««««««««»»»»»

2. What is the range?

1. Compare using <, >, or =.

.45 x 4

18 9 15 11 13 15

5. There are 24 students in each of the five math classes. Forty percent of the students are girls. How many students are not girls?

3. Absolute value means distance from zero. What is the absolute value?

1-301

4. Convert.

 $80 \, {}^{\circ}\text{C} = \underline{\hspace{1cm}} {}^{\circ}\text{F}$

1. Compare using <, >, or =.

.5 x .25

2. What is the range?

70 68 72 75 66

5. Thirty percent of the Skittles in each pack are red. If I got 5 packs of Skittles and each pack has 60 candies inside, how many red Skittles do I have?

3. What is the absolute value?

191

4. Convert.

32 °F = ____ °C

1. Compare using <, >, or =.

.75 x 8 (

2. What is the range?

7 4 8 9 12 4 5

5. A sandwich costs \$5.50. A soda costs \$1.50 less. If my best friend and I each get a sandwich and a soda but use a coupon for 25% off our total, how much will we spend?

3. What is the absolute value?

|-15|

4. Convert.

50 °F = °C

THURSDAY

1. Compare using <, >, or =.

5 x .5 ().5 x !

2. What is the range?

17 24 28 19 12

5. A large pizza is \$10. Medium pizzas cost 20% less than a large. If I bought 7 medium pizzas, how much did I spend?

3. What is the absolute value?

|-12|

4. Convert.

68 °F = _____ °C

ZIDAY

1. Compare using <, >, or =.

.15 x .5 () .06 x 1.5

2. What is the range?

36 42 66 54 23

5. A movie ticket is normally \$15. However, a ticket to the matinee is 40% less expensive. How much will a family of 5 save by going to the matinee?

3. What is the absolute value?

|44|

4. Convert.

100 °C = _____ °F

CORRECTION •|

REFLECT: Which problem was the most challenging this week? Why?

CORRECTION •2

TEACHER NOTES:

GRADE:

DAILY MATH PRACTICE OF S

1			
IDAY	1. Find the GCF. 40 44	2. What is the area of a right triangle with a base that is 4 meters and a height of 9 meters?	5. I bought a sweater for 25% off and paid \$30. What was the original price?
MONDAY	3. Solve. 5,000 ÷ 25	4. Use the distributive property to write an equivalent expression.	
n tow		a(24 - 13)	
welling	1. Find the GCF.	2. What is the area of a right	5. I bought 3 boxes of

ESDAY

AEDNESDAY

27

63

2. What is the area of a right triangle with a base of 5 feet and a height of 3 feet?

5. I bought 3 boxes of cereal that were on clearance for 20% off. My total bill was \$6. What was the original price of one box of the cereal?

3. Solve.

 $2,140 \div 20$

4. Use the distributive property to write an equivalent expression.

2(34 + c)

1. Find the GCF.

15

18

2. What is the area of a right triangle with a base of 12 cm and a height of 15 cm?

3. Solve.

 $8,624 \div 2$

4. Use the distributive property to write an equivalent expression.

h(.5 * 23)

5. My sister and I wanted to go to the circus. A ticket was 10% less on a Tuesday than it was on a Saturday. We paid \$27 each to attend Tuesday's show. What would our total cost have been had we attended the circus on Saturday?

E	2	ľ	4
	2		Š
(1	ā)
1	3	į	4
-)
			e H
6			ŝ

1. Find the GCF.

12

22

2. What is the area of a right triangle with a base of 2 meters and a height of 6 meters?

5. The coffee shop is offering every 5th drink for 40% off. If my 9 friends and I each order a coffee that costs \$4.00 and we pay together, what will our total be?

3. Solve.

 $785 \div 15$

4. Use the distributive property to write an equivalent expression.

24(15 - k)

IDAY

1. Find the GCF.

45

70

2. What is the area of a right triangle with a base of 7 feet and a height of 8 feet?

gummy bears. There were 25 gummy bears in each bag, and 20% were yellow. Another 10% were white. How many more yellow gummy bears were there than white gummy bears?

5. I bought 6 packs of

3. Solve.

 $2,040 \div 45$

4. Use the distributive property to write an equivalent expression.

16(b + a)

CORRECTION *|

REFLECT: Why is vocabulary important to help you solve the problems in box 5?

CORRECTION *2

TEACHER NOTES:

GRADE:

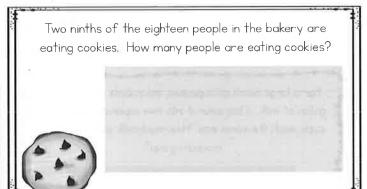
E ROBOT TAKEOVI Business is booming!, and your store is much too busy for you to keep up with on your own. You hire some robots to come and help you out. For the most part, your new robots are extremely helpful, but they sometimes get a little carried away and make mistakes... Solve the problems below. Write a multiplication equation to check your work. For a large batch of cupcakes, the robots use 1/5 of a On the robot's first day, they accidently tripled the size of a normal cake. By the end of the day, there was still gallon of milk. They pour it into two separate measuring $rac{3}{4}$ of the cake left. The staff split it among all 6 cups, each the same size. How much milk goes into each workers. How much did each person get? measuring cup? The robots are powered on coffee alone. They use 2 The robot poured too many ingredients in, and had $\frac{1}{2}$ cup bags of coffee each day. How long will ¼ of a bag of of apple pie filling left. He decided to split it up and put coffee last them? an equal amount of the extra filling into the three pies he was making. How much filling went into each one? In twenty seconds, a robot can chop half a pound of The robots will be taking over 1/3 of the normal work. chocolate and divide it into three different equally sized You have hired four robots. How much of the total work containers. How much chocolate goes into each will they each be doing? container?

•20II-20I9 TEACHING WITH A MOUNTAIN VIEW

SPLITTING THE SNACKS

Many of your customers like to share their purchases. Help them figure out how to divvy up their snacks in these word problems.

Three quarters of the 24 pies at the bakery are pumpkin pie. How many pies are pumpkin?



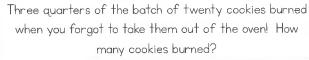
One fifth of the twenty five people in the bakery made a preorder. How many people did NOT make a preorder?

There are sixteen friends sharing 4 cupcakes. If they divide the cupcakes evenly so that they each get four pieces of a cupcake, how many pieces do they need to cut EACH cupcake into?

Sophia bought a large cake and cut it into fifteen slices for her birthday. Her friends ate 2/3 of the cake. How many pieces of the cake were left?



Mary and her dad shared one dozen brownies, 2/6 of them have nuts, which dad doesn't eat. How many brownies did dad not eat because they had nuts?





Grandma slices the apple pie into ten pieces. She eats 1/5 of the pie. How many slices does she eat?





STOCK VS. SOI

After your first day of long, hard work you need to analyze how much you sold versus how much you had left. You never want to have too much, or you might have to throw it away at the end of the day!

Complete the chart to show the fraction (in mixed numbers) of your items sold. The first one is done for you.

Item	BATCHES Made	Number of PIECES in each BATCH	Number of PIECES Made	Number of PIECES Sold	Fraction of PIECES Sold	Fraction of BATCHES Sold (Mixed Number)
Cookies	Ю	24		60	60/240	2 1/2
Pie	8	6		36		
Bread	12	2			22/24	144.5
Cakes	14	1		200		3
Cupcakes	6	12		52		* -
Brownles	5	16			31/80	

Use < , > , or = to compare the fraction of baked goods sold.

Cookies Brownies

Cupcakes Brownies

Bread Cakes !

Brownies Pie

Follow the directions below to analyze the information.

- Under the "Fraction of PIECES sold," shade in the box in green if you sold more than half of your pieces.
- Under the "Fraction of BATCHES sold," shade in the box in red if you sold less than half of your batches.

Explain how you could use the information from Baking for Bucks and this page to determine how much money you made in one day.

02011-2019 TEACHING WITH A MOUNTAIN VIEW

BAKING FOR BUCKS

Cha Ching! Your doors are now open, and the crowds are being drawn in by the scrumptious scents wafting out of your doors. It's time to start thinking about money!

Cost Vs. Profit



The chart below shows how you figure out how much it costs to make each item, and how much you will charge for each item. MULTIPLY the amount it costs to make a batch by the fraction in the "X" section and you will find the amount you wish to charge for the entire batch. Then look at how many pieces are in a batch and divide the cost per batch by the number of pieces, and you will find the cost per each piece.

Remember: Cost means how much you spent to make it. Price is how much you will charge.

Item	Cost Per batch	MULTIPLY X	Price Per batch	# in a batch	Price per item Fraction & Decimal
Cookies	\$8	<u>7</u>		24	11/201
Pie	\$14	2 ½		2	
Bread	\$3	3 ⅓		4	
Cakes	\$16	<u>3</u> ⁴		2	
Cupcakes	\$6	1 6	reb aft mole	12	
Brownies	\$8	4	t all tabel	8	of traction

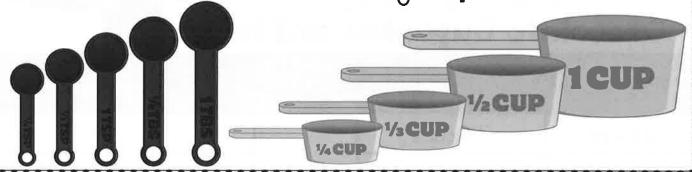
How much more expensive is the most expensive item compared to the least expensive?

Why do you think some costs are multiplied by higher numbers than others?

MEASURING MADNESS I

Your supply order finally arrived, and you can get back to baking as usual. Look at the ingredient lists below and create a combination of measuring cups to use for each ingredient amount. Try not to repeat combinations.

Available Measuring Cup Sizes



Cinnamon Raisin Bread

Ingredient	Measurement	Combination of Cups
Flour	4 2/3 cups	
Sugar	34 cup	ROLD FE THE THE
Milk	1 1/4 cup	water.
Yeast	2 ½ TBSP.	i gasta
Cinnamon	11/4 tsp.	Page 1 s. august
Raisins	1 3/4 cups	quita la la la partició

Strawberry Cake

Ingredient	Measurement	Combination of Cups
Water	2 3/4 cup and 2 ½ TBSP.	
Strawberry Jell-O	2 cups ¾ tsp.	Trace E I mag Life
Cake Mix	2 ½ cups	Flour 2 supe
Oil	3/4 cups	6950 (S) (S) (S) (S)

•20II-20I9 TEACHING WITH A MOUNTAIN VIEW

MEASURING MADNESS

You hired a company to buy all of the supplies you would need for your bakery. Unfortunately, your order didn't come in time. You are stuck using small measuring cups until the order arrives. Use your fraction skills to figure out how many of the small measuring cups you will need to measure each larger amount.

Chocolate Cupcakes and Icing

Ingredient	Measurement	Cup Size	# of full measuring cups needed
Flour	2 t cups		
Sugar	। ३ cups		
Cocoa	l½ cups	ЧC	
Oil	½ cup		
Heavy Cream	3 ² cups		ugar
Butter	l cup	$\frac{1}{3}$ C	(0.00)
Powdered Sugar	5 ½ cups		demonstr
Сосоа	½ cup		alsing

Brownies

Ingredient	Measurement	Cup Size	# of full measuring cups needed
Сосоа	½ cup		
Sugar	2 cups		O.H.
Flour	2½ cups	ŻC	wild and
Oil	3½ cups		T HO

●20II-20I9 TEACHING WITH A MOUNTAIN VIEW

RECIPE CARD READING

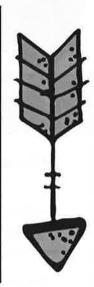
Before you begin baking, you must be certain that you are reading the recipes correctly. Read the recipe cards, and answer the questions about each recipe.

02011-2019 TEACHING WITH A MOUNTAIN VIEW



Scottie B	rownies
Butterscotch Chips	3 ½ Cups
White Chocolate	3:1/4 Cup
Cocoa Powder	2/3 Cup
Flour	4/8 Cup
Sugar	I ½ Tsp.
Vanilla	1/8 Tsp.

Shortbread Cookies	
Almonds	½ Cup
Flour	I¼ Cups
Powdered Sugar	3 <u>4</u> Cup
Coffee	2 TBSP.
Butter	¾ Cup
Sugar	I/3 Cup



Do you need more butterscotch chips or white chocolate?	
If you made a double batch, how much cocoa powder would you need?	
If you were going to halve your recipe, how much vanilla would you need?	
How many cups of butterscotch chips and white chocolate chips do you need altogether?	
How much more sugar do you need than vanilla?	
Write the amount of flour needed in simplest form.	

There are 16 tablespoons in a cup. What fraction of a cup of coffee do you need?	C) i managemen
Do you need more regular sugar or powdered sugar?	Hate .
If you were only going to make a third of the recipe, how many cups of almonds would you need?	
If you were to triple your recipe, how much butter would you require?	The Year word in
What item do you need the largest amount of?	
Write the amount of flour you need as an improper fraction	

ET BUSY BAKING I



That apple pie is mighty tasty, but it's time to make dozens upon dozens of chocolate chip cookies.

Mom's Best Chocolate Chip Cookies

Fill out the chart to figure out your new recipes

Ingredient	Original Amount	Improper Fraction	Tripled	Quadrupled
Flour	2 4 Cups	8	VE 300	000
Chocolate Chips		7/4 Cups		
Sugar	EM .	2 1 -	I Cup	
Brown Sugar	² ₃ Cup			
Vanilla		3/2 Tsp.		· sunay
Salt	ŧ Tsp.			

Analyzing Your Data
Use the information above to answer the following questions

In the original recipe, how many cups of flour, chocolate chips, sugar, and brown sugar was there altogether?

In your quadrupled recipe, how many teaspoons of vanilla and salt are there altogether?

Use < , > , or = to compare the amount of sugar to brown sugar.

How much brown sugar and regular sugar is there altogether in the tripled recipe?



GET BUSY BAKING



Before now, you have only had to worry about baking for a few people at one time. Now, you will be baking for an entire city of patrons! You are going to need to adjust your recipes to make larger batches that are equally as delicious.



Grandma's Famous Apple Pie Complete the chart to figure out your new recipes

Ingredient	Original Amount	Improper Fraction	Doubled	*Bonus* Halved
Pie Crust	2 ³ Cups			
Apples	5 ⁴ Cups		711 10	
Butter		7/4 Cups	19 69	
Flour	§ Cup	ha Ne apalan k and Sandra a		20 NO.
Cinnamon		9/4 TBSP		
Nutmeg	2 ² / ₃ TBSP		and former	10000000
Sugair	RAUL	UJIA	4 ½ Cups	

Analyzing Your Data

Use the information above to answer the following questions

For the original recipe	÷,
how much more sugar	is
required than flour?	

In the doubled recipe, how much more butter is there than flour?

In the original recipe, how many more apples are there than cups of pie crust? In the doubled recipe, how much more cinnamon do you need than nutmeg?

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•20II-20I9 TEACHING WITH A MOUNTAIN VIEW

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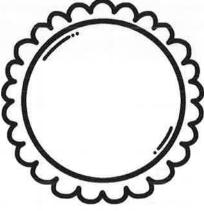
"BREAKING THE BREAD"

Each cake you make, every batch of cookies you mix, and each pie you toss in the oven will need to be divided into single servings. Complete the math problems below to practice drawing and identifying fractions based on the treats in your bakery!

This chocolate cake is divided into IH equal parts. Divide the cake to represent each part.



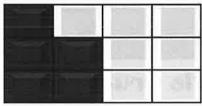
Now, draw sprinkles on half of the slices and write the fraction of sprinkled pieces below. This cherry pie is cut into 8 equally sized pieces. Divide the pie to represent each part.



Now, put a dollop of whipped cream on 4/8 of the slices.

Then, write an equivalent fraction to the fractions of pieces without whipped cream.

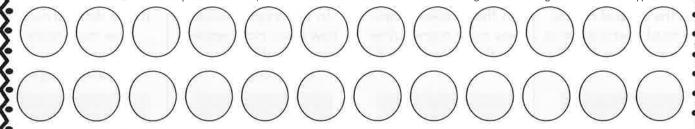
The chocolate bar below shows the amount of chocolate left after baking.



5 of the rectangles were used for chocolate cake, and 2 of the rectangles were used for cookies. Label each of the empty sections for their use, then write the fraction used for each item, as well as the fractional amount that was left over.

COMPLICATED COOKIES

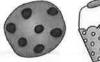
A batch of cookie dough made 24 large cookies. ¼ were plain chocolate chip, I/6 had chocolate chips and oatmeal, I/3 had chocolate chips and pecans, and the rest had all three goodies. (Chocolate chips, pecans, AND oatmeal.) Draw a picture to represent the batch of cookies, drawing and labeling each cookie type.



What fraction of each type of cookie was there?

What fraction of cookies had oatmeal?

Write the fraction of each type of cookie using the same denominator.





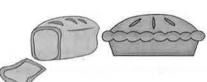
BAKER'S RACK





As you begin to plan out your bakery, your first order of business is determining how much of each of your baked goods you will have for sale. Let the planning begin!











You have six different varieties of baked goods in your store, including cupcakes, bread, pies, brownies, cakes, and cookies. To begin, you will have 126 items in your store every day. Complete the table to show what fraction of each item you will have in your store each day. Reduce the fraction to simplest terms, then write another fraction that is equivalent.

TYPE OF ITEM	FRACTION IN STORE	REDUCED SIMPLEST FORM	EQUIVALENT FRACTION
Cupcakes	24/126		
Bread	6/126		
Pie	12/126	of the belowers	
Brownies	/126	2/7	4.2.44
Cakes	/126	1/21	
Cookies	/126	1/3	

Us	se < , > , or = to compare the fraction of baked
	goods in the store.

Cookies	
COOKIES	_

Brownies

Cupcakes Brownies

Cakes Bread

Brownies Pie

Add or subtract to find the total fraction on baked goods.

Challenge: Use only the numbers from "Equivalent Fractions"

Pie + Bread = ____

Cookies - Cake =

Cupcakes + Cookies =

Brownies - Bread =

Brownies + Cake =

Cupcake - Pie =

Pie + Cookies =

Bread - Cake =

•20II-20I9 TEACHING WITH A MOUNTAIN VIEW

BUILDING A BAKERY Hooray! Your dreams are coming true, and you are building your very own bakery. Whether you want to be like Buddy Valastro on Cake Boss, The Sisters on DC Cupcakes, or Duff Goldman on Ace of Cakes, you are going to have a blast exploring the ins and outs of your new bakery. Before the flour gets flying and you fire up the ovens, we must find the perfect place to call home. The location you choose costs \$1,000 per month to rent. Your bakery is located in a large shopping center. The The bakery that you almost rented was 1/4 the cost but entire shopping center is 4,500 square feet. Your bakery was much too small. How much was the other bakery per takes up only 1/10 of that space. How many square feet is vour bakery? 100/225 square feet of your bakery will be used as your There is an ice cream & candy shop next door that is the same size as your bakery. How many thirtieths of the storefront, where customers come to visit. The rest will space does it take up? (Think: Equivalent Fractions!) be used for storage and baking. In simplest form, what fraction of space will be for storage and baking?

020II-20I9 TEACHING WITH A MOUNTAIN VIEW

Science Week 3

Mon.→ Read & study <u>vocabulary</u> by highlighting important parts

Tues.→ Assignment: Read and complete "Energy Transfer Reading & Questions"

Weds.→ Read & study <u>Energy Transfer Notes</u> by highlighting important parts

Thurs.→ Read & study Conduction Lab Notes by highlighting important parts

Fri.→ Complete the Conduction Lab

Week 3 Bell Ringers:

Monday: What is the hottest thing you can think	k of?
What is the coldest thing you can think of?	
Transfer tari	

Tuesday: What are some ways that things gain temperature?
Wednesday: Which do you believe you use the most often, conduction, convection or radiation?
Thursday: What are some substances that you think conduct thermal energy well?
What substances are good insulators?
Friday: Give some examples of radiation.

Energy Transfer Vocabulary

Energy Conversion: A change from one form of energy to another. Remember: Law of Conservation of Energy

<u>Heat</u>: Transfer of thermal energy between objects. Energy is always transferred from higher to lower temperature objects.

Absolute Zero: The lowest possible temperature & the complete absence of any heat. O Kelvins, -273° Celsius, -459° Fahrenheit

<u>Thermal Expansion</u>: The increase in volume (size) of a substance due to an increase in temperature.

<u>Conduction</u>: Transfer of thermal energy from one substance to another through direct contact; "Conductors" transfer heat well, while "Insulators" do not transfer heat well.

<u>Convection</u>: Transfer of thermal energy by the movement of a fluid (liquid or gas) because hotter materials rise and cooler materials sink.

<u>Radiation:</u> Transfer of energy through matter or space as electromagnetic waves such as visible light or infrared waves.

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Name:	Date:	Period:

Energy Transfer Reading & Questions

What is Heat?

All matter is made up of molecules and atoms. These atoms are always in different types of motion: translation (from one space to another), rotational (spinning), vibrational (shaking in place). The motion of atoms and molecules creates heat or thermal energy. All matter has this thermal energy. The more motion the atoms or molecules have the more heat or thermal energy they will have.

What is temperature?

Temperature is an average value of energy for all the atoms and molecules in a given system. Temperature is independent of how much matter there is in the system. It is simply an average of the energy in the system.

How is heat transferred?

Heat can travel from one place to another in three ways: Conduction, Convection, and Radiation. Both conduction and convection require matter to transfer heat. If there is a temperature difference between two systems heat will always find a way to transfer from the higher to lower system.

Conduction:

Conduction is the transfer of heat between substances that are in direct contact with each other. The better the conductor, the more rapidly heat will be transferred. Metal is a good conduction of heat. Conduction occurs when a substance is heated, particles will gain more energy, and vibrate more. These molecules then bump into nearby particles and transfer some of their energy to them. This then continues and passes the energy from the hot end down to the colder end of the substance.

Convection:

Thermal energy is transferred from hot places to cold places by convection. Convection occurs when warmer areas of a liquid or gas rise to cooler areas in the liquid or gas. Cooler liquid or gas then takes the place of the warmer areas which have risen higher. This results in a continuous circulation pattern. Water boiling in a pan is a good example of these convection currents. Another good example of convection is in the atmosphere. The earth's surface is warmed by the sun, the warm air rises and cool air moves in.

Radiation:

Radiation is a method of heat transfer that does not rely upon any contact between the heat source and the heated object as is the case with conduction and convection. Heat can be

transmitted through empty space by thermal radiation often called infrared radiation. This is a type of electromagnetic radiation. No mass is exchanged and no medium is required in the process of radiation. Examples of radiation are the heat from the sun or heat released from the filament of a light bulb.

/5

Answe	er questions using information from the text, in complete sentences.
1.	Explain why some objects have a higher temperature than others.
2.	Give an example of heat transferred by <u>conduction</u> .
3.	Give an example of heat transferred by <u>convection</u> .
4.	Give an example of heat transferred by <u>radiation</u> .
5.	Give an example of heat transfer that can be converted into electricity for our homes. What type of energy is used?

Energy Transfer Notes

<u>Conduction</u>: The process which heat or electricity is directly transmitted through a substance when there is a difference in temperature or electrical potential.

Examples: Stovetop, electric outlet, touching something & feeling heat/cold

<u>Convection</u>: The movement caused within a fluid by the tendency of the hotter & therefore less dense fluid to rise up.

Examples: Oven, hot hair balloon, wind & ocean currents

<u>Radiation:</u> The emission of electromagnetic waves that move away from the hotter object.

Examples: Sun, campfire, microwave

Conduction Lab Notes

Conduction is the transfer of thermal energy between particles of matter that are touching.

Conduction is faster and more efficient in some solids & liquids than in gases. Good thermal energy conductors have freely moving electrons that transfer energy.

<u>Poor thermal energy conductors are called insulators.</u> Many insulators reduce conduction by having a large portion of gases which do not conduct thermal energy well.

In this lab we will be testing which materials are good conductors or insulators of thermal energy.

Name:	
Date:	Science Period:

Conduction Lab

Directions: This lab is only to be completed with adult supervision and appropriate lab clothing: long pants and closed-toed shoes are required while working with boiling water. This lab needs to be completed in the kitchen on a stovetop. If you do not have the materials, feel free to improvise (safely) to the best of your ability with what you have at home. Regular text is an explanation of the scientific method & expectations for each section. Bold text is information pertaining to this lab write up. Fill in the information where you are asked to.

- Purpose: The question we ask ourselves that drives the purpose of the lab. We are trying to answer
 this question by doing the lab, but you don't need to answer it until you've finished the lab.
 What materials conduct thermal energy well? What materials insulate thermal energy well?
- 2. <u>Hypothesis</u>: An educated guess of what we think is going to happen, using an "if... then... because..." statement; If we do the lab, then what will happen, because why?

If we place 3 different materials into boiling water then they will conduct thermal energy best in this order:

- 1.
- 2.
- 3.

because

- 3. <u>Materials</u>: The supplies we need for this lab. Since you are working on this lab at home (with adult supervision) you may need to modify this materials list, just be sure to stay safe!
 - A pot of hot water
 - Timer
 - 3 different substances (Ideally: A wooden spoon, a rubber/silicone spoon, a metal spoon)
- 4. <u>Procedure</u>: These are the steps you will follow to complete this lab. Again, if you need to modify these steps for some reason just use good judgment and stay safe!
 - a. Boil water in pot (does not need more than 2-3 inches of water)
 - b. Place all 3 substances into the pot with the handles out
 - c. Start the timer
 - d. Feel the handles immediately and after 2 minutes, recording observation and ranking of heat both times.
 - e. Answer the conclusion question

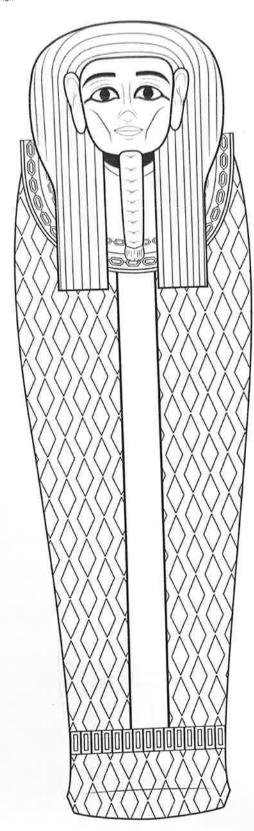
5. Results: This is recorded as the lab experiment is happening. You should work quickly to fill information in as it is happening, then go back after you are done to complete information. Record observations, use descriptors and rank each in the order of highest temperature (1) to lowest temperature to touch (3).

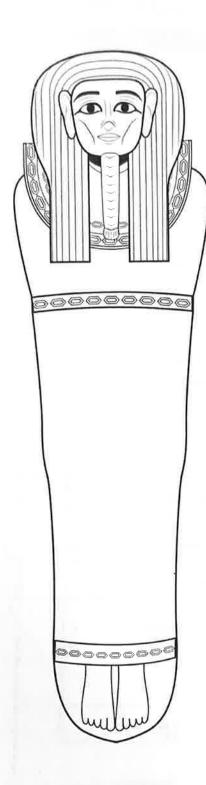
Material	Results: Immediately	Results: 2 minutes
	Temp. Rank: Observations:	Temp. Rank: Observations:
	Temp. Rank: Observations:	Temp. Rank: Observations:
	Temp. Rank: Observations:	Temp. Rank: Observations:

6. Conclusion

Using the words: temperature, thermal energy, conduction, conductor, and insulator, tell about what you learned and observed in this lab about the substances you used.







CLASS ___

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East Africa

Lesson 1: Physical Geography of East Africa

ESSENTIAL QUESTION

How does geography influence the way people live?

Terms to Know

rift to separate from one another

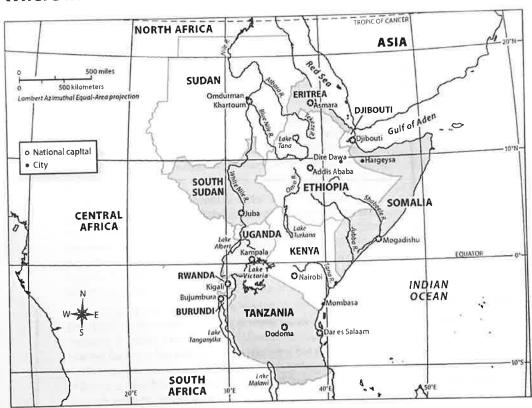
desertification the process by which agricultural land is turned into desert

hydroelectric power the production of electricity through the use of falling water

geothermal energy electricity produced using underground heat sources, such as hot springs

and steam

Where in the World: East Africa



East Africa

Lesson 1 Physical Geography of East Africa, continued

Land and Water Features

Guiding Question What makes the ecosystem of East Africa diverse? The Great Rift Valley is the most unusual feature of East Africa's physical geography. It is actually a series of large valleys and depressions on Earth's surface. The Great Rift started forming about 20 million years ago when tectonic plates began to tear apart from one another. Africa was once connected to the Arabian Peninsula. As the two rifted apart, or separated from one another, the land in between sank and was filled by the Red Sea. Eventually, all of East Africa will separate from the rest of Africa, and the Red Sea will fill the rift.

Great Rift System

- About 4,000 miles (6,437 km) long and 30 to 40 miles (48 to 64 km) wide
- · Eastern branch starts in Southwest Asia, runs through the Danakil plain in Ethiopia, and takes the form of deep valleys as it extends into Kenya and Tanzania.
- Western branch forms an arc extending southward from the western edge of the Ethiopian highlands.

Much volcanic and seismic activity has occurred along the branches of the Great Rift Valley. The largest volcanoes are located on the eastern Rift. They include Kilimanjaro, between Kenya and Tanzania. Kilimanjaro is the tallest mountain in Africa. Even though it is close to the Equator, its summit is covered in snow year-round.

Sudan is home to vast plains and plateaus. In the north, the terrain is desert. Somalia, on the east, is also extremely dry. It is made up largely of thornbush savanna and semidesert. Djibouti, to the north, has a very diverse landscape of rugged mountains and desert plains. South of Sudan, the Ruwenzori Mountains divide Uganda from the Democratic Republic of the Congo. Small, landlocked Rwanda is known as "the land of a thousand hills."

The longest river in the world is the Nile (4,132 miles or 6,650 km). The Nile Basin includes parts of many countries in East Africa: Tanzania, Burundi, Rwanda, Kenya, Uganda, Ethiopia, South Sudan, and the Sudan. It has two sets of headwaters, the Blue Nile and the White Nile. The Blue Nile begins in the northern highlands of Ethiopia. The White Nile begins in Lake Victoria and passes through swampy wetlands in central South Sudan. This huge area is called the Sudd.

Marking the Text

1. Read the text on the left. Underline the sentence describing what will eventually happen along the Great Rift.

Locating

2. Where does each of the two Nile tributaries begin?

Identifying

What is the Sudd?

Reading **Progress Check**

4. What caused the striking physical features of the Great Rift Valley in East Africa?

networks

East Africa

Lesson 1 Physical Geography of East Africa, continued

\$	Determining
	Cause and Effect

5. How are glaciers affected by climate change?

Name of the Describing

6. What is the climate like on the tropical grasslands of Kenya?

Determining Cause and Effect

7. What causes desertification?

Reading Progress Check

8. What generalization can you make about the variations in temperature in East Africa?

Sudan. The Nile then flows north to the Mediterranean Sea. East Africa has few important rivers, partly because of intermittent rainfall and high temperatures in the region.

Many of East Africa's lakes are located near the Great Rift Valley.

The two branches of the Nile meet at Khartoum, in northern

Many of East Africa's lakes are located near the Great Rift Valley. The largest of these is Lake Victoria. It is relatively shallow, but contains about 200 species of fish. Lake Tanganyika is the longest freshwater lake in the world, and the second deepest. Farther south is Lake Malawi.

Lake	Bordered by	
Victoria	Kenya, Tanzania, Uganda	
Tanganyika	Tanzania, Democratic Republic of the Congo	
Malawi	Tanzania, Malawi, Mozambique	

Climates of East Africa

Guiding Question How does climate vary in East Africa?

The diverse geography of East Africa is matched by its varied climate. Temperatures in East Africa tend to be warmer toward the coast and cooler in the highlands. Sudan, Djibouti, and Somalia have high temperatures for much of the year. High mountains such as Kilimanjaro and the Ruwenzori Range have had glaciers for thousands of years. Due to climate change, however, these glaciers are melting. Some experts predict that the glaciers of Kilimanjaro will disappear entirely over the next 20 years. The highlands of Kenya and Uganda enjoy a pleasant, springlike climate year-round.

In many parts of the region, rainfall is seasonal. This is especially true close to the Equator. Wet seasons alternate with dry ones. On the tropical grasslands of Kenya, for example, two rainy seasons occur in most years. These are the "long rains" of April and May and the "short rains" of October and November. The months in between these periods are dry, with little or no rainfall.

Rainfall in East Africa can be unpredictable. Sparse rainfall can result in drought. An urgent issue in the region is **desertification**. This is the process by which agricultural land turns into desert. It occurs when long periods of drought and unwise land use destroy vegetation. During the last half century, desertification has affected much of the Sahel. This area lies between the Sahara and countries to the south, such as Sudan and South Sudan.

networks

East Africa

Lesson 1 Physical Geography of East Africa, continued

Resources of East Africa

Guiding Question Which natural resources are important in East Africa?

Minerals, energy resources, landscapes, and wildlife are all important resources found in East Africa. There are small gold deposits along the rifts in Kenya, Uganda, and Tanzania. Gemstones such as sapphires and diamonds are found in Tanzania. Rwanda has tin deposits. Ethiopia and Uganda produce lumber. Lake Assal in Djibouti is the world's largest salt reserve, with an estimated size of 1 billion tons. It is located at the lowest point in Africa.

Energy resources include coal in Tanzania and petroleum in Uganda, South Sudan, and northwestern Kenya. Sudan has the opportunity to develop hydroelectric power, or electricity produced from falling water. Hydroelectric power is already in use in Kenya and Tanzania. Kenya and Diibouti are favorable locations for the development of geothermal energy. This type of energy comes from underground heat sources such as hot springs and steam. It is estimated that 30 percent of Kenya's energy needs could be met by geothermal energy by the year 2030. Energy resources and their use are often inconsistent and uneven. Major cities use much of the energy produced but it is often unavailable in rural areas.

East Africa's land and wildlife are also important assets. The breathtaking scenery of the Great Rift Valley is an important tourist resource. In addition, the region is home to the greatest assemblage of wildlife in the world. There are many national parks and wildlife sanctuaries. Perhaps the best-known reserves are in Kenya and Tanzania. These parks are home to lions, leopards, cheetahs, giraffes, zebras, elephants, and dozens of species of antelope. Every year, tourists from all over the world witness the Great Migration. During that event, more than 1 million animals travel hundreds of miles in search of fresh grazing land.

Marking the

- 9. Highlight the names of countries with mineral resources in pink. Highlight the names of countries with energy resources in yellow.
- Describing
- 10. Why do you think energy resources are often unavailable in rural areas?

Reading **Progress Check**

11. What two promising alternatives might help improve energy supplies in the East African region?

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Check for Understanding

1. Argument Which natural resources do you think are most important to East Africa? Why?