

GreatHearts

Northern Oaks



Supplemental Reading Packet

April 14 - 17, 2020

5th grade

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IT SEEMS THAT THE WORRIES and wants of a young boy never cease. Now that I had my pups another obstacle had cropped up. This one looked absolutely impossible. I had to have a coonskin so I could train them.

With my three little traps and a bulldogged determination, I set out to trap Mister Ringtail. For three solid weeks I practically lived on the river. I tried every trick I knew. It was no use. I just couldn't catch the wiley old coons.

In desperation I went to my grandfather. He smiled as he listened to my tale of woe. "Well, we'll have to do something about that," he said. "To train those dogs right, you'll need that coon hide, that's for sure. Now you watch the store while I go over to my tool shed. I'll be right back."

After what seemed like an eternity I saw him coming. He was carrying a brace and bit, that was all.

With a mischievous little smile on his face, he said, "You wouldn't think a fellow could catch a coon with this brace and bit, would you?"

I thought he was kidding me and it made me feel bad. "Why, Grandpa," I said, "you couldn't catch a coon in a jillion years with that thing. You just don't have any idea how smart they are."

"Yes, you can," he said. "You bet your boots you can. Why, when I was a boy I caught coons on top of coons with one of these things."

I saw Grandpa was serious and I got interested.

He laid the brace down on the counter, picked up a small paper sack, and filled it about half-full of horseshoe nails.

"Now you do everything exactly as I tell you," he said, "and you'll catch that coon."

"Yes, sir, Grandpa," I said, "I will. I'll do anything to catch one of them."

"Now the first thing you'll need is some bright objects," he said. "The best thing is bright shiny tin. Cut out some little round pieces, a little smaller than this bit. Do you understand?"

I nodded my head.

"Now," he said, "you go down along the river where there are a lot of coon tracks. Find a good solid log close by and bore a hole down about six inches. Drop one of the bright pieces of tin down in the hole, and be sure it's laying right on the bottom."

I was all ears. I didn't want to miss one word my grandfather said. Now and then I would glance at him to see if he was kidding me.

In a serious voice, he went on talking. "Now pay close attention," he said, "because this is the main part of the trap."

With eyes as big as a hoot owl's, I looked and listened.

He took four of the horseshoe nails from the sack. With the thumb and forefinger of his left hand he made a small "o" about the size of the bit, which was an inch and half in diameter.

"Now, we'll say this is the hole you bored in the log," he said. "About an inch apart, drive these nails in on a slant opposite each other."

Holding one of the nails in his right hand, he showed me the right angle.

"The ends of the nails will enter the hole about halfway between the top and the piece of tin," he continued. "Leave an opening between the sharp points big enough for a coon to get his paw through."

He asked me if I understood.

Again I nodded my head and moved a little closer to him.

"How is that going to catch a coon, Grandpa?" I asked.

"It'll catch him all right," he said, "and it won't fail. You see a coon is a curious little animal. Anything that is bright and shiny attracts him. He will reach in and pick it up. When his paw closes on the bright object it balls up, and when he starts to pull it from the hole, the sharp ends of the nails will gouge into his paw and he's caught."

He looked over at me.

"Well, what do you think of it?" he asked.

I closed my eyes and in my mind I could see the funnel-like entrance of the hole, and the sharp slanting points of the

nails. I could see the coon reaching in for the shiny piece of metal. Naturally his paw would be much larger when closed than it was when he reached in. It would be impossible for it to pass the sharp nails.

It was all looking pretty good to me and I was on the point of saying so, when it hit me. Why, all the coon had to do was open his paw, drop the object, and he was free. It all blew up then and there. I just knew my grandfather was playing a joke on me.

I stepped back and almost cried as I said, "Grandpa, you're kidding me. That kind of a trap couldn't catch a coon. Why all he'd have to do is open his paw, drop the piece of tin, and he could pull it from the hole."

Grandpa started roaring with laughter. This did make me feel bad. With tears in my eyes, I started for the door.

"Wait a minute," Grandpa said. "I'm not kidding you. Oh, I know I like to have my jokes, same as any man, but I meant every word I said."

I turned around and looked at him. He had stopped laughing and there was a hurt expression on his face.

"I wasn't laughing at you," he said. "I was laughing more at myself than you. I just wanted to see if you were smart enough to see that there was a way the coon could free himself."

"A fellow wouldn't have to be very smart to see that," I said.

Grandpa started talking seriously again. "You know," he said, "a coon has more than one peculiarity about him. When I was a boy I had a pet coon. By watching him, I saw and learned a lot of things.

Where the Red Fern Grows

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"He had a den in an old hollow tree in our front yard. I don't know the number of times I'd have to climb that tree and get my mother's scissors, buttons, needles, and thimble from his den. Why, he'd even carry out our knives, forks, and spoons. Anything that was bright and shiny, he took to his den."

Grandpa stopped talking for a few minutes. I could see a faraway look in his eyes. Once again he was living in those long-ago days. I waited in silence for him to go on with his story.

"One of the most peculiar things about that coon," he said, "was his front feet. Once he wrapped those little paws around something he would never let go.

"My mother had an old churn. It was one of those kind with a small hole in the lid for the dasher. When she would get through churning, she would take the dasher out to wash it. That crazy coon would climb up on top of the churn, poke his little front paw through the hole, and get a fistful of butter. The hole was small, and when he closed his paw, he couldn't get it back out. All he had to do was open it, drop the butter, and he would be free, but do you think he would? No, sir. He would carry that churn lid all over the house, squalling and growling. Why, it took everyone in the house to free him. I'd have to wrap him up in a gunny sack or an old coat and pry his claws loose from the butter. Seeing this time after time is what gave me the idea for this trap. Once he reaches in and gets hold of that tin, he's caught, because he will never open his paw."

With my confidence restored, it all sounded pretty good to

Wilson Rawls

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me and I was anxious to try out this wonderful plan. I thanked him and, taking the brace and nails, I left the store.

By the time I reached home it was too late in the day to start making my traps. That night I talked the idea over with Papa.

"I've heard of coons being caught that way," he said, "but I never paid much attention to it. Your grandfather should know, though, for he was quite a coon hunter when he was a boy."

"From what he told me," I said, "it never fails."

Papa asked if I wanted him to help make my traps.

"No," I said, "I think I can do it myself."

I didn't sleep too well that night. I bored holes, drove nails, and fought coons practically all night.

Early the next morning I went to the trash pile. As I stirred around in the rusty old cans, I thought of another time I had searched for a can. Finally I found the one I wanted. It was bright and shiny.

Everything was going along just fine until Mama caught me cutting out the circles of tin with her scissors. I always swore she could find the biggest switches of any woman in the Ozarks. That time she overdid it. I was almost to the river before the stinging stopped.

It wasn't hard to find places for my traps. All along the river large sycamore logs lay partly submerged in the clear blue water. On one where I could see the muddy little tracks of the ringtails, I bored a hole, dropped in a piece of tin, and drove my nails.

On down the river I went, making my traps. I stopped when I ran out of nails. Altogether I had fourteen traps.

Where the Red Fern Grows

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That night Papa asked me how I was making out.

"Oh, all right," I said. "I've got fourteen of them made."

He laughed and said, "Well, you can't ever tell. You may catch one."

The next morning I was up with the chickens. I took my pups with me as I just knew I'd have a big ringtail trapped and I wanted them to see it. I was a disappointed boy when I peeked out of a canebrake at my last trap and didn't see a coon. All the way home I tried to figure out what I had done wrong.

I went to Papa. He put his thinking cap on and thought the situation over. "Maybe you left too much scent around when you made those traps," he said. "If you did, it'll take a while for it to go away. Now I wouldn't get too impatient. I'm pretty sure you'll catch one sooner or later."

Papa's words perked me up just like air does a deflated inner tube. He was right. I had simply left too much scent around my traps. All I had to do was wait until it disappeared and I'd have my coon hide.

Morning after morning it was the same old disappointment; no coon. When a week had gone by and still no results from my traps, I gave up. What little patience I had was completely gone. I was firmly convinced that coons didn't walk on sycamore logs any more, and bright shiny objects had about as much effect on them as a coon hound would.

One morning I didn't get up to run my trap line. I stayed in bed. What was the use? It was just a waste of time.

When the family sat down to breakfast, I heard my oldest sister say, "Mama, isn't Billy going to get up for breakfast?"

"Why, is he in his room?" Mama asked. "I didn't know. I thought he was down looking at his traps."

I heard Papa say, "I'll go wake him up."

He came to the door and said, "You'd better get up, Billy. Breakfast is ready."

"I don't want any breakfast," I said. "I'm not hungry."

Papa took one look at me and saw I had a bad case of the ringtail blues. He came over and sat down on the bed.

"What's the matter?" he asked. "You having coon trouble?"

"Grandpa lied to me, Papa," I said. "I should've known better. Who ever heard of anyone catching a coon with a brace and bit and a few horseshoe nails."

"I wouldn't say that," Papa said. "I don't think your grandpa deliberately lied to you. Besides, I've heard of coons being caught that way."

"Well, I don't think I've done anything wrong," I said. "I've done everything exactly as he said, and I haven't caught one yet."

"I still think it's that scent," Papa said. "You know, someone told me, or I read it somewhere, that it takes about a week for scent to die away. How long has it been since you made those traps?"

"It's been over a week," I said.

"Well, the way I figure, it's about time for you to catch one. Yes, sir, I wouldn't be surprised if you came in with one any day now."

After Papa had left the room I lay thinking of what he had said. "Any day now." I got up and hurried into my clothes.

As soon as I was finished with breakfast, I called my pups and lit out for the river.

Sonnets (continued)

Another type of sonnet is called a

Petrarchan^{fo} Sonnet^d

★ Named after an Italian poet named Francesco Petrarch.

- Similar to the Shakespearean sonnet a Petrarchan Sonnet has:
 - 14 lines
 - The meter is iambic pentameter (we will learn about meter tomorrow)
 - The theme is usually love.

BUT a Petrarchan sonnet is also different in these ways:

① Although the Petrarchan Sonnet has 14 lines, it is usually divided into eight-line section called an octave and a six-line section called a sestet.

② Petrarchan sonnets pose a question, problem, or observation in the first eight-lines (octave) and a volta or turn occurs in line 9 and a resolution is given in the last six-lines (sestet).

③ Rhyme Scheme

- The first eight -lines (octave) of a Petrarchan sonnet have the following rhyme scheme:

ABBA ABBA

- The last six -lines (sestet) of a Petrarchan sonnet have the following rhyme scheme:

CDCDCD

or

CDECDE

* This is different from the Shakespearean sonnet that has a rhyme scheme of:

ABAB CDCD EFEF GG

- Example of a Petrarchan sonnet on the next page.

"Italian Sonnet" by James DeFord

Problem:
This love
is
leaving
octave

- 1 Turn back the heart you've turned away. A
- 2 Give back your kissing breath B
- 3 Leave not my love as you have left B
- 4 The broken hearts of yesterday A
- 5 But wait, be still, don't lose this way A
- 6 Affection now, for what you guess B
- 7 Maybe something more, could be less B
- 8 Accept my love, live for today. A

Solution:
Trust in
my love.
sestet

- 9 Your roses wilted, as love spurned C
- 10 Yet trust in me, my love and truth. D
- 11 Dwell in my heart, from which you turned C
- 12 My strength as great as yours aloof. D
- 13 It is fear you turn away A
- 14 And miss the chance of love today. A

Volta

- 14 lines
- Theme is love
- Contains an octave
- Contains a sestet
- Rhyme scheme is similar to a Petrarchan?

The author chose to write a different rhyme scheme!

Is a Petrarchan sonnet?

A rainforest is an area of tall, mostly evergreen trees and a high amount of rainfall. Rainforests are Earth's oldest living ecosystems, with some surviving in their present form for at least 70 million years. They are incredibly diverse and complex, home to more than half of the world's plant and animal species—even though they cover just 6% of Earth's surface. This makes rainforests astoundingly dense with flora and fauna; a 10-square-kilometer (4-square-mile) patch can contain as many as 1,500 flowering plants, 750 species of trees, 400 species of birds and 150 species of butterflies.



Rainforests thrive on every continent except Antarctica. The largest rainforests on Earth surround the Amazon River in South America and the Congo River in Africa. The tropical islands of Southeast Asia and parts of Australia support dense rainforest habitats. Even the cool evergreen forests of North America's Pacific Northwest and Northern Europe are a type of rainforest. Rainforests' rich biodiversity is incredibly important to our well-being and the well-being of our planet. Rainforests help regulate our climate and provide us with everyday products.

Unsustainable industrial and agricultural development, however, has severely degraded the health of the world's rainforests. Citizens, governments, intergovernmental organizations, and conservation groups are working together to protect these invaluable but fragile ecosystems.

Rainforest Structure

Most rainforests are structured in four layers: emergent, canopy, understory, and forest floor. Each layer has unique characteristics based on differing levels of water, sunlight, and air circulation. While each layer is distinct, they exist in an interdependent system: processes and species in one layer influence those in another.

Emergent Layer

The top layer of the rainforest is the emergent layer. Here, trees as tall as 60 meters (200 feet) dominate the skyline. Foliage is often sparse on tree trunks, but spreads wide as the trees reach the sunny upper layer, where they photosynthesize the sun's rays. Small, waxy leaves help trees in the emergent layer retain water during long droughts or dry seasons. Lightweight seeds are carried away from the parent plant by strong winds.



In the Amazon rainforest, the towering trees of the emergent layer include the Brazil nut tree and the kapok tree. The Brazil nut tree, a vulnerable species, can live up to 1,000 years in undisturbed rainforest habitats. Unlike many rainforest species, both the Brazil nut tree and the kapok tree are deciduous—they shed their leaves during the dry season.



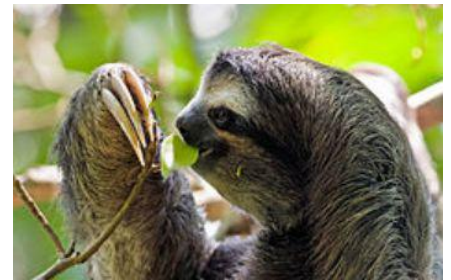
Animals often maneuver through the emergent layer's unstable topmost branches by flying or gliding. Animals that can't fly or glide are usually quite small—they need to be light enough to be supported by a tree's slender uppermost layers. The animals living in the emergent layer of the Amazon rainforest include birds, bats, gliders, and butterflies. Large raptors, such as white-tailed hawks and harpy eagles, are its top predators.



In rainforests on the island of New Guinea, pygmy gliders populate the emergent layer. Pygmy gliders are small rodents that get their name from the way flaps of skin between their legs allow them to glide from branch to branch. Bats are the most diverse mammal species in most tropical rainforests, and they regularly fly throughout the emergent, canopy, and understory layers. One of the world's largest species of bat, the Madagascan flying fox (found on the African island of Madagascar), for instance, is an important pollinator that mainly feeds on juice from fruit, but will chew flowers for their nectar.

Canopy Layer

Beneath the emergent layer is the canopy, a deep layer of vegetation roughly 6 meters (20 feet) thick. The canopy's dense network of leaves and branches forms a roof over the two remaining layers. The canopy blocks winds, rainfall, and sunlight, creating a humid, still, and dark environment below. Trees have adapted to this damp environment by producing glossy leaves with pointed tips that repel water.



While trees in the emergent layer rely on wind to scatter their seeds, many canopy plants, lacking wind, encase their seeds in fruit. Sweet fruit entices animals, which eat the fruit and deposit seeds on the forest floor as droppings. Fig trees, common throughout most of the world's tropical rainforests, may be the most familiar fruit tree in the canopy.

With so much food available, more animals live in the canopy than any other layer in the rainforest. The dense vegetation dulls sound, so many—but not all—canopy dwellers are notable for their shrill or frequent vocalizing. In the Amazon rainforest, canopy fruit is snatched up in the large beaks of screeching scarlet macaws and keel-billed toucans, and picked by barking spider and howler monkeys. The silent two-toed sloth chews on the leaves, shoots, and fruit in the canopy. Thousands and thousands of insect species can also be found in the canopy, from bees to beetles, borers to butterflies. Many of these insects are the principal diet of the canopy's reptiles, including the "flying" draco lizards of Southeast Asia.

Understory Layer

Tuesday, Science

Located several meters below the canopy, the understory is an even darker, stiller, and more humid environment. Plants here, such as palms and philodendrons, are much shorter and have larger leaves than plants that dominate the canopy. Understory plants' large leaves catch the minimal sunlight reaching beyond the dense canopy.

Understory plants often produce flowers that are large and easy to see, such as Heliconia, native to the Americas and the South Pacific. Others have a strong smell, such as orchids. These features attract pollinators even in the understory's low-light conditions. The fruit and seeds of many understory shrubs in temperate rainforests are edible. The temperate rainforests of North America, for example, bloom with berries.



Animals call the understory home for a variety of reasons. Many take advantage of the dimly lit environment for camouflage. The spots on a jaguar (found in the rainforests of Central and South America) may be mistaken for leaves or flecks of sunlight, for instance. The green mamba, one of the deadliest snakes in the world, blends in with foliage as it slithers up branches in the Congo rainforest. Many bats, birds, and insects prefer the open airspace the understory offers. Amphibians, such as dazzlingly colored tree frogs, thrive in the humidity because it keeps their skin moist.



Central Africa's tropical rainforest canopies and understories are home to some of the most endangered and familiar rainforest animals—such as forest elephants, pythons, antelopes, and gorillas. Gorillas, a critically endangered species of primate, are crucial for seed dispersal. Gorillas are herbivores that move throughout the dark, dense rainforest as well as more sun-dappled swamps and jungles. Their droppings disperse seeds in these sunny areas where new trees and shrubs can take root. In this way, gorillas are keystone species in many African rainforest ecosystems.



Forest Floor Layer

The forest floor is the darkest of all rainforest layers, making it extremely difficult for plants to grow. Leaves that fall to the forest floor decay quickly.

Decomposers, such as termites, slugs, scorpions, worms, and fungi, thrive on the forest floor. Organic matter falls from trees and plants, and these organisms break down the decaying material into nutrients. The shallow roots of rainforest trees absorb these nutrients, and dozens of predators consume the decomposers!



Animals such as wild pigs, armadillos, and anteaters forage in the decomposing brush for these tasty insects, roots and tubers of the South American rainforest. Even larger predators, including leopards, skulk in the darkness to surprise their prey. Smaller rodents, such as rats and lowland pacas (a type of striped rodent indigenous to Central

and South America), hide from predators beneath the shallow roots of trees that dominate the canopy and emergent layer.



Rivers that run through some tropical rainforests create unusual freshwater habitats on the forest floor. The Amazon River, for instance, is home to the boto, or pink river dolphin, one of the few freshwater dolphin species in the world. The Amazon is also home to black caimans, large reptiles related to alligators, while the Congo River is home to the caimans' crocodilian cousin, the Nile crocodile.

Types of Rainforests

Tropical Rainforests

Tropical rainforests are mainly located between the latitudes of 23.5°N (the Tropic of Cancer) and 23.5°S (the Tropic of Capricorn)—the tropics. Tropical rainforests are found in Central and South America, western and central Africa, western India, Southeast Asia, the island of New Guinea, and Australia.

Sunlight strikes the tropics almost straight on, producing intense solar energy that keeps temperatures high, between 21° and 30°C (70° and 85°F). High temperatures keep the air warm and wet, with an average humidity of between 77% and 88%. Such humid air produces extreme and frequent rainfall, ranging between 200-1000 centimeters (80-400 inches) per year. Tropical rainforests are so warm and moist that they produce as much as 75% of their own rain through evaporation and transpiration.



Such ample sunlight and moisture are the essential building blocks for tropical rainforests' diverse flora and fauna. Roughly half of the world's species can be found here, with an estimated 40 to 100 or more different species of trees present in each hectare.

Tropical rainforests are the most biologically diverse terrestrial ecosystems in the world. The Amazon rainforest is the world's largest tropical rainforest. It is home to around 40,000 plant species, nearly 1,300 bird species, 3,000 types of fish, 427 species of mammals, and 2.5 million different insects. Red-bellied piranhas and pink river dolphins swim its waters. Jewel-toned parrots squawk and fly through its trees. Poison dart frogs warn off predators with their bright colors. Capuchin and spider monkeys swing and scamper through the branches of the rainforest's estimated 400 billion trees. Millions of mushrooms and other fungi decompose dead and dying plant material, recycling nutrients to the soil and organisms in the understory. The Amazon rainforest is truly an ecological kaleidoscope, full of colorful sights and sounds.

Temperate Rainforests

Temperate rainforests are located in the mid-latitudes, where temperatures are much more mild than the tropics. Temperate rainforests are found mostly in coastal, mountainous areas. These geographic conditions help create areas of high rainfall. Temperate rainforests can be found on the

coasts of the Pacific Northwest in North America, Chile, the United Kingdom, Norway, Japan, New Zealand, and southern Australia.

As their name implies, temperate rainforests are much cooler than their tropical cousins, averaging between 10° and 21°C (50° and 70°F). They are also much less sunny and rainy, receiving anywhere between 150-500 centimeters (60-200 inches) of rain per year. Rainfall in these forests is produced by warm, moist air coming in from the coast and being trapped by nearby mountains. Temperate rainforests are not as biologically diverse as tropical rainforests. They are, however, home to an incredible amount of biological productivity, storing up to 500-2000 metric tons of leaves, wood, and other organic matter per hectare (202-809 metric tons per acre). Cooler temperatures and a more stable climate slow down decomposition, allowing more material to accumulate. The old-growth forests of the Pacific Northwest, for example, produce three times the biomass (living or once-living material) of tropical rainforests.



This productivity allows many plant species to grow for incredibly long periods of time. Temperate rainforest trees such as the coast redwood in the U.S. state of California and the alerce in Chile are among the oldest and largest tree species in the world.

The animals of the temperate rainforest are mostly made up of large mammals and small birds, insects, and reptiles. These species vary widely between rainforests in different world regions. Bobcats, mountain lions, and black bears are major predators in the rainforests of the Pacific Northwest. In Australia, ground dwellers such as wallabies, bandicoots, and potoroos (small marsupials that are among Australia's most endangered animals) feast on the foods provided by the forest floor. Chile's rainforests are home to a number of unique birds such as the Magellanic woodpecker and the Juan Fernández firecrown, a hummingbird species that has a crown of color-changing feathers.



Ecological Well-Being

Rainforests are critically important to the well-being of our planet. Tropical rainforests encompass approximately 1.2 billion hectares (3 billion acres) of vegetation and are sometimes described as the Earth's thermostat.

Rainforests produce about 20% of our oxygen and store a huge amount of carbon dioxide, drastically reducing the impact of greenhouse gas emissions. Massive amounts of solar radiation are absorbed, helping regulate temperatures around the globe. Taken together, these processes help to stabilize Earth's climate. Rainforests also help maintain the world's water cycle. More than 50% of precipitation striking a rainforest is returned to the atmosphere by evapotranspiration, helping regulate healthy rainfall around the planet. Rainforests

also store a considerable percentage of the world's freshwater, with the Amazon Basin alone storing one-fifth.

Human Well-Being

Rainforests provide us with many products that we use every day. Tropical woods such as teak, balsa, rosewood, and mahogany are used in flooring, doors, windows, boatbuilding, and cabinetry. Fibers such as raffia, bamboo, kapok, and rattan are used to make furniture, baskets, insulation, and cord. Cinnamon, vanilla, nutmeg, and ginger are just a few spices of the rainforest. The ecosystem supports fruits including bananas, papayas, mangos, cocoa and coffee beans.

Rainforests also provide us with many medicinal products. According to the U.S. National Cancer Institute, 70% of plants useful in the treatment of cancer are found only in rainforests. Rainforest plants are also used in the creation of muscle relaxants, steroids, and insecticides. They are used to treat asthma, arthritis, malaria, heart disease, and pneumonia. The importance of rainforest species in public health is even more incredible considering that less than one percent of rainforest species have been analyzed for their medicinal value.

Even rainforest fungi can contribute to humanity's well-being. A mushroom discovered in the tropical rainforest of Ecuador, for example, is capable of consuming polyurethane—a hard, durable type of plastic used in everything from garden hoses to carpets to shoes. The fungi can even consume the plastic in an oxygen-free environment, leading many environmentalists and businesses to invest in research to investigate if the fungi can help reduce waste in urban landfills.

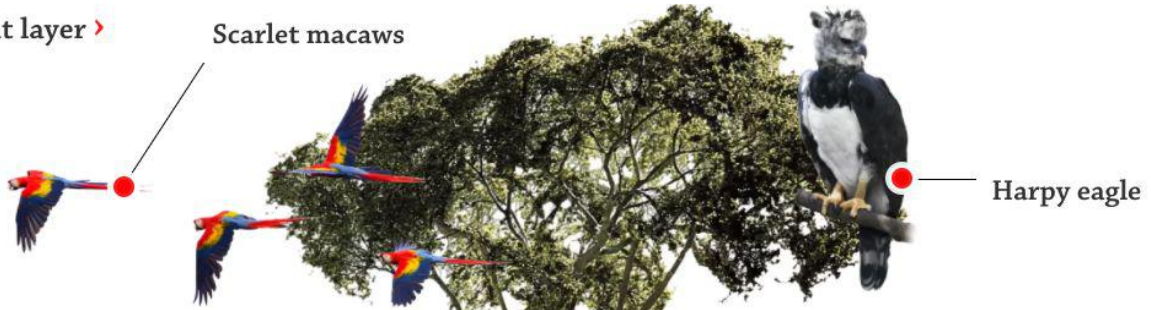
Threats to Rainforests

Rainforests are disappearing at an alarmingly fast pace, largely due to human development over the past few centuries. Once covering 14% of land on Earth, rainforests now make up only 6%. Since 1947, the total area of tropical rainforests has probably been reduced by more than half, to about 6.2 to 7.8 million square kilometers (3 million square miles). Many biologists expect rainforests will lose 5-10% of their species each decade. Rampant deforestation could cause many important rainforest habitats to disappear completely within the next hundred years.



Such rapid habitat loss is due to the fact that 40 hectares (100 acres) of rainforest are cleared every minute for agricultural and industrial development. In the Pacific Northwest's rainforests, logging companies cut down trees for timber while paper industries use the wood for pulp. In the Amazon rainforest, large-scale agricultural industries, such as cattle ranching, clear huge tracts of forests for arable land. In the Congo rainforest, roads and other infrastructure development have reduced habitat and cut off migration corridors for many rainforest species. Throughout both the Amazon and Congo, mining and logging operations clear-cut to build roads and dig mines. Some rainforests are threatened by massive hydroelectric power projects, where dams flood acres of land. Development is encroaching on rainforest habitats from all sides.

Emergent layer >



Canopy >



Understorey >



Forest floor >



Extension Videos:

National Geographic Rainforest 101: <https://www.youtube.com/watch?v=3vijLre760w>

Village Elephants: <https://www.nationalgeographic.org/media/village-elephants/>

Birds of Paradise: <https://www.youtube.com/watch?v=YTR21os8gTA>

Two New Tenses

Lesson Summary

- Latin verbs that end in *-bat* or *-bant* are in the **imperfect tense** and are translated with an English **past progressive tense** (“was [verb]ing/were [verb]ing”).
- Latin verbs that end in *-vit* or *-vērunt* are in the **perfect tense** and are translated with an English **simple past tense** (“[verb]ed”).

Introduction: What is a “Tense”?

For the rest of the year, we will be encountering two new verb tenses: the **imperfect tense** and the **perfect tense**. The word “tense” comes to us from Latin *tempus*, which means “time”. That is, in fact, precisely what “tense” means - time. The tense of a verb is **when** it takes place. Basically, it tells us the verb takes place in the past, the present, or the future. In both English and Latin, a verb’s tense affects its form.

English Tenses

To start with, let’s look at how English indicates whether a verb takes place in the past, the present, or the future.

Present

For example, consider the verb “run”. How do I describe myself running right now?

- The simplest way I can say it is, “**I run**”. This is a present tense verb, because it happens right now.
- Another common way I could describe myself running right now is, “**I am running**”. This is also a present tense verb.
- In English grammar, we call “I run” a **simple present tense**, and we call “I am running” a **present progressive tense**. Notice that both take place in the present - right now.

Past

Now let's see how I would use the verb "run" when describing myself running yesterday.

- I can say, "**I ran**". Notice the change in the vowel ("run" became "ran"). This is the most basic way English indicates a change of tense from present to past.
 - Another way English does this is by adding "-ed" to the end of the verb. For example, today **I walk**, but yesterday **I walked**.
 - Both "I ran" and "I walked" are examples of what we call the **simple past tense**.
- On the other hand, another common way to describe myself running yesterday is, "**I was running**".
 - This works for "walk", as well - "**I was walking**".
 - This kind of past tense is called the **past progressive tense**. It is also sometimes called the **imperfect tense**.

Future

Finally, how do I describe myself running tomorrow?

- I can say either "**I will run**" or "**I shall run**". This is called the **future tense**, because it takes place after the present.

English actually has even more tenses, but we'll stop here for today.

Latin Tenses

Now let's see how Latin indicates tense.

Present Tense

So far, we have learned verb forms for one tense: **the present tense**. Latin indicates that things are taking place right now, in the present, chiefly by using a particular set of endings: -ō, -s, -t, -mus, -tis, and -nt.

- So when I say in Latin *amō*, the stem *am(a)* means "love", and the ending -ō not only means that "I" am the one doing it but also that I am doing it **in the present** rather than the past or the future. So *amō* means "I love".
- But remember how English had two present tenses: the simple present tense and the present progressive tense? Latin has only one present tense, and it encompasses both of the English present tenses.

- So *amō* can mean not only “**I love**” but also “**I am loving**”. How do we know which one to use when we are translating? Easy. You simply pick the one that sounds best to you.

The New Tenses

So now we finally return to the main point of today’s lesson, the two new tenses: the **imperfect tense** and the **perfect tense**. Both of these are actually past tenses!

So why does Latin have two different past tenses? Well, remember that in English we also have more than one way of talking about the past: the past progressive tense and the simple past tense. While this is an oversimplification, for right now it is helpful to think of the Latin imperfect tense as essentially the English past progressive tense and the Latin perfect tense as the English simple past tense.

- So if you see an **imperfect tense** verb, you will translate it with an English **past progressive tense**: “was [verb]ing” or “were [verb]ing”.
 - Remember that the English past progressive is also itself sometimes called the **imperfect tense**.
- If you see a **perfect tense** verb, you will translate it with an English **simple past tense**: “[verb]ed”.

The Forms of the Two New Tenses

So how do we recognize the imperfect tense and the perfect tense? What do they look like? Well, we saw in the present tense that part of what Latin endings do is indicate tense. This is true in the other tenses, as well.

The Imperfect Tense

The imperfect tense is easily recognizable by its *-ba-* endings: *-bam*, *-bās*, *-bat*, *-bāmus*, *-bātis*, *-bant*. For now, we only have to worry about the 3rd person singular and plural forms:

- 3rd person singular *-bat* = he/she/it was [verb]ing, so:
 - *amābat* = he was loving
 - *pulsābat* = she was hitting
 - *audiēbat* = it was hearing
- 3rd person plural *-bant* = they were [verb]ing, so:
 - *amābant* = they were loving
 - *pulsābant* = they were hitting
 - *audiēbant* = they were hearing

The Perfect Tense

For right now, you will recognize the perfect tense by its endings *-it* and *-ērunt* and also by the presence of the letter *-v-* right before those endings (the *-v-* is actually a part of the stem, but we'll deal with that later).

- 3rd person singular *-vit* = he/she/it [verb]ed, so:
 - *amāv**it*** = he loved
 - *pulsāv**it*** = she hit
 - *audīv**it*** = it heard
- 3rd person plural *-vērunt* = they [verb]ed, so:
 - *amāv**ērunt*** = they loved
 - *pulsāv**ērunt*** = they hit
 - *audīv**ērunt*** = they heard

Conclusion

Make sure to look out for these two new tenses - the **imperfect tense** and the **perfect tense** - in this week's translation exercises.

The first trap was empty. So was the second one. That old feeling of doubt came over me again. I thought, "It's no use. I'll never catch one and I so need the skin to train my pups."

On the way to my third trap I had to walk through a thick stand of wild cane. It was tough going and my pups started whimpering. I stopped and picked them up.

"We'll be out of this in a few minutes," I said, "and then you'll be all right."

I came plowing out of the matted mass and was right on the trap before I realized it. I was met by a loud squall. I was so surprised I dropped the pups. There he was, my first coon.

He was humped up on the sycamore log, growling and showing his teeth. He kept jerking his front paw, which was jammed deep in the hole I had bored. He was trapped by his own curiosity.

I couldn't move and I felt like my wind had been cut off. I kept hearing a noise but couldn't make out what it was. The movement of the boy pup shook me from my trance. The unidentified sound was his bawling. He was trying to climb up on the log and get to the coon.

I yelled at him and darted in to get hold of his collar. On seeing my movement, the coon let out another squall. It scared me half to death. I froze in my tracks and started yelling again at my pup.

The girl pup worked around behind the coon and climbed up on the log. I screamed at her. She paid no attention to me.

Digging his sharp little claws in the bark, the boy pup made it to the top. He didn't hesitate. Straight down that sycamore log he charged. With teeth bared, the coon waited. When my

pup was about two feet from him, he made a lunge. The coon just seemed to pull my pup up under his stomach and went to work with tooth and claw.

The girl pup saved him. Like a cat in a corn crib, she sneaked in from behind and sank her needlesharp teeth in the coon's back.

It was too much for Old Ringy. He turned the boy pup loose, turned around, and slapped her clear off the log. She came running to me, yelping her head off. I grabbed her up in my arms and looked for the boy pup. When the coon had turned him loose, he too had fallen off the log. He was trying to get back to the coon. I darted in and grabbed him by the hind leg.

With a pup under each arm and running as fast as I could, I lit out for the house. Coming out of the bottoms into a fresh-plowed field I set my pups down so I could get a little more speed. I started yelling as soon as I came in sight of the house.

Mama came flying out with my sisters right behind her. Papa was out by the barn harnessing his team. Mama yelled something to him about a snake. He dropped the harness, jumped over the rail fence, and in a long lope started for me.

Mama reached me first. She grabbed me and shouted, "Where did it bite you?"

"Bite me?" I said. "Why Mama, I'm not bit. I've got him, Mama. I've got him."

"Got what?" Mama asked.

"A big coon," I said. "The biggest one in the river bottoms. He's this big, Mama." I made a circle with my arms as big as a twenty-gallon keg.

Mama just groaned way down deep and covered her face with her hands. Some big tears squeezed out between her fingers. Almost in a whisper, I heard her say, "Thank God; I thought you were snake-bitten."

My sisters, seeing Mama crying, puckered up and started bawling.

"He needs a whipping," the oldest one said, "that's what he needs, scaring Mama that way."

Something busted loose inside me and I cried a little, too.

"I didn't mean to scare Mama," I sniffed. "I just wanted everyone to know I caught a coon."

Up until this time Papa hadn't said a word. He just stood looking on.

"Here now," he said, "let's have none of this crying. He didn't mean to scare anyone."

Taking his handkerchief from his pocket, he stepped over to Mama, put his arm around her, and started drying her eyes.

Mama poked her head around him and glared at me. "Billy Colman," she shouted, "if you ever scare me like that again, I'll take a switch and wear you to a frazzle."

This hurt my feelings and I really did get tuned up. "Everyone's mad at me," I said, "and I haven't done anything but catch the biggest coon on the river."

Mama came over. "I'm sorry," she said. "I didn't mean to be cross, but you did scare me. I thought a rattlesnake had bitten you."

"Now that that's all settled," Papa said, "we had better go get that coon." Looking at Mama, he said, "Why don't you and the girls go with us. I don't think it'll take long."

Mama looked at me, smiled, and turned to the girls. "Would you like to go?" she asked.

Their only answer was a lot of squealing and jumping up and down.

On the way, Mama noticed some blood on my shirt. She stopped me and started looking me over.

"Where did that come from?" she asked. "Did that coon bite you?"

"No, Mama," I said. "I didn't get close enough for him to bite me."

With a worried look on her face, she jerked out my shirt. "You don't seem to be scratched anywhere," she said.

"Maybe this is where it came from," Papa said.

He reached down and picked up my boy pup. His little black nose was split wide open and was bleeding.

I saw a relieved look come over Mama's face.

Looking at me, she started shaking her head. "I don't know," she said. "I just don't know."

"Did that coon get hold of this pup?" Papa asked.

"He sure did, Papa," I said, "but it wasn't the coon's fault. If it hadn't been for Little Ann, he'd have eaten him up."

I told how my dogs had tied into the coon.

Papa laughed as he fondled my pup. "This dog is going to be a coon hound," he said, "and I mean a good one."

The coon started squalling as soon as we came in sight.

"My goodness," Mama said, "you wouldn't think anything so small would be so vicious."

Papa picked up a club. "Now everybody stand back out of the way," he said. "This won't take long."

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My pups were wanting to get to the coon so badly that they were hard to hold. I had to squeeze them up tight to keep them from jumping right out of my arms.

My sisters, with eyes as big as blue marbles, got behind Mama and peeked around her.

Papa whacked the coon a good one across the head. He let out a loud squall, growled, and showed his teeth. He tried hard to get to Papa but the trap held him.

The girls buried their faces in Mama's dress and started bawling. Mama turned her back on the fight. I heard her say, "I wish we hadn't come. Poor thing."

Papa whacked him again and it was all over.

It was too much for Mama and the girls. They left. I heard the tall cane rattling as they ran for the house.

After the coon was killed, I walked over. Papa was trying to get the coon's paw from the trap. He couldn't do it. Taking a pair of pliers from his pocket, he said, "It's a good thing I had these along or we would have had to cut his foot off."

After Papa had pulled the nails, he lifted the coon's paw from the hole. There, clamped firmly in it, was the bright piece of tin.

In a low voice Papa said, "Well, I'll be darned. All he had to do was open it up and he was free, but he wouldn't do it. Your grandfather was right."

A sorrowful look came over Papa's face as he ran his fingers through the soft, yellow hair. "Billy," he said, "I want you to take a hammer and pull the nails from every one of those traps. It's summertime now and their fur isn't any good. Besides, I don't think this is very sportsmanlike. The coon doesn't have

a chance. It's all right this time. You needed this one, but from now on I want you to catch them with your dogs. That way they have a fifty-fifty chance."

"I will, Papa," I said. "That's what I intended to do."

While we were skinning the coon, Papa asked me when I was going to start training my dogs.

"I don't know," I said. "Do you think they're too young?"

"No, I don't think so," he said. "I've heard that the younger they are the better it is."

"Well, in that case," I said, "I'll start tomorrow."

With the help of my oldest sister, we started giving my pups their first lessons. She would hold their collars while I made trails with the hide for them to follow.

I'd climb trees that leaned out over the river, jump out into the water, swim to the other side, and make trails up and down the bank. With a long pole and wire, I'd drag the hide on top of rail fences, swing it through the air, and let it touch the ground twenty or thirty feet away. I did everything with that hide a coon would do and probably a lot of things a coon couldn't do.

It was a beautiful sight to see my pups work those trails. At first they were awkward and didn't know what to do, but they would never quit trying.

Old Dan would get so eager and excited, he would overrun a trail. Where it twisted or turned, he would run straight on, bawling up a storm. It didn't take him long to realize that a smart old coon didn't always run in a straight line.

Little Ann never overran a trail. She would wiggle and twist, cry and whine, and pretty soon she would figure it out.

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At first they were afraid of water. I never would admit it even to myself. I always said that they just didn't like to get wet. They would follow the trail to the stream and stop. Sitting down on their rears, they would cry and beg for help. With a pup under each arm, I'd wade out into the stream and set them down in the cool water. Nine times out of ten, one pup would swim one way and the other one would go just the opposite way. I had a time with this part of their training, but my persistence had no bounds.

It wasn't long until they loved the water. Old Dan would jump as far out as he could and practically knock the river dry. Little Ann would ease herself in and swim like a muskrat for the opposite shore.

I taught my dogs every trick I knew and any new ones I heard about. I taught them how to split up on a riverbank to search for the hidden trail, because it was impossible to tell where a coon would come out of the water. Sometimes he might swim downstream and other times he might swim upstream. Maybe he would come back to the bank he had just left, or he would cross over to the other side. Perhaps he would stop in the middle of the stream on an old drift.

Sometimes he would come out of the water by catching the dangling limbs of a leaning birch and climbing up, never touching the bank. Or he could come out on the same trail he used to go in, and back-track. He would sometimes crawl up under an undermined bank or into an old muskrat den.

One of the favorite tricks of a smart old ringtail is the tree-barking trick. This he accomplished by running far up on the side of a tree and using his stout legs for leverage, springing

twenty or thirty feet away before touching the ground. Dumb hounds trail up to the tree and start bawling treed. I taught my dogs to circle for a good hundred yards to be sure he was still in the tree before bawling.

In order to learn more about coon hunting, I'd hang around my grandfather's store and listen to the stories told by the coon hunters. Some of the tales I heard were long and tall, but I believed them all.

I could always tell when Grandpa was kidding me by the twinkle in his eyes. He told me how a coon could climb right up the fog and disappear in the stars, and how he could leap on a horse's back and run him over your dogs. I didn't care, for I loved to hear the tall tales. Anything that had a coon hair in it I believed completely.

All through that summer and into the late fall the training went on. Although I was worn down to a frazzle, I was a happy boy. I figured I was ready for the ringtails.

Late one evening, tired and exhausted, I sat down by a big sycamore and called my dogs to me. "It's all over," I said. "There'll be no more lessons. I've worked hard and I've done my best. From now on it's all up to you. Hunting season is just a few days away and I'm going to let you rest for I want you to be in good shape the night it opens."

It was wonderful indeed how I could have heart-to-heart talks with my dogs and they always seemed to understand. Each question I asked was answered in their own doggish way.

Although they couldn't talk in my terms, they had a language of their own that was easy to understand. Sometimes

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I would see the answer in their eyes, and again it would be in the friendly wagging of their tails. Other times I could hear the answer in a low whine or feel it in the soft caress of a warm flicking tongue. In some way, they would always answer.



Tecumseh's Resistance

Thanks to Lewis and Clark's maps, white settlers were beginning to head west. Some were searching for a new home. Others hoped to trap rich mountain furs and sell them for money. Hardy trappers began to make homes on the rough sides of the Rocky Mountains. These "mountain men" lived on whatever game they could shoot. They set steel traps for beaver in high mountain streams, dried the furs, and traded them to Native American and Canadian traders. Many of these men married Native American women.

Other settlers began to push farther west, building houses and farms into the Ohio Valley and beyond. Some of the Native American tribes nearby welcomed the settlers. But others feared them—because these white explorers were claiming to own Native American land.

A Shawnee named Tecumseh had learned to fear the whites from his earliest days. His father had been killed by white settlers when Tecumseh was only six. The little boy had been adopted by the Shawnee chief Blackfish. Blackfish had also adopted several white boys who had been kidnapped from settler families. He taught all of the boys, white and Shawnee, to hate and fear the settlers.

When he was fifteen, Tecumseh went with Blackfish to attack settlers who were moving down the Ohio Valley. The Shawnees captured a white man, tied him to a stake, and burned him. Tecumseh was furious. "We do not torture our prisoners!" he shouted at the Shawnee warriors. "We do not use cruelty! We fight with honor!" Tecumseh was so angry that no prisoner was ever mistreated in front of him again.

But although Tecumseh did not want to see the whites tortured, he knew that his people were fighting a war against these invaders—and he was willing to attack and kill whites in battle. He led raids against white towns and forts all through the Northwest Territory. His brothers joined him. Two of them were killed in battle.

As time went on, Tecumseh saw that other tribes were willing to sign treaties with the whites, “selling” land in exchange for gifts. Again, Tecumseh grew angry. “We do not own the land!” he told his followers. “Land is like air and water. No one owns it. We all use it in common!” But Tecumseh saw that more and more Native Americans were beginning to think like white people—believing that they could own land and sell it to each other. He realized that although he could fight battles against the whites, he had a much bigger job: to keep the Native Americans from acting and thinking like the white people who were flooding into their land.

Tecumseh joined forces with his youngest brother, a strange and frightening preacher named Tenskwatawa. As a child, Tenskwatawa had stuck an arrow into his own eye by mistake. From then on, his right eye drooped and the right side of his face was pulled down. His twisted face made his message even more frightening. Tenskwatawa claimed that he had traveled to the Great Spirit’s dwelling place and returned with a message for all Native Americans. The Great Spirit, he declared, was angry that his children were behaving like whites. Unless the Native Americans changed their ways, they would lose their land forever. “Do not drink the white man’s alcohol!” he preached. “Don’t wear their wool and cotton clothes; wear the furs and skins of our people. Do not sign treaties with them, for none of us own the land. Do not marry them!” Because of his preaching, the Native Americans called Tenskwatawa the “Prophet.”

Tecumseh did not seem completely convinced that the Prophet had actually been to visit the Great Spirit. But his brother’s preaching fit with his own ideas. Tecumseh wanted all of the Native American tribes to join together in a *confederacy*, or union, against the white settlers.

Together, the brothers settled in the Indiana Territory. The Prophet preached about the old ways. Tecumseh traveled around, visiting tribes all over the Midwest, trying to convince them to unite together. Many Native Americans came to the settlement, nicknamed "Prophetstown," to join them.

In 1809, the governor of the Indiana Territory, William Henry Harrison, invited tribal chiefs from all over the Northwest to his headquarters at Fort Wayne. He didn't invite Tecumseh, though. He wanted to convince the chiefs to sign another land treaty. He told them that the United States wanted to buy their land and then pointed to the hundreds of soldiers camped nearby. "We could take your land by force," he said. "But we'll pay you generously instead. You'd better accept our offer before we change our minds."

This was exactly the sort of offer that Tecumseh had warned his people about. But, frightened by the soldiers, the chiefs agreed to sell Harrison three million acres of land—for seven thousand dollars.

Angry Native Americans who heard about this deal began to flood to Prophetstown. When Harrison heard about the gathering of hostile warriors, he sent a message to the Prophet. "I will take you to Washington and show you the Great White Father!" the message said. Harrison hoped that if the Prophet saw the President, the White House, and all of Washington, he would be too frightened of the whites to resist them.

Instead, Tecumseh sent back word that *he* would come—not to Washington, but to the governor's own headquarters. He took four hundred armed warriors and eighty war canoes with him! He left his army camped nearby and stalked to the governor's mansion with his bodyguards. An army officer who saw him wrote, "He was one of the finest looking men I ever saw....about six feet high, straight, with large fine features, and altogether a daring bold looking fellow."

Tecumseh refused to go into the mansion, insisting that the governor meet with him in a group of trees nearby. Harrison agreed and ordered chairs brought for everyone. Tecumseh waved the chairs away. "The Great Spirit is my father," he said.

“The earth is my mother, and on her bosom I will lie.” With that, he sat on the grass.

Harrison and his officials sat on the chairs.

“You have stolen this land,” Tecumseh began. “No one can sell it to you. It belongs to no tribe or leader, but to us all. I speak now for all Indians, for I am the head of them all. We do not accept this treaty. It was made by those who were afraid, and greedy.”

“I cannot cancel the treaty,” Harrison said. “And all of the tribes speak a different language. They are all separate. You cannot speak for them all!”

“We are like your United States,” Tecumseh retorted. “Independent, but united together to defend ourselves. How can you object to this?”

Harrison was out-argued. But he still refused to cancel the treaty. When Tecumseh and his bodyguard stalked away, Harrison got ready for a fight. He sent a message to Washington, asking for more soldiers. Tecumseh also went searching for more warriors. He told his brother, the Prophet, to wait for his return and hurried down south, hoping that the Choctaws would join with him against the whites.

The Choctaws refused. And before Tecumseh could return, Harrison marched an army to Prophetstown and camped outside it, on the banks of the Tippecanoe River.

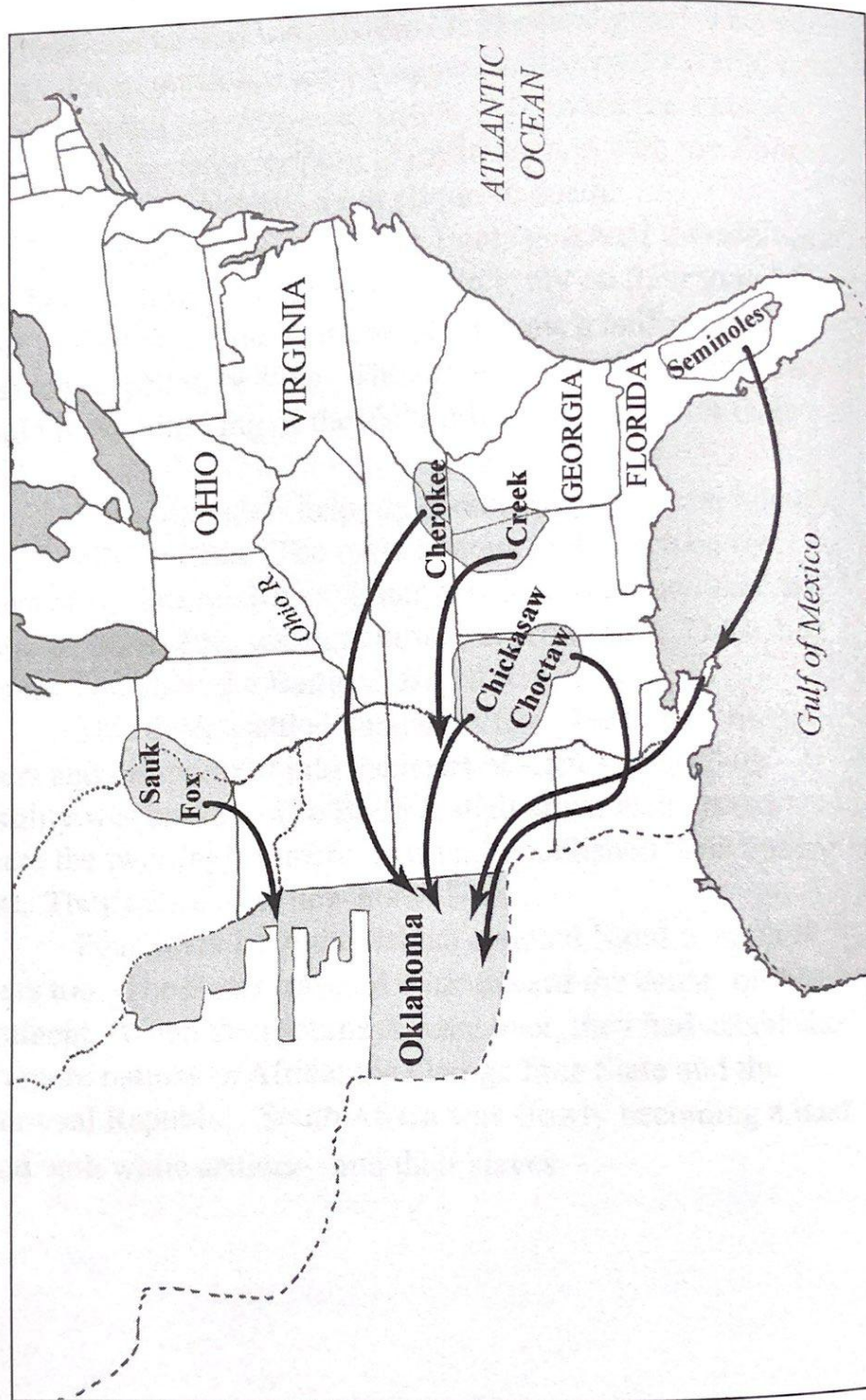
The Prophet didn’t wait for Tecumseh to come back. Instead, he told the Native Americans that his magic had made the white man’s bullets useless and that they could attack Harrison’s army without fear of death! The warriors believed him. They attacked the army camp—but without Tecumseh, they fought wildly and without a plan. Harrison ordered his men to fire. The bullets killed dozens of warriors. The Prophet’s magic had not worked!

The Prophet fled. Frightened, the Native Americans fled too. Harrison marched his army into Prophetstown and burned it to the ground. He even ordered his men to dig up the bodies in the Prophetstown graveyard and throw them on the ground, so that the settlement would be cursed!

When Tecumseh returned from the south, he found his town destroyed, his warriors scattered, and the word spreading to all of his allies that the Prophet was a fraud. Only a few loyal warriors remained. But they had captured the Prophet as he ran from the battlefield and tied him up. Tecumseh put his knife to his brother's throat but then pulled it away and shoved the Prophet out of his sight. He would not kill Tenskwatawa.

For the next twenty years, the Prophet would slink from village to village, a dishonored beggar. But Tecumseh's attempt to unite the Native Americans had failed. His confederation had been destroyed, along with Prophetstown.

The Trail of Tears



Chapter Thirty-Eight American Tragedies



The Trail of Tears

When the Boers settled in the southern African plains, they drove away the native tribes who lived there. But over in the United States, the American government had a different way of doing things. If American settlers wanted to build their houses on land where Native American tribes lived, they were supposed to pay for the land and sign a treaty explaining that the Native Americans had agreed to sell it.

Often, the Native Americans weren't given much choice. And they were hardly ever paid enough money for their land. White settlers bought entire forests and farms with handfuls of cheap jewelry and a few pounds of tobacco. But at least the settler who handed over the jewelry had to admit that the Native American tribe had "owned" the land first!

By 1830, more and more Americans wanted to "buy" land from the Native Americans who lived in the Ohio Valley and in the southeast states. The United States was growing. Settlers coming from Europe, called *immigrants*, didn't want to go all the way out to the empty western lands of the Louisiana Purchase, where there were no roads or stores or doctors. They wanted to settle near cities and rivers.

But the Native American tribes who lived on the valuable land in the Southeast and Midwest were too slow to hand those lands over. Many tribes refused to sell any of their land at all!

So the President of the United States, Andrew Jackson, signed a law called the Indian Removal Act. The Indian Removal Act said that the President could now take Native American land without asking for it or paying for it, as long as he gave the Native Americans who lived there an equal amount of land in the unsettled prairies of the west.

The Indian Removal Act seemed like a good idea to Congress and President Jackson. For over a hundred years, whites and Native Americans had quarreled, fought, and killed each other. Now, white settlers could live near each other, and the Native Americans could have their own part of the country, further away.

But to the Native American tribes, the Indian Removal Act meant that they would lose their homes—without any way of getting them back. Many Native Americans had begun to follow white customs. For years, they had lived in log houses, growing fruit trees and planting gardens. Their children went to schools run by white missionaries. Many Native Americans wore European clothes and had taken English names. In the Southeast, five Indian tribes—the Chickasaw, Choctaw, Seminole, Cherokee, and Creek—had been nicknamed the “Five Civilized Tribes,” because so many of them lived just like white settlers. Cherokee Indians had their own towns, with stores and churches. They published a newspaper written in both Cherokee and English. Cherokee Indians married white men and women and had children. Cherokee chiefs had adopted English names, like John Ross and David Vann. Some Cherokee even owned plantations and kept African slaves to work the land. They were no longer the same people who had once roamed through the forests, moving their tents and carrying their belongings with them.

But the Indian Removal Act decreed that all must go!

Some of the Five Civilized Tribes decided that they could not fight the United States government. The Chickasaw loaded wagons, preparing to leave. The Choctaw Indians began their journey west in the middle of the winter, the year after the Act was passed. The government had promised to give them money to buy food and clothes during the journey, but the money never arrived. The Choctaw ran out of blankets and coats. Many trudged toward their new homes barefoot, in the snow.

The Creek Indians refused to go. So United States soldiers came to their homes, chained them together, and marched them toward the west. Hungry, cold, and loaded down

with chains, thirty-five hundred Creek Indians died before reaching the new Indian territory.

The Cherokee and the Seminole tribes fought the hardest to keep their homes. Down in Florida, the Seminole picked up weapons and went to war. It took the United States seven years to defeat the Seminole and drive them out of Florida. The seven-year fight is now known as the Second Seminole War.

The Cherokee Indians tried fighting in a different way. They went to court to keep their homes. Judges heard them argue that they deserved to live on their own farms. The court hearings dragged on for almost eight years. But the governor of Georgia, where many Cherokee lived, didn't bother to wait for the judges' decisions. He divided up the Cherokee land and started to give it out to settlers who had won a lottery.

Finally, seven hundred soldiers invaded the Cherokee lands in Georgia, broke down the doors of Cherokee cabins and

plantation houses, and chased the families who lived there outside.

"They were dragged from their houses," wrote a Baptist minister who had watched the invasion, "...allowed no time to take anything with them except the clothes they had on....It is the work of war in the time of peace." They were herded into camps where they were organized into bands for the long walk west. Meanwhile, white settlers—and their own neighbors—looted their



A Cherokee Indian

houses and farms, stealing their furniture, clothes, jewelry, books, dishes, and silverware! Even the soldiers who guarded them felt sick with anger over their actions. "When I went into the army," one of them muttered, "nobody told me I'd have to herd people like cattle." "I [have seen] men shot to pieces [in war] by the thousands," another soldier wrote later, "but the Cherokee Removal was the cruelest work I ever knew."

In June of 1838, the Cherokee were marched toward the new Indian Territory in Oklahoma, eight hundred miles away. On this long, wretched journey, they marched through drought, dying of thirst. Measles and other diseases began to spread along the long line. "Almost every child and many grown persons...are sick with the whooping cough," a soldier wrote, two weeks into the journey.

They marched until winter came and snow howled down on them. At night, they camped in the open, with nothing but blankets and campfires to keep them warm: no tents, no shelter. A white traveler passing by wrote, "We found the poor Cherokee Indians camped for the night by a road side, under a severe fall of rain, with...the cold wet ground for a resting place after the fatigue of the day....We learned from the inhabitants on the road where the Indians passed, that they buried fourteen or fifteen at every stopping place." More weak and sick Cherokee lay down to rest and never got up. Every morning, the Cherokee had to bury their own dead before marching on.

It took the Cherokee nation a year to walk to Oklahoma. One out of every four Cherokee died on the journey. The Cherokee called their journey *nunna-da-ul-tsun-yi*, or "The road where we cried." Today, this journey is called the Trail of Tears.



Chief Joseph's Surrender



Chief Joseph of the Nez Perce (1840?-1904) was known to his people as "Thunder Traveling to the Loftier Mountain Heights." He led his people in an attempt to resist the takeover of their lands in the Oregon Territory by white settlers. In 1877, the Nez Perce were ordered to move to a reservation in Idaho. Chief Joseph agreed at first. But after members of his tribe killed a group of settlers, he tried to flee to Canada with his followers, traveling over 1500 miles through Oregon, Washington, Idaho, and Montana. Along the way they fought several battles with the pursuing U.S. Army. Chief Joseph spoke these words when they finally surrendered on October 5th, 1877.

“Tell General Howard I know his heart. What he told me before, I have it in my heart. I am tired of fighting. Our Chiefs are killed; Looking Glass is dead, Ta Hool Hool Shute is dead. The old men are all dead. It is the young men who say yes or no. He who led on the young men is dead. It is cold, and we have no blankets; the little children are freezing to death. My people, some of them, have run away to the hills, and have no blankets, no food. No one knows where they are - perhaps freezing to death. I want to have time to look for my children, and see how many of them I can find. Maybe I shall find them among the dead. Hear me, my Chiefs! I am tired; my heart is sick and sad. From where the sun now stands I will fight no more forever.”

Chief Joseph - Thunder Traveling to the Loftier Mountain Heights - 1877

EIGHT

THE DAY HUNTING SEASON OPENED, I was as nervous as Samie, our house cat. Part of that seemingly endless day was spent getting things ready for the coming night.

I cleaned my lantern and filled it full of oil. With hog lard I greased my boots until they were as soft as a hummingbird's nest. I was grinding my ax when Papa came around.

He smiled as he said, "This is the big night, isn't it?"

"It sure is, Papa," I said, "and I've waited a long time for it."

"Yes, I know," he said. "I've been thinking—there's not too much to do around here during the hunting season. I'm pretty sure I can take care of things, so you just go ahead and hunt all you want to."

"Thanks, Papa," I said. "I guess I'll be out pretty late at night, and I'll probably have to do a lot of sleeping in the daytime."

Where the Red Fern Grows

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Papa started frowning. "You know," he said, "your mother doesn't like this hunting of yours very much. She's worried about you being out all by yourself."

"I can't see why Mama has to worry," I said. "Haven't I been roaming the woods ever since I was big enough to walk, and I'm almost fourteen now."

"I know," said Papa. "It's all right with me, but women are a little different than men. They worry more."

"Now just to be on the safe side, I think it would be a good idea for you to tell us where you'll be hunting. Then if anything happens, we'll know where to look."

I told him I would, but I didn't think anything was going to happen.

After Papa had left, I started thinking. "He doesn't even talk to me like I was a boy any more. He talks to me like I was a man." These wonderful thoughts made me feel just about as big as our old red mule.

I had a good talk with my dogs. "I've waited almost three years for this night," I said, "and it hasn't been easy. I've taught you everything I know and I want you to do your best."

Little Ann acted like she understood. She whined and saved me a wash job on my face. Old Dan may have, but he didn't act like it. He just lay there in the sunshine, all stretched out and limber as a rag.

During supper Mama asked me where I was going to hunt.

"I'm not going far," I said, "just down on the river."

I could tell Mama was worried and it didn't make me feel too good.

"Billy," she said, "I don't approve of this hunting, but it

looks like I can't say no; not after all you've been through, getting your dogs, and all that training."

"Aw, he'll be all right," Papa said. "Besides, he's getting to be a good-size man now."

"Man!" Mama exclaimed. "Why, he's still just a little boy."

"You can't keep him a little boy always," Papa said. "He's got to grow up some day."

"I know," Mama said, "but I don't like it, not at all, and I can't help worrying."

"Mama, please don't worry about me," I said. "I'll be all right. Why, I've been all over these hills, you know that."

"I know," she said, "but that was in the daytime. I never worried too much when it was daylight, but at night, that's different. It'll be dark and anything could happen."

"There won't be anything happen," I said. "I promise I'll be careful."

Mama got up from the table saying, "Well, it's like I said, I can't say no and I can't help worrying. I'll pray every night you're out."

The way Mama had me feeling, I didn't know whether to go hunting or not. Papa must have sensed how I felt. "It's dark now," he said, "and I understand those coons start stirring pretty early. You had better be going, hadn't you?"

While Mama was bundling me up, Papa lit my lantern. He handed it to me, saying, "I'd like to see a big coonskin on the smokehouse wall in the morning."

The whole family followed me out on the porch. There we all got a surprise. My dogs were sitting on the steps, waiting for me.

Where the Red Fern Grows

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I heard Papa laugh. "Why, they know you're going hunting," he said, "know it as well as anything."

"Well, I never," said Mama. "Do you really think they do? It does look like they do. Why, just look at them."

Little Ann started wiggling and twisting. Old Dan trotted out to the gate, stopped, turned around, and looked at me.

"Sure they know Billy's going hunting," piped the little one, "and I know why."

"How do you know so much, silly?" asked the oldest one.

"Because I told Little Ann, that's why," she said, "and she told Old Dan. That's how they know."

We all had to laugh at her.

The last thing I heard as I left the house was the voice of my mother. "Be careful, Billy," she said, "and don't stay out late."

It was a beautiful night, still and frosty. A big grinning Ozark moon had the countryside bathed in a soft yellow glow. The starlit heaven reminded me of a large blue umbrella, outspread and with the handle broken off.

Just before I reached the timber, I called my dogs to me. "Now the trail will be a little different tonight," I whispered. "It won't be a hide dragged on the ground. It'll be the real thing, so remember everything I taught you and I'm depending on you. Just put one up a tree and I'll do the rest."

I turned them loose, saying, "Go get 'em."

They streaked for the timber.

By the time I had reached the river, every nerve in my body was drawn up as tight as a fiddlestring. Big-eyed and with ears open, I walked on, stopping now and then to listen. The way I

was slipping along anyone would have thought I was trying to slip up on a coon myself.

I had never seen a night so peaceful and still. All around me tall sycamores gleamed like white streamers in the moonlight. A prowling skunk came wobbling up the riverbank. He stopped when he saw me. I smiled at the fox-fire glow of his small, beady, red eyes. He turned and disappeared in the underbrush. I heard a sharp snap and a feathery rustle in some brush close by. A small rodent started squealing in agony. A night hawk had found his supper.

Across the river and from far back in the rugged mountains I heard the baying of a hound. I wondered if it was the same one I had heard from my window on those nights so long ago.

Although my eyes were seeing the wonders of the night, my ears were ever alert, listening for the sound of my hounds telling me they had found a trail.

I was expecting one of them to bawl, but when it came it startled me. The deep tones of Old Dan's voice jarred the silence around me. I dropped my ax and almost dropped my lantern. A strange feeling came over me. I took a deep breath and threw back my head to give the call of the hunter, but something went wrong. My throat felt like it had been tied in a knot. I swallowed a couple of times and the knot disappeared.

As loud as I could, I whooped, "Who-e-e-e. Get him, Dan. Get him."

Little Ann came in. The bell-like tones of her voice made shivers run up and down my spine. I whooped to her. "Who-e-e-e. Tell it to him, little girl. Tell it to him."

This was what I had prayed for, worked and sweated for, my own little hounds bawling on the trail of a river coon. I don't know why I cried, but I did. While the tears rolled, I whooped again and again.

They straightened the trail out and headed down river. I took off after them as fast as I could run.

A mile downstream the coon pulled his first trick. I could tell by my dogs' voices that they had lost the trail. When I came to them they were out on an old drift, sniffing around.

The coon had pulled a simple trick. He had run out on the drift, leaped into the water, and crossed the river. To an experienced coon hound, the crude trick would have been nothing at all, but my dogs were just big, awkward pups, trailing their first live coon.

I stood and watched, wondering if they would remember the training I had given them. Now and then I would whoop, urging them on.

Old Dan was having a fit. He whined and he bawled. He whimpered and cried. He came to me and reared up, begging for help.

"I'm not going to help you," I scolded, "and you're not going to find him out on that drift. If you would just remember some of the training I gave you, you could find the trail. Now go find that coon."

He ran back out on the drift and started searching.

Little Ann came to me. I could see the pleading in her warm gray eyes. "I'm ashamed of you, little girl," I said. "I thought you had more sense than this. If you let him fool you this easily, you'll never be a coon dog."

She whined, turned, and trotted downstream to search again for the lost trail.

I couldn't understand. Had all the training I had given them been useless? I knew if I waded the river they would follow me. Once on the other side, it would be easy for them to find the trail. I didn't want it that way. I wanted them to figure it out by themselves. The more I thought about it, the more disgusted I became. I sat down and buried my face in my arms.

Out on the drift, Old Dan started whining. It made me angry and I got up to scold him again.

I couldn't understand his actions. He was running along the edge of the drift, whimpering and staring downriver. I looked that way. I could see something swimming for the opposite shore. At first I thought it was a muskrat. In the middle of the stream, where the moonlight was the brightest, I got a good look. It was Little Ann.

With a loud whoop, I told her how proud I was. My little girl had remembered her training.

She came out on a gravel bar, shook the water from her body, and disappeared in the thick timber. Minutes later, she let me know she had found the trail. Before the tones of her voice had died away, Old Dan plowed into the water. He was so eager to join her I could hear him whining as he swam.

As soon as his feet touched bottom in the shallows, he started bawling and lunging. White sheets of water, knocked high in the moonlight by his churning feet, gleamed like thousands of tiny white stars.

He came out of the river onto a sand bar. In his eagerness, his feet slipped in the loose sand and down he went. He came

out of his roll, running and bawling. Ahead of him was a log jam. He sailed over it and disappeared down the riverbank. Seconds later I heard his deep voice blend with the sharp cries of Little Ann.

At that moment no boy in the world could have been more proud of his dogs than I was. Never again would I doubt them.

I was hurrying along, looking for a shallow riffle so I could wade across, when the voices of my dogs stopped. I waited and listened. They opened again on my side of the stream. The coon had crossed back over.

I couldn't help smiling. I knew that never again would a ringtail fool them by swimming the river.

The next trick the old fellow pulled was dandy. He climbed a large water oak standing about ten feet from the river and simply disappeared.

I got there in time to see my dogs swimming for the opposite shore. For half an hour they worked that bank. Not finding the trail, they swam back. I stood and watched them. They practically tore the riverbank to pieces looking for the trail.

Old Dan knew the coon had climbed the water oak. He went back, reared up on it, and bawled a few times.

"There's no use in doing that, boy," I said. "I know he climbed it, but he's not there now. Maybe it's like Grandpa said, he just climbed right on out through the top and disappeared in the stars."

My dogs didn't know it, but I was pretty well convinced that that was what the coon had done.

They wouldn't give up. Once again they crossed over to the other shore. It was no use. The coon hadn't touched that

Meter in Poetry

What is meter?

- **Meter: noun.**

- *The rhythm of a piece of poetry, determined by the number and length of feet in a line.*

“Length of feet”? No worries, we will come back to what the definition means by this later.

Let's start with the basics!

Syllables

- A syllable is a beat. When a word has one beat, we say it has one syllable; when a word has two beats, we say it has two syllables.

(Just like in Spalding!)

Examples:

1. Boat (1 syllable)
2. Count less (2 syllables)
3. En vi ron ment (4 syllables)
4. Au to bi o graph i cal (7 syllables)

Syllables

- Practice!
- Directions: On your notes page, number how many syllables are contained in the lines.

Example:

1. I wake to sleep, and take my waking slow. Number of syllables: **10**

— — — — — — — — — —

Stressed Syllables

- People automatically adjust their words so that some syllables are spoken with **emphasis** and some are spoken **softer**.

Our speech naturally fades in and out and moves up and down as we speak!

- Just like in spalding, when we are looking for the “emphasized or accented syllable” we hear the syllable **louder** that we are stressing. This is called a STRESSED syllable.

Stressed syllables are marked with an accent mark (a slanted line above the syllable kind of like a sideways exclamation point).

Examples: Pur ple Ex cel lent

Unstressed Syllables

- When we **soften** a syllable and allow it to fade into the background we are not stressing the syllable. This is called an UNSTRESSED syllable.
- Unstressed syllables are marked with a “U”.

• Examples: Pur ple Ex cel lent

Feet

- Meter is measured in *feet*. (Not the same as a ruler or the metric system)
- A *foot* is a combination of two or three syllables that are stressed and unstressed.
- The number of syllables and the location of the stress is what determines what type of *foot* the meter is classified as.

Iamb

- Lines in poetry are labeled in two parts:
 - **Part 1** is the type of foot or the rhythm of stressed and unstressed syllables
 - (iamb, trochee, anapest, and dactyl)
 - **Part 2** is the number of feet in the line
 - (monometer, dimeter, trimeter, tetrameter, etc).

We are just going to focus on mastering one type!

Part 1 Type of Foot:

The Iamb (adj. Iambic) has a unstressed-stressed rhyme. Pattern: u /

- Example:

 u
New York

Pentameter

Part 2 is the number of feet in the line.

The number of feet determines how many rhyme patterns you have.

For example. If an iamb has a pattern of unstressed-stressed then one of those combinations is one foot.

U /

To be This pattern equals one foot!

U / U /

To be or not This line equals two feet!

Pentameter

The number of feet per line have special names:

- 1--MONOMETER
- 2--DIMETER
- 3--TRIMETER
- 4--TETRAMETER
- 5--PENTAMETER
- 6--HEXAMETER
- 7- HEPTAMETER
- 8- OCTAMETER



We are going to focus on pentameter!

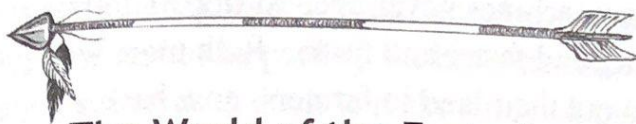
Your turn!

Complete the examples on your notes page.

Don't forget to watch the video on meter!

Chapter Thirty-One

A Different Kind of Rebellion



The World of the Factories

Do you remember walking down the road between the poplar trees, into the little English village where a weaver sat behind his loom and his wife spun thread? A nineteenth-century writer named Andrew Ure described the weaver's life as a healthy, happy way to earn money. The "dwelling and small gardens [were] clean and neat....the family well clad," he wrote. "The workshop of the weaver was a rural cottage from which, when he was tired of sedentary labour, he could sally forth into his little garden."

Across Europe, millions of people worked at home along with their whole families. If the mother and father wove cloth, the children worked too: a ten-year-old sorted cotton; a teenaged daughter spun thread; an older son tended the sheep and sheared their wool. Even a toddler might help by winding thread carefully onto a roll! When the family finished making their cloth, they would travel to market and sell it, using the money to buy food and tools. In the summer, they might spend more time tending their garden plot of carrots, cabbages, and beans; in the winter, when frost covered the ground, the family would go back to making cloth all day long.

Now let's go forward in time thirty years. Andrew Ure describes the very same village where the small gardens and cottages stood: "There are hundreds of factories....At the side of each factory there is a great chimney which belches forth black smoke and indicates the presence of the powerful steam engines....The houses have become black on account of the smoke. The river....is so tainted...that the water resembles the contents of a [black] dye-vat."

What has happened to England?

Factories are springing up all over the countryside. Now, machines can spin, weave, and knit better than the men and women who once made thread and cloth. Thanks to steam power, these machines never need to stop. Cloth is spun, woven and cut faster and faster and faster. Rich men, who might once have rented out their land to farmers, now have a better way to make money. They can buy a factory and hire workers to run the machines. The factory will make so much cloth that the owner can sell the cloth, pay the workers the same amount they would have earned making cloth at home, and still have plenty of money left over!

All over England, wealthy landowners began to buy and build factories. Soon, they discovered that they could sell the cloth made in factories much more cheaply than the cloth made by village workers in their homes. More and more people bought the cheap cloth, not the handmade cloth.

Now, weavers who worked at home couldn't get anyone to buy *their* cloth unless they sold it for less. Since they made less money from each piece, they had to work longer. Weavers worked for sixteen hours a day, their fingers sore and their eyes red—and still couldn't make enough money to buy food.

They had only one choice: leave their homes and go to work in the factories.

Today, most people “go to work.” But back at the beginning of the nineteenth century, “going to work” was a brand new idea. Families had always worked together in their homes. Now, they were leaving their homes to go somewhere else in order to make a living.

The work at factories was different than the work at home. Weavers were used to making cloth from beginning to end: getting the wool, combing it, spinning it, weaving it, cutting it, and selling it. But in the factory, each worker only did one task—like tying threads on a spinning machine—over and over again, all day long.

An old-fashioned weaver didn't need anyone to *make* him work. If he made many pieces of cloth, he earned a lot of money when he sold his goods. If he was lazy or took a nap

instead, he didn't make any money at all—and he went hungry! That was enough to make him work hard.

But in factories, workers couldn't be paid for each piece of cloth finished. Each worker was only doing one small part of the work. So they had to be paid by the hour instead. Now, someone had to watch over them to make sure that they spent all of their time working hard! These watchers were called *overseers*. Overseers treated factory workers with cruelty to make sure they were earning their money. Workers had to pay fines for looking out of windows, speaking to each other, or taking more than fifteen minutes to eat a meal. Sometimes they weren't allowed to go to the bathroom all day long!

All too soon, factory owners realized that women and children could run machines just as well as men—and that they were cheaper to hire! Men could no longer make a living working at home. Now, they often couldn't get factory jobs either. But children worked long hours so that their families would have enough money to live. They had to stand all day in front of machines—so long that many children had bow legs, deformed from standing. They had to pay fines if they talked or made faces at each other. In cotton factories, the cotton gave off fine white dust that the children breathed in all day. Their lungs quit working properly. Many of them died!

The English poet William Blake protested that the factories, or *mills*, were turning England from a "Jerusalem," a Christian kingdom, into a country that God would judge. He wrote,

And did the Countenance Divine
Shine down upon those clouded hills;
And was Jerusalem builded here
Among those dark Satanic mills?

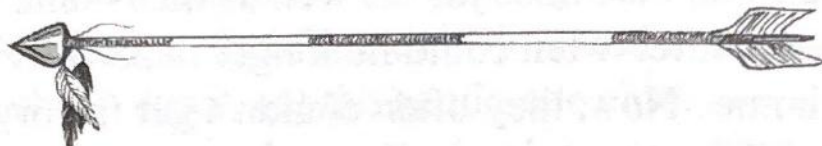
The poet William Wordsworth complained that the lives of people were being sacrificed to make money:

Men, maidens, youths,
Mothers and little children, boys and girls,
Enter, and each the wonted task resumes
Within this temple, where is offered up

To Gain, the master idol of the realm,
Perpetual sacrifice.

The British government did try to pass some laws to make the factories better places. But the rich men who made money from the factories objected! They protested so loudly that only very weak laws could be passed. One law, or Factory Act, said that children could only work twelve hours per day! Another Factory Act said that a child had to be eight before going to work in a factory.

Now it was perfectly legal for an eight-year-old to work from sunrise to sunset in a factory. All over England—and soon, across Europe—children, women, and men worked long, cold, miserable hours, earning just enough money to buy food.



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Frame - Breaking.

£.200 Reward.

WHEREAS, on Thursday Night last, about Ten o'Clock, a great Number of Men, armed with Pistols, Hammers and Clubs, entered the Dwelling-house of *George Ball*, framework-knitter, of Lenton, near Nottingham, disguised with Masks and Handkerchiefs over their Faces, and in other ways,---and after striking and abusing the said *George Ball*, they wantonly and feloniously broke and destroyed five STOCKING FRAMES, standing in the Work-shop; four of which belonged to *George Ball*, and one Frame, 40 gage, belonging to Mr. *Francis Braithwaite*, hosier, Nottingham: all of which were working at the FULL PRICE.

NOTICE IS HEREBY GIVEN,

THAT if any Person will give Information of the Offender or Offenders, or any one of them who entered such Dwelling-house and were concerned in such Felony, he or she shall receive a Reward of

£. 200,

to be paid on Conviction, in the Proportions following, (viz.) £50 under the King's Proclamation, £25 from the Committee of the Corporation of Nottingham, and £125 from the said *Francis Braithwaite*.

WE, the under-signed Workmen of the above-named *George Ball*, do hereby certify that we were employed in working the under-mentioned Frames, on the Work and at the Prices hereinafter stated, when the Mob came to break them,—that we had never been abated in our Work, either by Mr. Braithwaite, the hosier, who employed the Frames, or by the said *George Ball*, our master; of whom we never complained, or had any Reason so to do.

QUALITY OF WORK.	PRICE.	WORKMEN.	OWNERS.
40 Gauge, Single Shape, Narrowed Two-plain,	Maid's, 29 Shillings per Dozen,	Thomas Rew,	Mr. Braithwaite.
36 Gauge, Single Shape, Narrowed Two-plain,	Men's, 29 Shillings per Dozen,	John Jackson,	George Ball.
38 Gauge. Single Shape, Narrowed Two-plain,	Maid's, 26 Shillings per Dozen,	Thomas Naylor,	George Ball.

NB. The other two Frames were worked to another Hosier, but at the Full Price.

THOMAS REW,
JOHN JACKSON,
THOMAS NAYLOR.

Nottingham, 25th January, 1812.

The Luddites

Not everyone objected to the spread of factories. Over in the United States, the politician Alexander Hamilton argued that factories were good for the country. In the old days, people who had never been trained to weave, farm, or work in some other craft became beggars or thieves. Now they could find work in the factories. Hamilton also thought that factory owners were doing a *good* thing when they hired children. “In general,” he wrote, “women and children are rendered more useful, and the latter more early useful, by [factories], than they would otherwise be.”

But weavers, spinners, and others who *were* trained in a craft had been pushed out of their jobs. Now, a skilled weaver who had once taken pride in making beautiful cloth had to go to a factory, work long hours in a badly-lit and noisy room, and perform one boring task over and over again.

In England, weavers and spinners began to attack factories and smash the machines that were changing their lives! They were joined by other workers—carpenters, blacksmiths, and tailors—who realized that factories might soon force *them*

out of their livelihoods as well! An underground army formed. Their leader was a mysterious man who called himself "General Ned Ludd." No one knows who he was or why he chose this name. But all over England, workmen joined in General Ludd's Army. They became known as Luddites.

Luddites had their own regiments, weapons, and secret handshakes. They had a secret password: "Free Liberty!" They sang war songs as they marched up to factories, waving axes and hammers. "How gloomy and dark is the day, when men have to fight for their bread!" one song went. Another song warned:

You tyrants of England,
Your race may soon be run.
You may be brought to account
For what you've solely done.

Luddites broke hundreds of machines and shut down dozens of factories. To the poorest factory workers, Luddites were heroes! A popular song of the day began,

Chant no more your old rhymes about bold Robin Hood
His feats I but little admire.
I will sing the Achievements of General Ludd
Now the Hero of Nottinghamshire!

Today, people who are suspicious of new machines like computers are sometimes called Luddites. But the Luddites weren't just smashing the machines because they didn't like scientific discoveries and new advances. The Luddites were angry that their whole way of living was changing. They couldn't make a living at home any more. They *had* to work in the factories—or starve! And factory owners had the power to choose how much money the workers would make and how many hours they had to work. The workers themselves had no power at all. They couldn't demand to be paid a decent amount of money. They couldn't ask for shorter days or weekends off. They couldn't even ask for proper light and reasonable lunch breaks. They worked six days every week and sometimes a half day on Sunday too. England was so full of hungry people that factory owners could just fire anyone who complained and hire someone else!

The protests and the machine-breakings went on for years. But finally, the British government joined with the factory owners to stop the protests. New laws made breaking a factory machine a capital crime. Anyone who smashed a machine could be put to death! Soldiers were marched in to protect the factories. Workers were told that they were lucky to have work at all.

Many of them didn't feel lucky. "What with the heat and the hard work," one factory worker complained, "[it feels] as if the Devil was after us.... We are told to be content in the station of Life to which the Lord has placed us. But I say the Lord never did place us there so we have no Right to be content."

Over in the United States, leaders such as Thomas Jefferson agreed. "While we have land to labor," Thomas Jefferson wrote back to Alexander Hamilton, "let us never wish to see our citizens occupied at a workbench.... let our workshops remain in Europe." Jefferson thought that the United States would be a much better place to live if all of the cotton, wool, and wood were shipped over to Europe, to the factories there, and the finished goods were then shipped back. Factories, Jefferson complained, would "add just so much to the support of pure government, as sores do to the strength of the human body."

But businessmen in the United States couldn't resist the money that factories brought. Soon the factory system spread to the United States as well. Factories were built at the edges of the cities of Boston and New York. Factory workers lived near the factories, in tiny, shabby houses built just for them. Because they made so little money, two or three families might live together in a single house. So many people crowded to these "worker settlements," or *slums*, that cities couldn't keep up with building roads or laying down pipes for fresh water. Slums often had open sewers, where human waste mixed with the drinking water. Trash in the water decayed and gave off gases. The water became so foul and filled with gases that in hot weather it would actually catch on fire. Diseases like typhoid

and cholera spread through the water and killed thousands of factory workers. In the city of Boston, an Irishman who had come from Britain to find factory work could expect to live only fourteen years before dying of overwork and disease. Thomas Jefferson was right. The factory slums had become "sores" on the body of the United States!

Appendices, Spalding Rules

1. The letter q is the only letter that cannot be alone for its sound (qu).
2. The letter c before e, i, or y says s (cent, city, cycle).
3. The letter g before e, i, or y may say j (page, giant, gym).
4. Vowels a, e, o, and u may say ā, ē, ō, ū at the end of a syllable (na vy, me, o pen, mu sic).
5. The letters i and y may say ī at the end of a syllable (si lent, my). They usually say ĩ (big, gym).
6. The letter y, not i, is used at the end of an English word.
7. There are five kind of silent final e's. In short words, such as me, she, and he, the e says ē, but in longer words where a single e appears at the end, the e is silent. We retain the first four kinds of silent e's because we need them. The fifth kind is probably a relic from Old English. The abbreviation for rule 7 is not written in student notebooks, but the job of the silent final e is marked for each word as encountered.
8. The phonogram or may say er when it follows w (work).
9. For one-syllable words that have one vowel and end in one consonant (hop), write another final consonant (hop + ped) before adding suffixes (endings) that begin with a vowel. (Referring to rule 9 as the one-one-one rule helps students remember the criteria for applying the rule. This rule does not apply to words ending in x because x has two sounds.)
10. Words of multiple syllables (begin) in which the second syllable (gin) is accented and ends in one consonant, with one vowel before it, need another final consonant (be gin' + ning) before adding a suffix (ending) that begins with a vowel. (Refer to rule 10 as the two-one-one rule. This rule is applied more consistently in American English than in British English.)
11. Words ending with a silent final e (come) are written without the silent final e when adding a suffix (ending) that begins with a vowel.
12. After c we use ei (receive). If we say a, we use ei (vein). In the list of exceptions, we use ei.
13. The phonogram sh is used at the beginning of the base word (she) or at the end of a syllable (dish, finish).

Appendices, Spalding Rules

14. The phonograms ti, si, and ci are used to say sh at the beginning of a syllable but not the first syllable (na tion, ses sion, fa cial).
15. The phonogram si is used to say sh when the syllable before it ends in an s (ses sion) or when replacing /s/ in a base word (tense → ten sion).
16. The phonogram si may say zh (vi sion).
17. We often double l, f, and s following a single vowel at the end of a one-syllable word (will, off, miss). Rule 17 sometimes applies to s in two-syllable words like recess.
18. We often use the phonogram /ay/ to say ā at the end of a base word, never the phonogram /a/ alone.
19. Vowels i and o may say ī and ō if followed by two consonants at the end of a base word (kind, old).
20. The letter s or z never follows x.
21. All, written alone, has two l's, but when it is written in a compound word, only one l is written (al so, al most).
22. Full, written alone, has two l's, but when written as an ending, only one l is written (beau ti ful).
23. The phonogram /dge/ may be used only after a single vowel that says ä, ě, ĭ, ō, or ū at the end of a base word (badge, edge, bridge, lodge, budge).
24. When adding a suffix (ending) to a word that ends with y, change y to i before adding the ending (baby → babies, try → tries).
25. The phonogram ck may be used only after a single vowel that says ä, ě, ĭ, ō, or ū at the end of a syllable (back, neck, lick, rock, duck).
26. Words that are the names or titles of people, places, books, days, or months are capitalized (Mary, Honolulu, Monday, July).
27. Words beginning with the sound z are usually spelled with z, never s (zoo).
28. The phonogram /ed/ is used to form past tense verbs.
29. Words are usually divided between double consonants within a base word. We hear the consonant in syllable two but add it to syllable one because the vowel in syllable one does not say its name (app le, bet ter, com mon, sup per).

Where the Red Fern Grows

Name: _____ # _____

Unfamiliar Words & Vocabulary Guide

Chapters 7-8

Date: _____



Term	Definition	Page #
bulldogged	(adj.) – describing the strong and muscular stance and determination of a bulldog	62
Mister Ringtail	(n.) – a racoon	62
wiley	(adj.) – it is now spelled wily. It means full of clever tricks.	62
woe	(n.) – feeling of great pain or sadness	62
bit & brace	(n.) – a hand tool used to drill holes.	62
bore	(v.) – to make a hole or tunnel in something with a tool or by digging.	63
gouge	(v.) – to cut a deep hole in something.	64
churn	(n.) – a container in which cream is stirred or shaken to make butter.	66
switches	(n.) – flexible rods made from trees.	67
submerged	(v.) – to go under water.	67
canebrake	(n.) – a thicket of cane	68
deliberately	(v.) – in a way that is meant, intended, or planned	69
lit	(v.) – to hurry and go quickly	69, 71
frazzle	n.) – the state of being hard, dry and easily broken.	72
fondled	(v.) – to touch in a gentle way	73
bawling treed	(v.) – what the barking of hounds do when they think they have a raccoon	77

	trapped in a tree.	
rustle	(n.) – a quick series of soft, light sounds caused when things (such as leaves) rub against each other	83
baying	(v.) – to bark with long sounds	83
bawl	(v.) – to cry very loudly	83
jarred	(v.) – to have a harsh or unpleasant effect on someone or something	83
drift	(n.) – something such as driftwood washed ashore	84
riffle	(n.) – a shallow part of a streambed causing broken water	86

Where the Red Fern Grows

Chapter 7 Part 1 (p. 62-69)


Annotation & Vocabulary Worksheet

Name: AK # _____

Date: _____



SHORT ANSWER DIRECTIONS:

- In your book, mark with a star  and underline the text that answers the questions below.
- Write the page number in the space provided.
- In your own words, write the answer to the question.

1. Why did Grandpa say his plan would work to catch a coon? # 64

A raccoon is a curious animal. Anything bright and shiny attracts him. When his paw closes ~~on~~ on the object it balls up and when he starts to pull it out, the sharp ends of the nails catch his paw and he's trapped.

2. Why didn't Billy think it would work? # 65

All the raccoon has to do is open his paw, drop the tin and pull his paw from the hole.

3. What does Grandpa say is the reason the coon won't let go? # 66

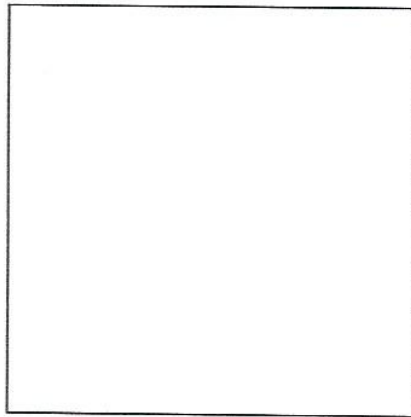
once he wrapped his paws around something he would never let go.



VOCABULARY DIRECTIONS:

- A. On the line, write the definition of the word as found in the Unfamiliar Words & Vocab Guide
- B. Circle the word in the text and define in the margin
- C. In the box, draw a picture of the word

deliberately - v. in a way that is meant, intended, or planned



Image

Where the Red Fern Grows

Name: AK # _____


Chapter 7 Part 2 (p. 70-78)

Date: _____

Annotation & Reflection Worksheet



SHORT ANSWER DIRECTIONS:

- In your book, mark with a star  and underline the text that answers the questions below.
- Write the page number in the space provided.
- In your own words, write the answer to the question.

1. Why is Papa surprised when they finally free the coon's paw from the hole? # 74

He is surprised that the coon wouldn't let go of the shiny piece of tin even in the face of death.

2. What did Old Dan have a tendency to do when he followed the trails? # 75

Old Dan would get so eager and excited that he would overrun a trail. When the trail would twist or turn, he would run straight on.

3. What did Little Ann do when she followed the trails? # 75

Little Ann would never overrun a trail. She would be patient and wiggle and twist until she figured out the trail.

4. What would you title Chapter 7?

answers will vary. something like "Training Begins"



REFLECTION QUESTION DIRECTIONS:

- Answer the following question in 3-5 complete, cursive sentences.

What do you think about how Billy trains his dogs? Billy says that training the dogs had "...worn [him] down to a frazzle," and that he was "...tired and exhausted"(p. 77). Billy never complains about how hard the work is. Instead, he says he is "...a happy boy" (p. 77). Have you ever worked hard for something that made you happy to do the work?

How Billy trains his dogs is inspiring! He worked to help them overcome their fear of the water and was persistent! He taught them all of the tricks of a rindtail and to circle a hundred yards before barking treed. He learned everything he could about coon hunting.

I have worked hard for something I love

I have not worked this hard for something I love . . . but I would like to.

Where the Red Fern Grows

Chapter 8 Part 1 (p. 79-86)

Annotation Worksheet

Name: AK # _____

Date: _____



SHORT ANSWER DIRECTIONS:

- A. In your book, mark with a **star** ★ and **underline** the text that answers the questions below.
- B. Write the page number in the space provided.
- C. In your own words, write the answer to the question.

1. How did Billy prepare for his first hunt? # 79

he cleaned his lantern and filled it full of oil;
he greased his boots with hog lard until they were soft;
he sharpened his ax.

2. What do Billy's parents think about him going hunting? # 80

Papa is excited for him but also feels concern.
Mama is worried and really doesn't like all
of this coon hunting.

3. Why is it necessary for Billy to hunt at night? # 81

The coons come ~~up~~ out at night.

4. How does the raccoon fool Old Dan and Little Ann? How does this make Billy feel? # 84-85

The coon pulled a simple trick by running out on the
drift, leaping into the water and crossing the river.
Billy felt terribly disappointed. He had train the dogs
for this and they weren't figuring it out.

Parent AK

The New Colossus

Part I: *Read the poem and answer the questions that follow.*

*The following sonnet is engraved on a plaque placed on the Statue of Liberty.

“The New Colossus”

by Emma Lazarus

- | | | |
|----|-----------------------------------------------------|---|
| 1 | “Not like the brazen giant of Greek fame, | A |
| 2 | With conquering limbs astride from land to land; | B |
| 3 | Here at our sea-washed, sunset gates shall stand | B |
| 4 | A mighty woman with a torch, whose flame | A |
| 5 | Is the imprisoned lightning, and her name | A |
| 6 | Mother of Exiles. From her beacon-hand | B |
| 7 | Glow world-wide welcome; her mild eyes command | B |
| 8 | The air-bridged harbor that twin cities frame. | A |
| 9 | “Keep, ancient lands, your storied pomp!” cries she | C |
| 10 | With silent lips. “Give me your tired, your poor, | D |
| 11 | Your huddled masses yearning to breathe free, | C |
| 12 | The wretched refuse of your teeming shore. | D |
| 13 | Send these, the homeless, tempest-tost to me, | C |
| 14 | I lift my lamp beside the golden door!” | D |

Annotate the poem by doing the following:

- Number the lines
- Label the rhyme scheme
- Brace the octave and sestet
- Circle the line that contains the volta.

Appendices, Grammar Key

Part II: Answer the following questions in complete sentences.

1. Is this a Petrarchan or Shakespearean sonnet? Why? (Answer in 2-3 sentences)

Petrarchan.

(Reasons will vary. Should have at least one of these two.)

1. *The rhyme scheme matches that of a Petrarchan sonnet*
2. *It is divided into an octave and sestet.*

(Analysis might vary.)

Ex: It is divided into an octave that describes the statue as a welcoming sign to exiles instead of other European statues that send people fleeing. It is also composed of a sestet that responds to how The Statue of Liberty passionately accepts immigrants to her country.

2. (Circle the best answer) In lines 9 and 10 “Cries she with silent lips.” is an example of what poetic device?
 - a. **Personification**
 - b. Allusion
 - c. Simile

3. List an example of a line of alliteration from the sonnet.

Here at our sea-washed, sunset gates shall stand

(Optional: List another example of alliteration)

Glows world-wide welcome

4. Where does the volta or turn occur? How do you know this line is the volta? What changes?

Line 9. "Keep, ancient lands, your storied pomp!" cries she" Petrarchan sonnets volta occurs in line 9.

(Answers will vary based on interpretations of what changes)

Example: The statue is not being described anymore and is making a statement against Europe's pride.

5. Who are the tired, poor, and homeless that the poem is referring to? (lines 13 and 10)

The immigrants sailing to America.

6. How might this sonnet fit a theme of love or compassion? (Answer in 2-3 complete sentences)

(Answers will vary)

Parent Answer Key

Meter Notes

**Some slides are omitted from answer key because the answers can be found on the power point.*

Slide 3: *Based off the example, write the number of syllables contained in each line of poetry.*

- | | |
|----------------------------------------------------------------|-----------|
| 1. I wandered lonely as a cloud | 8 |
| 2. Gently they go, the beautiful, the tender, the kind | 13 |
| 3. I have measured out my life with coffee spoons | 11 |
| 4. I bequeath myself to the dirt to grow from the grass I love | 15 |

Slide 5:

Directions: In the following syllabicated words, label which syllable is stressed.

1. Ge ni us
 2. A men ded

Slide 9:

Directions: Following the examples on the slide, label the stressed and unstressed syllables and write the number of feet per line on the space provided.

U / U / U /
 To be or not to be # of feet **3**

U / U / U / U / U / U / U
 To be or not to be that is the question # of feet **5**

Appendices, Grammar Key

Practice:

Directions: Read the lines below. Label the unstressed and stressed syllables and write on the space provided how many number of feet are in each line.

Example:

U / U / U / U / U /

Now is the winter of our discontent

of feet: **5**

U / U / U / U / U /

1. Shall I compare thee to a summer's day?

of feet: **5**

U / U / U / U / U /

2. When in disgrace with fortune and men's eyes.

of feet: **5**

U / U / U / U / U /

3. If music be the food of love, play on.

of feet: **5**

(Fill in the blanks) What is the meter of the four examples listed above?

Iambic Pentameter



Rocket Math Learning to Add Integers

(positive and negative numbers)

Name **Answer Key**

Set **e**

Rule 1: When you add a positive (+ a +), go **UP**.
 Rule 2: When you add a negative (+ a -), go **DOWN**.

Follow these steps.

1. Read the problem.
2. Circle where you start.
3. Will you add a positive or a negative? (Say the right rule).
4. Make the arrow point the way to go.
5. Make the bumps.
6. Write the answer.
7. Cover and say the problem & the answer.

+ (-)	+ Add (-)	+	+ Add +	+ (-)	+ Add (-)
	Rule 2: Add a negative, go DOWN . $\begin{array}{r} 8 \\ +(-2) \\ \hline 6 \end{array}$		Rule 1: Add a positive, go UP . $\begin{array}{r} 2 \\ + 4 \\ \hline 6 \end{array}$		Rule 2: Add a negative, go DOWN . $\begin{array}{r} 2 \\ +(-5) \\ \hline -3 \end{array}$



$\frac{3}{+(-3)}$	$\frac{4}{+(-8)}$	$\frac{6}{+1}$	$\frac{2}{+6}$	$\frac{5}{+(-7)}$	$\frac{12}{+(-7)}$	$\frac{8}{+7}$	$\frac{1}{+8}$	$\frac{4}{+(-7)}$	$\frac{13}{+(-4)}$
0	-4	7	8	-2	5	15	9	-3	9

$$\begin{array}{r} 5 \\ + 7 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 1 \\ + 6 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 4 \\ +(-5) \\ \hline -1 \end{array}$$

$$\begin{array}{r} 6 \\ +(-1) \\ \hline 5 \end{array}$$

$$\begin{array}{r} 5 \\ + 8 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 9 \\ + 7 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 7 \\ +(-2) \\ \hline 5 \end{array}$$

One-Minute Test

Goal

Completed

$\frac{6}{+(-2)}$	$\frac{4}{+(-5)}$	$\frac{8}{+1}$	$\frac{1}{+7}$	$\frac{3}{+(-2)}$	$\frac{4}{+(-4)}$	$\frac{5}{+3}$
<input type="text" value="4"/>	<input type="text" value="-1"/>	<input type="text" value="9"/>	<input type="text" value="8"/>	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text" value="8"/>
$\frac{3}{+4}$	$\frac{4}{+6}$	$\frac{9}{+(-6)}$	$\frac{2}{+(-7)}$	$\frac{3}{+6}$	$\frac{7}{+(-9)}$	$\frac{8}{+(-4)}$
<input type="text" value="7"/>	<input type="text" value="10"/>	<input type="text" value="3"/>	<input type="text" value="-5"/>	<input type="text" value="9"/>	<input type="text" value="-2"/>	<input type="text" value="4"/>
$\frac{3}{+(-2)}$	$\frac{1}{+1}$	$\frac{5}{+2}$	$\frac{8}{+(-5)}$	$\frac{1}{+(-7)}$	$\frac{2}{+3}$	$\frac{4}{+9}$
<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="7"/>	<input type="text" value="3"/>	<input type="text" value="-6"/>	<input type="text" value="5"/>	<input type="text" value="13"/>
$\frac{6}{+2}$	$\frac{8}{+(-6)}$	$\frac{3}{+(-7)}$	$\frac{4}{+4}$	$\frac{6}{+7}$	$\frac{2}{+(-8)}$	$\frac{8}{+(-3)}$
<input type="text" value="8"/>	<input type="text" value="2"/>	<input type="text" value="-4"/>	<input type="text" value="8"/>	<input type="text" value="13"/>	<input type="text" value="-6"/>	<input type="text" value="5"/>

$$\begin{array}{r} 4 \\ + 2 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 6 \\ + 5 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 6 \\ +(-6) \\ \hline 0 \end{array}$$

$$\begin{array}{r} 4 \\ +(-6) \\ \hline -2 \end{array}$$

$$\begin{array}{r} 9 \\ + 8 \\ \hline 17 \end{array}$$

$$\begin{array}{r} 3 \\ + 5 \\ \hline 8 \end{array}$$

$\frac{4}{+(-5)}$	$\frac{9}{+5}$	$\frac{5}{+3}$	$\frac{6}{+(-13)}$	$\frac{8}{+(-12)}$	$\frac{8}{+3}$	$\frac{4}{+1}$	$\frac{2}{+(-4)}$	$\frac{2}{+(-7)}$
-1	14	8	-7	-4	11	5	-2	-5



Rocket Math Learning to Add Integers

(positive and negative numbers)

Name Answer Key

Set F

Rule 1: When you add a positive (+ a +), go **UP**.
 Rule 2: When you add a negative (+ a -), go **DOWN**.

Follow these steps.

1. Read the problem.
2. Circle where you start.
3. Will you add a positive or a negative? (Say the right rule).
4. Make the arrow point the way to go.
5. Make the bumps.
6. Write the answer.
7. Cover and say the problem & the answer.

+	+ Add +	+ (-)	+ Add (-)	+ (-)	+ Add (-)
	Rule 1: Add a positive, go UP . $\begin{array}{r} 2 \\ + 4 \\ \hline 6 \end{array}$		Rule 2: Add a negative, go DOWN . $\begin{array}{r} 2 \\ + (-5) \\ \hline -3 \end{array}$		Rule 2: Add a negative, go DOWN . $\begin{array}{r} 6 \\ + (-4) \\ \hline 2 \end{array}$



$\frac{3}{+(-3)}$	$\frac{4}{+(-8)}$	$\frac{6}{+1}$	$\frac{2}{+(-6)}$	$\frac{5}{+4}$	$\frac{2}{+5}$	$\frac{8}{+(-7)}$	$\frac{1}{+8}$	$\frac{2}{+1}$	$\frac{3}{+(-1)}$
0	-4	7	-4	9	7	1	9	3	2

$$\frac{5}{+(-7)}$$

$$\frac{-2}{-2}$$

$$\frac{1}{+6}$$

$$\frac{7}{7}$$

$$\frac{4}{+(-5)}$$

$$\frac{-1}{-1}$$

$$\frac{6}{+(-1)}$$

$$\frac{5}{5}$$

$$\frac{5}{+(-2)}$$

$$\frac{3}{3}$$

$$\frac{9}{+(-5)}$$

$$\frac{4}{4}$$

$$\frac{2}{+2}$$

$$\frac{4}{4}$$

One-Minute Test

Goal Completed

$\frac{1}{+7}$	$\frac{4}{+(-5)}$	$\frac{8}{+1}$	$\frac{6}{+(-2)}$	$\frac{3}{+2}$	$\frac{4}{+(-4)}$	$\frac{5}{+3}$
<input type="text" value="8"/>	<input type="text" value="-1"/>	<input type="text" value="9"/>	<input type="text" value="4"/>	<input type="text" value="5"/>	<input type="text" value="0"/>	<input type="text" value="8"/>
$\frac{3}{+4}$	$\frac{9}{+(-6)}$	$\frac{1}{+5}$	$\frac{2}{+(-7)}$	$\frac{3}{+6}$	$\frac{7}{+(-9)}$	$\frac{8}{+(-4)}$
<input type="text" value="7"/>	<input type="text" value="3"/>	<input type="text" value="6"/>	<input type="text" value="-5"/>	<input type="text" value="9"/>	<input type="text" value="-2"/>	<input type="text" value="4"/>
$\frac{3}{+(-2)}$	$\frac{1}{+1}$	$\frac{5}{+2}$	$\frac{8}{+(-5)}$	$\frac{1}{+(-7)}$	$\frac{2}{+3}$	$\frac{4}{+(-9)}$
<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="7"/>	<input type="text" value="3"/>	<input type="text" value="-6"/>	<input type="text" value="5"/>	<input type="text" value="-5"/>
$\frac{6}{+2}$	$\frac{8}{+(-6)}$	$\frac{5}{+(-3)}$	$\frac{4}{+4}$	$\frac{6}{+(-7)}$	$\frac{2}{+(-8)}$	$\frac{1}{+3}$
<input type="text" value="8"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="8"/>	<input type="text" value="-1"/>	<input type="text" value="-6"/>	<input type="text" value="4"/>

$$\frac{4}{+2}$$

$$\frac{6}{6}$$

$$\frac{6}{+(-5)}$$

$$\frac{1}{1}$$

$$\frac{6}{+3}$$

$$\frac{9}{9}$$

$$\frac{4}{+(-6)}$$

$$\frac{-2}{-2}$$

$$\frac{9}{+(-8)}$$

$$\frac{1}{1}$$

$$\frac{3}{+5}$$

$$\frac{8}{8}$$

$\frac{4}{+3}$	$\frac{2}{+(-9)}$	$\frac{8}{+(-1)}$	$\frac{2}{+2}$	$\frac{3}{+(-5)}$	$\frac{8}{+(-3)}$	$\frac{4}{+1}$	$\frac{2}{+(-4)}$	$\frac{2}{+7}$
7	-7	7	4	-2	5	5	-2	9

Tuesday Math Key

Tuesday Warm Up

1. Jumble Key

$y = 3x$
 $y = 58 + x$
 $y = x + 27$
 $y = x - 8$
 $y = x \div 12$
 $y = \frac{x}{5}$
 $y = x + (-14)$
 $y = x^3$
 $y = \frac{1}{4}x$

2a) $y = x + (-27)$

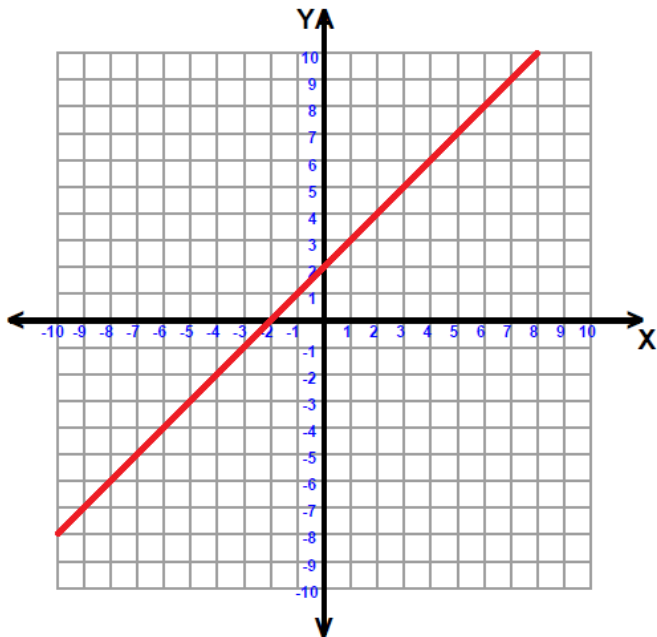
2b) $y = x + (-113)$

2c) $21 + (-85)$

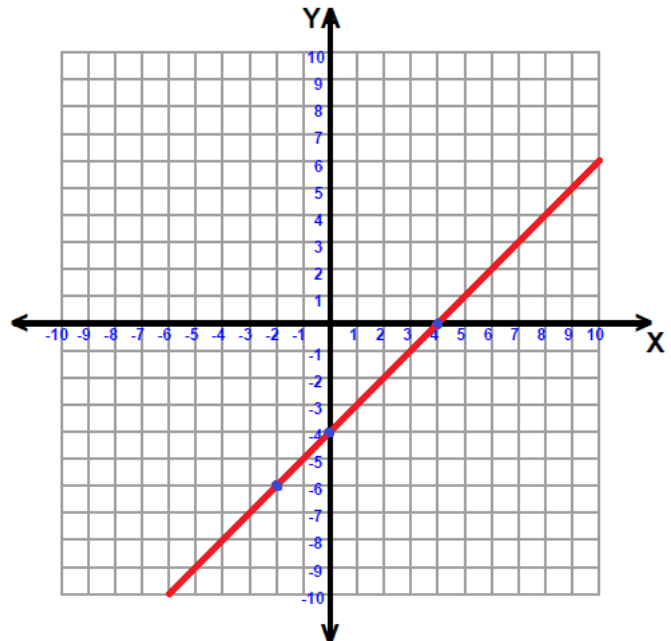
2d) $-17 + (-35)$

Tuesday Guided Practice

$y = x + 2$



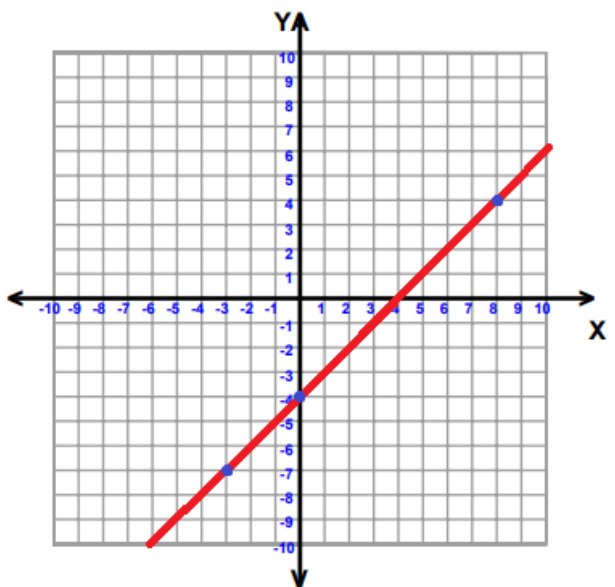
$y = x + (-4)$



Tuesday Independent Practice

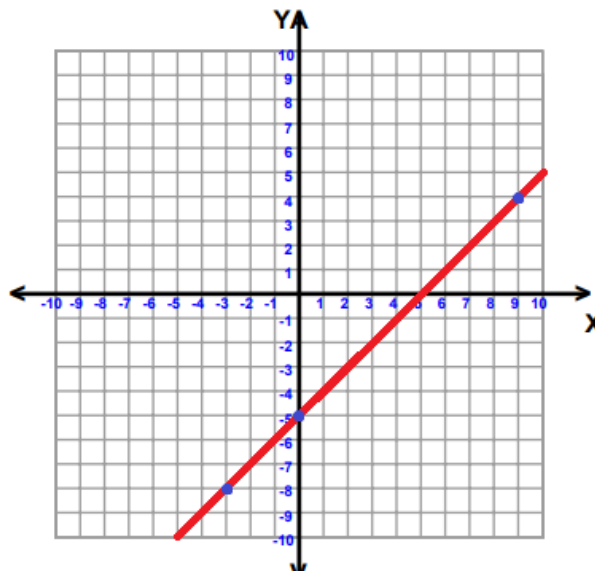
b. $y = x + (-4)$

x	(-3)	0	8
y	(-7)	(-4)	4



d. $y = x - 5$

x	(-3)	0	9
y	(-8)	(-5)	4



Wednesday Math Key

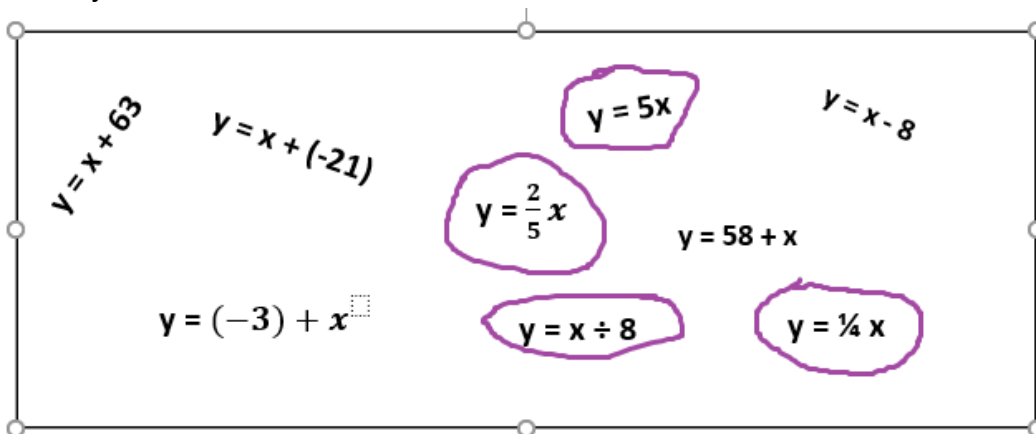
Wednesday Warm Up

- 1) D 2) D

Wednesday Guided Practice

1a) $y = \frac{1}{4}x$ b) $y = \frac{1}{3}x$

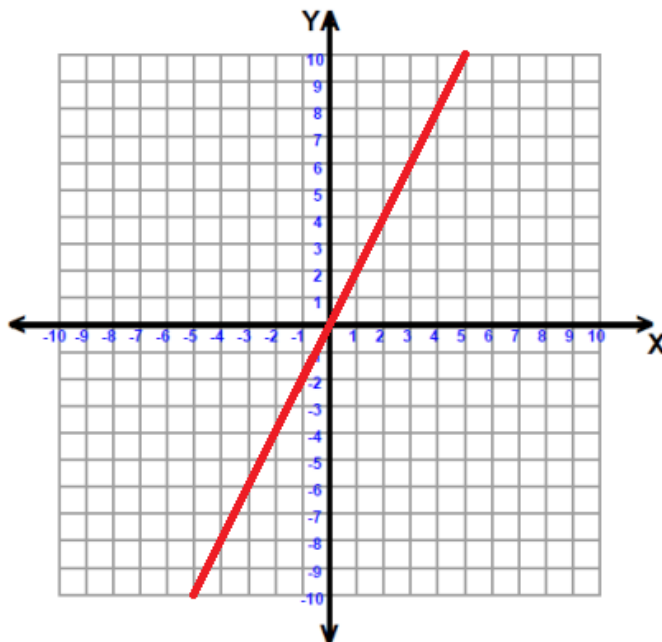
2. Jumble Key



3. Input-output table and graph of $y = 2x$.

Equation: $y = 2x$

x	1	2	3
y	2	4	6

**Thursday Math Key****Thursday Warm Up**

- 1) J 2) G

Thursday Guided Practice

- 2) Water is flowing from a tap at the rate of 100 liters every 4 minutes. Find the rate of the flow of water in liters per minute.

$$100 \text{ liters} \div 4 \text{ minutes} = 25 \text{ liters per minute}$$

The rate of the flow of water is 25 liters per minute.

- 3) A lamp can flash 5 times per minute. At this rate, how many times can it flash in 30 minutes?

$$5 \text{ times per minute} \times 30 \text{ minutes} = 150 \text{ times}$$

The lamp can flash 150 times in 30 minutes.

Thursday Independent Practice

- 1b) The rate is 50 words per minute.
- 1d) The rate is 34 miles per gallon.
- 2b) At this rate, a similar carpet of area $35 m^2$ will cost \$7,875.
- 2d) At this rate, the family will use $144 m^3$ in 6 months.

W4 Translation Answer Key

Wednesday (Numbers 1-6)

- 1.) The slaves were walking through the street.
- 2.) A dog suddenly barked.
- 3.) Grumio was afraid of the dog.
- 4.) "Pest!" shouted the cook.
- 5.) Clemens was brave.
- 6.) But the dog overcame Clemens.

Thursday (Numbers 7-12)

- 7.) Quintus was walking through the street.
- 8.) The young man heard a noise.
- 9.) The dog was annoying Clemens.
- 10.) Quintus hit the dog.
- 11.) The slaves were happy.
- 12.) The slaves praised Quintus.



Set **e**

Rule 1: When you add a positive (+ a +), go **UP**.
Rule 2: When you add a negative (+ a -), go **DOWN**.

Follow these steps.

1. Read the problem.
2. Circle where you start.
3. Will you add a positive or a negative? (Say the right rule).
4. Make the arrow point the way to go.
5. Make the bumps.
6. Write the answer.
7. Cover and say the problem & the answer.

+ (-)	+ Add (-)	+	+ Add +	+ (-)	+ Add (-)
	<p>Rule 2: Add a negative, go DOWN.</p> $\begin{array}{r} 8 \\ +(-2) \\ \hline 6 \end{array}$		<p>Rule 1: Add a positive, go UP.</p> $\begin{array}{r} 2 \\ + 4 \\ \hline 6 \end{array}$		<p>Rule 2: Add a negative, go DOWN.</p> $\begin{array}{r} 2 \\ +(-5) \\ \hline -3 \end{array}$



$\frac{3}{+(-3)}$	$\frac{4}{+(-8)}$	$\frac{6}{+1}$	$\frac{2}{+6}$	$\frac{5}{+(-7)}$	$\frac{12}{+(-7)}$	$\frac{8}{+7}$	$\frac{1}{+8}$	$\frac{4}{+(-7)}$	$\frac{13}{+(-4)}$
$\frac{0}{0}$	$\frac{-4}{-4}$	$\frac{7}{7}$	$\frac{8}{8}$	$\frac{-2}{-2}$	$\frac{5}{5}$	$\frac{15}{15}$	$\frac{9}{9}$	$\frac{-3}{-3}$	$\frac{9}{9}$

$$\begin{array}{r} 5 \\ + 7 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 1 \\ + 6 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 4 \\ +(-5) \\ \hline -1 \end{array}$$

$$\begin{array}{r} 6 \\ +(-1) \\ \hline 5 \end{array}$$

$$\begin{array}{r} 5 \\ + 8 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 9 \\ + 7 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 7 \\ +(-2) \\ \hline 5 \end{array}$$

One-Minute Test

Goal Completed

$\frac{6}{+(-2)}$	$\frac{4}{+(-5)}$	$\frac{8}{+1}$	$\frac{1}{+7}$	$\frac{3}{+(-2)}$	$\frac{4}{+(-4)}$	$\frac{5}{+3}$
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
$\frac{3}{+4}$	$\frac{4}{+6}$	$\frac{9}{+(-6)}$	$\frac{2}{+(-7)}$	$\frac{3}{+6}$	$\frac{7}{+(-9)}$	$\frac{8}{+(-4)}$
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
$\frac{3}{+(-2)}$	$\frac{1}{+1}$	$\frac{5}{+2}$	$\frac{8}{+(-5)}$	$\frac{1}{+(-7)}$	$\frac{2}{+3}$	$\frac{4}{+9}$
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
$\frac{6}{+2}$	$\frac{8}{+(-6)}$	$\frac{3}{+(-7)}$	$\frac{4}{+4}$	$\frac{6}{+7}$	$\frac{2}{+(-8)}$	$\frac{8}{+(-3)}$
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

$\frac{4}{+(-5)}$	$\frac{9}{+5}$	$\frac{5}{+3}$	$\frac{6}{+(-13)}$	$\frac{8}{+(-12)}$	$\frac{8}{+3}$	$\frac{4}{+1}$	$\frac{2}{+(-4)}$	$\frac{2}{+(-7)}$
$\frac{-1}{-1}$	$\frac{14}{14}$	$\frac{8}{8}$	$\frac{-7}{-7}$	$\frac{-4}{-4}$	$\frac{11}{11}$	$\frac{5}{5}$	$\frac{-2}{-2}$	$\frac{-5}{-5}$



Rocket Math Learning to Add Integers

(positive and negative numbers)

Name Answer Key

Set **e**

Rule 1: When you add a positive (+ a +), go **UP**.
 Rule 2: When you add a negative (+ a -), go **DOWN**.

Follow these steps.

1. Read the problem.
2. Circle where you start.
3. Will you add a positive or a negative? (Say the right rule).
4. Make the arrow point the way to go.
5. Make the bumps.
6. Write the answer.
7. Cover and say the problem & the answer.

+ (-)	+ Add (-)	+	+ Add +	+ (-)	+ Add (-)
	Rule 2: Add a negative, go DOWN . $\begin{array}{r} 8 \\ +(-2) \\ \hline 6 \end{array}$		Rule 1: Add a positive, go UP . $\begin{array}{r} 2 \\ + 4 \\ \hline 6 \end{array}$		Rule 2: Add a negative, go DOWN . $\begin{array}{r} 2 \\ +(-5) \\ \hline -3 \end{array}$



$\frac{3}{+(-3)}$	$\frac{4}{+(-8)}$	$\frac{6}{+1}$	$\frac{2}{+6}$	$\frac{5}{+(-7)}$	$\frac{12}{+(-7)}$	$\frac{8}{+7}$	$\frac{1}{+8}$	$\frac{4}{+(-7)}$	$\frac{13}{+(-4)}$
0	-4	7	8	-2	5	15	9	-3	9

$$\begin{array}{r} 5 \\ + 7 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 1 \\ + 6 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 4 \\ +(-5) \\ \hline -1 \end{array}$$

$$\begin{array}{r} 6 \\ +(-1) \\ \hline 5 \end{array}$$

$$\begin{array}{r} 5 \\ + 8 \\ \hline 13 \end{array}$$

$$\begin{array}{r} 9 \\ + 7 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 7 \\ +(-2) \\ \hline 5 \end{array}$$

One-Minute Test

Goal Completed

$\frac{6}{+(-2)}$	$\frac{4}{+(-5)}$	$\frac{8}{+1}$	$\frac{1}{+7}$	$\frac{3}{+(-2)}$	$\frac{4}{+(-4)}$	$\frac{5}{+3}$
4	-1	9	8	1	0	8
$\frac{3}{+4}$	$\frac{4}{+6}$	$\frac{9}{+(-6)}$	$\frac{2}{+(-7)}$	$\frac{3}{+6}$	$\frac{7}{+(-9)}$	$\frac{8}{+(-4)}$
7	10	3	-5	9	-2	4
$\frac{3}{+(-2)}$	$\frac{1}{+1}$	$\frac{5}{+2}$	$\frac{8}{+(-5)}$	$\frac{1}{+(-7)}$	$\frac{2}{+3}$	$\frac{4}{+9}$
1	2	7	3	-6	5	13
$\frac{6}{+2}$	$\frac{8}{+(-6)}$	$\frac{3}{+(-7)}$	$\frac{4}{+4}$	$\frac{6}{+7}$	$\frac{2}{+(-8)}$	$\frac{8}{+(-3)}$
8	2	-4	8	13	-6	5

$$\begin{array}{r} 4 \\ + 2 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 6 \\ + 5 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 6 \\ +(-6) \\ \hline 0 \end{array}$$

$$\begin{array}{r} 4 \\ +(-6) \\ \hline -2 \end{array}$$

$$\begin{array}{r} 9 \\ + 8 \\ \hline 17 \end{array}$$

$$\begin{array}{r} 3 \\ + 5 \\ \hline 8 \end{array}$$

$\frac{4}{+(-5)}$	$\frac{9}{+5}$	$\frac{5}{+3}$	$\frac{6}{+(-13)}$	$\frac{8}{+(-12)}$	$\frac{8}{+3}$	$\frac{4}{+1}$	$\frac{2}{+(-4)}$	$\frac{2}{+(-7)}$
-1	14	8	-7	-4	11	5	-2	-5



Rocket Math Learning to Add Integers

(positive and negative numbers)

Name Answer Key

Set F

Rule 1: When you add a positive (+ a +), go **UP**.
 Rule 2: When you add a negative (+ a -), go **DOWN**.

Follow these steps.

1. Read the problem.
2. Circle where you start.
3. Will you add a positive or a negative? (Say the right rule).
4. Make the arrow point the way to go.
5. Make the bumps.
6. Write the answer.
7. Cover and say the problem & the answer.

+	+ Add +	+ (-)	+ Add (-)	+ (-)	+ Add (-)
	<p>Rule 1: Add a positive, go UP.</p> $\begin{array}{r} 2 \\ + 4 \\ \hline 6 \end{array}$		<p>Rule 2: Add a negative, go DOWN.</p> $\begin{array}{r} 2 \\ + (-5) \\ \hline -3 \end{array}$		<p>Rule 2: Add a negative, go DOWN.</p> $\begin{array}{r} 6 \\ + (-4) \\ \hline 2 \end{array}$



$\frac{3}{+(-3)}$	$\frac{4}{+(-8)}$	$\frac{6}{+1}$	$\frac{2}{+(-6)}$	$\frac{5}{+4}$	$\frac{2}{+5}$	$\frac{8}{+(-7)}$	$\frac{1}{+8}$	$\frac{2}{+1}$	$\frac{3}{+(-1)}$
$\frac{0}{0}$	$\frac{-4}{-4}$	$\frac{7}{7}$	$\frac{-4}{-4}$	$\frac{9}{9}$	$\frac{7}{7}$	$\frac{1}{1}$	$\frac{9}{9}$	$\frac{3}{3}$	$\frac{2}{2}$

$$\frac{5}{+(-7)}$$

$$\frac{-2}{-2}$$

$$\frac{1}{+6}$$

$$\frac{7}{7}$$

$$\frac{4}{+(-5)}$$

$$\frac{-1}{-1}$$

$$\frac{6}{+(-1)}$$

$$\frac{5}{5}$$

$$\frac{5}{+(-2)}$$

$$\frac{3}{3}$$

$$\frac{9}{+(-5)}$$

$$\frac{4}{4}$$

$$\frac{2}{+2}$$

$$\frac{4}{4}$$

One-Minute Test

Goal Completed

$\frac{1}{+7}$	$\frac{4}{+(-5)}$	$\frac{8}{+1}$	$\frac{6}{+(-2)}$	$\frac{3}{+2}$	$\frac{4}{+(-4)}$	$\frac{5}{+3}$
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
$\frac{3}{+4}$	$\frac{9}{+(-6)}$	$\frac{1}{+5}$	$\frac{2}{+(-7)}$	$\frac{3}{+6}$	$\frac{7}{+(-9)}$	$\frac{8}{+(-4)}$
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
$\frac{3}{+(-2)}$	$\frac{1}{+1}$	$\frac{5}{+2}$	$\frac{8}{+(-5)}$	$\frac{1}{+(-7)}$	$\frac{2}{+3}$	$\frac{4}{+(-9)}$
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
$\frac{6}{+2}$	$\frac{8}{+(-6)}$	$\frac{5}{+(-3)}$	$\frac{4}{+4}$	$\frac{6}{+(-7)}$	$\frac{2}{+(-8)}$	$\frac{1}{+3}$
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

$$\frac{4}{+2}$$

$$\frac{6}{6}$$

$$\frac{6}{+(-5)}$$

$$\frac{1}{1}$$

$$\frac{6}{+3}$$

$$\frac{9}{9}$$

$$\frac{4}{+(-6)}$$

$$\frac{-2}{-2}$$

$$\frac{9}{+(-8)}$$

$$\frac{1}{1}$$

$$\frac{3}{+5}$$

$$\frac{8}{8}$$

$\frac{4}{+3}$	$\frac{2}{+(-9)}$	$\frac{8}{+(-1)}$	$\frac{2}{+2}$	$\frac{3}{+(-5)}$	$\frac{8}{+(-3)}$	$\frac{4}{+1}$	$\frac{2}{+(-4)}$	$\frac{2}{+7}$
$\frac{7}{7}$	$\frac{-7}{-7}$	$\frac{7}{7}$	$\frac{4}{4}$	$\frac{-2}{-2}$	$\frac{5}{5}$	$\frac{5}{5}$	$\frac{-2}{-2}$	$\frac{9}{9}$