

Grade 8
Family Resource Bundle

Grade 8

ANSWER KEY Text #1 “More Facebook Friends, Fewer Real Ones, says Cornell Study”

by ABC News November 8, 2011

1. RI.KID.2

Summarize the central idea(s) of the article.

1. **Answers will vary; students should focus on how a recent Cornell study revealed that despite living in the age of the social network, people nowadays have fewer close friends.**

2. RI.CS.4

PART A: What does the word “confidant” most closely mean as it is used in paragraph 4?

- A. Someone with a lot of self-esteem
- B. An acquaintance or colleague
- C. Someone you might take advantage of
- D. A person you deeply trust and care about**

3. RI.KID.1

PART B: Which phrase from the text provides the best support for the answer to Part A?

- “truly close friends” (Paragraph 2)**
- A. “socializing as much as ever” (Paragraph 2)
- B. “if you need something” (Paragraph 4)
- C. “discussed ‘important matters’” (Paragraph 5)

4. RI.CS.5

Why does the author quote Keith Hampton? What is the purpose for including his views?

- To suggest that the results of the Cornell study are flawed and should be taken lightly.**
- A. To provide the alternative perspective that social networks like Facebook may be more helpful than harmful.**
- B. To support the central idea of the text that people should carefully consider the costs and benefits of social media.
- C. To introduce the point that social network relationships are less valuable than real ones.

5. RI.KID.3

What is the difference between online contact and personal contact? Why is this an important distinction?

Answers will vary; students should focus on the information in paragraphs 9-11.

ANSWER KEY Text #2 “After Twenty Years”

by O. Henry 1905

1. RL.CS.4

PART A: What does the word “stalwart” most closely mean as it is used in paragraph 2?

- A. **Loyal and dedicated**
- B. Rude and arrogant
- C. Threatening and scary
- D. Awkward and rigid

2. RL.KID.1

PART B: Which of the following phrases from paragraph 2 best supports the answer to Part A?

- A. "Trying doors as he went, twirling his club"
- B. "with many intricate and artful movements"
- C. "cast his watchful eye adown the pacific thoroughfare"
- D. **"a fine picture of a guardian of the peace"**

3. RL.KID.2

PART A: Which of the following best describes a central theme of the text?

- A. Those who fight for justice will always be rewarded.
- B. Loyalty is absolute and must allow no room for disagreement.
- C. **The decision between loyalty and doing what is right is a hard one to make.**
- D. Money can help one make new friends, but not old.

4. RL.KID.1

PART B: Which of the following quotes best supports the answer to Part A?

- A. "The policeman on the beat moved up the avenue impressively. The impressiveness was habitual and not for show, for spectators were few." (Paragraph 1)
- B. "But I know Jimmy will meet me here if he's alive, for he always was the truest, stanchest old chap in the world. He'll never forget." (Paragraph 9)
- C. "The man from the West, his egotism enlarged by success, was beginning to outline the history of his career." (Paragraph 27)
- D. **"When you struck the match to light your cigar I saw it was the face of the man wanted in Chicago. Somehow I couldn't do it myself, so I went around and got a plain clothes man to do the job." (Paragraph 33)**

5. RL.CS.4

Consider the imagery used in the story around darkness and light. Why is this imagery important?

1. Answers will vary; students should analyze the imagery presented in the text and explain how these images contribute to story's plot and central themes. For example, when 'Silky' Bob is first introduced he is essentially cloaked in darkness: "In the doorway of a darkened hardware store a man leaned, with an unlighted cigar in his mouth." (Paragraph 3) It is only when he lights his cigar that his true nature is discovered by Jimmy: both as his old friend and as a wanted criminal. Overall, the use of darkness and light contribute to the themes of false and real identities, as well as dishonesty and truth.

RELATED MEDIA LINKS and Descriptions

Related Media #1: [Teens on Being Tethered to Their Phones and Social Media](#)

Show this video to students to provide them with an interview with teens about how they use social media. How do teenagers use social media to form opinions about each other? How focused do the teenagers in the video appear to be on their "likes"? Do students think these teenagers are negatively impacted by their reliance on social media? Why or why not? (2:37)

Related Media #2: [After 20 Years: Short Film](#)

Have students compare this short film with O. Henry's original text. How does the director's use of music, sound effects, lighting, etc. reflect the mood and themes of the original work? What about the plot details have changed? Why? (8:55)

Grab and Go Writing Checklists

Grades 6-9 Short Response

Informational /Explanatory	<ul style="list-style-type: none"><input type="checkbox"/> Has a topic sentence that addresses the main question<input type="checkbox"/> Includes ideas that support the topic sentence<input type="checkbox"/> Cites at least two pieces of evidence from the text that most strongly support the ideas<input type="checkbox"/> Elaborates and explains how the text evidence supports the topic and ideas<input type="checkbox"/> Ends with concluding sentences or statement
Entire Response	<ul style="list-style-type: none"><input type="checkbox"/> Has few errors in sentence formatting, capitalization, punctuation, and spelling.

Argument	<ul style="list-style-type: none"><input type="checkbox"/> Has a claim that responds to the main question<input type="checkbox"/> Includes ideas that support the claim<input type="checkbox"/> Cites at least two pieces of evidence from the text that most strongly support the claim<input type="checkbox"/> Elaborates and explains how the text evidence supports the ideas and the claim<input type="checkbox"/> Ends with concluding sentences or statement
Entire Response	<ul style="list-style-type: none"><input type="checkbox"/> Has few errors in sentence formatting, capitalization, punctuation, and spelling.

8.EE Ant and Elephant

Alignments to Content Standards: 8.EE.A.3

Task

An ant has a mass of approximately 4×10^{-3} grams and an elephant has a mass of approximately 8 metric tons.

- How many ants does it take to have the same mass as an elephant?
- An ant is 10^{-1} cm long. If you put all these ants from your answer to part (a) in a line (front to back), how long would the line be? Find two cities in the United States that are a similar distance apart to illustrate this length.

Note: 1 kg = 1000 grams, 1 metric ton = 1000 kg, 1 m = 100 cm, 1 km = 1000 m

IM Commentary

In this problem students are comparing a very small quantity with a very large quantity using the metric system. The metric system is especially convenient when comparing measurements using scientific notations since different units within the system are related by powers of ten.

[Edit this solution](#)

Solution

- First we observe that the mass of the ant is in grams, where the mass of the elephant is in metric tons. We cannot compare the two masses as is, so we first convert

them into the same units. We can do this with ratios, using the conversion chart above to convert metric tons into kilograms and then kilograms into grams.

$$(8 \text{ metric tons}) \left(\frac{1000 \text{ kg}}{1 \text{ metric ton}} \right) \left(\frac{1000 \text{ grams}}{1 \text{ kg}} \right) = 8,000,000 \text{ grams}$$

$$= 8 \times 10^6 \text{ grams}$$

Notice that both metric tons and kg appear once on both the top and the bottom, enabling them to be canceled out, leaving only grams. Also note that we could have converted .003 grams into metric tons, and though this would have given an answer with a large number of decimal places, we would end up with the same final result.

Now that both quantities are in grams, we want to find how many ants, n , are required to have the same mass as the elephant. As each ant has a mass of 4×10^{-3} grams, we multiply 4×10^{-3} by n to get the total mass of the ants

$$\text{total mass of } n \text{ ants} = 4 \times 10^{-3}n$$

and then we set this equal to the mass of the elephant:

$$4 \times 10^{-3}n = 8 \times 10^6$$

We find that $n = 2 \times 10^9$ ants.

Thus, it takes approximately 2×10^9 ants to have the same mass as an elephant.

b. Each ant is 10^{-1} cm long, and we have 2×10^9 ants total. If we put all these ants in a line (front to back), we can find the length of the line by multiplying the length of one ant by how many ants we have:

$$2 \times 10^9 \times 10^{-1} \text{ cm} = 2 \times 10^8 \text{ cm}$$

As is, this answer is difficult to illustrate because it is such a large number. To find two objects that are this distance apart, we first want to convert centimeters into more useful units. We do this by using ratios from the above chart, converting centimeters to meters and meters to kilometers.

$$(2 \times 10^8 \text{ cm}) \left(\frac{1 \text{ m}}{10^2 \text{ cm}} \right) \left(\frac{1 \text{ km}}{10^3 \text{ m}} \right) = 2 \times 10^3 \text{ km} = 2000 \text{ km}$$

This amount is much easier to visualize, and it turns out that 2000 km is approximately the driving distance from San Francisco, California to Denver, Colorado.



8.EE Ant and Elephant
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Operations with Numbers Expressed in Scientific Notation I

1. $(5 \times 10^4)^2$

2.5×10^9

2. $(2 \times 10^9)^4$

1.6×10^{37}

3.
$$\frac{(1.2 \times 10^4) + (2 \times 10^4) + (2.8 \times 10^4)}{3} =$$

2×10^4

4.
$$\frac{7 \times 10^{15}}{14 \times 10^9}$$

5×10^5

5.
$$\frac{4 \times 10^2}{2 \times 10^8}$$

2×10^{-6}

6.
$$\frac{(7 \times 10^9) + (6 \times 10^9)}{2}$$

6.5×10^9

7. $(9 \times 10^{-4})^2$

8.1×10^{-7}

8. $(9.3 \times 10^{10}) - (9 \times 10^{10})$

3×10^9

THE ANSWERS

1. C
2. No solutions
3. $x = 4$
4. Many possibilities
5. Many possibilities
6. Many possibilities
7. $6\frac{1}{2}$
8. $\frac{11}{2}$
9. The length is 6 feet.

Multistep Equations II

1. $2(x + 5) = 3(x + 6)$

$x = -8$

2. $3(x + 5) = 4(x + 6)$

$x = -9$

3. $4(x + 5) = 5(x + 6)$

$x = -10$

4. $-(4x + 1) = 3(2x - 1)$

$x = \frac{1}{5}$

5. $3(4x + 1) = -(2x - 1)$

$x = -\frac{1}{7}$

6. $-3(4x + 1) = 2x - 1$

$x = -\frac{1}{7}$

7. $15x - 12 = 9x - 6$

$x = 1$

8. $\frac{1}{3}(15x - 12) = 9x - 6$

$x = \frac{1}{2}$

9. $\frac{2}{3}(15x - 12) = 9x - 6$

$x = 2$

Multistep Equations I**Set 1:**

$$3x + 2 = 5x + 6$$

$$4(5x + 6) = 4(3x + 2)$$

$$\frac{3x + 2}{6} = \frac{5x + 6}{6}$$

Answer for each problem in this set is $x = -2$.

Set 2:

$$6 - 4x = 10x + 9$$

$$-2(-4x + 6) = -2(10x + 9)$$

$$\frac{10x + 9}{5} = \frac{6 - 4x}{5}$$

Answer for each problem in this set is $x = -\frac{3}{14}$.

Set 3:

$$5x + 2 = 9x - 18$$

$$8x + 2 - 3x = 7x - 18 + 2x$$

$$\frac{2 + 5x}{3} = \frac{7x - 18 + 2x}{3}$$

Answer for each problem in this set is $x = 5$.

Multistep Equations III

1. $2.5x - 14.8 = 26.7$

$x = 16.6$

2. $\frac{3}{4}(8x - 12) = \frac{1}{5}(10x + 15)$

$x = 3$

3. $-\frac{1}{5}(2x - 3) = \frac{1}{2}(4 - 3x)$

$x = \frac{14}{11} = 1\frac{3}{11}$

4. $3.1(2x - 13.4) = 3.8x - 14.7 + 2.3x$

$x = 268.4$

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

$x = -\frac{1}{10}$

6. $4(2.4x - 4.6) = -(2.2 - 3.6x)$

$x = 2.7$

7. $4(5.9 + 0.8x) = 2(29.5 - 4.3x)$

$x = 3$

8. $\frac{1}{4}\left(\frac{2}{3}x + 4\right) = \frac{3}{4}\left(\frac{1}{3} - \frac{2}{3}x\right)$

$x = -\frac{9}{8} = -1\frac{1}{8}$

9. $6.5(2.6x + 7.8) = -5.2(-6.5 - 2.6x) + 3.9x$

$x = 32.5$

$$15 - 3(x-2) + 6x = 3(13)$$

$$15 - 3x + 6 + 6x = 3(13)$$

$$15 - 3x + 6 + 6x = 39$$

$$3x + 21 = 39$$

$$\begin{array}{r} 3x + 21 = 39 \\ -21 \quad -21 \\ \hline \end{array}$$

$$\frac{3x}{3} = \frac{18}{3}$$

$$x = 6$$

Apply Distributive property to left side

Apply Distributive property to right side

combine like terms

inverse operation of (+)

inverse operation of (x)

check work

$$15 - 3(6-2) + 6(6) = 3(13)$$

$$15 - 3(4) + 6(6) = 3(13)$$

$$15 - 12 + 36 = 39$$

$$3 + 36 = 39$$

$$39 = 39$$

$$\therefore x = 6 \checkmark$$

Pablo factored out a common GCF whereas Karla combined like terms. They both ultimately solved for x and found it to be 6 by isolating the variable. I also solved it a slightly similar way to Karla but I added more steps to help track my math.

Assignment #2

From what type of rocks is the Grand Canyon Composed?

Part 2

In order to better understand what kind of weathering broke apart the rock from which the Grand Canyon was formed, it's important to establish what we know about the kind of rocks the Grand Canyon is made from.

- Read Page 1 of the *Grand Canyon Rocks!* article.
- Describe each of the three types of rock using information from the article:
 - Igneous rocks:
Formed when rock is super-heated, becomes molten, and then cools and hardens on or beneath Earth's surface.
 - Sedimentary rocks:
Made of smaller pieces called sediments that pile into layers. Pressure cements the sediments into solid rock over time.
 - Metamorphic rocks:
Rocks that have been changed under great heat and pressure
- Look at the images of the Grand Canyon below. Do you see any clues about what classification of rock the Grand Canyon might be made of? Use what you know about characteristics of different rock classifications and the article information to make an evidence-based claim.



https://commons.wikimedia.org/wiki/File:USA_09855_Grand_Canyon_Luca_Galuzzi_2007.jpg



<https://pixabay.com/images/search/rock%20layers/>

Is the Grand Canyon made of igneous rock, metamorphic rock, or sedimentary rock?	What evidence from the images above supports your claim?
I think the Grand Canyon is composed of.... <i>Answers may vary; however, article evidence should support sedimentary rock.</i>	The evidence that supports my claim is.... <i>I see layers in the rocks in the pictures of the Grand Canyon and the article says that sedimentary rock is formed by sediments being cemented together into layers.</i>

- Read pages 2-4 of the *Grand Canyon Rocks!* Article to learn more about the types of rocks found at the Grand Canyon and complete the table below with information about each type of rock.

Rock Name	Time Period Formed?	Environment Description	Types of Fossils Found
<p>Precambrian Basement Rocks</p> <p>Rock Type: <i>Igneous & Metamorphic</i></p>	<i>1.8 billion years ago</i>	<i>Molten rock flowed as magma through cracks of metamorphic rock</i>	<i>Hard to find due to heat and pressure during formation</i>
<p>Bright Angel Shale</p> <p>Rock Type: <i>Sedimentary</i></p>	<i>515 million years ago</i>	<i>Muddy, warm, shallow sea</i>	<i>Trilobites, brachiopods, crinoids</i>
<p>Redwall Limestone</p> <p>Rock Type: <i>Sedimentary</i></p>	<i>340 million years ago</i>	<i>Shallow, warm, clear well lit sea</i>	<i>Corals, cephalopods, bryozoans, brachiopods</i>
<p>Supai Group</p> <p>Rock Type: <i>Sedimentary</i></p>	<i>300 million years ago</i>	<i>Varied between beaches, dunes, and oceans</i>	<i>Brachiopods (oceans) Plant fossils (land)</i>
<p>Hermit Shale</p> <p>Rock Type: <i>Sedimentary</i></p>	<i>280 million years ago</i>	<i>Broad coastal plain fed by multiple streams</i>	<i>Ferns, conifers, reptiles, insects</i>
<p>Coconino Sandstone</p> <p>Rock Type: <i>Sedimentary</i></p>	<i>275 million years ago</i>	<i>Coastal dune fields (desert like)</i>	<i>Reptiles, spiders, scorpions</i>
<p>Kaibab Limestone</p> <p>Rock Type: <i>Sedimentary</i></p>	<i>270 million years ago</i>	<i>Shallow, warm, well-lit clear sea with a sandy floor</i>	<i>Brachiopods, sponges, sharks, fish</i>

- Does this information support your earlier answer about the type of rock that composes the Grand Canyon? *Answers will vary. If the earlier answer was sedimentary: yes.*

Assignment #3

What type of weathering contributed to the formation of the Grand Canyon?

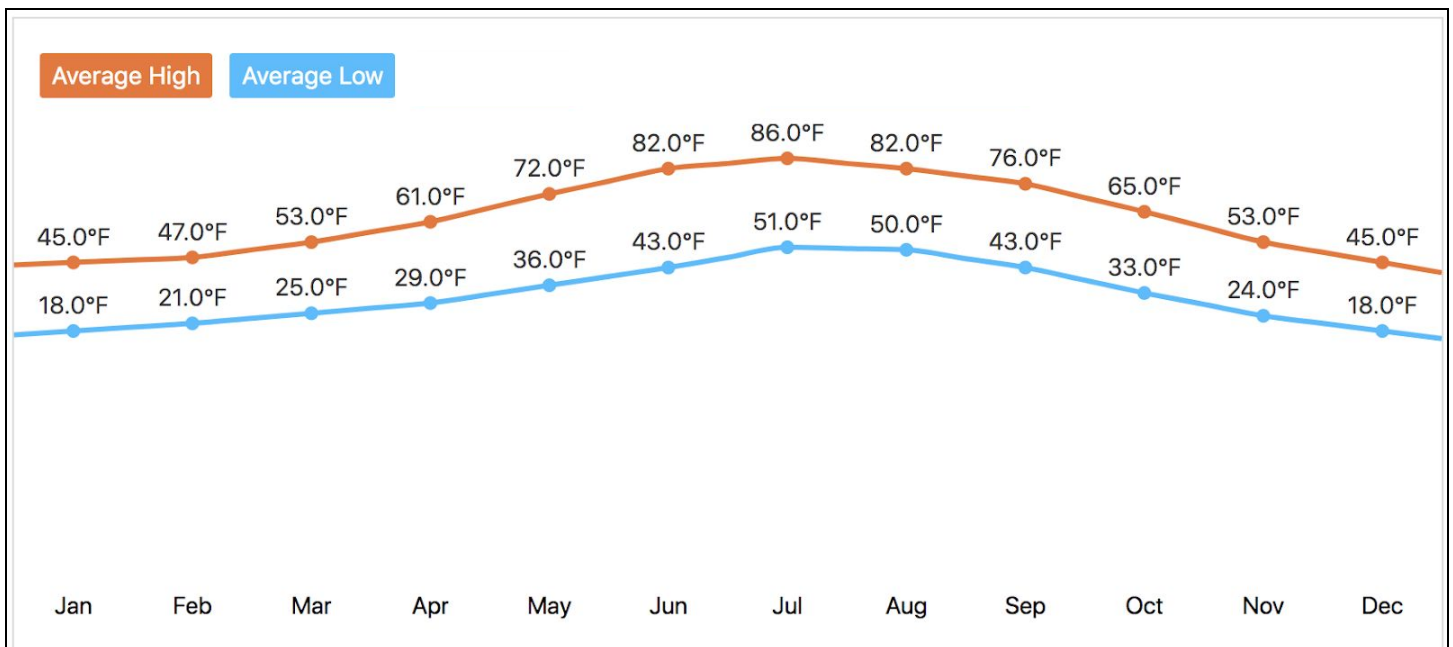
Part 1

Grand Canyon Climate

1. Examine the graph below. During which month is there the biggest difference between the average low temperature and the average high temperature? How much is the difference?

The biggest difference in average low and high temperature is in June. The difference is 39 degrees.

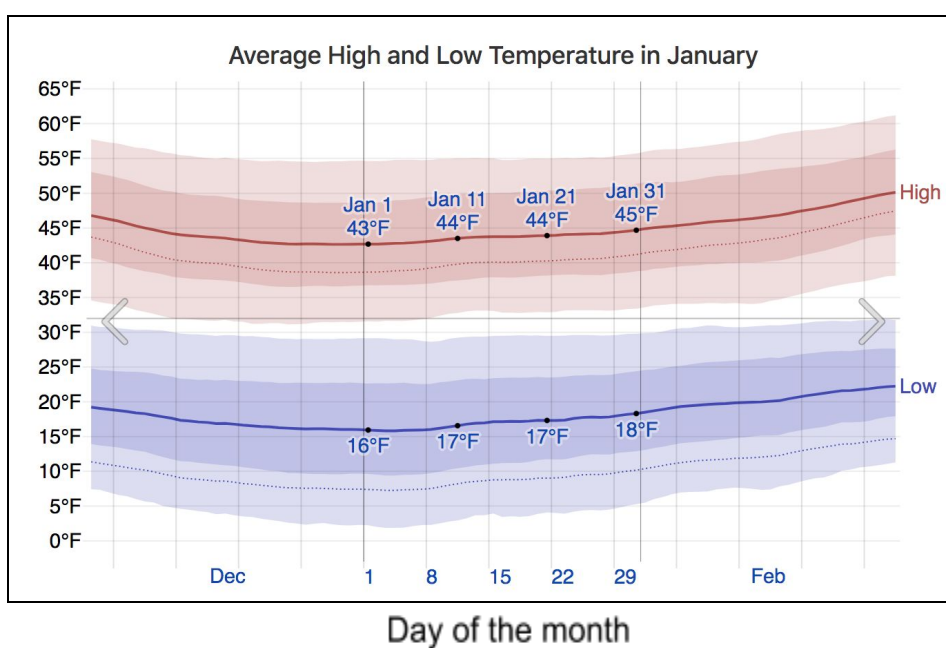
Grand Canyon Average Monthly High and Low Temperatures



2. One of the coldest months in the Grand Canyon is January. Examine the graph of January temperatures in the Grand Canyon below.

Does the Grand Canyon ever experience temperature below and above freezing (32 degrees F) on the same day? Be sure to cite evidence from the graph.

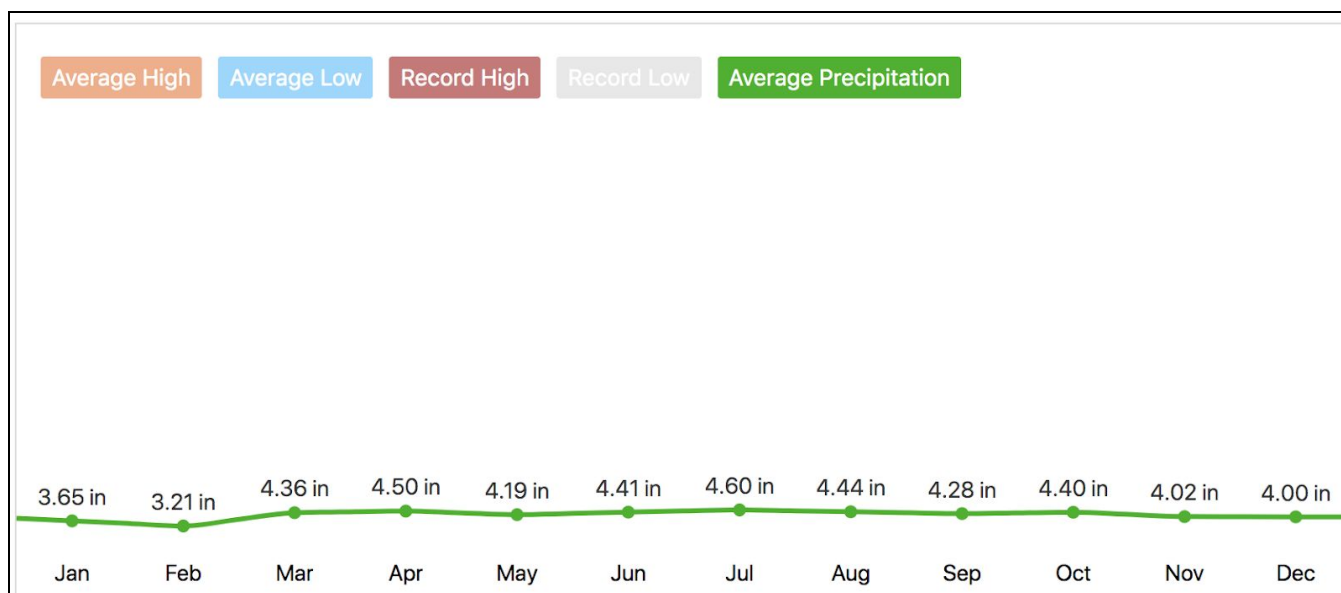
Yes, it is common for the Grand Canyon to experience temperatures below and above freezing on the same day in January. The low temperatures range from 16 degrees to 18 degrees (below freezing), while the high temperatures on the same days range from 43 degrees to 45 degrees (above freezing).



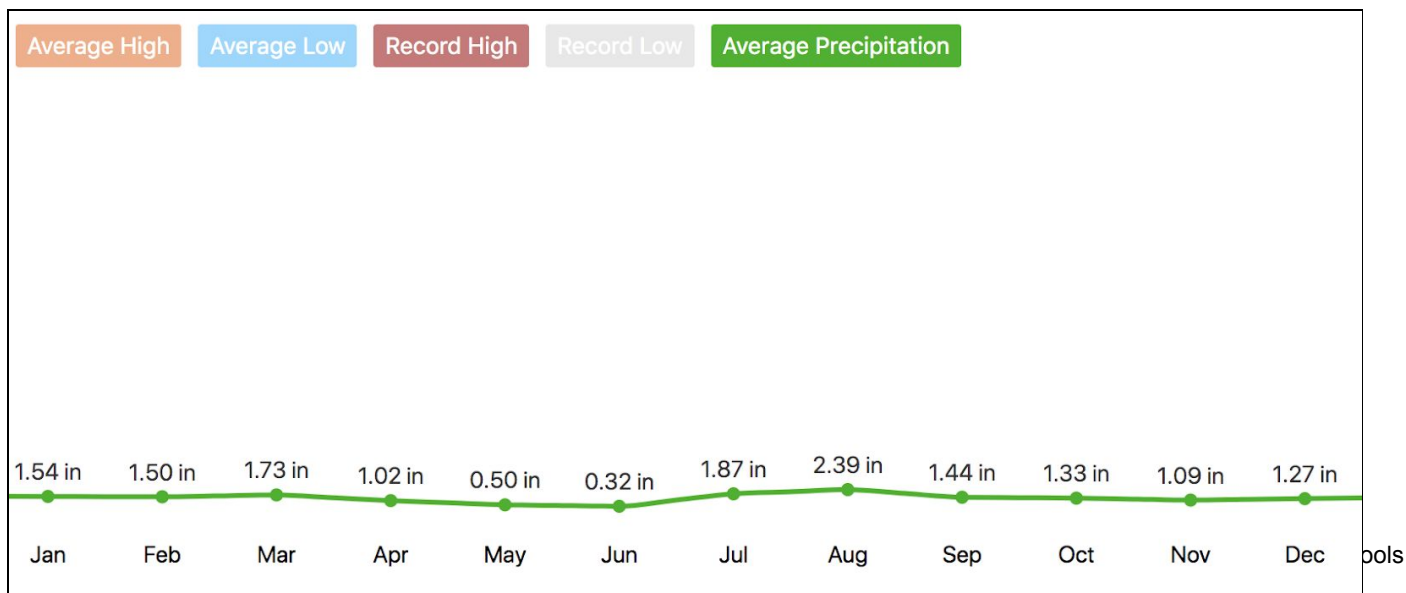
3. Examine the graphs below. Does it rain or snow (precipitation) at the Grand Canyon? How does the precipitation in the Grand Canyon compare to the precipitation in New York City?

Yes it rains and/or snows at the Grand Canyon. The precipitation at the Grand Canyon is higher than the average monthly precipitation in New York City. In fact, it is more than double.

Grand Canyon Average Monthly Precipitation



New York City Average Monthly Precipitation



Summarize your observations, thoughts, and questions from **Part 1: Grand Canyon Climate**, in the space provided below.

<p>See What are some of your observations?</p>	<p>Think What does each observation make you think about the Grand Canyon formation?</p>	<p>Wonder What questions do you have about each observation?</p>
<p><i>Answers will vary.</i></p>	<p><i>Answers will vary.</i></p>	<p><i>Answers will vary.</i></p>

Part 2

- Read the text, *Weathering*.
 - As you read, use a yellow highlighter (or underline) to highlight ideas that you think connect to what you learned about the Grand Canyon's climate and might offer clues about the type of weathering that may have broken apart rock to form the Grand Canyon. Use green to highlight (or circle) ideas you don't understand or have questions about.
- 1) What ideas from the text do you think connect to what you learned about the Grand Canyon's climate? Be sure to explain why you think they connect.

Answers will vary. Some ideas that connect to the data above are:

- *Temperature changes*
- *Freeze-thaw*
- *Rainwater*

- 2) What questions do you have about the text?

Answers will vary.

- Now that you have read about the types of physical and chemical weathering, make an evidence-based claim below about at least one type of physical weathering and one type of chemical weathering you think could have broken apart rock to form the Grand Canyon.

Physical Weathering Claim

Claim	Evidence Consider rock and mineral composition and climate at the Grand Canyon.	Reasoning How does the evidence connect to the description of the physical weathering you claimed?
<p>The type of physical weathering I think may have broken apart rock to form the Grand Canyon is...</p> <p><i>Answers will vary.</i></p> <p><i>Example: Freeze-thaw</i></p>	<p><i>Answers will vary; however, students should cite evidence from the climate data and/or the Grand Canyon Rocks! Article.</i></p> <p><i>Example: Temperatures at the Grand Canyon often fall below and above freezing during the same day.</i></p> <p><i>It rains significantly more at the Grand Canyon than NYC.</i></p>	<p><i>Answers will vary; however, students should use information from the weathering article to connect the claim to the evidence.</i></p> <p><i>Example: Freeze thaw is a type of physical weathering caused when water gets into the cracks of rocks and then freezes, expands, and makes a bigger crack in the rock. Given the precipitation levels and temperature changes at the Grand Canyon, this process can happen over and over again.</i></p>

Chemical Weathering Claim

Claim	Evidence Consider rock and mineral composition and climate at the Grand Canyon.	Reasoning How does the evidence connect to the description of the chemical weathering you claimed?
<p>The type of chemical weathering I think may have broken apart rock to form the Grand Canyon is...</p> <p><i>Answers will vary.</i></p> <p><i>Example: Rainwater</i></p>	<p><i>Answers will vary; however, students should cite evidence from the climate data and/or the Grand Canyon Rocks! article.</i></p> <p><i>Example: The Grand Canyon averages over four inches of rain a month.</i></p> <p><i>The Grand Canyon is partly composed of limestone.</i></p>	<p><i>Answers will vary; however, students should use information from the weathering article to connect the claim to the evidence.</i></p> <p><i>Example: Since the Grand Canyon is a national park and not around a lot of pollution, I did not choose acid rain as an option. The area does get steady precipitation during the year and is composed of some limestone, which are easily weathered by slightly acidic rainwater.</i></p>