

7th Grade FUESD Independent Study Plan, Week of May 11th

Week 8 Monday/ lunes	Tuesday/ martes	Wednesday/ miercoles	Thursday/ jueves	Friday/viernes
<p>ELA</p> <ul style="list-style-type: none"> Read 30 minutes independently 1 Lexia/or Reading Plus Lesson Read: The House on Mango Street:My Name Complete The Text Dependent Questions <hr/> <p>Science</p> <ul style="list-style-type: none"> Read <i>Quaking Earth, Racing Waves</i> Work on the Text Dependent Questions <hr/> <p>ELD/Social Studies</p> <ul style="list-style-type: none"> ELD Monday Read <i>Manor Life</i> Answer the Comprehension Questions <hr/> <p>Math</p> <ul style="list-style-type: none"> 1 Dreambox or ST Lesson Adding and Subtracting Like Fractions Notes Adding and Subtracting Like Fractions Practice Adding and Subtracting Like Fractions Answer Sheet Adding and Subtracting Like Fractions Answer Key <hr/> <p>PE</p> <ul style="list-style-type: none"> PE Week 7 <hr/> <p>Leadership Activities:</p> <ul style="list-style-type: none"> Kindness and Compassion FUESD SEL Resources 	<p>ELA</p> <ul style="list-style-type: none"> Read 30 minutes independently 1 Lexia/or Reading Plus Lesson Complete Adverb Phrases and Clauses worksheet <hr/> <p>Science</p> <p>Read <i>Quaking Earth, Racing Waves</i></p> <p>Work on the Text Dependent Questions</p> <hr/> <p>ELD/Social Studies</p> <ul style="list-style-type: none"> ELD Tuesday Read <i>Manor Life</i> Write a Summary <hr/> <p>Math</p> <ul style="list-style-type: none"> 1 Dreambox or ST Lesson Adding and Subtracting Unlike Fractions Notes Adding and Subtracting Unlike Fractions Practice Adding and Subtracting Unlike Fractions Answer Sheet Adding and Subtracting Unlike Fractions Answer Key <hr/> <p>PE</p> <ul style="list-style-type: none"> PE Week 7 <hr/> <p>Leadership Activities:</p> <ul style="list-style-type: none"> Kindness and Compassion FUESD SEL Resources 	<p>ELA</p> <ul style="list-style-type: none"> Read 30 minutes independently 1 Lexia/or Reading Plus Lesso Read The House on Mango Street:Cathy Queen of Cats Complete The Text Dependent Questions <hr/> <p>Science</p> <ul style="list-style-type: none"> Read <i>Quaking Earth, Racing Waves</i> Work on the Text Dependent Questions <hr/> <p>ELD/Social Studies</p> <ul style="list-style-type: none"> ELD Wednesday Read <i>The Benedictine Rule and Christianity</i> Answer the comprehension questions <hr/> <p>Math</p> <ul style="list-style-type: none"> 1 Dreambox or ST Lesson Adding and Subtracting Mixed Numbers Notes Adding and Subtracting Mixed Numbers Practice Adding and Subtracting Mixed Numbers Answer Sheet Adding and Subtracting Mixed Numbers Answer Key <hr/> <p>PE</p> <ul style="list-style-type: none"> PE Week 7 <hr/> <p>Leadership Activities:</p> <ul style="list-style-type: none"> Kindness and Compassion FUESD SEL Resources 	<p>ELA</p> <ul style="list-style-type: none"> Read 30 minutes independently 1 Lexia/or Reading Plus Lesson Complete Simple and Compound Sentences worksheet <hr/> <p>Science</p> <ul style="list-style-type: none"> Read <i>Quaking Earth, Racing Waves</i> Work on the Text Dependent Questions <hr/> <p>ELD/Social Studies</p> <ul style="list-style-type: none"> ELD Thursday Read <i>The Benedictine Rule and Christianity</i> Vocabulary Activity <hr/> <p>Math</p> <ul style="list-style-type: none"> 1 Dreambox or ST Lesson Rational Number Escape Room Rational Number Escape Room Google Form Escape Room Answer Key <hr/> <p>PE</p> <ul style="list-style-type: none"> PE Week 7 <hr/> <p>Leadership Activities:</p> <ul style="list-style-type: none"> Kindness and Compassion FUESD SEL Resources 	<p>ELA</p> <ul style="list-style-type: none"> Read 30 minutes independently 1 Lexia/or Reading Plus Lesson Read: The House on Mango Street: Our Good Day Complete The Text Dependent Questions <hr/> <p>Science</p> <ul style="list-style-type: none"> Read <i>A Whole Lotta Quakin' Goin' On</i> Work on the Text Dependent Questions <hr/> <p>ELD/Social Studies</p> <ul style="list-style-type: none"> ELD Friday Read <i>A Comparison of Feudal Europe and Feudal Japan</i> Answer the Comprehension Questions <hr/> <p>Math</p> <ul style="list-style-type: none"> 1 Dreambox or ST Lesson <ul style="list-style-type: none"> Add and Subtract Mixed Numbers GimKit <hr/> <p>Extension</p> <ul style="list-style-type: none"> <i>Mothers Day Math</i> Mothers Day Math Answer Sheet Mothers Day Math Answer Key <hr/> <p>PE</p> <ul style="list-style-type: none"> PE Week 7 <hr/> <p>Leadership Activities:</p> <ul style="list-style-type: none"> Sharpen the Saw Kindness and Compassion FUESD SEL Resources

7 Grado - Plan de Estudio independiente de FUESD - 11 de mayo

Semana 8 Monday/ lunes	Tuesday/ martes	Wednesday/ miercoles	Thursday/ jueves	Friday/viernes
<p>ELA/ SS</p> <ul style="list-style-type: none"> Leer 30 minutos independiente(registro de lectura) 1 Lexia/o Leccion de Reading Plus Leer The House on Mango Street:My Name Contestar las preguntas de comprensión <hr/> <p>Ciencias</p> <ul style="list-style-type: none"> Lee el documento Quaking Earth, Racing Waves Haz las preguntas de comprensión <hr/> <p>ELD/SS</p> <ul style="list-style-type: none"> ELD lunes Lee el documento <i>Manor Life</i> Haz las preguntas de comprensión <hr/> <p>Matematicas</p> <ul style="list-style-type: none"> 1 Dreambox or ST Lesson Adding and Subtracting Like Fractions Notes Adding and Subtracting Like Fractions Practice Adding and Subtracting Like Fractions Answer Sheet Adding and Subtracting Like Fractions Answer Key <hr/> <p>PE</p> <ul style="list-style-type: none"> Fisica semana 7 <hr/> <p>Actividades de "Leadership":</p> <ul style="list-style-type: none"> Kindness and Compassion FUESD SEL Resources 	<p>ELA/ SS</p> <ul style="list-style-type: none"> Leer 30 minutos independiente(registro de lectura) 1 Lexia/o Leccion de Reading Plus Complete la pagina de Adverb Phrases and Clauses <hr/> <p>Ciencia</p> <ul style="list-style-type: none"> Lee el documento Quaking Earth, Racing Waves Haz las preguntas de comprensión <hr/> <p>ELD/SS</p> <ul style="list-style-type: none"> ELD martes Lee el documento <i>Manor Life</i> Escribe un resumen <hr/> <p>Matematicas</p> <ul style="list-style-type: none"> 1 Dreambox or ST Lesson Adding and Subtracting Unlike Fractions Notes Adding and Subtracting Unlike Fractions Practice Adding and Subtracting Unlike Fractions Answer Sheet Adding and Subtracting Unlike Fractions Answer Key <hr/> <p>PE</p> <ul style="list-style-type: none"> Fisica semana <hr/> <p>Actividades de "Leadership":</p> <ul style="list-style-type: none"> Kindness and Compassion FUESD SEL Resources 	<p>ELA</p> <ul style="list-style-type: none"> Leer 30 minutos independiente(registro de lectura) 1 Lexia/o Leccion Reading Plus Leer Read The House on Mango Street:Cathy Queen of Cats Contestar las preguntas de comprensión <hr/> <p>Ciencia</p> <ul style="list-style-type: none"> Lee el documento Quaking Earth, Racing Waves Haz las preguntas de comprensión <hr/> <p>ELD/SS</p> <ul style="list-style-type: none"> ELD miércoles Lee el documento <i>The Benedictine Rule and Christianity</i> Haz las preguntas de comprensión <hr/> <p>Matematicas</p> <ul style="list-style-type: none"> 1 Dreambox or ST Lesson Adding and Subtracting Mixed Numbers Notes Adding and Subtracting Mixed Numbers Practice Adding and Subtracting Mixed Numbers Answer Sheet Adding and Subtracting Mixed Numbers Answer Key <hr/> <p>PE</p> <ul style="list-style-type: none"> Fisica semana 7 <hr/> <p>Actividades de "Leadership":</p> <ul style="list-style-type: none"> Kindness and Compassion FUESD SEL Resources 	<p>ELA/Science</p> <ul style="list-style-type: none"> Leer 30 minutos independiente(registro de lectura) 1 Lexia/o Leccion de Reading Plus Complete la pagina de Simple and Compound Sentences <hr/> <p>Ciencia</p> <ul style="list-style-type: none"> Lee el documento Quaking Earth, Racing Waves Haz las preguntas de comprensión <hr/> <p>ELD/SS</p> <ul style="list-style-type: none"> ELD jueves Lee el documento <i>The Benedictine Rule and Christianity</i> Actividad de Vocabulario <hr/> <p>Matematicas</p> <ul style="list-style-type: none"> 1 Dreambox or ST Lesson Rational Number Escape Room Rational Number Escape Room Google Form Escape Room Answer Key <hr/> <p>PE</p> <ul style="list-style-type: none"> Fisica semana 7 <hr/> <p>Actividades de "Leadership":</p> <ul style="list-style-type: none"> Kindness and Compassion FUESD SEL Resources 	<p>ELA/Science</p> <ul style="list-style-type: none"> Leer 30 minutos independiente(registro de lectura) 1 Lexia/o Leccion Reading Plus Leer Read: The House on Mango Street: Our Good Day Contestar las preguntas de comprensión <hr/> <p>Ciencia</p> <ul style="list-style-type: none"> Lee el documento A Whole Lotta Quakin' Goin' On Haz las preguntas de comprensión <hr/> <p>ELD/SS</p> <ul style="list-style-type: none"> ELD viernes Lee el documento <i>A Comparison of Feudal Europe and Feudal Japan</i> Haz las preguntas de comprensión <hr/> <p>Matematicas</p> <ul style="list-style-type: none"> 1 Dreambox or ST Lesson Add and Subtract Mixed Numbers GimKit <p>Extension</p> <ul style="list-style-type: none"> Mothers Day Math Mothers Day Math Answer Sheet Mothers Day Math Answer Key <hr/> <p>PE</p> <ul style="list-style-type: none"> Fisica semana 7 <hr/> <p>Actividades de "Leadership":</p> <ul style="list-style-type: none"> Afila la sierra Kindness and Compassion FUESD SEL Resources

The House on Mango Street Text Dependent Questions

Use the RACE strategy to answer the following questions. Type your answers in the boxes. They will expand as you type.

Monday- The House on Mango Street: My Name

1. Why is it bad luck for a woman to be born in the year of the horse?

2. Why does Esperanza say that she has her grandmother's name but doesn't "want to inherit her place by the window"?

3. What does Esperanza dislike about her name? Why do you suppose she wants to be called Zeze the x?

Wednesday- The House on Mango Street: Cathy Queen of Cats

1. This chapter is written partly with Esperanza as the narrator and partly with Cathy narrating. What is the first line narrated by Cathy? What is the last? Why do you think the author decides to write part of this chapter from Cathy's point of view?

2. What does Cathy say to hurt Esperanza? How are Cathy's parents and Esperanza's parents alike?

Friday- The House on Mango Street: Our Good Day

1. Briefly describe Lucy and Rachel. Why do you think Esperanza likes them?

2. Why do you think Esperanza decides to buy the bicycle with Lucy and Rachel, knowing she will make Cathy "mad forever"? What does Esperanza learn about herself and the kinds of friends she wants to have?

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The House on Mango Street

by Sandra Cisneros

My Name

In English my name means hope. In Spanish it means too many letters. It means sadness, it means waiting. It is like the number nine. A muddy color. It is the Mexican records my father plays on Sunday mornings when he is shaving, songs like sobbing.

It was my great-grandmother's name and now it is mine. She was a horse woman too, born like me in the Chinese year of the horse—which is supposed to be bad luck if you're born female—but I think this is a Chinese lie because the Chinese, like the Mexicans, don't like their women strong.

My great-grandmother. I would've liked to have known her, a wild horse of a woman, so wild she wouldn't marry. Until my great-grandfather threw a sack over her head and carried her off. Just like that, as if she were a fancy chandelier. That's the way he did it.

And the story goes she never forgave him. She looked out the window her whole life, the way so many women sit their sadness on an elbow. I wonder if she made the best with what she got or was she sorry because she couldn't be all the things she wanted to be. Esperanza. I have inherited her name, but I don't want to inherit her place by the window.

At school they say my name funny as if the syllables were made out of tin and hurt the roof of your mouth. But in Spanish my name is made out of a softer something, like silver, not quite as thick as sister's name—Magdalena—which is uglier than mine. Magdalena who at least can come home and become Nenny. But I am always Esperanza.

I would like to baptize myself under a new name, a name more like the real me, the one nobody sees. Esperanza as Lisandra or Maritza or Zeze the X. Yes. Something like Zeze the X will do.

The House on Mango Street by Sandra Cisneros

Cathy Queen of Cats

She says, I am the great great grand cousin of the queen of France. She lives upstairs, over there, next door to Joe the baby-grabber. Keep away from him, she says. He is full of danger. Benny and Blanca own the corner store. They're okay except don't lean on the candy counter. Two girls raggedy as rats live across the street. You don't want to know them. Edna is the lady who owns the building next to you. She used to own a building big as a whale, but her brother sold it. Their mother said no, no, don't ever sell it. I won't. And then she closed her eyes and he sold it. Alicia is stuck-up ever since she went to college. She used to like me but now she doesn't.

Cathy who is queen of cats has cats and cats and cats. Baby cats, big cats, skinny cats, sick cats. Cats asleep like little donuts. Cats on top of the refrigerator. Cats taking a walk on the dinner table. Her house is like cat heaven.

You want a friend, she says. Okay, I'll be your friend. But only till next Tuesday. That's when we move away. Got to. Then as if she forgot I just moved in, she says the neighborhood is getting bad.

Cathy's father will have to fly to France one day and find her great great distant grand cousin on her father's side and inherit the family house. How do I know this is so? She told me so. In the meantime they'll just have to move a little farther north from Mango Street, a little farther away every time people like us keep moving in.

The House on Mango Street by Sandra Cisneros

Our Good Day

If you give me five dollars I will be your friend forever. That's what the little one tells me.

Five dollars is cheap since I don't have any friends except Cathy who is only my friend till Tuesday.

Five dollars, five dollars.

She is trying to get somebody to chip in so they can buy a bicycle from this kid named Tito. They already have ten dollars and all they need is five more.

Only five dollars, she says.

Don't talk to them, says Cathy. Can't you see they smell like a broom.

But I like them. Their clothes are crooked and old. They are wearing shiny Sunday shoes without socks. It makes their bald ankles all red, but I like them. Especially the big one who laughs with all her teeth. I like her even though she lets the little one do all the talking.

Five dollars, the little one says, only five.

Cathy is tugging my arm and I know whatever I do next will make her mad forever.

Wait a minute, I say, and run inside to get the five dollars. I have three dollars saved and I take two of Nenny's. She's not home, but I'm sure she'll be glad when she finds out we own a bike. When I get back, Cathy is gone like I knew she would be, but I don't care. I have two new friends and a bike too.

My name is Lucy, the big one says. This here is Rachel my sister.

I'm her sister, says Rachel. Who are you?

And I wish my name was Cassandra or Alexis or Maritza—anything but Esperanza—but when I tell them my name they don't laugh.

We come from Texas, Lucy says and grins. Her was born here, but me I'm Texas.

You mean she, I say.

No, I'm from Texas, and doesn't get it.

This bike is three ways ours, says Rachel who is thinking ahead already. Mine today, Lucy's tomorrow and yours day after.

But everybody wants to ride it today because the bike is new, so we decide to take turns after tomorrow. Today it belongs to all of us.

I don't tell them about Nenny just yet. It's too complicated. Especially since Rachel almost put out Lucy's eye about who was going to get to ride it first. But finally we agree to ride it together. Why not?

Because Lucy has long legs she pedals. I sit on the back seat and Rachel is skinny enough to get up on the handlebars which makes the bike all wobbly as if the wheels are spaghetti, but

after a bit you get used to it.

We ride fast and faster. Past my house, sad and red and crumbly in places, past Mr. Benny's grocery on the corner, and down the avenue which is dangerous. Laundromat, junk store, drugstore, windows and cars and more cars, and around the block back to Mango.

People on the bus wave. A very fat lady crossing the street says, You sure got quite a load there.

Rachel shouts, You got quite a load there too. She is very sassy.

Down, down Mango Street we go. Rachel, Lucy, me. Our new bicycle. Laughing the crooked ride back.

Grammar Answer Sheet

Tuesday: Adverb Phrases and Clauses

1.
2.
3.
4.
5.

1.	
2.	
3.	
4.	
5.	

Thursday: Simple and Compound Sentences

1.
2.
3.
4.
5.

1.	
2.	
3.	
4.	
5.	

Lesson 3

Adverb Phrases and Clauses

CCSS

L.7.1a: Explain the function of phrases and clauses in general and their function in specific sentences.



Introduction

Phrases and clauses are groups of words that give specific information in a sentence. A **clause** has both a subject and a predicate, while a **phrase** does not.

Some phrases and clauses function like **adverbs**, which means they modify a verb, an adjective, or another adverb in a sentence.

- An **adverb phrase** tells "how," "when," "where," or "why." It is often a prepositional phrase.

Soccer players **wear** protective gear **on the field**.
(tells where; modifies verb *wear*)

Soccer gloves are **thick with padding**.
(tells how; modifies adjective *thick*)

- An **adverb clause** can also tell "how," "when," "where," or "why." It is always a dependent clause.

Gloves **protect** goalies **when they catch the ball**.
(tells when; modifies verb *protect*)

Goalies **need** gloves **because the ball can hurt**.
(tells why; modifies verb *need*)



Guided Practice

Circle the word in each sentence that the underlined phrase or clause modifies. Write *how*, *when*, *where*, or *why* to explain what the phrase or clause tells.

Hint

Often an adverb phrase or clause immediately follows the word it modifies, but sometimes other words separate the two. The phrase or clause may also come at the beginning of a sentence, *before* the modified word.

- 1 Goalies are the only players who touch the ball with their hands.

- 2 As the ball comes toward the goal, the goalie moves quickly.

- 3 If necessary, the goalie dives onto the ground.

- 4 Sometimes the other team scores because the ball gets past the goalie.

- 5 The game is over after two halves of play.



In numbers 1–3, choose the information that the underlined adverb phrase or clause provides about the word or words in **bold**.

- 1 Before you sign up for a soccer team, you **should get** the gear you need to stay safe.

A how
B when
C where
D why

- 2 Your shin guards must fit **snugly** against your lower leg.

A how
B when
C where
D why

- 3 Many players also **use** a mouth guard because it protects their teeth, tongue, and jaws.

A how
B when
C where
D why

Answer Form

- 1 (A) (B) (C) (D)
2 (A) (B) (C) (D)
3 (A) (B) (C) (D)
4 (A) (B) (C) (D)
5 (A) (B) (C) (D)

Number
Correct / 5

In numbers 4 and 5, how does the underlined group of words function in each sentence?

- 4 Regular running shoes are not safe for soccer.

A It is an adverb clause that modifies the noun *shoes*.
B It is an adverb phrase that modifies the verb *are*.
C It is an adverb phrase that modifies the adjective *safe*.
D It is an adverb clause that modifies the adjective *safe*.

- 5 Soccer shoes grip the turf because they have cleats.

A It is an adverb clause that modifies the verb *grip*.
B It is an adverb phrase that modifies the adjective *Soccer*.
C It is an adverb clause that modifies the noun *shoes*.
D It is an adverb phrase that modifies the verb *grip*.

Lesson 4

L.7.1b: Choose among simple [and] compound ... sentences to signal differing relationships among ideas.



- A **simple sentence** contains one independent clause.

subject

predicate

- A **compound sentence** is made up of two or more **independent clauses**. Those clauses are joined by a **coordinating conjunction** such as *and*, *or*, *so*, *but*, or *yet*, with a comma between the first clause and the conjunction.

independent clause 1

independent clause 2



Guided Practice Write *simple* next to each simple sentence. Write *compound* next to each compound sentence, then circle the conjunction that joins the two clauses.

Hint

A simple sentence can have a compound subject or compound predicate.

Compound subject:
My brother and I loved
Grandma Lucy.

Compound predicate:
She wrote music and
played the piano.

Both sentences are simple sentences.

- 1 Lucy's mother and father were both schoolteachers. _____
- 2 They traveled all over Oklahoma, yet Lucy and her sisters never minded or complained. _____
- 3 As a young girl, Lucy was always one of the best students in her class. _____
- 4 Schools were segregated in Oklahoma in the early 1900s, so Lucy and her sisters attended schools for black children. _____
- 5 Lucy's family did not have much money but lived happily. _____



For numbers 1–3, choose the sentence that answers each question.

- 1** Which of these is a simple sentence?
- A** Great-Grandma Lucy married Richmond Bell in 1937, and they moved to Arizona.
 - B** There was little work in Oklahoma, but in Arizona they got jobs picking cotton.
 - C** The work was difficult, yet Lucy was glad to have a job.
 - D** She and Richmond worked hard and saved their money.

- 2** Which of these is a compound sentence?
- A** Lucy and Richmond heard about work in California.
 - B** They could buy some land and a house in California's Central Valley.
 - C** Folks were struggling to survive in most places, but in California they had jobs.
 - D** Lucy and Richmond packed up, hopped on a train, and went west.

- 3** Which of these is a compound sentence?
- A** The couple found a house in the town of Dos Palos.
 - B** Dos Palos was a small community, but the land was good for farming.
 - C** Lucy and Richmond bought a cow, raised chickens, and grew vegetables.
 - D** Their first child was born in Dos Palos in the summer of 1945.

Answer Form

1 (A) (B) (C) (D)

2 (A) (B) (C) (D)

3 (A) (B) (C) (D)

4 (A) (B) (C) (D)

5 (A) (B) (C) (D)

**Number
Correct** / **5**

For numbers 4 and 5, choose the answer that correctly combines each pair of simple sentences into a compound sentence.

- 4** World War II began. Richmond joined the army.
- A** World War II began but Richmond joined the army.
 - B** World War II began, Richmond joined the army.
 - C** World War II began, and, Richmond joined the army.
 - D** World War II began, and Richmond joined the army.
- 5** With the men away, many jobs were open to women. Lucy became a librarian.
- A** With the men away, many jobs were open to women, so Lucy became a librarian.
 - B** With the men away, many jobs were open to women, Lucy became a librarian.
 - C** With the men away, many jobs were open to women, so, Lucy became a librarian.
 - D** With the men away, many jobs were open to women so, Lucy became a librarian.

Week 8

Monday

Write down 5 new words that you came across in the reading. Write down the word, the definition, draw or insert a picture, add synonyms or antonyms, and write the word in a sentence.

Word	Definition	Picture	Synonyms or Antonyms	Write the Word in a Sentence

Tuesday

Write 3 questions that you have about today's reading.

Wednesday

Write a summary on today's reading using EXACTLY 6 words.

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Thursday

Write down three new facts that you learned.

Friday

Using the internet or any other reliable resources, research a significant earthquake and write about it. Make sure to include the magnitude, epicenter, date, and any other interesting information you found (for example damage, deaths, etc).

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In July 2004 the village school on Tello Island, Indonesia, had a visitor with a startling story to tell. As the students in their red and white uniforms sat quietly listening, geologist Kerry Sieh explained that under the ocean, 60 miles from their island, was a ticking time bomb. For hundreds of years, the Sunda Megathrust Fault had been storing energy that would be released in massive undersea earthquakes. The powerful quakes would likely cause tsunamis, fast-moving waves that could wipe out the entire seaside village.



Tello Island is located off Indonesia's west coast. [photo: Getty Images]

The students and their teachers were surprised by Sieh's warnings. They'd never felt giant earthquakes or seen tsunami waves. How did he know that the earth was going to shake?

Sieh explained that, for more than a decade, scientists from the California Institute of Technology had been studying a section of the fault just to the south. They'd figured out that major earthquakes shook the region about every 200 years. The last big quake was in the early 1800s, which meant another could come at any time. Though Sieh couldn't say exactly when it would happen, he was almost certain there would be at least one major earthquake in the students' lifetimes.

But no one could have known that the next big quake would hit just a few months later.

Rising Corals

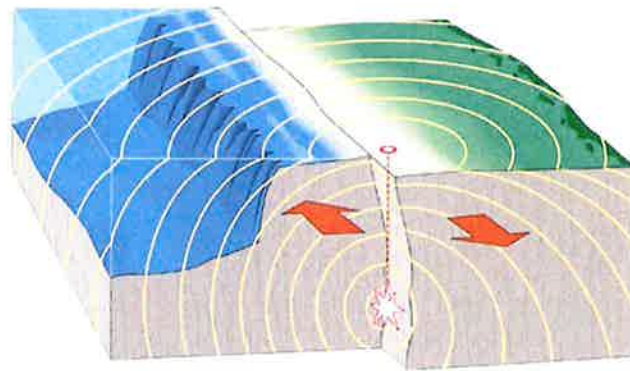
Scientists know a lot about earthquakes after they happen, but they can't predict what hour, day, year, or even decade an earthquake will hit. So how did Kerry Sieh know to warn the Tello islanders that an earthquake might happen soon? He read the corals.

In the Indian Ocean, big corals called Porites grow from the sea floor to the water's surface, then outward. The ocean floor sinks slowly between earthquakes, dragging the coral down, then rises quickly during a quake, raising the coral up again. Over hundreds of years, all this up and down causes the coral to grow outward in doughnut-shaped rings. Sieh discovered that by looking at the growth patterns of Porites coral heads near the fault, he could pinpoint the dates of past earthquakes, and maybe find a pattern that would help predict future quakes.

Using underwater chainsaws, Sieh and other scientists sliced off slabs of coral heads that were hundreds of years old. Sure enough, they found that, on a section of the fault just to the north of the Mentawai Islands and just to the south of Tello, earthquakes occurred in pairs about every 200 years. One pair of quakes hit in the 1300s, another in the 1500s, and a third in 1797 and 1833—almost 200 years ago. According to the corals, it was time for another big quake.

Sinking Islands

The corals weren't the only evidence of underground rumblings in Indonesia. The Sunda Megathrust Fault at the bottom of the Indian Ocean marks the collision between two of the plates that make up the earth's surface, one oceanic, the other continental. Between earthquakes, the plates are stuck together. As the oceanic plate slips slowly downward, it squeezes the continental plate sideways about half an inch a year, and drags it down a few inches a year as well. The islands on top of the continental plate are dragged down too, as much as half an inch a year. The more years between earthquakes, the more the islands sink—and the more stress builds up at the fault.



Earthquakes are caused by one rock mass rubbing against another. [photo: Getty Images]

The islanders could tell that the water line was shifting. "They can see their boardwalks and harbors sinking," Sieh said. Trees that once grew tall on shore were now underwater, and wells that once gave freshwater were full of salty seawater instead. But no one thought that this had anything to do with earthquakes or tsunamis.

Evidence from Global Positioning System, or GPS, stations they'd set up to measure island sinking also had convinced the scientists that a big quake could rock the area at any time. "As we came to realize what we were learning, and how much at risk people were," said Sieh, "we couldn't keep quiet."

In July 2004, Sieh visited five islands and gave presentations at schools, churches, mosques, and village squares. Sieh and his colleagues planned to return the following year to visit more islands and teach more people about their research.

Then, six months later, a quake struck.

December 26, 2004

The ground shook so violently that people were knocked off their feet. Dishes fell from shelves, roofs collapsed, trees toppled. Two minutes after it began, the shaking stopped. It had been the biggest earthquake anywhere on the planet in 40 years.

Like a twig you bend and bend until it breaks, pressure that had been building along the Sunda Megathrust Fault for hundreds of years had finally given way. Along a section of the fault longer than the state of California, the oceanic and the continental plates suddenly, violently separated, sending out earth-shaking waves. But the worst was still to come.



When plates suddenly separate, tsunamis can occur, creating a path of destruction.
[photo: Getty Images]

The continental plate sprang up as much as 20 feet, pushing up the water above it. Tsunami waves rippled out in all directions, gaining power as they raced across the open ocean as fast as jet airplanes. The first wave, 100 feet tall in some places, hit the Indonesian island of Sumatra 15 minutes after the earthquake. Waves

swamped the coast of Thailand 75 minutes later, then India and Sri Lanka, and even Africa, 3,000 miles from the quake's center.

The deadly waves kept flooding beaches for hours. Hundreds of thousands of people were killed, and millions were left homeless.

Kerry Sieh was at home in California when he heard the news. Immediately, Sieh thought of his friends on the islands he'd visited. Had they escaped the quaking ground and giant waves? Had their homes and villages been destroyed? Communication by phone or email was impossible. On January 1, he flew back to Indonesia, uncertain of what he'd find.

No Ordinary Waves

Most waves are formed by wind that blows across the ocean's surface, pulling water with it. But a tsunami is started by a disturbance, such as an undersea earthquake, that shifts water at the ocean floor. Water is pushed up from the bottom of the sea all the way to the ocean's surface, and waves begin to roll out in all directions. As a tsunami wave hits the shallow water near land, it slows down but grows taller. Water at the shore is sucked into the giant wave, exposing fish, shells, and corals that were underwater moments ago. Then, suddenly, a towering wall of water crashes onto the beach.

Safe for Now

People in Tello were lucky. Their island was more than 200 miles from the epicenter of the quake, the most powerful point. On Tello during the quake, the earth shook, but not violently. Later, a small tsunami, three to six feet high, swept through the village, flooding houses. People were shaken and scared, but unharmed.

As he traveled to the other islands he'd visited in July, Sieh was relieved to hear the same story. Few homes had been destroyed, and no lives were lost. But danger still lurked. An earthquake on one section of a fault can increase stress along the rest of the fault. And the thousands of miles of the Sunda Megathrust Fault that hadn't ruptured in December were still ripe for another quake.

Sure enough, another earthquake shook an area to the south on March 28. This quake was 10 times less powerful than the one in December, yet it was still the second-biggest quake to rock the world in 40 years.

Again, Sieh's friends escaped harm. But the quakes were proof that what the scientist had said was true, and they convinced some islanders to take action. Today, on the island of Simuk, people are leaving their homes near the shore and rebuilding their town at the island's highest point, the hill where Sieh erected his GPS station.

The quakes also provided Sieh with a lot of work to do. On Sumatra, the rising continental plate pushed up vast stretches of beach that had been underwater. "We saw thousands of dead corals," Sieh said. He is looking at data from the GPS stations to find out exactly how the nearby islands moved during the quakes.

As they travel the islands by boat and helicopter, Sieh and his colleagues will explain why earthquakes and tsunamis happen and what people can do to prepare. They can build their houses out of lightweight wood or bamboo rather than heavy concrete, which would cause more damage if it toppled during a quake. They can move their villages away from the beach, or build pathways to higher ground.



Rising continental plates caused coral to die.
[photo: Getty Images]

Sieh doesn't know exactly when or where it will hit, but he's certain another big quake is coming along the section of the fault south of Tello. Until it does, he'll try to understand as much as he can about why and how the earth moves, and he'll teach the people who live nearby about the danger that lurks under the waves.

What Makes the Earth Quake?

Next time you're outside, jump up and down. Stomp your feet a few times. The ground seems solid, right? Well, not entirely.

The part of the earth you're standing on, called the lithosphere, is rock-solid. But the lithosphere is very thin—if the earth were the size of an apple, the lithosphere would be about as thick as the apple's skin. If you dug a hole through the earth, you'd find that as you went deeper, what's inside becomes hotter and more gooey. The solid lithosphere is broken up into close-fitting plates that drift on top of the molten rock underneath. We don't feel the plates moving because they're usually drifting only a few centimeters a year—about as fast (or slow) as your fingernails grow.

Earth's plates don't all move in the same direction. At the boundary where two plates meet, called a fault, they bump and push into each other. They're wedged together most of the time, but stress builds up as the plates bump and grind together. Finally the plates break free along a section of the fault, releasing pent-up energy in an earthquake.

—By Rachel Young
Adapted from “Quaking Earth, Racing Waves”



Whole Lotta Quakin' Goin' on

The surface of Earth is moving all the time. Don't be fooled if it appears to be still—the plates that make up the outer crust of Earth are constantly in motion. Sometimes they slide against each other or move apart. Sometimes one plate slides underneath another. And sometimes they collide head-on.

Wherever plates come together, there is bound to be a certain amount of disturbance to Earth's crust. This could be a volcanic eruption, or it could be an earthquake.

This map shows Earth's continental and oceanic plates, and also the locations of the 10 most devastating earthquakes and volcanoes in the 20th century.

KEY



Red arrows show directions plates are moving.



White lines show plate boundaries.



In areas where two plates come together, there may be an opening in the earth's crust. This may result in the release of hot molten rock that lies beneath the crust. This hot stuff, called magma, has to go somewhere, and so when plates crash into each other, in certain circumstances it comes up to the surface as a volcanic eruption.

Mt. Pelee, Martinique, on May 8, 1902; casualties: 28,000

Nevado del Ruiz, Colombia, on November 13, 1985; casualties: 23,000

Mt. Kelud, Java, Indonesia, on May 19, 1919; casualties: 5,000

Mt. Lamington, New Guinea, on January 17-21, 1951; casualties: 3,000

El Chichon, Mexico, on March 28, 1982; casualties: 1,880



Earthquakes

When two plates push against each other, tension builds up in the rock. Eventually, this tension has to be released. The rocks grind past each other deep underground, creating vibrations, or shock waves, that rise to the surface and cause the ground to shake. This motion, if violent enough, can cause buildings to fall down, resulting in major human casualties.

Tangshan, China, on July 27, 1976;
Richter scale reading: 8.0; casualties: 255,000
Nan-Shan, China, on May 22, 1927;
Richter scale reading: 8.3; casualties: 200,000
Gansu, China, on December 16, 1920;
Richter scale reading: 8.6; casualties:
180,000—200,000
Yokohama, Japan, on September 1, 1923;
Richter scale reading: 8.6; casualties: 143,000
Messina, Italy, on December 28, 1908;
Richter scale reading 7.5; casualties: 83,000

Activity

COMPARING FIGURES These lists present "devastating" earthquakes and volcanoes—in other words, from a casualty point of view. Use library and Internet resources to find the 10 earthquakes that rated highest on the Richter scale. Why do you suppose that there were more casualties in China? Is there always a direct relationship between the number of casualties and the quake's rating on the Richter scale? Why or why not?

ESL At Home 6-8 Weeks 1-2

Use notebook paper to complete these activities. Do one each day!

Use paper to complete these activities. Do one each day!																				
Monday	Tuesday	Wednesday	Thursday	Friday																
Choose any book, TV show or movie. Write a 1 paragraph summary, and then write and illustrate an alternate ending.	Use things you can find in your house to invent something new. Illustrate and label it. Write about how you would use this invention to solve a problem.	Create a cipher code, then write a message to a family member. See if they can unlock the code. EX: <table border="1"><tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>G</td><td>H</td></tr><tr><td>Z</td><td>Y</td><td>X</td><td>W</td><td>V</td><td>U</td><td>T</td><td>S</td></tr></table>	A	B	C	D	E	F	G	H	Z	Y	X	W	V	U	T	S	For each letter of the alphabet, find four objects in your house that begin with the letter. Example: A: airplane toy, animal crackers.. B: bread C: D:	Choose something in your house to use as a measuring tool, like a water bottle or a spoon. Measure 10 things with that tool and make a list. Example: My bed = 12 water bottles by 16 water bottles.
A	B	C	D	E	F	G	H													
Z	Y	X	W	V	U	T	S													
Monday	Tuesday	Wednesday	Thursday	Friday																
Find 30 objects in your home. Sort them into lists. Example: things that are red, things that are plastic, things that are magnetic.	Roll up three pieces of paper to make tubes. Stand them up. See how many things you can stack on top of the tubes. Make a list of all the things you were able to stack.	Create a scavenger hunt for your family. Hide things around your house, then write clues to help them search.	Observe the cars that pass by your home in 1 hour. Tally the color of each car. Create ratios to explain the probability of a certain color car passing by.	Think of two characters from two different books or shows. Write a story about what might happen if they met each other.																

ESL en Casa 6-8 Semanas 1-2

Usar una hoja de libreta para completar las actividades. Hacer uno por día.

Lunes	Martes	Miercoles	Jueves	Viernes																
Escoge cualquier libro, pelicula o programa de television. Escribo un parafo resumido, y despues escribe escribe y dibuja un final alterno.	Usar cosas que puedas encontrar en tu casa para inventar algo nuevo. Dibujalo y etiquetalo. Escribe como este invento va hacer de ayuda.	Crear un codigo de cifrado, despues escribe un mensaje a un familiar. Ve si ellos pueden descifrarlo. EX: <table><tr><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>G</td><td>H</td></tr><tr><td>Z</td><td>Y</td><td>X</td><td>W</td><td>V</td><td>U</td><td>T</td><td>S</td></tr></table>	A	B	C	D	E	F	G	H	Z	Y	X	W	V	U	T	S	Encontrar cosas en casa que empiecen con las letras del abecedario. Dar 4 ejemplos de cada uno Ejemplo: A: anillo, agua... B: basura, bote .. C: D:	Escoge algo en tu casa para usar de herramienta para medir, como una botella de agua o una cucharra. Medir 10 cosas con tu herramienta y hacer una lista. Ejemplo: Mi cama mide 12 botellas de agua por 16 botellas de agua.
A	B	C	D	E	F	G	H													
Z	Y	X	W	V	U	T	S													
Lunes	Martes	Miercoles	Jueves	Viernes																
Encontrar 30 cosas en tu casa. Acomodarlos por listas. Ejemplo: cosas que son rojas, cosas que son de plastico, cosas que tienen iman.	Enrollar 3 pedazos de papel para hacer tubos. Paralas y mira cuantas cosas puedes poner encima. Hacer una lista de todo lo que pusiste encima.	Crear una busqueda de tesoros para tu familia. Esconde cosas alrededor de tu casa y escribe pistas para que los demas los encuentren.	Observar los carros que pasan por tu hogar en una hora. Cuenta los coloroes de cada carro. Crear proporciones de cada color para determinar la probabilidad.	Piensa en dos diferentes personajes de distinos libros o peliculas. Escribe una historia de como pudieran llegar a conocerse.																

Monday- The Manor Life

Use the RACE method to answer the following questions.

1. Describe the life of a serf. How could they become a knight?

2. What is a vassal? What is their relationship to the king?

3. What is a manor? What would you find in a manor?

Tuesday- The Manor Life

Write a summary of *The Manor Life*

Wednesday- The Benedictine Rule and Christianity

Use the RACE method to answer the following questions.

1. What rules did the Benedictine monks have to follow? How did they benefit society?

2. What was the Benedictine Rule?

3. Describe the hierarchy in the secular-religious order and the monastic-religious order.

Thursday- The Benedictine Rule and Christianity

Find 5 new words in the reading. Write their definition, insert or draw a picture, write down synonyms or antonyms, and write the new word in a sentence.

Word	Definition	Picture/ Drawing	Synonyms/ Antonyms	Use the word in a sentence

Friday- A Comparison of Feudal Europe and Feudal Japan

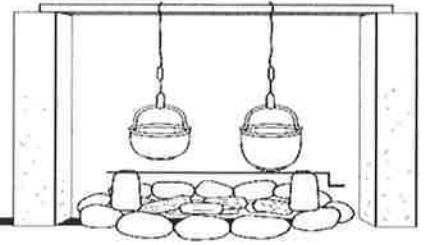
Use the RACE method to answer the following questions.

1. How were the rights of women in Feudal Japan different from the rights of women in Feudal Europe

2. Compare and Contrast samurais and knights.

3. How did the poetry of Feudal Japan differ from Feudal Europe?

MANOR LIFE



Life in a medieval manor was not easy for anyone, but it was especially difficult for serfs, the peasant class of people. The manor consisted of the land owned by the feudal lord, which included: the village surrounding the manor or castle, the woods that the lords of the manor hunted in, fields of crops, a church, grain mills, and a barn. It was completely self-sufficient, a little micro-world unto itself.

Medieval Europe had no real government, so each manor had its own form of government. A king controlled a large area which he divided up among his vassals, the lords of the manors. The vassals leased the land from the king, but there was a catch. Each vassal swore an oath to be loyal to and defend the life of the king. The vassals were trustworthy men with great wealth and power and were given complete control over their manor. When the king traveled, he stayed at the manors of his vassals. Each manor had its own laws and money, which was minted for use in rare trade with other manors.

The hierarchy in feudal times worked in the following way. The king ruled a large mass of land. He leased portions of the land to his nobles, who were powerful landholders. Nobles who pledged loyalty to the king became his vassals. Nobles served the role of protecting the king. They were sometimes given the name Baron, which is not actually a title of aristocracy, but rather a description of the Tenants-in-Chief who attended the king's great council.

These vassals provided soldiers for the king by means of knights, who were often the sons of the nobles. They also paid taxes to the king. The nobles would divide their fief (land) into portions which they gave to his knights, which were loyal to the lord and indirectly to the king.

The peasant class, known as serfs, had hard lives. They were not considered slaves, as they could not be bought and sold. However, they also could not leave the fiefdom, either. Most serfs were farmers, but some were tradesmen such as millers or tavern owners. Serfs had to work several days a week for the lord of the manor, leaving little time to provide for themselves and their families. A serf could become a knight by entering training as a page at the age of 7 years old. The second step in his training began at age 14 when he became a squire. Squires were armor-bearers or errand-boys for the knights. At the age of 21, if he had proven himself in bravery and battle, he could at long last become a knight.

WHILE YOU'RE READING...

MARK WITH SYMBOLS

! when you find something interesting.

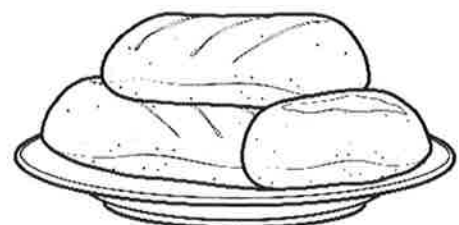
? when you are unsure or confused by something.

* when you find something important.

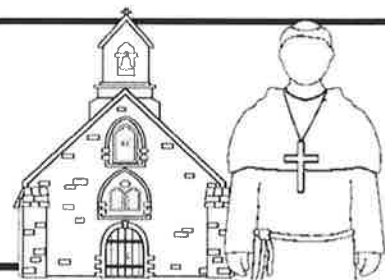
HIGHLIGHT WITH COLORS

yellow power words or key terms

green key phrases and definitions



THE BENEDICTINE RULE AND CHRISTIANITY



Feudal Europe consisted of three "estates": the nobility, the church, and everybody else. The clergy had the duty of carefully looking after the spiritual welfare of society. The hierarchy included both the secular-religious and the monastic-religious hierarchies. In both, the Pope was the top level and there was only one Pope at a time. Under the Pope in the secular-religious order were the archbishops, who had power over the other orders, including bishops, priests, and deacons. The monastic-religious order was also headed up by the Pope, and then came nunneries, the Abbot, the Prior, and monks.

Monks and nuns alike served people in many practical ways. They housed travelers, nursed the sick, assisted the poor, and taught reading and writing in the schools they ran. The Abbots and Abbesses dispensed advice to rulers as well. Another very important thing the monks did was preserved the classics of ancient Greek and Roman literature, including the works of Cicero, Virgil, Ovid, and Aristotle.

In Benedictine monasteries, the monks made three pledges. They took the vow of poverty, meaning they had very few possessions, the vowed chastity, which meant they could never marry, and they promised obedience to the church and the rules of the monastery.

Traditionally, St. Benedict founded the monastery at Montecassino in 529AD. He wrote a rulebook for monks around 530, calling it the Benedictine Rule. He was a devout Italian Christian who was so appalled at life in the Holy City that at the age of 20 decided he wanted to withdraw from the world. His rule was very strict. Mainly, it expressed extreme obedience to the Abbot, the male head of a monastery. In nunneries, the female head is called an Abbess. Abbot comes from the Latin word for "Father." Although it would seem harsh to us today, monks in medieval Europe had been accustomed to extremely difficult ordeals in their attempts to subdue the flesh.

St. Patrick was a missionary and bishop in Ireland. Tradition says that at the age of 16, he was captured by British pirates and taken as a slave to Ireland. After about 6 years, he escaped and returned home, studying to become a cleric. As a monk, he returned to Ireland to teach others. Many myths have arisen around him, including one that says he drove all the snakes out of Ireland. Be that as it may, he became the patron saint of Ireland and has a holiday named after him.

WHILE YOU'RE READING...

MARK WITH SYMBOLS

!

when you find something interesting.

?

when you are unsure or confused by something.

*

when you find something important.

HIGHLIGHT WITH COLORS

yellow

power words or key terms

green

key phrases and definitions



A COMPARISON OF FEUDAL EUROPE AND FEUDAL JAPAN



There is much to compare between feudalism in Europe and feudalism in Japan. Although they have many differences, they also have quite a few similarities.

Both were greatly influenced by religion, in Europe by Christianity and in Japan by Shintoism and Zen Buddhism. Although they both had poetry in common, the style of poetry differed dramatically. The epic poems of Europe told long stories of the times, while haiku poetry in Japan emphasized beauty. The Japanese women in feudal times were treated more equally than women in Europe. Some of the Japanese women learned martial arts and became samurais. They had a modicum of control in their own lives. In Europe, women had no say over what they did or whom they married. The art in Japan included Zen Gardens and focused on nature and beauty while in Europe, art was centered on religious themes.

Similarities in the feudal systems of Europe and Japan had many things in common, too. Knights compare to samurai. Lords in Europe were quite similar to daimyo in Japan. Both societies were largely dependent on farming and both had feudal governments. They also shared the idea that the warriors—knights and samurais—should behave by an accepted code of honor. Although the codes differed, the purpose was the same and was taken very seriously by the warriors. The Knights' code was called Chivalry and the samurais' was known as Bushido. People could count on exemplary behavior from both groups.

WHILE YOU'RE READING...

MARK WITH SYMBOLS

!

when you find something interesting.

?

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*

when you find something important.

HIGHLIGHT WITH COLORS

yellow power words or key terms

green key phrases and definitions



Key Concept

Add and Subtract Like Fractions

Words To add or subtract like fractions, add or subtract the numerators and write the result over the denominator.

Examples**Numbers**

$$\frac{5}{10} + \frac{2}{10} = \frac{5+2}{10} \text{ or } \frac{7}{10}$$

$$\frac{11}{12} - \frac{4}{12} = \frac{11-4}{12} \text{ or } \frac{7}{12}$$

Algebra

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}, \text{ where } c \neq 0$$

$$\frac{a}{c} - \frac{b}{c} = \frac{a-b}{c}, \text{ where } c \neq 0$$

Fractions that have the same denominators are called **like fractions**.

Examples

Add. Write in simplest form.

1. $\frac{5}{9} + \frac{2}{9}$

$$\frac{5}{9} + \frac{2}{9} = \frac{5+2}{9}$$

$$= \frac{7}{9}$$

Add the numerators.

Simplify.



Negative Fractions

Remember $\frac{1}{2} = \frac{-1}{2} = \frac{1}{-2}$. Typically, the form $\frac{-1}{2}$ is used when performing computations.

2. $-\frac{3}{5} + (-\frac{1}{5})$

$$-\frac{3}{5} + (-\frac{1}{5}) = \frac{-3 + (-1)}{5}$$

$$= \frac{-4}{5} \text{ or } -\frac{4}{5}$$

Add the numerators.

Use the rules for adding integers.

Got It? Do these problems to find out.

a. $\frac{1}{3} + \frac{2}{3}$

b. $-\frac{3}{7} + \frac{1}{7}$

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

d. $-\frac{1}{4} + \frac{1}{4}$

Example

3. Sofia ate $\frac{3}{5}$ of a cheese pizza. Jack ate $\frac{1}{5}$ of a cheese pizza and $\frac{2}{5}$ of a pepperoni pizza. How much pizza did Sofia and Jack eat altogether?

$$\frac{3}{5} + (\frac{1}{5} + \frac{2}{5}) = \frac{3}{5} + (\frac{2+1}{5})$$

$$= (\frac{3}{5} + \frac{2}{5}) + \frac{1}{5}$$

$$= 1 + \frac{1}{5} \text{ or } 1\frac{1}{5}$$

Commutative Property of Addition

Associative Property of Addition

Simplify.

So, Sofia and Jack ate $1\frac{1}{5}$ pizzas altogether.

Got It? Do this problem to find out.

- e. Eduardo used fabric to make three costumes. He used $\frac{1}{4}$ yard for the first, $\frac{2}{4}$ yard for the second, and $\frac{3}{4}$ yard for the third costume. How much fabric did Eduardo use altogether?

e. _____

Examples

4. Find $-\frac{5}{8} - \frac{3}{8}$.

$$-\frac{5}{8} - \frac{3}{8} = -\frac{5}{8} + (-\frac{3}{8})$$

$$= \frac{-5 + (-3)}{8}$$

$$= -\frac{8}{8} \text{ or } -1$$

Add $-\frac{3}{8}$.

Add the numerators.

Simplify.

Subtracting Integers

To subtract an integer, add its opposite.
 $-1 - (-4) = -1 + 4$
 $= 3$

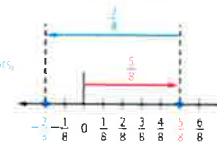
5. Find $\frac{5}{8} - \frac{7}{8}$.

$$\frac{5}{8} - \frac{7}{8} = \frac{5-7}{8}$$

$$= -\frac{2}{8} \text{ or } -\frac{1}{4}$$

Subtract the numerators.

Simplify.



Got It? Do these problems to find out.

f. $\frac{5}{9} - \frac{2}{9}$

g. $-\frac{5}{9} - \frac{2}{9}$

h. $-\frac{11}{12} - (-\frac{5}{12})$

f. _____

g. _____

h. _____

Lesson 3 Homework Practice

Add and Subtract Like Fractions

Add or subtract. Write in simplest form.

1. $\frac{2}{5} + \frac{3}{5}$

2. $\frac{2}{9} + \frac{4}{9}$

3. $\frac{8}{11} - \frac{7}{11}$

4. $\frac{4}{8} + \frac{5}{8}$

5. $\frac{1}{18} + \frac{5}{18}$

6. $\frac{7}{15} - \frac{1}{15}$

7. $\frac{9}{16} - \frac{5}{16}$

8. $\frac{5}{14} - \frac{2}{14}$

9. $\frac{7}{8} - \frac{1}{8}$

10. $-\frac{7}{10} - \frac{4}{10}$

11. $\frac{5}{6} - \frac{3}{6}$

12. $-\frac{2}{3} - \left(-\frac{1}{3}\right)$

13. $\frac{5}{6} + \frac{1}{6}$

14. $\frac{5}{5} - \frac{3}{5}$

15. $\frac{4}{9} + \frac{8}{9}$

16. $\frac{5}{4} - \frac{1}{4}$

17. $\frac{2}{15} + \frac{4}{15} + \frac{1}{15}$

18. $\frac{7}{16} + \frac{1}{16} + \frac{3}{16}$

19. $\left(\frac{3}{12} + \frac{1}{12}\right) - \frac{11}{12}$

20. $\left(\frac{4}{5} - \frac{7}{5}\right) + \frac{1}{5}$

- 21. STATES** Most of the state names in the United States end in a vowel. Of the 50 states, 25 of the state names end in either an *a* or an *e* and 7 end in either an *i* or an *o*. If none of the state names end in a *u*, what is the fraction of state names that end in a vowel?

- 22. JIGSAW PUZZLES** Over the weekend, Halverson had put together $\frac{3}{16}$ of a jigsaw puzzle, while Jaime put together $\frac{10}{16}$ of the puzzle. Who had completed a greater fraction of the jigsaw puzzle, and by how much?

- 23. TULIPS** Solan and Julie each planted tulips. Of Solan's 20 tulips, 15 were red, while 10 of Julie's 20 tulips were red. How much greater was Solan's fraction of red tulips than Julie's?

Key Concept

Add or Subtract Unlike Fractions

To add or subtract fractions with different denominators,

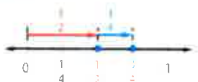
- Rename the fractions using the least common denominator (LCD).
- Add or subtract as with like fractions.
- If necessary, simplify the sum or difference.

Before you can add two **unlike fractions**, or fractions with different denominators, rename one or both of the fractions so that they have a common denominator.

Example

1. Find $\frac{1}{2} + \frac{1}{4}$.

Method 1 Use a number line.



Divide the number line into fourths since the LCD is 4.

Method 2 Use the LCD.

The least common denominator of $\frac{1}{2}$ and $\frac{1}{4}$ is 4.

$$\begin{aligned}\frac{1}{2} + \frac{1}{4} &= \frac{1 \times 2}{2 \times 2} + \frac{1 \times 1}{4 \times 1} && \text{Rename using the LCD, 4.} \\ &= \frac{2}{4} + \frac{1}{4} && \text{Add the fractions.} \\ &= \frac{3}{4} && \text{Simplify.}\end{aligned}$$

Using either method, $\frac{1}{2} + \frac{1}{4} = \frac{3}{4}$.

Got It? Do these problems to find out.

Add. Write in simplest form.

a. $\frac{1}{6} + \frac{2}{3}$

b. $\frac{9}{10} + \left(-\frac{1}{2}\right)$

c. $\frac{1}{4} + \frac{3}{8}$

d. $-\frac{1}{3} + \left(-\frac{1}{4}\right)$

Example

2. Find $\left(-\frac{3}{4} + \frac{5}{9}\right) + \frac{7}{4}$.

$$\begin{aligned}\left(-\frac{3}{4} + \frac{5}{9}\right) + \frac{7}{4} &= \left(\frac{5}{9} + \left(-\frac{3}{4}\right)\right) + \frac{7}{4} && \text{Commutative Property of Addition} \\ &= \frac{5}{9} + \left(-\frac{3}{4} + \frac{7}{4}\right) && \text{Associative Property of Addition} \\ &= \frac{5}{9} + 1 \text{ or } 1\frac{5}{9} && \text{Simplify}\end{aligned}$$

Got It? Do these problems to find out.

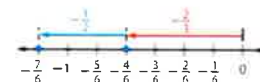
e. $\frac{2}{5} + \left(\frac{4}{7} + \frac{3}{5}\right)$

f. $\left(-\frac{3}{10} + \frac{5}{8}\right) + \frac{23}{10}$

Example

3. Find $-\frac{2}{3} - \frac{1}{2}$.

Method 1 Use a number line.



Divide the number line into sixths since the LCD is 6.

Method 2 Use the LCD.

$$\begin{aligned}-\frac{2}{3} - \frac{1}{2} &= -\frac{2 \times 2}{3 \times 2} - \frac{1 \times 3}{2 \times 3} && \text{Rename using the LCD, 6.} \\ &= -\frac{4}{6} - \frac{3}{6} && \text{Simplify.} \\ &= -\frac{4}{6} - \frac{3}{6} && \text{Rewrite: } -\frac{4}{6} \text{ as } -\frac{4}{6} \\ &= -\frac{4-3}{6} \text{ or } -\frac{7}{6} && \text{Subtract the numerators. Simplify.}\end{aligned}$$

Check by adding: $-\frac{7}{6} + \frac{1}{2} = -\frac{7}{6} + \frac{3}{6} = -\frac{4}{6}$ or $-\frac{2}{3}$ ✓

Using either method, $-\frac{2}{3} - \frac{1}{2} = -\frac{7}{6}$ or $-1\frac{1}{6}$.

Got It? Do these problems to find out.

Subtract. Write in simplest form.

g. $\frac{5}{8} - \frac{1}{4}$

h. $\frac{3}{4} - \frac{1}{3}$

i. $\frac{1}{2} - \left(-\frac{2}{5}\right)$

Check for Reasonableness

Estimate the difference.

$$-\frac{2}{3} - \frac{1}{2} \approx -\frac{1}{2} - \frac{1}{2} \text{ or } -1$$

Compare $-\frac{7}{6}$ to the estimate. $-\frac{7}{6} \approx -1$. So, the answer is reasonable.

a. _____

b. _____

c. _____

d. _____

g. _____

h. _____

i. _____

Lesson 4 Homework Practice

Add and Subtract Unlike Fractions

Add or subtract. Write in simplest form.

1. $\frac{1}{18} + \frac{5}{6}$

2. $\frac{7}{15} - \frac{1}{5}$

3. $\frac{9}{16} - \frac{5}{12}$

4. $\frac{5}{14} - \frac{2}{21}$

5. $\frac{7}{8} - \frac{1}{6}$

6. $-\frac{7}{10} - \frac{4}{15}$

7. $\frac{5}{6} - \left(-\frac{3}{4}\right)$

8. $-\frac{2}{3} - \left(-\frac{1}{2}\right)$

9. $1 + \frac{1}{6}$

10. $1 - \frac{3}{4}$

11. $4 + \frac{8}{9}$

12. $5 - \frac{1}{4}$

13. $\frac{2}{3} + \frac{4}{15} + \frac{1}{5}$

14. $\frac{3}{4} + \frac{1}{3} - \frac{11}{12}$

15. **EYE COLOR** If $\frac{2}{3}$ of the girls in class have brown eyes and $\frac{1}{4}$ of the girls have blue eyes, what fraction of the girls in class have neither blue or brown eyes?

16. **PIE** Ubi made a banana cream pie. His brother ate $\frac{1}{3}$ of the pie and his sister ate $\frac{2}{5}$ of the pie. How much less did his brother eat than his sister?

Add and Subtract Mixed Numbers

To add or subtract mixed numbers, first add or subtract the fractions. If necessary, rename them using the LCD. Then add or subtract the whole numbers and simplify if necessary.

Sometimes when you subtract mixed numbers, the fraction in the first mixed number is less than the fraction in the second mixed number. In this case, rename one or both fractions in order to subtract.

Examples

1. Find $7\frac{4}{9} + 10\frac{2}{9}$. Write in simplest form.

Estimate: $7 + 10 = 17$

$$\begin{array}{r} 7\frac{4}{9} \\ + 10\frac{2}{9} \\ \hline 17\frac{6}{9} \text{ or } 17\frac{2}{3} \end{array}$$

Add the whole numbers and fractions separately.

Check for Reasonableness: $17\frac{2}{3} \approx 17$ ✓

2. Find $8\frac{5}{6} - 2\frac{1}{3}$. Write in simplest form.

Estimate: $8 - 2 = 6$

$$\begin{array}{r} 8\frac{5}{6} \\ - 2\frac{1}{3} \\ \hline 6\frac{3}{6} \text{ or } 6\frac{1}{2} \end{array}$$

Rename the fraction using the LCD, then subtract.

Check for Reasonableness: $6\frac{1}{2} \approx 6$ ✓

Got It? Do these problems to find out.

Add or subtract. Write in simplest form.

- a. $6\frac{1}{8} + 2\frac{5}{8}$ b. $5\frac{1}{5} + 2\frac{3}{10}$ c. $1\frac{5}{9} + 4\frac{1}{6}$
 d. $5\frac{4}{5} - 1\frac{3}{10}$ e. $13\frac{7}{8} - 9\frac{3}{4}$ f. $8\frac{2}{3} - 2\frac{1}{2}$

Example

3. Find $2\frac{1}{3} - 1\frac{2}{3}$.

Method 1 Rename Mixed Numbers

Estimate: $2 - 1 = 1$

Since $\frac{1}{3}$ is less than $\frac{2}{3}$, rename $2\frac{1}{3}$ before subtracting.



$$\begin{array}{r} 2\frac{1}{3} \\ - 1\frac{2}{3} \\ \hline 1\frac{4}{3} \\ - 1\frac{2}{3} \\ \hline \frac{2}{3} \end{array}$$

Rename $2\frac{1}{3}$ as $1\frac{4}{3}$.

Subtract the whole numbers and then the fractions.

Check for Reasonableness: $\frac{2}{3} \approx 1$ ✓

Method 2 Write as Improper Fractions

$$\begin{array}{r} 2\frac{1}{3} \\ - 1\frac{2}{3} \\ \hline \frac{7}{3} \\ - \frac{5}{3} \\ \hline \frac{2}{3} \end{array}$$

Write $2\frac{1}{3}$ as $\frac{7}{3}$.

Write $1\frac{2}{3}$ as $\frac{5}{3}$.

Simplify.

$$\text{So, } 2\frac{1}{3} - 1\frac{2}{3} = \frac{2}{3}$$

Using either method, the answer is $\frac{2}{3}$.

Got It? Do these problems to find out.

Subtract. Write in simplest form.

- g. $7 - 1\frac{1}{2}$ h. $5\frac{3}{8} - 4\frac{11}{12}$ i. $11\frac{2}{5} - 2\frac{3}{5}$
 j. $8 - 3\frac{3}{4}$ k. $3\frac{1}{4} - 1\frac{3}{4}$ l. $16 - 5\frac{5}{6}$

Fractions Greater Than One

An improper fraction has a numerator that is greater than or equal to the denominator. Examples of improper fractions are $\frac{5}{4}$ and $2\frac{6}{5}$.

g. _____

h. _____

i. _____

j. _____

k. _____

l. _____

Properties

$120\frac{1}{2} + 40\frac{1}{3}$ can be written as $(120 + \frac{1}{2}) + (40 + \frac{1}{3})$. Then the Commutative and Associative Properties can be used to reorder and regroup the numbers to find the sum.

a. _____

b. _____

c. _____

d. _____

e. _____

f. _____

Lesson 5 Homework Practice

Add and Subtract Mixed Numbers

Add or subtract. Write in simplest form.

1. $2\frac{3}{5} + 1\frac{4}{5}$

2. $3\frac{5}{6} - 1\frac{1}{6}$

3. $4\frac{3}{4} + 3\frac{1}{2}$

4. $6\frac{3}{8} - 2\frac{1}{4}$

5. $5\frac{9}{10} + 8\frac{2}{5}$

6. $3\frac{5}{8} - 2\frac{7}{8}$

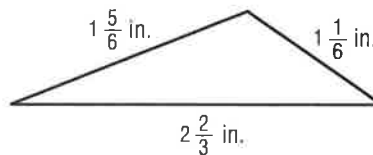
7. $7\frac{5}{12} - 3\frac{3}{4}$

8. $1\frac{3}{5} + 2\frac{5}{6}$

9. $6 - 2\frac{3}{4}$

10. $3\frac{1}{2} + 2\frac{5}{8} - 4\frac{1}{4}$

11. **GEOMETRY** Find the perimeter of the triangle.

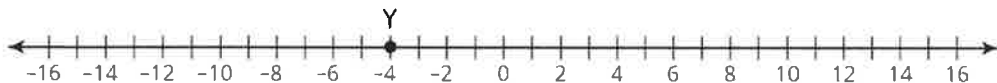


12. **KNITTING** Nastia knitted two scarves for her dolls. One was $8\frac{3}{4}$ inches long. The other was $1\frac{1}{2}$ inches shorter than the first. How long was the second scarf?

Can you **ESCAPE?**

#1

Point Y is shown on the number line below.



The distance between point Z and point Y is $7\frac{1}{2}$ units.
Which number could represent point Z?

1) $-10\frac{1}{2}$

2) $3\frac{1}{2}$

3) $11\frac{1}{2}$

4) $2\frac{1}{2}$

#2

Add to find the sum.

$46 + (-28)$ and $-14 + (-12)$

1) -18 and -26

2) 18 and -26

3) -74 and -2

4) 74 and 2

#3

Add to find the sum.

$-2 + (-7) + 15$

1) 24

2) -24

3) 6

4) -6

#4

Add to find the sum.

$-1.6 + (-2.4)$

1) 0.8

2) 4.0

3) -0.8

4) -4.0

#5

Add to find the sum.

$-4\frac{9}{10} + \frac{4}{5}$

1) $-4\frac{1}{10}$

2) $5\frac{7}{10}$

3) $-5\frac{7}{10}$

4) $4\frac{1}{10}$

Can you **ESCAPE?**

#1

Find the difference.

$$8 - 18 \quad \text{and} \quad -12 - (-27)$$

- 1) 10 and -15
- 2) -10 and 15
- 3) -10 and -15
- 4) 26 and 15

#2

Choose the expression that has the same value as

$$59.2 - 84.7$$

- 1) $84.7 - 59.2$
- 2) $-84.7 + (-59.2)$
- 3) $59.2 - (-84.7)$
- 4) $59.2 + (-84.7)$

#3

Yesterday, the temperature at noon was 11.4°F . By midnight, the temperature decreased by 15.7°F . What was the temperature at midnight?

- 1) -4.3°F
- 2) -11.4°F
- 3) -15.7°F
- 4) -27.1°F

#4

Find the difference.

$$-3\frac{3}{4} - \frac{4}{5}$$

- 1) $-3\frac{1}{20}$
- 2) $3\frac{1}{20}$
- 3) $-4\frac{11}{20}$
- 4) $4\frac{11}{20}$

#5

Find the difference.

$$3.8 - (-7.45)$$

- 1) -11.25
- 2) 11.25
- 3) 3.65
- 4) -3.65

Can you **ESCAPE?**

#1

Find the product.

$$-8 \cdot -9$$

1) -17

2) 17

3) -72

4) 72

#2

Find the product.

$$(-6)(-3)(10)$$

1) -18

2) 180

3) -180

4) 18

#3

What is the product of the expression?

$$\left(-\frac{1}{4}\right) \times \left(-\frac{3}{7}\right)$$

1) $\frac{3}{28}$

2) $-\frac{7}{12}$

3) $\frac{7}{12}$

4) $-\frac{3}{28}$

#4

Find the product. Write the answer in simplest form.

$$\left(-\frac{2}{3}\right) \frac{9}{15}$$

1) $\frac{11}{18}$

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

3) $\frac{2}{5}$

4) $-\frac{11}{18}$

#5

Find the product.

$$-0.5(3.26)(-20)$$

1) -32.6

2) 32.6

3) 22.6

4) -22.6

Can you ESCAPE?

#1

Find the quotient.

$$-84 \div 7 \text{ and } \frac{-54}{-6}$$

- 1) -12 and -9
- 2) 12 and -9
- 3) -12 and 9
- 4) -13 and 8

#2

What is the value of this expression?

$$\frac{\left(\frac{2}{3} - \frac{5}{6}\right)}{\frac{3}{4}}$$

- 1) $\frac{2}{9}$
- 2) $-\frac{2}{9}$
- 3) $\frac{1}{8}$
- 4) $-\frac{1}{8}$

#3

Evaluate the expression when $x = 3$, $y = -4$, and $z = -6$

$$\frac{z - 2x}{y}$$

- 1) 0
- 2) -3
- 3) 3
- 4) -4

#4

Solve. Write your answer in simplest form.

$$-\frac{9}{10} \div \frac{6}{5} \quad \text{and} \quad \frac{3}{7} \times 0.1 \div \frac{5}{21}$$

- 1) $\frac{54}{50}$ and $\frac{1}{98}$
- 2) $-\frac{3}{4}$ and $\frac{9}{50}$
- 3) $\frac{3}{4}$ and $\frac{9}{5}$
- 4) $-\frac{54}{50}$ and $\frac{18}{1}$

#5

Find the quotient.

$$-15.4 \div (-2.5)$$

- 1) 6.16
- 2) -5.14
- 3) 6.016
- 4) -6.16

Can you ESCAPE?

#1

Write the fraction or mixed number as a decimal and write the decimal as a fraction or mixed number in simplest form.

$$-\frac{7}{8}$$

$$1\frac{7}{16}$$

$$-0.35$$

$$\frac{43}{12}$$

- 1) 0.875, 1.4375, $\frac{7}{20}$, $3.5\overline{83}$
- 2) -0.875, 1.4375, $-\frac{7}{20}$, $3.5\overline{83}$
- 3) 0.875, -1.3475, $\frac{7}{20}$, $3.5\overline{83}$
- 4) -0.875, 1.4375, $-\frac{7}{20}$, $3.5\overline{83}$

#2

Altitude above sea level is given in positive values and below sea level is given in negative values. Which situation describes a hiker in Death Valley stopping at an altitude of 0 feet?

- A. The hiker starts at -10 feet then increases altitude by 10 feet.
- B. The hiker starts at -10 feet then decreases altitude by 10 feet.
- C. The hiker starts at 10 feet then increases altitude by 10 feet.
- D. The hiker starts at 0 feet then decreases by 10 feet.

- 1) A
- 2) B
- 3) C
- 4) D

#3

A pile of books in Mr. Halpert's math class was $17\frac{3}{4}$ inches high. Each consecutive week, for the next 5 weeks, the height of the pile of books increased by $8\frac{7}{12}$ inches. What was the height, in inches, of the pile after 3 weeks?

- 1) $25\frac{3}{4}$
- 2) $26\frac{1}{4}$
- 3) $42\frac{1}{4}$
- 4) $43\frac{1}{2}$

Can you **ESCAPE?**

#4

Students in Mr. Halpert's class are measuring the width of a rectangle that is $6\frac{2}{3}$ inches.

The length of the rectangle is twice its width.

What is the **perimeter** of the rectangle?

- 1) 20 inches
- 2) 40 inches
- 3) $30\frac{8}{9}$ inches
- 4) $88\frac{2}{3}$ inches

#5

Which situation results in a final value of zero?

- A. The overall change in temperature when the temperature goes from -20°F to 20°F .
- B. The total profit made when a person buys an item for \$4.54 and then sells the item for \$4.54.
- C. The overall change in altitude of a hot air balloon after rising 14 km from sea level.
- D. The total distance a person travels when he bikes 2.1 miles to school and then bikes 2.1 miles back home.

- 1) A
- 2) B
- 3) C
- 4) D

ESCAPE ROOM

RECORDING SHEET

Name: _____

Directions: Using what you know about rational numbers, solve each question in order. Then write each answer (1, 2, 3, or 4) on the lines provided in the correct sequence. If the code is correct, you can advance to the next level; however, if the code is incorrect, you must go back and check your work! Good luck!

LEVEL 1 CODE: _____

LEVEL 2 CODE: _____

LEVEL 3 CODE: _____

LEVEL 4 CODE: _____

LEVEL 5 CODE: _____

Mother's Day by the Numbers

Mother's Day is right around the corner and that means big business for the greeting card and floral industries. According to the National Federation of Retailers, Mother's Day is a \$23.6 billion industry. After the winter holidays, Mother's Day is the second largest U.S. consumer spending holiday. Let's take a peak at the numbers behind this holiday.

1. According to the US Census Bureau there are around **85 million moms** in the U.S. On average how much of that \$23.6 billion is spent on one mom?

2. According to National Federation of Retailers, around \$2.6 billion in flowers will be given in the U.S. for Mother's Day. Considering that there are about 85 million moms in the U.S. how many dollars is spent for flowers for the average mom for Mother's Day?

3. The \$2.6 billion in flowers sold for Mother's day makes up 25% of annual U.S. flower sales (2nd only to the winter holidays). Determine how much is spent on flowers in the U.S. annually.

4. According to Hallmark, we give roughly **141 million Mother's Day cards** each year. This may seem like a lot, but there are around **85 million moms** in the U.S. How many Mother's Day cards does the average mom get?

5. If the average Mother's Day card costs in the range of \$2 to \$4, around how much is spent annually on Mother's Day cards?

6. One other big part of Mother's Day is food. Research shows that 56% of us take mom out to eat, spending a total \$4.2 billion in the U.S. Assuming that only 56% of moms are taken out to eat, how much does the typical Mother's Day restaurant bill cost?

Source: <https://nrf.com/resources/consumer-data/mothers-day>

Brought to you by **Yummymath.com**

PHYSICAL EDUCATION MAKE-UP ACTIVITY LOG

Name _____ Period _____

Date(s) of absence: _____

- Keep a daily log of physical activities you have done each day.
- Include the type of activity and the amount of time spent doing each activity.
- **A minimum of thirty (30) minutes is required each day to receive credit.**
- **A parent must sign the log each day to verify the completion of the activity.**
- Examples of activities include walking, biking, jogging, swimming, skiing, hiking, skating, etc.

Date	Activity	Amount of Time	Parent Signature
------	----------	----------------	------------------

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible, starting from the top edge and ending near the bottom edge. The lines are thin and black. The paper has a slight shadow on the right side, suggesting it's part of a bound notebook or folder.

Educación Física

Registro de Actividades

Nombre _____

Periodo _____

Fechas de Ausencias:

- Mantén un registro diario de actividades físicas que has hecho cada día.
- Incluye el tipo de actividad y la cantidad de tiempo que usaste haciendo cada actividad cada día.
- **Un mínimo de treinta (30) minutos es requerido cada día para recibir crédito.**
- **Un padre de familia debe firmar el registro cada día para verificar que se a completado la actividad.**
- Ejemplos de actividades incluyen caminar, bicicletaear, correr, nadar, esquiar, patinar, etc.

Fecha	Actividad	Cantidad de Tiempo	Firma
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This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins or other markings on the paper.



TABATA



1. PUSH-UPS



10 SEC REST

20 SEC MOVE

2. SKIER JUMPS



10 SEC REST

20 SEC MOVE

3. ALT. LEG KICKS



10 SEC REST

20 SEC MOVE

4. BURPEES



10 SEC REST

20 SEC MOVE

5. SQUATS



10 SEC REST

20 SEC MOVE

6. JOG IN PLACE



10 SEC REST

20 SEC MOVE

6

HIGH INTENSITY INTERVAL TRAINING

beginner circuit

WORKOUT

by DAREBEE

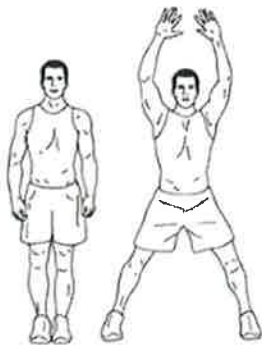
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Level I 3 sets

Level II 5 sets

Level III 7 sets

2 minutes rest



12 jumping jacks



6 squats



6 calf raises



12 raised arm circles



6 shoulder taps



6 plank rotations

100%

DAREBEE **HIIT** WORKOUT © darebee.com

Level I 3 sets Level II 5 sets Level III 7 sets | 2 minutes rest



20sec high knees



20sec shoulder taps



20sec high knees



20sec shoulder taps



20sec plank hold



20sec shoulder taps



20sec high knees



20sec shoulder taps



20sec high knees