Grade 7
Assignment Bundle

COMMONLIT

Name: _____ Class: _____

Klondike Gold Rush

By Anonymous
1898

On August 16, 1896, miners found gold in the Klondike region of the Yukon in northwestern Canada. This inspired a migration of an estimated 100,000 people between 1896 and 1899, hoping to find similar success and riches. As you read, takes notes on what miners expected to find and how this compared to the reality of their experiences.

Yukon Territory 1897

"Underground mining at Klondike gold field, 1898" by Curtis, Asahe is in the public domain.

[1] The Klondike gold rush began in July of 1897 when two ships docked in San Francisco and Seattle carrying miners returning from the Yukon with bags of gold. The press was alerted and papers carried the story to the masses.

Soon, miners of all shapes and sizes, called "stampeders," were on their way to the gold fields. Within six months, approximately 100,000 gold-seekers set off for the Yukon. Only 30,000 completed the trip.

Most stampeders knew little or nothing about where they were going, so pamphlets were available to help them on their way. Many of the pamphlets contained little or no real information and made outrageous claims of wealth to be had by everyone. Outfitters[1] sprang up overnight that were happy to sell the stampeders whatever they needed to get started. This included food, clothing, tools, and camping, mining and transportation equipment. Helping the outfitters in this regard were the Northwest Mounted Police who required all stampeders to have one year's supply of goods before they allowed them across the border into Canada. This was roughly one ton of goods per person. Towns such as Seattle made fortunes outfitting the miners.

The easiest and more expensive route to the gold fields was by boat upstream from the mouth of the Yukon in western Alaska. The most difficult route was the "All Canadian Route" from Edmonton and overland through the wilderness.

[5] The most common route taken by the stampeders to reach the fields was by boat from the west coast of the continental U.S. to Skagway in Alaska, over the Chilkoot or White Passes to the Yukon River at Whitehorse and then by boat 500 miles to Dawson City.

1. an establishment that sells clothing, equipment, and services, especially for outdoor activities

The Chilkoot Pass trail was steep and hazardous.[2] Rising 1,000 feet in the last ½ mile, it was known as the "golden staircase": 1,500 steps carved out of snow and ice worked their way to the top of the pass. Too steep for packhorses,[3] stampeders had to "cache"[4] their goods, moving their equipment piecemeal[5] up the mountain. Stampeders who gave up often did it here, discarding their unneeded equipment on the side of the trail.

Conditions on the White Pass trail were even more horrendous.[6] Steep, narrow and slick, over 3,000 pack animals died on the trail causing it to be dubbed the "Dead horse trail."

Those who made it across the passes found themselves at Bennett Lake. Here, boats had to be built to run the final 500 miles down the Yukon River to the gold fields. A three week trip, the miners had to survive many sets of rapids before making it to Dawson City. Many miners lost their lives or their possessions when their boats broke up in the rapids.

Those who survived the perilous[7] journey mostly found disappointment once they reached Dawson City. Locals had already claimed all of the gold-bearing creeks and claims of "gold for the taking" were grossly exaggerated. Many stampeders headed home, some worked for others on the claims, and still others stayed to work in Dawson City.

[10] The work that was necessary to retrieve the gold was incredible. Most of the gold was not at the surface, but rather 10 or more feet below. To reach it, the miners had to dig through the permafrost — the layer of permanently frozen ground. The ground had to be thawed before it could be dug. Then the dirt had to be sluiced[8] to separate it from the gold. All digging had to be done during the summer as it was impossible to dig in the winter when temperatures could reach -60°F. It was incredibly difficult work.

The biggest boom to hit this part of the world was a huge bust for the miners. The only ones to strike it rich were the merchants and profiteers who took advantage of those who hoped to "get rich quick."

2. **Hazardous** ***(adjective):*** risky; dangerous
3. a horse used to carry loads
4. to place or store something in a hidden or secure place
5. one piece at a time
6. **Horrendous** ***(adjective):*** extremely bad or unpleasant
7. **Perilous** ***(adjective):*** full of danger
8. to wash or rinse with water

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: In paragraph 2, what does the phrase "miners of all shapes and sizes" mean? [RI.4]
    A. Many people were invited.
    B. People with supplies traveled to the Yukon.
    C. People experienced discrimination.
    D. Many types of people traveled to the Yukon.

2. PART B: What additional idea does the reader understand from the phrase in Part A? [RI.3]
    A. a large number of miners arrived
    B. most miners had gold field experience
    C. a large number of miners were rejected
    D. most miners could handle the hard labor

3. PART A: What is the meaning of "pamphlets" as it is used in paragraph 3 of "Klondike Gold Rush"? [RI.4]
    A. tokens for miners
    B. stocked wagons
    C. guides for miners
    D. camping kits

4. PART B: Which detail from paragraph 3 helps the reader understand the meaning of "pamphlets"? [RI.1]
    A. "Most stampeders knew little or nothing about where they were going"
    B. "This included food, clothing, tools, and camping, mining and transportation equipment."
    C. "Helping the outfitters in this regard were the Northwest Mounted Police"
    D. "This was roughly one ton of goods per person."

5. PART A: Based on the information from "Klondike Gold Rush," which sentence states a central idea of the article? [RI.2]
    A. Most miners were pleased with the outcome of the gold rush.
    B. Most miners labored hard for very little gain.
    C. Work in the Yukon Territory was worth the danger of traveling there.
    D. The gold rush hurt many small businesses.

6. PART B: Which TWO sentences from the article provide the best evidence for the answer in Part A? [RI.1]

   A. "Outfitters sprang up overnight that were happy to sell the stampeders whatever they needed to get started." (Paragraph 3)
   B. "Towns such as Seattle made fortunes outfitting the miners." (Paragraph 3)
   C. "Those who made it across the passes found themselves at Bennett Lake." (Paragraph 8)
   D. "Many stampeders headed home, some worked for others on the claims, and still others stayed to work in Dawson City." (Paragraph 9)
   E. "The work that was necessary to retrieve the gold was incredible." (Paragraph 10)
   F. "The biggest boom to hit this part of the world was a huge bust for the miners.) (Paragraph 11)

7. PART A: Based on evidence in the article, why did so few miners stay in the Klondike to mine gold after arriving? [RI.3]

   A. The conditions for mining were difficult.
   B. Many laws outlawed miners.
   C. The lack of wildlife made mining nearly impossible.
   D. The value of gold dropped significantly.

8. PART B: Which detail from the article supports the answer to Part A? [RI.1]

   A. "helping the outfitters in this regard were the Northwest Mounted Police" (Paragraph 3)
   B. "The Chilkoot Pass trail was steep and hazardous." (Paragraph 6)
   C. "Here, boats had to be built" (Paragraph 8)
   D. "Most of the gold was not at the surface" (Paragraph 10)

9. PART A: Based on the information in "Klondike Gold Rush," how did most miners reach the Yukon territory? [RI.3]

   A. by boat and by train
   B. by train and using pack animals
   C. by boat and by walking overland
   D. by train and by walking overland

10. PART B: Which paragraph offers evidence for the answer to Part A? [RI.1]

    A. Paragraph 2
    B. Paragraph 5
    C. Paragraph 9
    D. Paragraph 10

11. PART A: How does the author mainly organize paragraphs 1-2 in the article "Klondike Gold Rush"? [RI.5]

    A. chronological order
    B. cause and effect
    C. problem and solution
    D. compare and contrast

12. PART B: Which description best illustrates how the structure in Part A is achieved? [RI.1]

A. “The Klondike gold rush began in July of 1897” (Paragraph 1)
B. “The press was alerted” (Paragraph 1)
C. “miners of all shapes and sizes” (Paragraph 2)
D. “Only 30,000 completed the trip” (Paragraph 2)

Discussion Questions

Directions: Brainstorm your answers to the following questions in the space provided. Be prepared to share your original ideas in a class discussion.

1. In the context of the text, how does power corrupt? How did some people abuse their influence in the Klondike? Do you think miners were treated fairly in the Klondike? Why or why not?

2. In the context of the text, how has America changed over time? How has the American Dream changed over time? Do you think the miners were pursuing a version of the American Dream? Why or why not?

3. In the context of the text, how can we achieve happiness? What did the miners think would bring them happiness? Did they achieve happiness? Why or why not? Cite evidence from this text, your own experience, and other literature, art, or history in your answer.

COMMONLIT

Name: _____ Class: _____

A Woman Who Went to Alaska

By Mary Kellogg Sullivan
1902

In Mary Kellogg Sullivan's book A Woman Who Went to Alaska*, Sullivan describes her adventures in Alaska during her search for riches. Between 1896 and 1899, an estimated 100,000 people migrated to the Klondike region of the Yukon in northwestern Canada. In the following excerpt from Sullivan's book, she describes the experiences of miners searching for gold. As you read, take notes on who profited from the gold rush.*

THE RUSH.

"Klondikers buying miner's licenses at Custom House, Victoria, B C, Feb 21, 1898" by John Wallace Jones is in the public domain.

[1] Since the discovery of gold by George Carmack on Bonanza Creek in September 1896, the growth of this country has been phenomenal, more especially so to one who has visited and is familiar with Dawson and the Klondyke mining section.

As to the entire yield of gold from the Klondyke Creeks, none can say except approximately; for the ten percent royalty[1] imposed by the Canadian government has always met a phase of human nature which prompts to concealment and dishonesty, so that a truthful estimate cannot be made.

The Canadian Dominion government is very oppressive. Mining laws are very arbitrary[2] and strictly enforced. A person wishing to prospect for gold must first procure a miner's license, paying ten dollars for it. If anything is discovered, and he wishes to locate a claim, he visits the recorder's office, states his business, and is told to call again. In the meantime, men are sent to examine the locality and if anything of value is found, the man wishing to record the claim is told that it is already located. The officials seize it. The man has no way of ascertaining[3] if the land was properly located, and so had no redress.[4] If the claim is thought to be poor, he can locate it by the payment of a fifteen dollar fee.

One half of all mining land is reserved for the crown,[5] a quarter or more is gobbled by corrupt officials, and a meager[6] share left for the daring miners who, by braving hardship and death, develop the mines and open up the country.

1. an amount of money paid by a mining company to the owner of the land
2. **Arbitrary** ***(adjective):*** based on random choice or personal whim, rather than any reason or system
3. **Ascertain** ***(verb):*** to find or learn with certainty
4. a means of obtaining a remedy
5. the reigning king or queen, representing a country's government
6. very small

[5] "Any one going into the country has no right to cut wood for any purpose, or to kill any game or catch any fish, without a license for which a fee of ten dollars must be paid. With such a license it is unlawful to sell a stick of wood for any purpose, or a pound of fish or game." This law is strictly enforced. To do anything, one must have a special permit, and for every such permit he must pay roundly.[7]

The story is told of a miner in a hospital who was about to die. He requested that the Governor be sent for. Being asked what he wanted with the Governor, he replied: "I haven't any permit, and if I should undertake to die without a permit, I should get myself arrested."

It is a well-known fact that many claims on Eldorado, Hunker, and Bonanza Creeks have turned out hundreds of thousands of dollars. One pan of gravel on Eldorado Creek yielded $2,100. Frank Dinsmore on Bonanza Creek took out ninety pounds of solid gold for $24,480 in a single day. On Aleck McDonald's claim on Eldorado, one man shoveled in $20,000 in twelve hours. McDonald, in two years, dug from the frozen ground $2,207,893. Charley Anderson, on Eldorado, panned out $700 in three hours. T.S. Lippy is said to have paid the Canadian government $65,000 in royalties for the year 1898 and Clarence Berry about the same.

On Skukum Gulch $30,000 were taken from two boxes of dirt. Frank Phiscator of Michigan, after a few months' work, brought home $100,000 in gold, selling one-third of his claim interests for $1,333,000, or at the rate of $5,000,000 for the whole.

When a man is compelled to pay one thousand dollars out of every ten thousand he digs from the ground, he will boast little of large "clean-ups";[8] and for this reason it is hard to estimate the real amount of gold extracted from the Klondyke mines.

7. thoroughly or completely
8. to make a substantial gain or profit

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: As used in paragraph 3 of the passage from A Woman Who Went to Alaska, what is the meaning of the word "oppressive"? [RI.4]
    A. unjustly harsh
    B. occasionally flexible
    C. unexpectedly angry
    D. appropriately demanding

2. PART B: Which phrase from paragraph 3 in the passage from A Woman Who Went to Alaska helps the reader understand the meaning of the word "oppressive"? [RI.1]
    A. "Canadian Dominion government"
    B. "arbitrary and strictly enforced"
    C. "prospect for gold"
    D. "he visits the recorder's office"

3. PART A: Which statement best describes the Canadian government's treatment of the miners in the passage from A Woman Who Went to Alaska? [RI.3]
    A. a controlling government that takes advantage of the miners
    B. a fair government that wants the miners to succeed without assistance
    C. a disorganized government that fails to set appropriate rules for the miners
    D. an irresponsible government that is indifferent to the miners

4. PART B: Which three actions does the government take that provide evidence for the answer to Part A? [RI.8]
    A. charging high taxes on mined gold
    B. encouraging fishing and hunting
    C. enforcing a nightly curfew
    D. requiring multiple licenses and permits
    E. seizing property known to contain gold
    F. assisting newcomers seeking a claim
    G. banning the use of explosives

Discussion Questions

Directions: Brainstorm your answers to the following questions in the space provided. Be prepared to share your original ideas in a class discussion.

1. Why did businesses and the Canadian government take advantage of miners? How did this impact the miners' motivation? Cite evidence from this text, your own experience, and other literature, art, or history in your answer.

2. How did the prospect of finding gold affect people's judgement and actions during the Gold Rush? Cite evidence from this text, your own experience, and other literature, art, or history in your answer.

3. How did the Gold Rush help develop America? How do you think it contributed to the notion of the American Dream? Cite evidence from this text, your own experience, and other literature, art, or history in your answer.

Selecting Books for Your Child: Finding 'Just Right' Books

By: Kathleen Rogers

How can parents help their children find books that are not "too hard" and not "too easy" but instead are "just right"? Here's some advice.

Five finger rule

1. Choose a book that you think you will enjoy.
2. Read the second page.
3. Hold up a finger for each word you are not sure of, or do not know.
4. If there are five or more words you did not know, you should choose an easier book.
5. Still think it may not be too difficult? Use the five finger rule on two more pages.

Choose a book that is a good fit for you!

Read two or three pages and ask yourself these questions:

Will it be an easy, fun book to read?

- Do I understand what I am reading?
- Do I know almost every word?
- When I read it aloud, can I read it smoothly?
- Do I think the topic will interest me?

If most of your answers were "yes", this will be an easy book to read independently by yourself.

Will this book be too hard for me?

- Are there five or more words on a page that I don't know, or am unsure of?
- Is this book confusing and hard to understand by myself?
- When I read it aloud, does it sound choppy and slow?

If most of your answers were "yes," this book is too hard. You should wait awhile before you read this book. Give the book another try later, or ask an adult to read the book to you.

Tips on reading with your child

- When they can't read the word, say…
- Can you sound it out?
- Fingertap it.
- Can you think of the word or movement that helps you remember that vowel sound?
- What is the first and last sound? What word would make sense?
- Does it have a pattern that you have seen in other words? (ex-an, ack)
- How does the word begin?
- You said_____. Does that make sense?
- What word would make sense that would start with these sounds?
- Put your finger under the word as you say it.

When they want to read a book that is too hard, say…

- Let's read it together.
- This is a book you will enjoy more if you save it until you are older — or later in the year.
- [Be honest!] When people read books that are too hard for them, they often skip important parts. You will have more fun with this book if you wait until you can read it easily.

Rogers, K. (2008). Selecting Books for Your Child: Finding 'Just Right' Books. Retrieved November 7, 2008, from www.readingtogether.org.

HERE'S THE IMPACT OF READING 20 MINUTES PER DAY!

A student who reads	A student who reads	A student who reads
20:00	5:00	1:00
minutes per day	minutes per day	minute per day
will be exposed to **1.8 MILLION** words per year and scores in **90th PERCENTILE** on standardized tests	will be exposed to **282,000** words per year and scores in **50th PERCENTILE** on standardized tests	will be exposed to **8,000** words per year and scores in **10th PERCENTILE** on standardized tests

Source: Nagy, Anderson and Herman, 1987

SCHOLASTIC

Home Reading Log

Student Information			
Student Name		Grade Level	
School Name		Teacher	

Log

Date	Title	Author	Time Spent	Number of Pages Read

7.RP Cooking with the Whole Cup

Task

Travis was attempting to make muffins to take to a neighbor that had just moved in down the street. The recipe that he was working with required $\frac{3}{4}$ cup of sugar and $\frac{1}{8}$ cup of butter.

a. Travis accidentally put a whole cup of butter in the mix.

> i. What is the ratio of sugar to butter in the original recipe? What amount of sugar does Travis need to put into the mix to have the same ratio of sugar to butter that the original recipe calls for?
>
> ii. If Travis wants to keep the ratios the same as they are in the original recipe, how will the amounts of all the other ingredients for this new mixture compare to the amounts for a single batch of muffins?
>
> iii. The original recipe called for $\frac{3}{8}$ cup of blueberries. What is the ratio of blueberries to butter in the recipe? How many cups of blueberries are needed in the new enlarged mixture?

b. This got Travis wondering how he could remedy similar mistakes if he were to dump in a single cup of some of the other ingredients. Assume he wants to keep the ratios the same.

> i. How many cups of sugar are needed if a single cup of blueberries is used in the mix?
>
> ii. How many cups of butter are needed if a single cup of sugar is used in the mix?

iii. How many cups of blueberries are needed for each cup of sugar?

Understanding Addition with Negative Integers

1. Between the time Iko woke up and lunchtime, the temperature rose by 11°. Then by the time he went to bed, the temperature dropped by 14 °.

   Write an addition expression for the temperature relative to when Iko woke up.

   _____

   Draw a model using integer chips and circle the zero pairs.

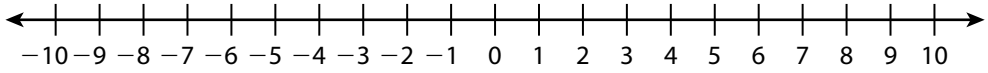
   What is the value of the remaining integer chips after the zero pairs are removed?

   _____

   What is the net change in the temperature relative to when Iko woke up?

   _____

2. Complete the number line model to find $(-5) + 6$.



$(-5) + 6 =$ _____

How would the number line model be different if you wanted to find $(-5) + (-6)$?

_____

_____

Understanding Addition with Negative Integers *continued*

➤ **For problems 3–5, consider the sum 4 + (−8).**

3 Explain how you can use a number line to find the sum.

4 Explain how you can use chips to determine the sum.

5 Does it matter what order you add the numbers in the problem? Explain how chips and number lines support your answer.

6 Write an addition expression that has a value of −8.

Understanding Subtraction with Negative Integers

1 Mary takes 9 grapes from Rohin and then decides to give 4 back.

Write a subtraction problem to describe how many grapes Rohin has. _____

Draw a model for the subtraction problem using integer chips.

How many negative integer chips did you cross out? _____

Write the subtraction as addition. _____

Draw a model for the addition problem using integer chips.

How do the two integer chip models show that $-9 - (-4)$ is the same as $-9 + 4$?

What is the change in the number of grapes Rohin has? _____

Understanding Subtraction with Negative Integers *continued*

2 Jin is 3 floors above ground level in a hotel. Leila is on a parking level of the hotel that is 4 floors below ground level. How many floors apart are they? Draw a number line model to show $3 - (-4)$.

What is $3 - (-4)$? _____

What is the meaning of this answer in the context of the problem?

Rewrite $3 - (-4)$ as an addition problem. _____

3 The variables a and b represent positive numbers. When you find the difference $a - (-b)$, do you expect the result to be less than or greater than a? What if a is negative and b is positive? Explain.

Understanding Multiplication with Negative Integers

➤ **Practice multiplying negative integers.**

1. Find each product. Then describe any patterns you notice.

$3 \cdot (-7) =$ _____

$2 \cdot (-7) =$ _____

$1 \cdot (-7) =$ _____

$0 \cdot (-7) =$ _____

$(-1) \cdot (-7) =$ _____

$(-2) \cdot (-7) =$ _____

$(-3) \cdot (-7) =$ _____

2. Solve each problem. Explain how you determined the sign of the products.

$(-3)(9) =$ _____

$(-8)(-5) =$ _____

$(-5)(-6) =$ _____

$(-1)(2)(-6) =$ _____

$(-2)(-4)(-7) =$ _____

$(-3)(-4)(-3)(-1) =$ _____

Understanding Multiplication with Negative Integers *continued*

3 Use the distributive property to show why the product $(-6)(-3)$ is positive. The first step is done for you.

$(-6)(-3) + (-6)(3) = (-6)[(-3) + 3]$

4 Mark's work to simplify $(-3)(-5)(-2)$ is shown. Explain his error and show how to find the correct product.

$(-3)(-5)(-2) = (-15)(-2) = 30$

Number Correct: _____

Integer Addition—Round 1

Directions: Determine the sum of the integers, and write it in the column to the right.

1.	$8 + (-5)$	
2.	$10 + (-3)$	
3.	$2 + (-7)$	
4.	$4 + (-11)$	
5.	$-3 + (-9)$	
6.	$-12 + (-7)$	
7.	$-13 + 5$	
8.	$-4 + 9$	
9.	$7 + (-7)$	
10.	$-13 + 13$	
11.	$14 + (-20)$	
12.	$6 + (-4)$	
13.	$10 + (-7)$	
14.	$-16 + 9$	
15.	$-10 + 34$	
16.	$-20 + (-5)$	
17.	$-18 + 15$	

18.	$-38 + 25$	
19.	$-19 + (-11)$	
20.	$2 + (-7)$	
21.	$-23 + (-23)$	
22.	$45 + (-32)$	
23.	$16 + (-24)$	
24.	$-28 + 13$	
25.	$-15 + 15$	
26.	$12 + (-19)$	
27.	$-24 + (-32)$	
28.	$-18 + (-18)$	
29.	$14 + (-26)$	
30.	$-7 + 8 + (-3)$	
31.	$2 + (-15) + 4$	
32.	$-8 + (-19) + (-11)$	
33.	$15 + (-12) + 7$	
34.	$-28 + 7 + (-7)$	

Number Correct: _____
Improvement: _____

Integer Addition—Round 2

Directions: Determine the sum of the integers, and write it in the column to the right.

1.	$5 + (-12)$	
2.	$10 + (-6)$	
3.	$-9 + (-13)$	
4.	$-12 + 17$	
5.	$-15 + 15$	
6.	$16 + (-25)$	
7.	$-12 + (-8)$	
8.	$-25 + (-29)$	
9.	$28 + (-12)$	
10.	$-19 + (-19)$	
11.	$-17 + 20$	
12.	$8 + (-18)$	
13.	$13 + (-15)$	
14.	$-10 + (-16)$	
15.	$35 + (-35)$	
16.	$9 + (-14)$	
17.	$-34 + (-27)$	

18.	$23 + (-31)$	
19.	$-26 + (-19)$	
20.	$16 + (-37)$	
21.	$-21 + 14$	
22.	$33 + (-8)$	
23.	$-31 + (-13)$	
24.	$-16 + 16$	
25.	$30 + (-43)$	
26.	$-22 + (-18)$	
27.	$-43 + 27$	
28.	$38 + (-19)$	
29.	$-13 + (-13)$	
30.	$5 + (-8) + (-3)$	
31.	$6 + (-11) + 14$	
32.	$-17 + 5 + 19$	
33.	$-16 + (-4) + (-7)$	
34.	$8 + (-24) + 12$	

Number Correct: _____

Integer Subtraction—Round 1

Directions: Determine the difference of the integers, and write it in the column to the right.

1.	$4 - 2$	
2.	$4 - 3$	
3.	$4 - 4$	
4.	$4 - 5$	
5.	$4 - 6$	
6.	$4 - 9$	
7.	$4 - 10$	
8.	$4 - 20$	
9.	$4 - 80$	
10.	$4 - 100$	
11.	$4 - (-1)$	
12.	$4 - (-2)$	
13.	$4 - (-3)$	
14.	$4 - (-7)$	
15.	$4 - (-17)$	
16.	$4 - (-27)$	
17.	$4 - (-127)$	
18.	$14 - (-6)$	
19.	$23 - (-8)$	
20.	$8 - (-23)$	
21.	$51 - (-3)$	
22.	$48 - (-5)$	

23.	$(-6) - 5$	
24.	$(-6) - 7$	
25.	$(-6) - 9$	
26.	$(-14) - 9$	
27.	$(-25) - 9$	
28.	$(-12) - 12$	
29.	$(-26) - 26$	
30.	$(-13) - 21$	
31.	$(-25) - 75$	
32.	$(-411) - 811$	
33.	$(-234) - 543$	
34.	$(-3) - (-1)$	
35.	$(-3) - (-2)$	
36.	$(-3) - (-3)$	
37.	$(-3) - (-4)$	
38.	$(-3) - (-8)$	
39.	$(-30) - (-45)$	
40.	$(-27) - (-13)$	
41.	$(-13) - (-27)$	
42.	$(-4) - (-3)$	
43.	$(-3) - (-4)$	
44.	$(-1{,}066) - (-34)$	

Number Correct: _____
Improvement: _____

Integer Subtraction—Round 2

Directions: Determine the difference of the integers, and write it in the column to the right.

1.	$3 - 2$	
2.	$3 - 3$	
3.	$3 - 4$	
4.	$3 - 5$	
5.	$3 - 6$	
6.	$3 - 9$	
7.	$3 - 10$	
8.	$3 - 20$	
9.	$3 - 80$	
10.	$3 - 100$	
11.	$3 - (-1)$	
12.	$3 - (-2)$	
13.	$3 - (-3)$	
14.	$3 - (-7)$	
15.	$3 - (-17)$	
16.	$3 - (-27)$	
17.	$3 - (-127)$	
18.	$13 - (-6)$	
19.	$24 - (-8)$	
20.	$5 - (-23)$	
21.	$61 - (-3)$	
22.	$58 - (-5)$	

23.	$(-8) - 5$	
24.	$(-8) - 7$	
25.	$(-8) - 9$	
26.	$(-15) - 9$	
27.	$(-35) - 9$	
28.	$(-22) - 22$	
29.	$(-27) - 27$	
30.	$(-14) - 21$	
31.	$(-22) - 72$	
32.	$(-311) - 611$	
33.	$(-345) - 654$	
34.	$(-2) - (-1)$	
35.	$(-2) - (-2)$	
36.	$(-2) - (-3)$	
37.	$(-2) - (-4)$	
38.	$(-2) - (-8)$	
39.	$(-20) - (-45)$	
40.	$(-24) - (-13)$	
41.	$(-13) - (-24)$	
42.	$(-5) - (-3)$	
43.	$(-3) - (-5)$	
44.	$(-1{,}034) - (-31)$	

Number Correct: _____

Integer Multiplication—Round 1

Directions: Determine the product of the integers, and write it in the column to the right.

1.	$-2 \bullet -8$	
2.	$-4 \bullet 3$	
3.	$5 \bullet -7$	
4.	$1 \bullet -1$	
5.	$-6 \bullet 9$	
6.	$-2 \bullet -7$	
7.	$8 \bullet -3$	
8.	$0 \bullet -9$	
9.	$12 \bullet -5$	
10.	$-4 \bullet 2$	
11.	$-1 \bullet -6$	
12.	$10 \bullet -4$	
13.	$14 \bullet -3$	
14.	$-5 \bullet -13$	
15.	$-16 \bullet -8$	
16.	$18 \bullet -2$	
17.	$-15 \bullet 7$	
18.	$-19 \bullet 1$	
19.	$12 \bullet 12$	
20.	$9 \bullet -17$	
21.	$-8 \bullet -14$	
22.	$-7 \bullet 13$	

23.	$-14 \bullet -12$	
24.	$15 \bullet -13$	
25.	$16 \bullet -18$	
26.	$24 \bullet -17$	
27.	$-32 \bullet -21$	
28.	$19 \bullet -27$	
29.	$-39 \bullet 10$	
30.	$43 \bullet 22$	
31.	$11 \bullet -33$	
32.	$-29 \bullet -45$	
33.	$37 \bullet -44$	
34.	$-87 \bullet -100$	
35.	$92 \bullet -232$	
36.	$456 \bullet 87$	
37.	$-143 \bullet 76$	
38.	$439 \bullet -871$	
39.	$-286 \bullet -412$	
40.	$-971 \bullet 342$	
41.	$-773 \bullet -407$	
42.	$-820 \bullet 638$	
43.	$591 \bullet -734$	
44.	$491 \bullet -197$	

Number Correct: _____
Improvement: _____

Integer Multiplication—Round 2

Directions: Determine the product of the integers, and write it in the column to the right.

1.	$-9 \bullet -7$	
2.	$0 \bullet -4$	
3.	$3 \bullet -5$	
4.	$6 \bullet -8$	
5.	$-2 \bullet 1$	
6.	$-6 \bullet 5$	
7.	$-10 \bullet -12$	
8.	$11 \bullet -4$	
9.	$3 \bullet 8$	
10.	$12 \bullet -7$	
11.	$-1 \bullet 8$	
12.	$5 \bullet -10$	
13.	$3 \bullet -13$	
14.	$15 \bullet -8$	
15.	$-9 \bullet 14$	
16.	$-17 \bullet 5$	
17.	$16 \bullet 2$	
18.	$19 \bullet -7$	
19.	$-6 \bullet 13$	
20.	$1 \bullet -18$	
21.	$-14 \bullet -3$	
22.	$-10 \bullet -17$	

23.	$-22 \bullet 14$	
24.	$-18 \bullet -32$	
25.	$-24 \bullet 19$	
26.	$47 \bullet 21$	
27.	$17 \bullet -39$	
28.	$-16 \bullet -28$	
29.	$-67 \bullet -81$	
30.	$-36 \bullet 44$	
31.	$-50 \bullet 23$	
32.	$66 \bullet -71$	
33.	$82 \bullet -29$	
34.	$-32 \bullet 231$	
35.	$89 \bullet -744$	
36.	$623 \bullet -22$	
37.	$-870 \bullet -46$	
38.	$179 \bullet 329$	
39.	$-956 \bullet 723$	
40.	$874 \bullet -333$	
41.	$908 \bullet -471$	
42.	$-661 \bullet -403$	
43.	$-520 \bullet -614$	
44.	$-309 \bullet 911$	

7.NS, 7.EE Bookstore Account

Task

a. At the beginning of the month, Evan had $24 in his account at the school bookstore. Use a variable to represent the unknown quantity in each transaction below and write an equation to represent it. Then represent each transaction on a number line. What is the unknown quantity in each case?

i. First he bought some notebooks and pens that cost $16.

ii. Then he deposited some more money and his account balance was $28.

iii. Then he bought a book for English class that cost $34.

iv. Then he deposited exactly enough money so that he paid off his debt to the bookstore.

b. Explain why it makes sense to use a negative number to represent Evan's account balance when he owes money.

7.NS Differences of Integers

Task

Ojos del Salado is the highest mountain in Chile, with a peak at about 6900 meters above sea level. The Atacama Trench, just off the coast of Peru and Chile, is about 8100 meters below sea level (at its lowest point).

a. What is the difference in elevations between Mount Ojos del Salado and the Atacama Trench?

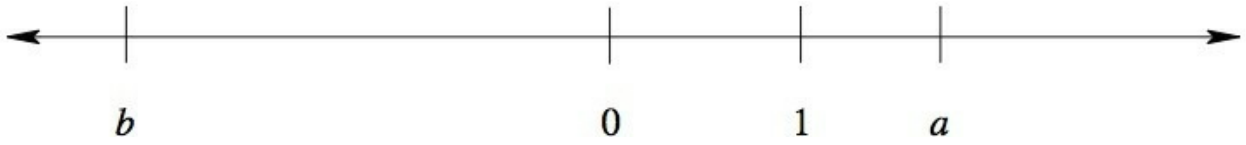
b. Is the elevation halfway between the peak of Mount Ojos del Salado and the Atacama Trench above sea level or below sea level? Explain without calculating the exact value.

c. What elevation is halfway between the peak of Mount Ojos del Salado and the Atacama Trench?

7.NS Operations on the number line

Task

A number line is shown below. The numbers 0 and 1 are marked on the line, as are two other numbers a and b.



Which of the following numbers is negative? Choose all that apply. Explain your reasoning.

a. $a - 1$

b. $a - 2$

c. $-b$

d. $a + b$

e. $a - b$

f. $ab + 1$

7th Grade Science
Assignment #1

Part I

1. Watch the following videos to observe the phenomenon we will be exploring in this lesson.
    a. April 7, 2013 - Kansas https://bit.ly/2UR9cdF
    b. October 5, 2010 - Arizona https://bit.ly/3aSZUn9
    c. June 10, 2013 - Canada https://bit.ly/3aUqmfZ

2. Complete the *Notice and Wonder* chart below.
    a. What do you notice in the videos? Write down as many observations as possible in the *Notice* column.
    b. What do the videos make you wonder? Write down questions you have about what you observed in the *Wonder* column.

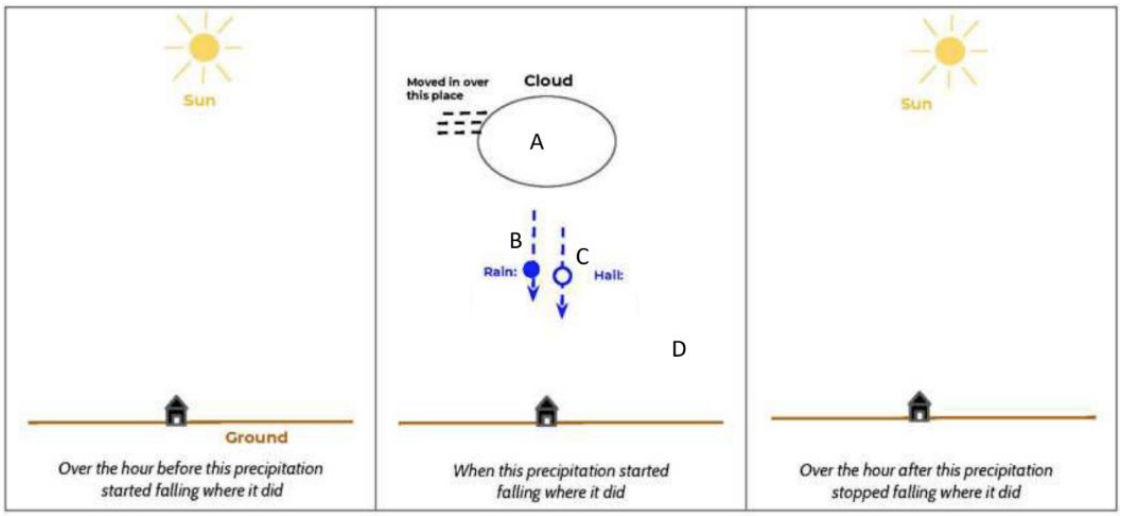
Notice	Wonder

3. Share your noticings and wonderings with a classmate or family member.

Part 2

1. **Precipitation** is a way to refer to any liquid or solid forms of water that fall to the ground from above.
    a. Watch a video (https://bit.ly/2y22M2g) reviewing states of matter at the particle level.

    b. Use this model of the precipitation events observed in Part 1 to answer the discussion questions below.



i. Where do you think the cloud that appeared when the precipitation occurred came from?

ii. Why would a cloud appear when precipitation occurs?

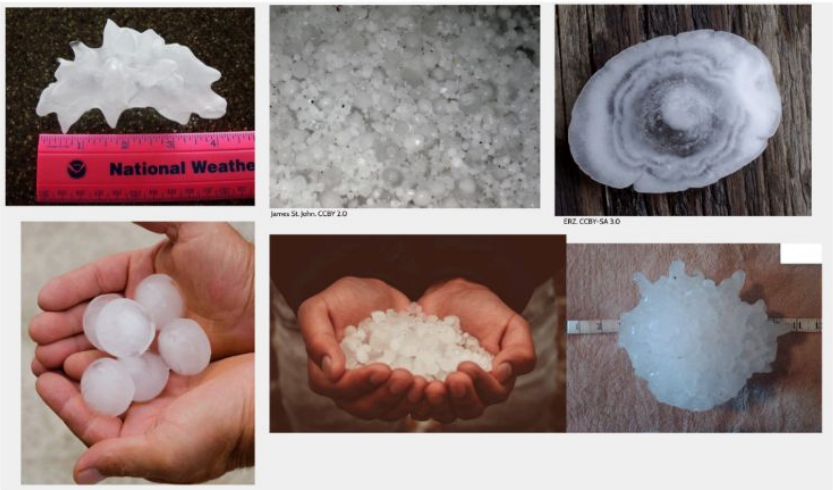
iii. Imagine you had a microscope strong enough to see matter at the particle level. Draw what you think it looks like at the particle level for each labeled part of the model. (A: Inside cloud, B: Rain, C: Hail, D: Air)

A	**B**	**C**	**D**

Assignment #2

Part I

1. Look at the images of different hailstones and write down what you notice and what questions the photos make you wonder about in the chart below.



Notice	Wonder

2. Considering your observations:
    a. When do you think hail storms happen most frequently in the United States?

    b. What do you think the weather conditions are like during a hail storm?

Part 2

1. Look at the Weather Data handout for the Fort Scott hailstorm.

    a. Based on Chart A, during what season(s) did most hailstorms occur? Does this support your prediction from Part 1?

    b. What was the date and time for the hailstorm in Fort Scott, KS?

    c. Using Chart B, what was the approximate temperature when the hailstorm occurred? Does this support your prediction from Part 1?

    d. Using Chart B, what was happening with the wind around the time that the hailstorm occurred?

2. Look at data from the two hail storms that occured in Phoenix, AZ on October 5.

    a. Based on all the data you've reviewed so far,
        i. How would you describe the typical temperature during a hailstorm?

        ii. Relative humidity is the quantity of water in air compared to the utmost amount of water the air can take in. How would you describe the typical relative humidity during a hailstorm?

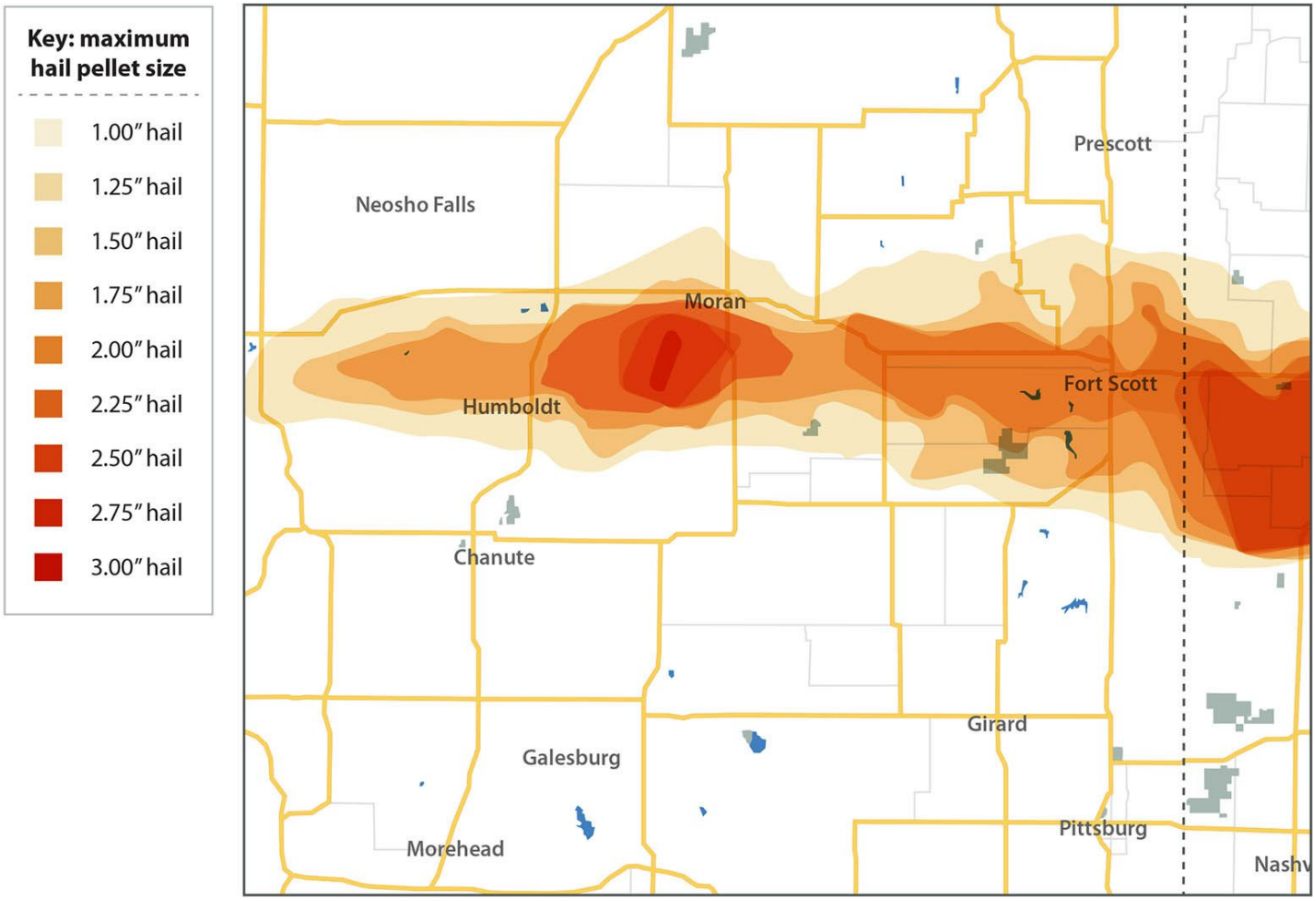
        iii. How would you describe the wind during a hailstorm?

Weather Data for Fort Scott*

A

Site	Location	Date	Approximate time of day
❉	Fort Scott, KS	April 7, 2013	4:25 PM
A	Phoenix, AZ	Oct. 5, 2010	12:30 and 4:30 PM
B	Oklahoma City, OK	April 26, 2013	8:30 PM
C	Dallas, TX	June 13, 2012	6:30 PM
D	Winnipeg, Manitoba, Canada	June 10, 2013	6:30 PM
E	New Orleans, LA	Feb. 24, 2013	9:15 PM
F	Indianapolis, IN	Aug. 25, 2018	5:30 PM
G	Pittsfield, MA	May 15, 2018	No record avail.

Hail map



Weather Data for Fort Scott, continued

Weather station: Chanute Martin Johnson Station, KS

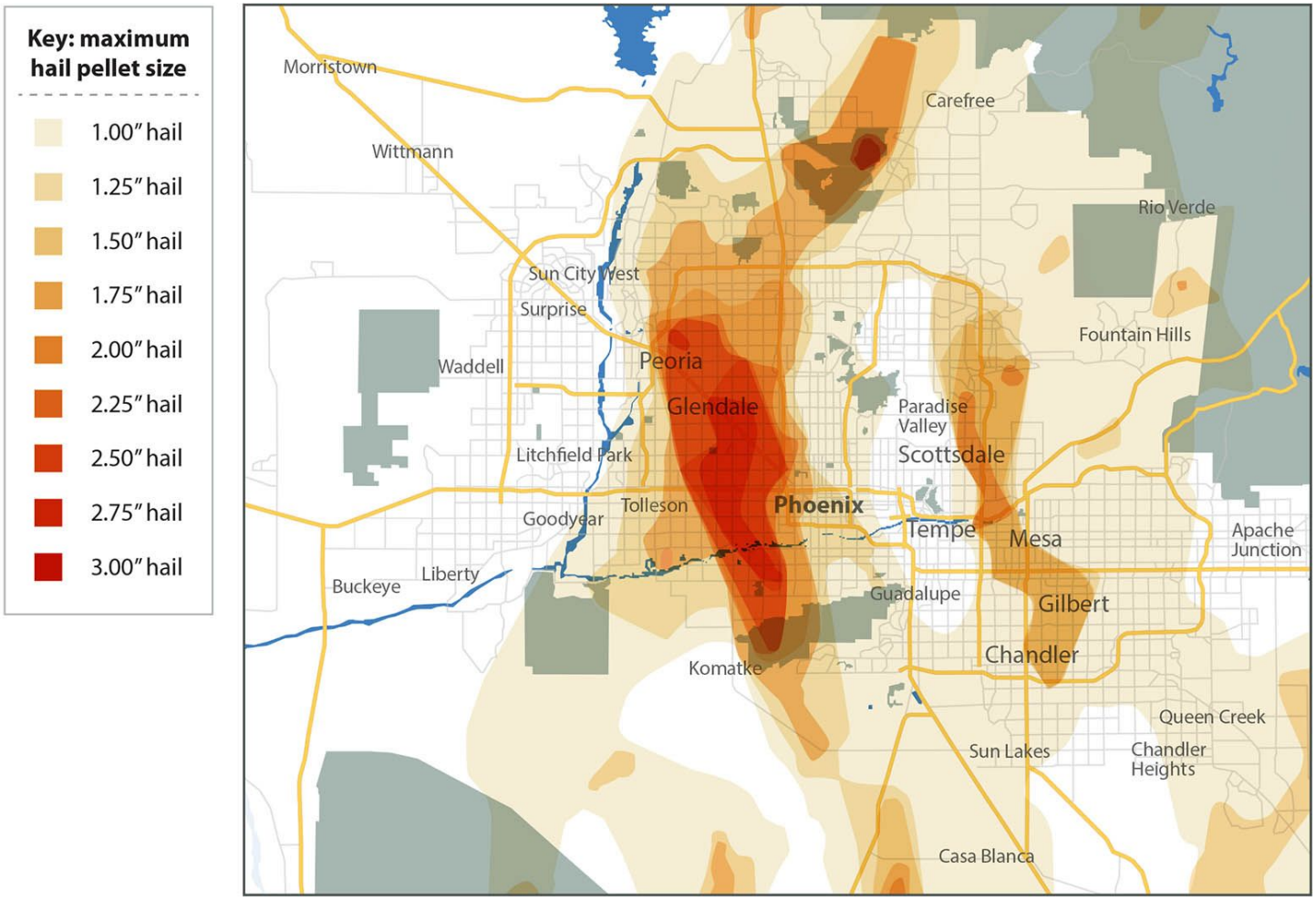
B

Time	Temperature (°F)	Relative humidity (%)	Wind speed (mph)	Wind gust (mph)
5:52 AM	44	93	3	0
6:52 AM	46	89	0	0
7:52 AM	50	89	0	0
8:52 AM	55	83	5	0
9:52 AM	62	72	9	0
10:52 AM	64	75	8	0
11:52 AM	67	70	8	0
12:52 PM	70	63	13	17
1:52 PM	73	57	17	24
2:52 PM	70	65	15	20
3:52 PM	68	68	12	17
4:52 PM	59	78	30	37
4:59 PM	59	77	17	37
5:30 PM	63	72	6	0
5:52 PM	65	68	3	0
6:52 PM	64	75	6	0
7:35 PM	66	73	17	25
7:52 PM	63	84	17	28

Weather Data for Site A (Phoenix)

Site	Location	Date	Approximate time of day
❄	Fort Scott, KS	April 7, 2013	4:25 PM
A	Phoenix, AZ	Oct. 5, 2010	12:30 and 4:30 PM
B	Oklahoma City, OK	April 26, 2013	8:30 PM
C	Dallas, TX	June 13, 2012	6:30 PM
D	Winnipeg, Manitoba, Canada	June 10, 2013	6:30 PM
E	New Orleans, LA	Feb. 24, 2013	9:15 PM
F	Indianapolis, IN	Aug. 25, 2018	5:30 PM
G	Pittsfield, MA	May 15, 2018	No record avail.

Hail map



Weather Data for Site A, continued

Weather station: Phoenix Sky Harbor International Station, AZ

Time	Temperature (°F)	Relative humidity (%)	Wind speed (mph)	Wind gust (mph)
6:51 AM	73	66	9	0
7:51 AM	73	64	10	0
8:51 AM	77	54	13	17
9:51 AM	78	52	15	0
10:51 AM	81	45	10	0
11:51 AM	86	38	13	21
12:06 PM	86	37	1	0
12:36 PM	81	45	17	37
12:38 PM	75	53	15	37
12:49 PM	73	57	6	0
12:51 PM	74	55	9	0
1:16 PM	72	60	8	0
1:40 PM	73	65	9	0
1:51 PM	75	57	12	0
2:11 PM	75	53	9	0
2:51 PM	79	48	6	0
3:24 PM	73	69	16	0
3:51 PM	71	78	7	0
4:13 PM	72	83	14	0
4:51 PM	68	94	3	25
5:04 PM	66	94	10	0
5:35 PM	66	94	7	0
5:51 PM	69	84	8	0
6:51 PM	70	84	8	0
7:51 PM	70	81	9	0

Assignment #3

Part I

1. Watch the video titled "Hail and Hailstones" (https://bit.ly/3aTfqiL).

2. Based on what you learned from the video, why do you think hail storms tend to happen when there are warmer temperatures even though they are made of ice?

Part 2

1. Read the article titled **"After a freak hailstorm turned a beach white, we look at what causes hail and if it's dangerous"**.

2. Draw a diagram that shows how hailstorms are formed. Include pictures, labels, and directional arrows.

3. Explain how the data you analyzed in Part 2 supports what you learned in the video and article. Why wouldn't you expect more hailstorms to happen during winter when cold temperatures are occuring?

KIDSNEWS

After a freak hailstorm turned a beach white, we look at what causes hail and if it's dangerous

Toni Hetherington, May 12, 2019 **6:45PM** Kids News

EXPLAINERS

A freak* and furious hailstorm has turned an Australian beach into a winter wonderland*.

Heavy hail came down in the coastal town of Cape Paterson in Gippsland, Victoria on Friday and transformed the sandy shoreline into a sea of white. It also turned horse paddocks into icy fields and tennis courts into surfaces more suitable for ice hockey.

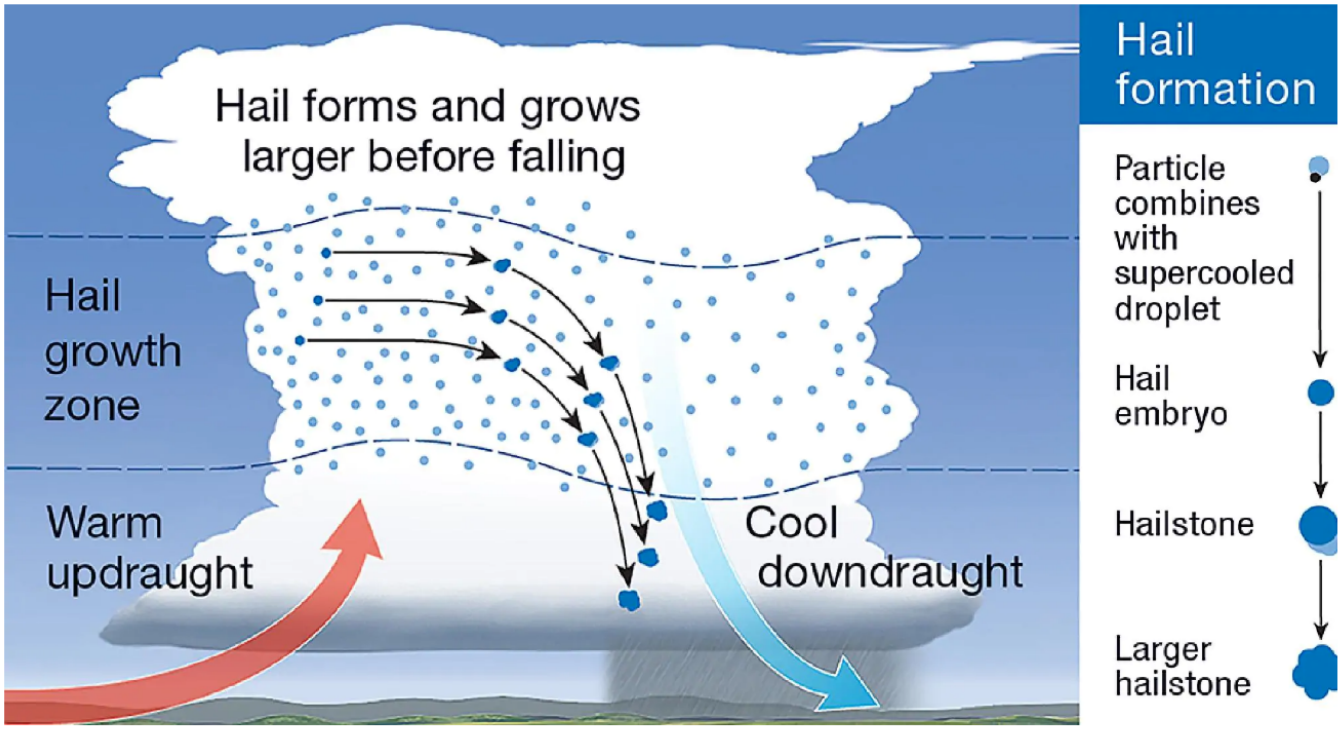
It made for an unusual sight and got us wondering here at Kids News, what causes hail?

Here are some answers:

Facebook images of the beach at Cape Paterson in Victoria after it was turned into a sea of white. Picture: Brad Richards

WHAT CAUSES HAIL?

Hail is created when small water droplets* are caught in the updraught* of a thunderstorm. These water droplets are lifted higher and higher into the sky until they move way above the freezing level and they form into ice. Once they become too heavy for the updraught to support, they will start to fall as hail.



How hail forms from Bureau of Meteorology

Hailstones are actually clumps* of layered ice.

Hailstones start as small ice balls (called hail embryos*) if they come into contact with tiny particles in the air, such as a speck* of dust or dirt, or a salt crystal.

Growth into a full hailstone happens in the hail growth zone, where the updraught air temperature is -10 degrees Celcius* to -25 degrees Celcius. Here, hail embryos collide with super-cooled water droplets, causing them to freeze on impact. Once the hailstones have collided with enough of these droplets, building up in size, they become heavy enough for gravity* to take over, and begin to fall.

Hail can only form in thunderstorms or Cumulonimbus clouds*.

HOW BIG CAN HAILSTONES GET?

Hailstones can be as big as the size of a cricket ball.

Their size depends on the strength and size of the updraught. Most of the time hailstones are smaller than 25mm which is about the size of a 10c piece. However, in very intense thunderstorms, the upward air motion inside the updraught is so strong that even larger hailstones are suspended or fall very slowly. In these storms, hailstones have more time to collect even more super-cooled water droplets and grow to larger sizes, such as golf-ball or cricket-ball size.

AUSTRALIA'S WORST HAILSTORM

On April 14, 1999, Sydney experienced Australia's worst hailstorm in history.

Hailstones the size of cricket balls hit the city at more than 200km/h. The storm hit 85 suburbs, causing damage to 20,000 houses, including windows, roofs and skylights.

More than 70,000 cars had windscreen and panel damage and 25 commercial planes were affected.

When the storm was at its worst, emergency services received a call for help every 10 seconds.

When it was over, the damage bill came to $1.7 billion, the most expensive natural disaster in Australian history.

MOST COMMON TIMES FOR HAILSTORMS IN AUSTRALIA

Hail can occur at any time of year, but large hail is most common in Australia during spring and early summer when temperatures are warm enough to promote the development of strong thunderstorms and the upper atmosphere is still cool enough to support growth of stronger storms.

Source: Bureau of Meteorology

GLOSSARY

- **freak:** unusual, not normal
- **wonderland:** a place full of wonderful things
- **droplets:** a very small drop of liquid
- **updraught:** upward movement of air
- **clumps:** bunch
- **embryos:** at an early stage, such as a seed
- **speck:** a tiny spot
- **Celcius:** measurement of heat
- **gravity:** downward force
- **Cumulonimbus clouds**: rain clouds

CLASSROOM ACTIVITY

Draw a diagram

Based on the information presented in the article, draw a diagram that shows how hailstones are formed. Be sure to include a heading, pictures, labels and directional arrows to make the information easy to understand.