

### Table of Contents

Snow - informational articles about snowflakes and photographer, Wilson Bentley

3-8

### GET THE FULL PACK WITH TWO MORE SETS OF PAIRED TEXTS FOR WINTER AND SNOW HERE!

Dear Teacher,

These passages meet the demand for more rigorous, complex texts with Common Core- especially paired texts that students can use to compare and build knowledge to integrate information and draw conclusions. The passages in this set are in the "stretch" range for 4<sup>th</sup> and 5<sup>th</sup> and in the grade level bands for 6-8. There are two styles of passages provided to help suit various needs.

In my 4th grade classroom, I use each of the texts for close reading and annotating lessons- this helps ensure the students fully comprehend the texts before having to answer questions about both texts together. My students use their annotated texts to answer the questions. Since the texts are in the "stretch" range for 4th and 5th, I don't give these texts as cold reads, but if you have students reading on a 6th-8th grade level, you definitely could! If your students have not been exposed to paired text questions, you may want to walk them through some examples before you ever take a grade. If you have any questions, please feel free to contact me- ideasbyjivey@gmail.com.

Thank you for your purchase! ~jivey

### Snowflakes

The water cycle is never-ending. Evaporation happens when

the sun heats the water in our oceans, lakes, rivers, and other bodies of water. Water takes the form of a gas called vapor, and rises into the atmosphere. As the vapor rises, it begins cooling. When the vapor cools, it turns back into tiny water droplets. This process is called condensation. For those water droplets to form though, they need something to stick to. There are dust particles in our atmosphere, and those pieces of dust actually become the center of the droplets. All of the tiny water droplets come together to form clouds. Sometimes the air is so cold that instead of water droplets, ice crystals form on those specks of dust. When the clouds become too heavy, precipitation occurs. Rain is the most common form of precipitation. However, rain is not what you will see if the temperature is below freezing. If it is below freezing, the ice crystals fall to the ground as snow.

Snowflakes can be made of as many as 200 ice crystals. If you were to look at a snowflake under a microscope, you would find that most are symmetrical hexagons (six-sided figures). These beautiful, unique creations can also take the shape of columns, stars, needles, or even triangles. Although you might find two snowflakes that are similar, you will never find two snowflakes that are exactly alike. That is because the molecules that form the ice crystal can arrange themselves in an infinite number of ways. Snowflake formation is also affected by temperature and humidity. Sometimes, as the ice crystal falls to the ground, water vapor in the air sticks to it, forming a larger crystal. Once the flake hits the ground, it will melt if the ground temperature is above freezing. If it is below freezing, the flakes could accumulate - perfect for making snow angels, building snowmen, and having snowball fights!

<sup>&</sup>lt;sup>1</sup>accumulate: gather or build up

# Bentley's Snow Crystals

In 1885, Wilson Bentley was a 20-year-old farmer in Vermont who surprised the world with the first photograph of a snow crystal. In the next 46 years of his life, he captured over 5,000 snow crystals on film.

It all started when Bentley was fifteen and his mother bought him a microscope. He was so excited to look at a snowflake up close, only to be disappointed when it would melt. When his father bought him a camera, he combined his microscope with his camera and took the first photomicrograph of a snowflake! As he took several more pictures over the course of his life, he also collected data about the conditions of when he saw each crystal. This helped him to realize that the way the snow crystal looked depended on the temperature in which it was created and fell. Bentley taught people about snowflakes with his photographs through lectures and articles in popular magazines like *National Geographic*.

dendrites: branches and side branches off of the plate

plate: the center of the crystal; thin hexagonal prism



Stellar Dendrite by Wilson Bentley published in the US before 1923 and public domain in the US

Use both texts to answer the following questions.

- 1. How are the ideas in paragraph 1 of **Snowflakes** mostly organized?
- a. in chronological order to tell the steps of the water cycle
- b. through compare and contrast to show the differences between rain and snow
- c. with descriptions that give the reader a mental image of snow
- d. in order from least important to the most important details
- 3. In paragraph 1 of **Snowflakes**, what does the word <u>particles</u> mean?
- a. giant flakes
- b. dirt
- c. small pieces
- d. droplets
- 5. Which of the following statements is NOT true?
- a. Snow crystals might stick together to make a flake.
- b. Temperature will not affect a snowflake's shape.
- Dendrites are the branches of a snowflake.
- d. Wilson Bentley is a world-famous photographer.

2. Which phrase from

Snowflakes best supports the idea that snowflakes are unique?

- a. "ice crystals form on specks of dust"
- b. "snowflakes can be made of as many as 200 ice crystals"
- c. "it will melt if the ground temperature is above freezing"
- d. "you will never find two snowflakes that are exactly alike"
- 4. How old was Wilson Bentley when he took his first photograph of a snow crystal?
- a. 1885
- ь. 20
- c. 46
- d. 15
- 6. How does the photograph in **Bentley's Snow Crystals** help the reader?
- a. It gives the reader a close-up view.
- b. The reader can see a piece of Bentley's work.
- c. It defines the parts of a snow crystal.
- d. all of the above
- 7. Which quote from **Snowflakes** shows an example of condensation?
- a. "...the sun heats the water in our oceans, lakes, rivers, and other bodies of water."
- b. "Water takes the form of a gas called vapor, and rises into the atmosphere."
- c. "When the vapor cools, it turns back into tiny water droplets."
- d. "When the clouds become too heavy, precipitation occurs."

Name:	Date:
Support your answer to the question with evidence fr	
Why are snowflakes unique?	*0 *0 *0

Use both texts to answer the following questions.

- 1. How are the ideas in paragraph 1 of Snowflakes mostly organized?
- in chronological order to tell the steps of the water cycle
- through compare and contrast to b. show the differences between rain and snow
- with descriptions that give the reader a mental image of snow
- in order from least important to the most important details
- 3. In paragraph 1 of Snowflakes, what does the word <u>particles</u> mean?
- giant flakes a.
- dirt b.
- small pieces
- droplets d.

- R.H

5. Which of the following statements is NOT true?

- Snow crystals might stick together to make a flake.
- Temperature will not affect a Ь. snowflake's shape.
- Dendrites are the branches of a snowflake.
- Wilson Bentley is a world-famous RI d. photographer.

2. Which phrase from

Snowflakes best supports the idea that snowflakes are unique?

- "ice crystals form on specks of dust"
- "snowflakes can be made of as b. many as 200 ice crystals"
- "it will melt if the ground temperature is above freezing"
- "you will never find two snowflakes that are exactly alike"
- 4. How old was Wilson Bentley when he took his first photograph of a snow crystal?
- 1885 a.
- 20
- 46 c.
- 15
- 6. How does the photograph in Bentley's Snow Crystals help the reader?
- It gives the reader a close-up view.
- Ь. The reader can see a piece of Bentley's work.
- It defines the parts of a snow crystal.
- all of the above d.

**R.7** 

R.I

- 7. Which quote from **Snowflakes** shows an example of condensation?
- "...the sun heats the water in our oceans, lakes, rivers, and other bodies of water."
- "Water takes the form of a gas called vapor, and rises into the atmosphere." b.
- "When the vapor cools, it turns back into tiny water droplets." c.
- "When the clouds become too heavy, precipitation occurs." d.

Name: answer key Date:
Support your answer to the question with evidence from both texts.
Why are snowflakes unique?
The response may include, but is not limited to:
No two flakes are alike, as Bentley proved with his photos.
Most are symmetrical hexagons with dendrites and plates.
Their Formation is dependent upon temperature and humidity.



# TERMS OF USE

# Thank you for your download!

© Copyright 2014 Ideas By Jivey

Permission granted to copy pages specifically designed for student or teacher use by the original purchaser or licensee. The reproduction of any other part of this product is strictly prohibited. Copying any part of this product and placing it on the Internet in any form (even a personal/classroom website) is strictly forbidden. Doing so is a violation of the Digital Millennium Copyright Act (DMCA).

# Please DO:

\*Use this product with your students in your class or for your own personal use.

\*Buy additional licenses for others to use this product at 50% off by visiting your TPT "My Purchases" page.

\*Review this product to recommend that others buy it by providing a direct link to jivey's store or product.

### Please DO NOT:

\*Give this item to others without the purchase of an additional license for them (this includes emailing, printing copies, or sharing through a website, cloud, or network).

\*Copy or modify any part of this document to offer others for free or for sale.

Thank you so much for your download! If you find any errors, please email me: ideasbyjivey@gmail.com

and I'll be happy to correct it right away!

Don't Forget to leave Feedback

to earn credits For Future purchases!

Visit my blog for more ideas:



Clip Art, Backgrounds, and Frames Credit:









