HAPPY NEW YEAR!

FROM THE DESK OF WOODWORD

Have you made a New Year Resolution? My resolution is to become a better reader and with all the great features in this month’s Connect123, I will get lots of practice.

Isn’t it incredible that no two snowflakes are alike? William Bentley was a remarkable man and I’m going to see if I can identify different kinds of snowflakes. And there’s another experiment to discover the difference between direct and indirect sunlight.

There’s a story about a hippo and a tortoise becoming friends that warms your heart.

And we think Martin Luther King, Jr. Day should be a day ON and not a day OFF. You may have a day off school but this is a great day to join a volunteer group to help a local organization or get together with a neighbor who could use a hand.

Welcome to 2018. Let’s resolve together to make this a great year.

Yaaaawn! What’s different?

Look closely at these two pictures. How many differences can you find? Have a parent try. Who found more?

Confetti everywhere! Which shape appears more than the others: stars, circles or squares?

Standards link: Visual discrimination; Find similarities and differences in common objects.
**Standards link:** Investigation: Recognize similarities and differences in common objects.

**Let It Snow!**

**Earthlings say that no two snowflakes look identical!**

**That’s funny. They all taste the same!**

**What we usually call snowflakes are little crystals of ice called snow crystals.**

The water molecules in ice form a six-sided, or hexagonal, crystal. That is why most snowflakes have six sides.

**About Snowflakes**

**Stellar dendrites**

Stellar means “star-like” and dendrite means “tree-like.” Put together it means these kinds of snowflakes look like stars and have branches like trees.

**Hollow columns**

Most snowflakes are this kind. The columns are hexagonal, like a wooden pencil. Can you find 4 or more hollow columns?

**Sectored plates**

These crystals have flat, plate-like arms or sections. Can you find at least 10 sectored plate snow crystals?

**Spatial dendrites**

Not all snowflakes are thin flat plates or slender columns. Some snowflakes are made of many ice crystals jumbled together. Can you find 6 spatial dendrites?

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**Snowflake Man**

People say no two snowflakes are alike. This fact was discovered by a man named Wilson A. Bentley. In 1885 he was the first person to photograph a single snowflake! He figured out a way to attach a microscope to a camera.

Bentley went on to photograph more than 5,000 snowflakes during his lifetime, never finding two alike.

**Look closely: Find the differences in these two pictures.**

**Are snowflakes frozen raindrops?**

No. Rain that freezes when it falls is called sleet. Sleet doesn’t have the fancy shapes of snowflakes and it forms differently.

**Here’s how sleet and snow are made:**

- **Water vapor**
- **Water drop**
- **Ice**
- **Ice**
- **Snow**
- **Sleet**

**Standards Link:** Earth Science: Weather can be observed, written and described.
Sunny question

Why are sunny winter days COLD, while sunny summer days are HOT?
Winter expert
Dr. I. Cicle explains it all!

As you can see, it’s a sunny winter day here and …

YEAH! It’s a sunny day! Let’s hit the waves, Bro!

Uh, Dude, there’s something really wrong with this sand. It’s, like, frozen!

That’s because it isn’t sand. It’s snow!

SNOW? But it’s, like, sunny today. So why isn’t the snow, like, melted?

I’m glad you asked! Let’s pretend this snowball is Earth.

Earth is, like, WAY bigger, Dude!

The Earth tilts on its axis as it travels around the sun. In the winter, if the part of the Earth where you live is tilted away from the sun, it gets indirect sunlight.

Indirect sunlight doesn’t warm up the Earth as much as the direct sunlight we get in the summer.

That is so cool! Now, why is this sand so COLD?

Standards link: Earth science: Students know that weather can be observed, measured and described; changes in weather and seasons are affected by the Earth’s position.

Experiment tells all

Try this experiment to understand the difference between indirect and direct sunlight. Keep track of your work on a separate sheet of paper like the Scientist’s Notebook.

Stuff you need:
- 2 metal pie tins or flat pans
- A sunny winter day
- Watch or clock

What to do:
1. Lay one pan flat on the ground in the direct sunlight. (Fig. 1)
2. Tilt the other pan on its side. Lean it against a rock or a shoe. This pan is being hit with indirect sunlight. (Fig. 2)
3. Wait three minutes.
4. Which pan is warmer?

SCIENTIST’S NOTEBOOK

<table>
<thead>
<tr>
<th>Question</th>
<th>Hypothesis</th>
<th>Observation</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which pan do you think will feel warmer after three minutes in the winter sun?</td>
<td>What do you think the answer to the question is?</td>
<td>Which pan was warmer in three minutes?</td>
<td>Was your hypothesis correct? What did you learn from this experiment?</td>
</tr>
<tr>
<td>☐ pan in direct sunlight</td>
<td>☐ pan in direct sunlight</td>
<td>☐ pan in indirect sunlight</td>
<td>☐ pan in indirect sunlight</td>
</tr>
</tbody>
</table>

(Fig. 1) direct sunlight

(Fig. 2) indirect sunlight
Sun spot mystery

How far is the sun from the Earth? **93 million miles**

How long does it take the sun to make one complete rotation? 24 Earth days

What is the diameter of the sun? **1.4 million miles**

**WARNING!** Never look directly at the sun as this can damage your eyesight!

Standards link: Earth science: Students know about the sun, planets and stars.

Word search

Find the words by looking up, down, backwards, forwards, sideways and diagonally.

<table>
<thead>
<tr>
<th>AXIS</th>
<th>MILES</th>
<th>SAND</th>
<th>SUMMER</th>
<th>ALIKE</th>
<th>FALL</th>
<th>PENCIL</th>
<th>STARS</th>
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<tr>
<td>EXPERIMENT</td>
<td>PAPER</td>
<td>SHOE</td>
<td>WINTER</td>
<td>BENTLEY</td>
<td>FROZEN</td>
<td>PLATES</td>
<td>TOOL</td>
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<tr>
<td>DIAMETER</td>
<td>METAL</td>
<td>SNOWBALL</td>
<td></td>
<td>DENDRITES</td>
<td>ICE</td>
<td>SNOWFLAKE</td>
<td>WATER</td>
</tr>
<tr>
<td>HYPOTHESIS</td>
<td>PAN</td>
<td>SUNLIGHT</td>
<td></td>
<td>CAMERA</td>
<td></td>
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</tbody>
</table>

| S I S E H T O P Y H | W R A T S B S E E S |
| D A L L A B W O N S | T N R R L R E K P E |
| I W N I R E M M U S | H E E E L P A I E T |
| A S S D N X T N E R | I Z M T A L T L N I |
| M I M E T A L R S E | N O A A F A S A C R |
| E X P E R I M E N T | I R C W T T J P I D |
| T A R S G T L P U N | C F O O Y E C I L N |
| E E O H S I N A S I | G N O I B S N O W E |
| R H T I M N A P N W | S L Y E L T N E B D |

Snowflake pattern time

Draw the snowflake that comes next in each row.

Answers

- How far is the sun from the Earth? **93 million miles**
- What is the diameter of the sun? **1.4 million miles**
- How long does it take the sun to make one complete rotation? 24 Earth days

Learning buddy sign here

I have completed ________ activities with my Learning buddy.

Learning buddy’s signature Date

Please send ideas, suggestions or information to: nie@deseretnews.com

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**RUBY BRIDGES**

**Meet Ruby**

On Nov. 14, 1960, a little girl named Ruby Bridges walked to school past a screaming mob of angry white people. She had to be protected by four gun-toting U.S. federal marshals.

Why? She was doing something no other African American in her hometown of New Orleans had ever done before. She was going to school with white children.

**PATIENCE**

**Alone at school**

For young Ruby, the isolation was even worse than the threats. When the school’s white parents pulled their children out in protest, she was left alone, day after day, with her white teacher, Barbara Henry.

**COURAGE**

**Not welcome**

For months, Ruby quietly walked up the steps of William Frantz public school, past youths who were chanting, “Two, four, six, eight! We don’t want to integrate,” past a woman threatening to “poison” her, past signs designed to terrify her. One woman had a baby-sized coffin with a black doll inside. “That really scared me,” remembered Ruby.

Ruby’s courage amazed and inspired people. Former First Lady Eleanor Roosevelt sent Ruby a letter. Circle every other letter to discover what she told Ruby in that letter.

**SEGREGATION**

Means the practice of separating people into groups, especially racial groups. Before 1960, schools in America were segregated. Can you guess what integration means?

- a. Remembering a name
- b. Bringing people together that used to be separated
- c. Excluding people based on race
- d. Organizing names alphabetically

**Standards Link:** History: Understand the accomplishments of ordinary people in historical situations.

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**Draw a couple of classmates sitting by Ruby to be her friends.**
Martin Luther King, Jr. Day of Service

Make your celebration of Martin Luther King, Jr. Day “a day on, not a day off.” This year, thousands of people will do just that by volunteering.

SEEDS OF LEARNING AND SERVICE

AMHERST, MA – Every spring, kids at the Common School in Amherst, plant pumpkins and proceed to learn how to care for them. And from these seeds come study and service.

In the fall, after they harvest the pumpkins, students practice math skills by weighing them and counting the seeds.

The learning continues as they measure ingredients to make dozens of loaves of pumpkin bread, which they donate to the nearby senior center.

Read the above article and identify each of the following:

WHO:  
WHAT:  
WHEN:  
WHERE:  

Standards link: Civics: Students understand the importance of volunteering as a characteristic of American society (e.g., people should volunteer to help others in their family, schools and communities).

Take a look at this list of MLK, Jr. Day of Service ideas. Then look at each picture. Number the project you think each kid chose in the circles.

1. Clearing an elderly neighbor’s sidewalk.
2. Collecting canned goods for a food bank.
3. Help coach a younger child’s team.
4. Help a neighbor with some yard work.
5. Play a game at the senior center.

Service ideas

The kids in Mrs. Kelsey’s class painted some posters to give kids ideas about the kinds of things they can do to help in their neighborhood. But they fell off the line while drying and got mixed up.

Can you match the two halves of each poster?

Standards link: Language arts: Use reading skills and strategies to understand a variety of texts.
What to do?

**Sticky problem**
Evan collects stickers from the grocery store vending machine. Each one costs 50¢. He buys one each time his family shops, which is usually three times a week.

Evan earns $3 a week pulling weeds in his neighbor’s yard, so he spends half of his money each week on stickers and saves the rest in his piggy bank.

This week, the grocery store replaced the old sticker machine with a brand new one. The stickers are bigger, but they cost $1 each. If he buys three, he’ll spend all his money every week.

**Q: What should Evan do to keep saving some money each week?**

**A:**


**Bike lane pain**
Maria walks and feeds her Aunt Meridith’s dog, Zinger, every day after school. Maria gets $2 per day for taking such good care of Zinger.

Maria wants a new bike that costs $75. If she saved all her money each week, she could buy the bike in about two months. But Maria downloads music from her favorite bands at $1.30 per song a couple of times a week. She also buys a smoothie for $3.95 on Saturdays with her friend Katie. Sometimes they go to a movie, which costs $7 per ticket.

**Q: What advice would you give Maria about how to reach her goal of buying that new bike?**

**A:**


**Savings shortage**
David is trying to save money to buy a new LEGO set that costs $29. He gets an allowance of $5 every Friday afternoon from his mom.

David tries to save at least $3 every week. He spends about $2 when he visits the video arcade on Sunday afternoons. But sometimes he’ll spend more than he planned to trying to top his best score.

Last Sunday, he spent $8.50, which ate into his LEGO savings. Now he only has about $4 saved up for the LEGO set.

**Q: What can David do to save the $29.00 faster?**

**A:**


Trash-bag team

The volunteer coordinator asked four students to collect as many bags of garbage as they could find in the park. How many did each student find? Use the clues to complete the chart.

- The 4 students filled a total of 15 bags.
- No one filled more than 7 bags.
- None of the students filled the same number of bags.
- Cassidy filled 5 bags.
- Owen filled 3 less than Cassidy.
- Sam filled the most bags.

<table>
<thead>
<tr>
<th>Students</th>
<th>Bags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cassidy</td>
<td>5</td>
</tr>
<tr>
<td>Owen</td>
<td>2</td>
</tr>
<tr>
<td>Bodie</td>
<td>3</td>
</tr>
<tr>
<td>Sam</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
</tr>
</tbody>
</table>

**Standards link:** Mathematical reasoning: Use a variety of strategies to solve problems.

**Reasoning:** Use a Mathematical Standards link:
- Most bags.
- Sam filled the 7 bags.
- Cassidy filled 5 bags.
- Owen filled 3 less than Cassidy. Bodie.
- None of the students filled the same number of bags.
- No one filled more than 7 bags.
- The 4 students filled a total of 15 bags.

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**Word search**

Find the words by looking up, down, backwards, forwards, sideways and diagonally.

<table>
<thead>
<tr>
<th>ALONE</th>
<th>GAMES</th>
<th>RUBY</th>
</tr>
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<tbody>
<tr>
<td>BRIDGES</td>
<td>LADY</td>
<td>SCARED</td>
</tr>
<tr>
<td>COURAGE</td>
<td>RACES</td>
<td>SEGREGATED</td>
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<tr>
<td>CREATE</td>
<td>RACIAL</td>
<td>SIGNS</td>
</tr>
<tr>
<td>DOLL</td>
<td>RECESS</td>
<td>Threats</td>
</tr>
</tbody>
</table>

**Standards Link:** Letter sequencing, Recognized identical words, Skim and scan reading, Recall spelling patterns.

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**Puzzler**

Starting at the R, move clockwise around the circle and write every third letter on the lines to find out something you can do today to help someone.

**Standards link:** Reading comprehension: Follow simple written directions.

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**Learning buddy sign here**

I have completed ______ activities with my Learning Buddy.

Learning buddy’s signature: Date

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**Check it out**

This November the librarians at the Salt Lake Public Library believe these books to be award worthy. What do you think? Check out their picks and start reading!

- **“After the Fall,”** by Dan Santant. Everyone knows that when Humpty Dumpty sat on a wall, Humpty Dumpty had a great fall. But what happened after?
- **“The Wolf, the Duck and the Mouse,”** by Mac Barnett. This is a story about a duck and mouse who get swallowed by a wolf, and then decide to live in his belly.
- **“Flashlight Night,”** by Matt Forrest Esenwine. Three children use a flashlight to light a path around their backyard at night; in the flashlight’s beam another world looms.
- **“This Is How We Do It,”** by Matt Lamothe. Follow one day in the real lives of seven kids from around the world — Italy, Japan, Iran, India, Peru, Uganda, and Russia!
- **“Here We Are: Notes For Living On Planet Earth,”** by Oliver Jeffers. Jeffers offers a rare personal look inside his own hopes and wishes for his child.
My name: ____________________________

There isn’t much to a jellyfish. It’s not a fish; it has no brain, no heart, no eyes. But even so, jellies eat, travel and live in all of the oceans of the world.

How a Jellyfish stings

Read how a jellyfish stings. Number the pictures from 1 to 4 to show the stinging steps.

1. A tentacle contains many stinging cells.
2. A fish brushes against a tentacle. The stinging cell on the jellyfish’s tentacle bursts open and launches the stinger into the fish’s skin.
3. A barb on the stinger holds it in place.
4. The stinger shoots a long tube into the wound and injects a poison through it.

Ancient Animals:
Older than sharks and dinosaurs, jellyfish have lived on earth for over 650 million years.

Standards link: Life science: Living organisms have distinct structures that serve specific functions in survival.
Standards link: Life science: Living things are found almost everywhere in the world and distinct environments support the life of different types of plants and animals.

**How many jellyfish do you see here?**

Standards link: Life science: Understand diversity within species.

**Puzzler**

To be carried by the currents, drifters have to travel light. The blob-like bodies of the jellies are nearly weightless in the water. Their “jelly” is transparent, so the animals can almost disappear — a useful trick in the middle of the ocean, where there is no place to hide.

**Box jellyfish**

This is the most poisonous jellyfish in the world. A single box jellyfish has enough poison or venom to kill 60 humans.

Which of the box jellyfish below is different from the others?

**Lion’s Mane jellyfish**

With ________ up to three meters long and covered with stinging cells, it’s ________ not to get too close to the Lion’s Mane jellyfish. Its ________ can be up to 80 inches across (200 cm), making it one of the largest ________ of jellyfish.

**Moon jellyfish**

Its saucer top grows to 16” wide and has many short tentacles. This is the jelly that most commonly washes up on beaches.

Standards link: Life science: Understand diversity within species.

**Answers**

How many jellyfish do you see? 13

How many box jellyfish are there? 3

How many Lion’s Mane jellyfish are there? 1

How many Moon jellyfish are there? 10

The ________ of the Lion’s Mane jellyfish is boxy, can be up to 50 inches across (120 cm), and has a face that looks ________ to an octopus. The Moon jellyfish has a saucer top and covered with ________ tentacles.
Hi there! My name is Mzee. I’m about 130 years old (I don’t bother to keep track of my birthdays anymore). Here’s the story of how I met my best friend named Owen.

A man named Owen Sobien was able to tackle the slippery hippo long enough for others to drape a net over him. The hippo was named Owen in his honor.

In Kenya, a baby hippo was left stranded on a coral reef. He was too tired and frightened to get back to shore by himself. Hundreds of villagers and visitors worked together to rescue the young hippo.

Back in 2004, there was a terrible tsunami that caused unbelievable damage and loss of life in Southeast Asia and Africa. You or your parents probably read about it.

Now, I’ve always preferred to be by myself. But Owen just kept following me around.

If I walked away, he’d follow me. At first, I felt a little embarrassed and annoyed when he would crouch beside me like a baby hippo does with its mom.

But Owen was a nice enough kid. And without a mother, he needed someone to show him how to find food, so I did.

People wonder why we became such close friends. Some think it’s maybe because my round shell looked a little like another hippo to Owen. What do YOU think?

Standards link: Life science: Animal patterns of behavior are related to the nature of their environment.
Oval art
Trace each oval shape you see in this picture. Can you find them all?

My letters
O is for Oval
o is for oval

How many words or pictures can you find on this page that have the sound that the letter O makes in the word oval?

Learning buddies: Read the two phrases aloud. Have your child read with you. Trace the uppercase and lowercase letter N. Say the letter as you trace it.

My numbers
How many

Draw a hippo!

Standards link: Visual arts: Know various purposes for creating visual works of art.

Hippo or tortoise?
Do the math to find out which facts describe a hippo and which describe a tortoise. If the answer is less than 10, it describes a hippo. If the answer is more than 15, it describes a tortoise. If the answer is between 10 and 15, it is true for both hippos and tortoises.

1. Lives to be 200 years old. 9 + 7 = _____
2. Lived with the dinosaurs. 19 - 4 = _____
3. Is an herbivore. 6 + 5 = _____
4. Likes to swim. 7 + 5 = _____
5. Its closest living relative is a whale. 3 + 6 = _____
6. Can run faster than a human. 4 + 3 = _____

Standards link: Number Sense: Add and subtract whole numbers.

Answers

1. 9 + 7 = 16 (Tortoise)
2. 19 - 4 = 15 (both)
3. 6 + 5 = 11 (both)
4. 7 + 5 = 12 (both)
5. 3 + 6 = 9 (Hippo)
6. 4 + 3 = 7 (Hippo)

Standards link: Visual arts: Know various purposes for creating visual works of art.

Read Today Christmas Project
The Read Today team helped spread cheer to a few hundred Salt Lake families last month. Our team visited The Neighborhood House, which helps support low-income families, for Parent Involvement Night.

Involvement Night.
And that’s not all! We teamed up with the KSL morning team who helped assemble boxes of holiday dinners then delivered those 210 gourmet meals, purchased by Elements Capital, to The Neighborhood House. The Read Today team, along with Santa, gave every child a Christmas book and a candy cane. Families were able to spend time together, decorating gingerbread houses in their classrooms and were paid a visit by Santa himself! Families who attended left with a gingerbread house, a gourmet holiday meal, a Christmas book and smiles on their faces. We hope all our readers had a wonderful holiday break.

Learning buddy sign here
I have completed ________ activities with my Learning Buddy.

Learning buddy’s signature    Date