Dear Third Grade Students, Families, and Caregivers,

This packet includes a range of activities that students can work on at home independently or with family members or other adults. Some activities may require guidance from an adult to get started. Resources are categorized into two types:

- **Independent Projects**
  - These projects cover a range of different topics and skills. They may be spread out over multiple days.
  - All independent projects can be completed without internet access.

- **Enrichment Activities**
  - These activities are organized into Read, Write, Move, Design, and Solve categories so that students can engage in many different ways while at home.
  - Please note that some of these options are digital and require internet access.

You may work through these resources over multiple days and in any order.

### Independent Projects

- Project 1: Rock Secrets
- Project 2: Finding Your Superpowers!
- Project 3: Future Meteorologist

### Enrichment Activities

- Digital Resources
- Non-Digital Resources
  - Directions
  - Read
  - Write
  - Move
  - Design
  - Solve

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Read  Write  Move  Design  Solve
### Project 1: Rock Secrets

<table>
<thead>
<tr>
<th>Estimated Time</th>
<th>4 days - 8 activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caregiver Support Option</td>
<td>Support is optional, but recommended for collecting rocks outside and Activity 4: What do you know about your rock? for the rock testing.</td>
</tr>
<tr>
<td>Materials Needed</td>
<td>Pencil, rocks (at least 5) paper, penny, nail (or other object to try and scratch the rock,) magnet, and coloring utensils. Not all materials are needed for every activity. Optional Materials: paint, ruler, vinegar</td>
</tr>
<tr>
<td>Question to Explore</td>
<td>What are rocks and what can we learn from studying them?</td>
</tr>
<tr>
<td>Student Directions</td>
<td>Each activity has directions for you to follow.</td>
</tr>
</tbody>
</table>

**What is a rock?**
We find rocks everywhere! But what makes them so special? Go through these activities to find out!

**Activity 1: Go grab some rocks!**
Collect at least five rocks and lay them all out in front of you. What do you notice? Sort your rocks using the sorting categories below. Then, record your observations.

Sort your rocks in these ways:

**Sort 1**
- Heavy
- Light

**Sort 2**
- Rough
- Smooth

**Sort 3**
- Large
- Small

**Sort 4:** What’s one other way you can sort your rocks? Write it below.

___________________________
___________________________
What did you notice about the rocks you chose? Write your observations. You can use the word bank to help.

<table>
<thead>
<tr>
<th>Word Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rough</td>
</tr>
<tr>
<td>Smooth</td>
</tr>
<tr>
<td>Glassy</td>
</tr>
<tr>
<td>Dull</td>
</tr>
<tr>
<td>Flat</td>
</tr>
<tr>
<td>Sandy</td>
</tr>
<tr>
<td>Speckled</td>
</tr>
<tr>
<td>Light</td>
</tr>
<tr>
<td>Crumbly</td>
</tr>
<tr>
<td>Square</td>
</tr>
<tr>
<td>Heavy</td>
</tr>
<tr>
<td>Hard</td>
</tr>
<tr>
<td>Jagged</td>
</tr>
<tr>
<td>Gray</td>
</tr>
<tr>
<td>Sharp</td>
</tr>
<tr>
<td>Oblong</td>
</tr>
<tr>
<td>Streaked</td>
</tr>
<tr>
<td>Rough</td>
</tr>
</tbody>
</table>

I observed ____________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
Activity 2: Read “Rock Secrets” by Betsy James and answer the questions.

Rock Secrets
By Betsy James

Do you take the time to study the rocks in your backyard? No? Well, you should! In this text from Highlights, Betsy James discusses what you can learn from the rocks in your very own backyard. As you read, take notes on what rocks can tell us about the past.

[1] A rock is never just a rock. A rock is a mystery.

Pick up a rock. Any rock. Does it look as if it has a secret? Because it does. A big one. As big as a volcano. Or an ocean. Or a ferocious
dinosaur. Every rock has a secret story to tell about what the earth was like long ago. Could where you’re sitting this very second once have been a pool of lava? Or the bottom of an ocean? Or a tropical forest? Maybe. How can you tell? You pick up a rock.

Is your rock sandy or gritty? It’s probably sandstone. To make sandstone, millions of years of wind and rain wore down mountains until nothing was left but grains of sand. That sand made deserts and beaches; in time it stuck together and became rock. Sandstone sometimes shows ripples left by long-ago winds or waves.

Did you pick up a piece of shiny black obsidian? It came out of a volcano! When a volcano erupts, some lava may cool so fast that it hardens into this smooth, glassy rock.

[5] Does your rock have sparkly crystals? Then it once spent time far underground, where heat from deeply buried lava, called magma, can help crystals grow. If you look at the very hard rock called granite, you’ll see the different colors of many mineral crystals.

Rocks can tell stories of lives before our own. Long-ago oceans were full of animals, little and big; when they died, their shells and skeletons sank to the seafloor and formed limestone. In limestone you might see fossil sponges or corals, or even the shell of an animal that is now extinct. Then you’ll know that your neighborhood was once covered by a great sea!

Or you might find a piece of petrified wood, made from a tree that died in an ancient forest. When mud covered the fallen tree, minerals that were dissolved in the water slowly seeped into the rotting wood and made an exact copy of it in hard rock.

If you’re really lucky, you might pick up a piece of dinosaur bone. How can a scientist tell if the rock she picks up is a dinosaur fossil? She might touch her tongue to it. If it’s bone, tiny holes where blood vessels once ran will usually make her tongue stick a little.

Or you might find a gastrolith, a round, smooth, shiny stone that once spent time in a dinosaur’s stomach, helping it grind up its dinner of plants.
Does every rock have a secret story? Yes, every single rock — even a tiny pebble from your playground. It won’t tell you its story in words. You have to figure it out by looking, feeling, asking, and wondering. But first — pick up a rock!

Text-Dependent Questions

Directions: For the questions 1–4, circle the best answer.

1. PART A: Which sentence describes the main idea of the text?
   a. Rocks can tell you about past environments and organisms.
   b. You can learn the most about a rock by tasting it.
   c. Fossils and petrified wood are the rarest types of rocks
   d. Studying rocks is the only way you can understand the past.

2. PART B: Which detail from the text best supports the answer to Part A?
   a. “To make sandstone, millions of years of wind and rain wore down mountains until nothing was left but grains of sand.” (Paragraph 3)
   b. “Rocks can tell stories of lives before our own. Long-ago oceans were full of animals, little and big; when they died, their shells and skeletons sank to the seafloor and formed limestone.” (Paragraph 6)
   c. “When mud covered the fallen tree, minerals that were dissolved in the water slowly seeped into the rotting wood and made an exact copy of it in hard rock.” (Paragraph 7)
   d. “She might touch her tongue to it. If it’s a bone, tiny holes where blood vessels once ran will usually make her tongue stick a little.” (Paragraph 8)

3. How is the text organized?
   a. The author describes different types of rocks and what they can tell you.
   b. The author describes the least valuable rocks, and then goes to the most valuable.
   c. The author discusses how rocks formed in the past are different from rocks today.
   d. The author discusses the different time periods that different rocks were created in.

4. What is the first thing you should do when studying a rock?
   a. crack the rock open
   b. show the rock to someone
   c. study the area you found the rock
   d. look at the rock
Answer questions 5–7 on another sheet of paper. Use complete sentences and use the text to answer the questions.

5. How are the rocks you can find today related to the past?

6. In the text, the author discusses how studying rocks can help us learn about the past. Why do you think it’s important to know what the world looked like in the past and the different animals that were here before us?

7. How often do you pass by a rock without taking the time to study it? How could taking the time to study an interesting rock help you better understand and appreciate the world around you? Has this article inspired you to look more closely at the rocks around you? Why or why not?

Activity 3: Pick your favorite rock and observe it more closely.

Fill out this sheet about your selected rock.

This is my rock!
(Draw a picture.)

My rock feels

I found my rock...

The colors in my rock are

Grab your ruler or give your best estimate.

My rock measures about _____ cm long.

My rock measures about _____ cm tall.
Activity 4: What do you know about your rock?
Testing a rock in different ways can tell you more about it. Try the tests below on one (or all!) of your rocks to see what happens! You can ask an adult for help.

Try these tests on your rock. After each step, write down the results in the chart below.

<table>
<thead>
<tr>
<th>Test</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test 1: Hardness test.</strong> Scratch the rock with a fingernail, a penny, and a nail. Can you scratch it?</td>
<td>Does it scratch with…</td>
</tr>
<tr>
<td></td>
<td>a fingernail?</td>
</tr>
<tr>
<td></td>
<td>a penny?</td>
</tr>
<tr>
<td></td>
<td>a nail?</td>
</tr>
<tr>
<td><strong>Test 2: Color streak test.</strong> Test for the “color streak” of the minerals by rubbing the rock on smooth cement outside. What colors do you see?</td>
<td>Colors I see…</td>
</tr>
<tr>
<td><strong>Test 3: Magnetism test.</strong> Hold your rock near a magnet. Can you feel a pull?</td>
<td>Did you feel a pull?</td>
</tr>
<tr>
<td><strong>OPTIONAL Test 4: Acidity test:</strong> Put a few drops of vinegar on your rock (ask an adult for help!) Does it fizzle?</td>
<td>Does it fizzle?</td>
</tr>
</tbody>
</table>

What did you learn about your rock?

Activity 5: Take your answers from above and write a story.
Pretend that you are rock and that people just keep walking past you. What would you want them to know about you?

On your paper, draw a picture of your life as a rock and then write your story.
Activity 6: Read about the different types of rocks and underline what you learn about igneous, sedimentary, and metamorphic rocks.

All about rocks
By National Geographic, adapted by Newsela staff on 10.15.19
Word Count 588
Level 590L

Image 1. Devils Tower in Wyoming formed when molten rock intruded into the existing rocks. Wind and water eroded the sedimentary rock surrounding the tower faster than the harder igneous rock, creating the Tower's iconic shape. Photo by: PhotoAlto/Jerome Gorin via Getty Images

Rocks are very common. You may not think too much about them. Yet rocks are more important than you may know! They contain clues about what Earth was like long ago. Rocks can help scientists understand how our planet has changed in the past. They can also hint at the ways it may change in the future.

What Is A Rock?

Geologists are scientists who study the Earth. They look closely at the rocks that make up our planet. They study the ways those rocks have changed over time.

What exactly is a rock? A rock is a natural substance. It is made up of crystals of different minerals. These crystals have fused together, making a solid lump.

The minerals that make up a rock may or may not have been formed at the same time. That does not really matter. What matters is that have been "glued" together by nature.
Geologists put rocks into different groups. The groups are based on how rocks formed. There are three main kinds of rock. They are igneous, sedimentary and metamorphic rocks.

Igneous Rocks

Igneous rocks are common in Earth’s crust. These rocks are volcanic. They are formed from hot melted material. Below Earth’s surface, this material is called magma. It can become solid, forming igneous rock.

Sometimes magma reaches Earth’s surface. It may erupt out of a volcano, for example. At the surface, it is called lava. When lava cools down and becomes a solid, that also makes igneous rock.

Granite and basalt are two other kinds of igneous rock. Granite makes up large parts of all continents. These rocks can be very old. Some granite in Australia is thought to be over 4 billion years old! Basalt is a kind of dark lava. It forms the seafloor. Basalt can also be found in volcano flows.

Sedimentary Rocks

Sedimentary rocks are formed from parts of other rocks. Animal remains and plants can also form sedimentary rocks. Over time, these bits of rock and remains build up. This usually happens in low areas, like lakes, oceans and deserts. More and more material layers up. Over time, the bits become packed tightly together. Eventually they are pressed into solid rock.

Sedimentary rock forms in layers. These layers are called strata. Sandstone is formed from layers of pressed sand. Mudstone is formed from layers of pressed mud. Shells and bonelike minerals form limestone. Fossils are most often found in sedimentary rock.

Metamorphic Rocks

Metamorphic rocks are rocks that have changed their form. That is what the word "metamorphic" means. These rocks were once sedimentary or igneous. They became metamorphic when they were changed by pressure or heat. They may also be changed by fluids.

The heat that makes metamorphic rock can come from magma. It can also come from a process called subduction. That is when one of Earth’s tectonic plates slips under another one. This pulls rocks beneath the planet’s surface. Deep below the surface, metamorphic rocks are made.

Marble and quartzite are two kinds of metamorphic rocks. Marble was once limestone. Quartzite was once sandstone. Gneiss is another common metamorphic rock. This rock often begins as granite.
Activity 7: The Rock Cycle

Now that we’ve learned more about our rock and the types of rocks that there are, let’s investigate the Rock Cycle!

First, read about the Rock Cycle:

“Rocks are hard and can be difficult to break. For that reason, many people think of rocks as being permanent. However, rocks break down and change over time. They change because of a process called the rock cycle. That means one type of rock can be changed into a different type of rock.

The process can happen in many different ways. Any one type of rock can form into any other type of rock, given the right conditions. One example begins with igneous rocks. Magma shoots out of the ground and cools. It forms an igneous rock on Earth’s surface.

Over time, water breaks down the igneous rock. Tiny pieces of igneous rock sediment build up and compress over time. The pieces can turn into sedimentary rock over many years.

The sedimentary rock can also change. Some sedimentary rock can, over many years, slip below Earth’s surface. The heat and pressure under Earth’s surface change the rock. The sedimentary rock can turn into metamorphic rock.”

Second, observe the Rock Cycle and think about how a rock changes:

Third, write about the Rock Cycle. Using the Rock Cycle diagram, write an informational piece about what happens to a rock in the cycle. Include these transition words in your writing: first, then, next, additionally.
Activity 8: Beauty in rocks. Beauty in nature.
Read Elizabeth Preston’s article about rainbow rocks. Then, read and write some poetry.

Rainbow Rocks
By Elizabeth Preston

In China, a colorful area of land has been called the “rainbow mountains.” In this text, Elizabeth Preston describes how they formed. As you read, take notes on how the colorful mountains came to be.

These snazzy stripes may look like an artist's creation, but they're all natural. They're part of a formation in China nicknamed the “rainbow mountains.”

The stripes used to be hidden, stacked underground like layers in a cake. The layers formed over a very long time. In some layers, water and oxygen mixed with iron in the rock to turn it red, like rusting metal. In others, tiny amounts of different minerals in the rock created colors such as green, yellow, or blue. Then, about 55 million years ago, two of the Earth's tectonic plates smashed into each other in slow motion. All that rock was pushed upward to form mountains — and those colorful layers were hidden no longer.

Nature has lots of other colorful things. Let’s read some poems about things in nature and then write our own poem.

First, read these poems. Circle any words or ideas that you like.

Into the Mud
By Joyce Sidman

Sun
slant low,
chill seeps into black
water. No more days of bugs
and basking. Last breath, last sight
of light and down I go, into the mud. Every
year, here, I sink and settle, shuttered like a
shed. Inside, my eyes close, my heart slows
to its winter rhythm. Goodbye, goodbye!
Remember the warmth.
Remember the quickness.
Remember me.
Remember.
<table>
<thead>
<tr>
<th><strong>Firefly</strong></th>
<th><strong>Color</strong></th>
<th><strong>Grass</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>By Jacqueline Woodson</td>
<td>By Christina Rossetti</td>
<td>By Joyce Sidman</td>
</tr>
<tr>
<td>It’s almost May and yesterday I saw a firefly.</td>
<td>What is pink? A rose is pink By the fountain's brink. What is red? A poppy's red In its barley bed. What is blue? The sky is blue Where the clouds float through. What is white? A swan is white Sailing in the light. What is yellow? Pears are yellow, Rich and ripe and mellow. What is green? The grass is green, With small flowers between. What is violet? Clouds are violet In the summer twilight. What is orange? Why, an orange, Just an orange!</td>
<td>I grow in places others can’t, where wind is high and water scant. I drink the rain, I eat the sun; before the prairie winds I run. I see, I sprout, I grow, I creep, and in the ice and snow, I sleep. On steppe or veld or pampas dry, beneath the grand, enormous sky, I make my humble, bladed bed. And where there’s level ground,</td>
</tr>
<tr>
<td>You don’t see them a lot in the city. Sometimes in the park in the near dark one comes out you'll hear a little kid shout Lightning bug! Firefly!</td>
<td>Make a wish, Miss Edna said. Make a good one. Firefly wishes always come true.</td>
<td>I spread.</td>
</tr>
</tbody>
</table>
Second, use these questions to brainstorm some ideas. Write your answers on another sheet of paper.

1. What are other colorful things in nature that you have seen? Make a list.
2. Pick something from your list. Write three adjectives to describe the thing.
3. What colors do you see in nature? Make a list.

Now, use your words and items from your lists above to write your own poem on another paper.

**Activity 9: Reflection**
Over these activities, you have learned so much about rocks! What would you say to someone who doesn't like rocks to convince them that they should give rocks a try? Write your reasons for liking rocks on another sheet of paper.

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**Project 2: Finding Your Superpowers!**

<table>
<thead>
<tr>
<th>Estimated Time</th>
<th>One to two 60 minute sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Caregiver Support</strong></td>
<td>Students will identify their reading superheroes and make connections to their own “superpowers.”</td>
</tr>
<tr>
<td><strong>Option</strong></td>
<td>Take a few minutes to brainstorm a few favorite characters from books your child has read and tell them about your favorite character from any book you read. Discuss why the characters stood out to you and why the character should be a reading superhero!</td>
</tr>
</tbody>
</table>
| **Materials Needed**    | ● Blank paper
● Pen or pencil
**Optional supplies but not necessary:**
● Crayons, markers, colored pencils, etc. |
| **Question to Explore** | Who are some of my “reading superheroes?”
What are some of my superpowers?
How can I make important changes in the world through reading, writing, and talking? |
| **Student Directions**  | Think about some of your reading superheroes and how they used their “superpowers” to impact others or change their worlds. Then complete each of the activities below to identify your superpowers and create a portrait of yourself as a “superhero.” |
| **Extension Resources** | Current Events
Kid President: How to Change the World (YouTube video)
Time For Kids: Young Game Changers
Kids Go Global: Exploring Global Issues |

Complete each of the activities below on a sheet of paper or in a writing journal.
Activity 1: Who are your reading superheros?
In comic books, a superhero is a character who has superhuman powers that they use to do good, protect people, or fight evil.

1. In your own words, describe what it means to be a superhero.
2. Take a moment to think about all the books you have read in and out of school. Write down the titles of some of your favorite books.
3. From the books you listed above, think about characters in the books that you have read who have used their superpowers to do good, to help people, or to change the world. Who are some of your “reading superheroes?” What “powers” or skills did they have that helped them to do good?
4. Now think about a time you were able to help someone or to do good. What skills or strengths do you have that you use to help others? Are you a good listener? Can you solve problems easily? Are you a good writer or artist? Can you convince people to support your ideas?
5. Pick one skill you have used to help others. Let’s call that your superpower! Give your superpower a special name and describe how you use your superpower to help other people (e.g., I am a Laser Listener!)
6. Draw a portrait of yourself as a superhero! You are the focus of this picture because you are a superhero with great powers! Be sure to include images and words that show your superpower.

Activity 2: Current Events with Kid President
Current events are important to read daily. It is important for all of us to know what is happening in the world around us. Reading about current events keeps us informed and helps us decide on how we want to help make change! That includes you!

You might think only adults can make change, but there are many young people your age or older that disagree. Young people's voices can be just as powerful, if not more, than adults.

Kid President tweeted:

Ordinary people are people that are not famous, don’t have tons of money, or aren’t politicians. Ordinary people are like you and me!

Answer these questions on sheet of paper:
1. Why did the Kid President tweet that ordinary people are the ones that make change in the world?
2. How could you use your superpower to make change in the world?

Activity 3: Current Events with Greta Thunberg
Let’s take a look at another powerful voice making change for the environment: Greta Thunberg. Greta is a “17-year-old climate and environmental activist with Asperger’s.” Whoa! What does that mean? Well, Greta uses her words and voice as her superpower to change the world! She cares about the oceans, forests, and the air we breathe. She knows that the world’s environment needs ordinary people, like me and you, to make big changes!

Read this article to learn more about Greta Thunberg.

Greta Thunberg "a bit surprised" to be Time Person of the Year
By Associated Press, adapted by Newsela staff on 01.02.20
Word Count 597
Level 570L

Greta Thunberg is a teenage climate activist. For more than a year, she has been leading worldwide protests. Thunberg was named Time’s Person of the Year on December 11.

Time is a magazine. Every year, Time magazine picks a person or an idea that has influenced the world the most that year.

Thunberg is 16 years old. She is the youngest person to ever win. Thunberg said she was surprised. She also said other young protestors deserve to share the award.

Face Of Young Activism
Thunberg is from Sweden. She has become the face of young activists. They are trying to protect the Earth.
Scientists say climate change has been caused by people. People burn fossil fuels for heat and power. Coal and oil are fossil fuels. Burning them gives off greenhouse gases. These gases trap heat. This changes Earth’s weather. It also causes Earth’s temperature to rise. Climate change causes dangers. One is flooding from rising seas.

Time said it chose Thunberg for a few reasons. One is she brought attention to an important issue. She has also united the world. She also has shown the world what it looks like when a younger group of people become leaders.

Thunberg said she was surprised she got the award.

"I could never have imagined anything like that," she said.

She said the award is for everyone that participated in the Fridays for the Future movement.

"What we have done, we have done together," Thunberg said.

In 2018, Thunberg helped start Fridays for Future. Every Friday, she would skip school. She would go protest outside Sweden's government offices. Thunberg was there every Friday. Young people began following her lead. They protested in their own countries.

"Governments Need To Do Better"

Thunberg and other activists say governments need to do better to fight climate change. The teenager uses studies by scientists. The science is proof of the dangers of climate change.

On December 11, Thunberg spoke at a climate meeting for the United Nations (U.N.). She said governments and company leaders are misleading the public. She said leaders hold meetings. Yet those meetings bring little change.

The youth climate protests have taken place all over the world. Hundreds of thousands of people have gone to them.

Thunberg said the protests are spreading awareness about the need to reduce emissions. It is also bringing attention to people being affected by climate change. She thinks the protests’ biggest success has been bringing a sense of importance to the conversations around climate change.

Thunberg said the past 15 months have changed her. She started protesting by herself. Now she speaks to world leaders.

Meaningful Impact

"I think life is much more meaningful now that I have something to do that has an impact," she said.
Thunberg has gotten a lot of attention from the media. She also has a lot of fans. She is also looking forward to some quiet time.

She is going home to Sweden for Christmas. She will spend it with her family and dogs. She goes back to school in August. She has been taking a break from school for the year to be an activist.

"I will probably continue a bit like now, travel around. And if I get invitations, to come. And just try everything I can," she said.

Greta uses her voice for good.

Greta tweeted, “Be kind. Help where you can…” On a sheet of paper, write about a time when you were kind and helped.

Activity 4: Current Events in Your World!
Think about some of the big issues that are currently happening around the world. What have you seen in your school you would like to change for the better? Maybe you noticed something in your neighborhood you think could be better...what might that be? Maybe you would like to help homeless animals or collect items to donate to a shelter for people. What would you like to change in the world?

On your sheet of paper, write down three big issues you would like to change.

What’s your plan? Now it’s time to create a plan. A plan is very important when making changes because it helps you think about what needs to be done to achieve your goal. Your plan does not have to be perfect, but it’s important you think about the steps you need to take. Remember: YOUR voice, YOUR words, and YOUR superpower are POWERFUL enough to make change.

On your sheet of paper, create your plan in three steps. Write your steps as “Step 1,” “Step 2,” and “Step 3.”
Activity 1: Reading about the weather.

- First, read the article title and write down what you know about weather and observing weather on a separate piece of paper. Also write down any questions that you have.
- Next, read the article.
- Last, answer the questions.

High-tech instruments and human observation aid in weather forecasts

By NOAA.gov, adapted by Newsela staff on 08.26.19
Word Count 549
Level 560L

Watching the weather is part of daily life. Knowing if it will be sunny or rainy helps us decide what to wear. It also helps us choose what activities to do that day.

Meteorologists are weather scientists. They also keep their eyes on the sky. They use what they see to develop weather forecasts. These forecasts say what the weather will be for the coming days.

Forecasters have many ways to predict the weather. They take many different measurements. For example, they determine the temperature. They look at the speed of the winds. They also look at which way it is blowing. Weather scientists study the air pressure. That is how strongly the air pushes against anything it touches. Changes in air pressure can give hints about how the weather will change.

Meteorologists also take note of the humidity. That shows how much water is in the air. They watch for any precipitation, or water falling from the sky. This could fall as rain or snow. It just depends on the temperature.
The types and quality of weather instruments have changed over time. The ways of studying observations are different, too. Scientists today use many tools to watch the weather. Thermometers show the temperature. Rain gauges collect and measure rain. Wind speed meters reveal the strength of the wind. Barometers to measure air pressure.

**Equipment Gets High-Tech**

Some meteorologists use more high-tech equipment. They might use wind profilers. These instruments bounce sound waves into the air. They help find the wind speed at different heights. Weather balloons and satellites are also put to work. They take pictures from high above the earth. Scientists can then study the images.

Doppler radar is another type of high-tech equipment. It sends radio waves into the sky. The waves bounce back when they hit something. Clouds moving away from the radar return one kind of wave. Clouds moving closer return another. A computer in the radar changes the signal into pictures. These pictures show clouds, rain, wind speeds, and wind direction.

All these instruments are very helpful. Still, human eyes are important, too. Simply looking at the sky can provide information. It can give clues about weather and clouds. It’s also easy to see the size and amount of any rain or snow.

Over 210 million weather observations are made each day in the United States. These measurements come from many different places. Some are taken by machines or meteorologists. Others come from trained volunteers.

All of these observations are recorded. Then they are uploaded into computers. The computers plug the data into math equations. These equations help the computers create forecasts. A forecast can be for the region or for the whole world.

**Computer Forecasts And Human Observations**

There are National Weather Service offices all over the country. Meteorologists at these offices look at the computers’ forecasts. They compare them against their own observations. Their knowledge of local weather patterns is also helpful. They combine all the information that they have. Then they make a forecast for their area.

These forecasts might warn of bad weather. They could tell pilots if it's safe to fly. They could forecast fires or rough seas. They could also warn people about snow fall or polluted air. It all depends on the community’s needs.

After reading, answer these questions on a separate piece of paper:

1. What are the most interesting new facts you’ve learned from reading the article? Why did you choose these facts?
2. Why is it important to be able to accurately predict the weather? Use at least two specific details from the article to explain your opinion.
3. Why do meteorologists use a combination of high-tech equipment and observations of what they see to develop weather forecasts?
Activity 2: Weather Diary

For the next week, you will record the weather in your Weather Diary. Step outside for a minute and observe for cloudiness, precipitation, and wind from a safe location. For the temperature, check a thermometer or ask a family member to look at a weather app on their phone.

After one week, use your Weather Diary to answer these questions on a separate sheet of paper:

1. What was the temperature yesterday or the day before that? Have there been any trends in temperature?
2. How does the temperature change where you live during different seasons? Are there trends or patterns?
3. How does the weather affect our environment? Explain.

Extension: Make another row in your weather diary (see example below) to compare your observations with a weather report on TV, a website, or an app.

Example:

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Observations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weather Report</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Activity 3: You’re a Meteorologist
Pretend that you are a meteorologist and you will report the weather on television. Select any day from your weather diary and write a weather report on a separate piece of paper. In your report, you will include information about precipitation, wind, cloudiness, and any other information you observed. Think about the questions below as you create your report.

- How will you begin your weather report?
- What information should you report first, second...last?
- What advice can you offer viewers based on weather conditions?
Enrichment Activities

Digital Resources
If you have access to the internet, please go to tinyurl.com/DigitalAtHome. This document contains links to multiple digital resources that you can use each day.

There are also more resources specific to grades 3–5 at tinyurl.com/CPSESEnrichment.

Non-Digital Resources
We’ve designed this section of the packet to provide students the opportunity to:

Directions
1. Each day, pick at least one activity to complete from each category.
2. Keep track of your work on a separate sheet of paper or in a journal.
3. At the end of each day, write a journal entry answering the questions:
   a. What was my favorite activity today? Why?
   b. What is something new I learned today?
   c. What are my goals for tomorrow?
Read independently for at least 25 minutes per day. Then select 1–2 questions from the tables below to respond to or to discuss with a friend or family member. You can pick different questions everyday!

Questions about stories:

<table>
<thead>
<tr>
<th>Describe a problem or conflict your character faced in this chapter. How would you solve it?</th>
<th>What lesson(s) do any of the characters learn? What do we, as readers, learn?</th>
<th>Get to know the main character. Analyze the main character through their words, thoughts, actions, and conversations with others.</th>
<th>What are repeated themes in the text? Provide evidence to support your answer.</th>
<th>How does dialogue in the story move the plot along? Provide quotes from the text and explain.</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does the setting affect how the characters respond to conflict/conflicts in the story?</td>
<td>Pick three adjectives to describe one of the characters. Use examples from the text to support your choices.</td>
<td>What examples of figurative language are in the text? What meaning do they hold?</td>
<td>After the events at the end of the story, do you think the protagonist will behave differently? Why or why not?</td>
<td>Did the ending satisfy you? What changes would you make?</td>
</tr>
<tr>
<td>What are the protagonist’s strengths and weaknesses?</td>
<td>What are major turning points in the story?</td>
<td>How does this story make you feel? Why?</td>
<td>Choose two characters in your story and compare and contrast them.</td>
<td>What is the main conflict (problem) in the book? How do the characters react?</td>
</tr>
<tr>
<td>Determine a character’s perspective and how it affects the telling of the story.</td>
<td>Which minor character most influences the protagonist? Give an example and explain why?</td>
<td>When you visualize the setting of important scenes, what do the settings reveal about the characters?</td>
<td>How well did the author develop the characters? What did you like about them? What did you dislike?</td>
<td>What type of language is used to set the tone in your book? Provide evidence and explanations.</td>
</tr>
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</table>
Questions about informational texts:

<table>
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<tr>
<th>How does the author describe the setting of your book? What details are provided?</th>
<th>When you visualize something that is being described in your book, draw what you see based on the description given.</th>
<th>Give examples of when the author uses extreme or absolute language. (leaves no doubt)</th>
<th>Create a diagram of a descriptive paragraph provided in your book</th>
<th>Create an advertisement for your book. Why would other students want to read your book?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyze a photo or diagram in your book. What additional information do you learn about your topic?</td>
<td>Write about an example of when the author writes about the topic and shares information that is different from what you know.</td>
<td>Pick three adjectives to describe one of the subjects/topics. Use examples from the text to support your choices.</td>
<td>Analyze the cover of your book. What did the illustrator include and how does it represent the topic? Create an alternative cover for your book with an explanation of your changes.</td>
<td>Write a fictional story from the perspective of a real person or topic in your non-fiction text. Use information you learn about the person, animal, or thing to write the story.</td>
</tr>
<tr>
<td>Create a jingle or a poem for the topic of your book using the information you learned from the text.</td>
<td>Write about the information that is surprising, shocking, or disappointing in your book. Explain why you have this reaction.</td>
<td>Complete a graphic organizer comparing or connecting two subjects/topics in your book.</td>
<td>Write a two paragraph book review about your book. Give reasons why the next person should read your book.</td>
<td>Create a storyboard for a movie trailer for a documentary about the topic of your book.</td>
</tr>
</tbody>
</table>

**Vocabulary Four-Square:** read a book, magazine, or newspaper article and find any words you don’t know. Use a dictionary or ask an adult to find the definition for each word. Take out a piece of paper and draw a four-square for each word, writing the word in the center of your paper. In the top left-hand corner, write the definition (in your own words). In the top right-hand corner, write a sentence using the new word that you learned. In the bottom right-hand corner draw a picture that represents the word. In the bottom left-hand corner write a synonym of the word (a word that has the same meaning). Then write an antonym of the word (a word that has the opposite meaning).
Write

I Am Poem: Write a 3 stanza poem on a separate sheet of paper by completing each statement with your own ideas. When you are done, recite the poem for an audience. If you want to write another poem, interview someone and write an I Am Poem for them!

First Stanza: I am (2 special characteristics you have). I wonder (something of curiosity). I hear (an imaginary sound). I see (an imaginary sight). I want (an actual desire). I am (the first line of the poem repeated).

Second Stanza: I pretend (something you actually pretend to do). I feel (a feeling about something imaginary). I touch (an imaginary touch). I worry (something that bothers you). I cry (something that makes you sad). I am (the first line of the poem repeated).

Third Stanza: I understand (something that is true). I say (something you believe in). I dream (something you dream about). I try (something you really make an effort about). I hope (something you actually hope for). I am (the first line of the poem repeated)

Start a Writing Journal
Pick one idea to write about every day. Get creative! Write in paragraphs or write a poem. Add illustrations or diagrams. Go back to build on your writing over time as you think of new ideas.

1. What is your favorite holiday? Write the reasons for your choice.
2. What is the bravest thing you have ever done?
3. If you could be a superhero, what extraordinary powers would you give yourself? Explain your choices.
4. What is the one food you would least like to give up for the rest of your life? Explain why.
5. Would you rather be a dog or a cat? Explain why.
6. Who or what makes you laugh? Explain why you think this person or thing is funny.
7. Imagine that you drank a magic potion, and then suddenly you started to grow smaller and smaller. Finally, you were no larger than a fly. What would you do?
8. What is your most prized possession? Explain why it is so important to you.
10. Do you think you have a lot of self-confidence? Explain the reasons for your answer.

Move

Don’t Let the Balloon Touch the Ground: Hit the balloon up in the air, but don’t let it touch the ground. For an extra challenge, juggle more than one balloon or keep one hand behind your back. Ask someone to time you to see how long you can do it. If there is someone to play with, count how many times you can hit it back and forth. Then, see if you can beat your time or score! This game is great for improving arm strength and hand-eye coordination.

- Materials Needed: Balloons (Remember: pieces of burst balloons can be a serious choking hazard)
**Sticky Note Wall Bop:** Ask an adult to help you with this activity! Attach twenty-six sticky notes to the back of a door and write a different letter on each one (in random order). Make a “start” line a few feet away from the door. Stand behind the start line with a soft ball, bean bag, stuffed animal, or pair of rolled-up socks. Ask the adult to call out a letter. Then toss your soft object at the post-it note with that letter. You get a point for each correct target you hit! For an extra challenge, ask the adult to call out a word for you to spell. Try to beat your last score each time you play. Don’t forget to retrieve your object after each toss.

- **Materials Needed:** Sticky notes, soft-tossing object, paper and pencil for keeping score

**Mirror Mirror:** Find a partner and stand face-to-face about two feet apart. Take turns making movements and copying each other! Reach up and stretch to the sky. Do ten jumping jacks. Run in place. Act like an animal. Make it fun and you’ll both be working up a sweat in no time.

**Obstacle Course:** Ask an adult to help you make an obstacle course with items you have around the house. Make sure to create a course that includes a variety of motions (jumping, crawling, balancing, etc.) and uses a large area. You can make a different obstacle course every day so this never gets old!

- **Materials Needed:** Hula hoops to jump through, line of tape to balance on, couch cushions to hop between, table to crawl under, blanket over two chairs to crab walk through, tupperware containers to hurdle over, stuffed animals to roll over, plastic cups to run around

**Red Light, Green Light:** Ask an adult to be your “traffic light.” Stand in one spot while the adult begins calling out colors. When you hear “red light,” you must stand still. When you hear “yellow light,” you must walk slowly in place. When you hear “green light,” you must jog in place. You can also come up with new colors and rules. Try Purple Light: Skip in place, Orange Light: Frog jumps, Blue Light: Bunny hops, Pink Light: Gallop like a horse or anything else you would like!

**Physical Activity Calendar:** Complete the daily activity on the calendar. After finishing the activity for today’s date, pick any other activity you want and complete that too!
**Design a Solution:** Find a few short articles. Identify a real-world problem in what you read and design a solution to address the problem. After drawing your design, look for items around the house that you can use to build a model of your solution. Then answer the following questions:

- **What is the problem you are trying to solve?**
- **Who will your solution help?**
- **How will you convince others to use your solution?**
- **Share your solution with a family member or a trusted adult. Ask them for one suggestion on how to make your design even better.**
- **Revise your design and model by including the suggestion you were given.**

### Rube Goldberg Machine

Identify a simple task and use household items to design and build a multi-step machine to complete the task. Before building your machine, answer the following:

- **What is the task you want to automate?**
- **What household items can you use to build your machine?**
- **How will you ensure the task is completed efficiently?**
- **Share your design with a family member or a trusted adult. Ask for feedback and suggestions for improvement.**
- **Revise your design and build your machine based on the feedback you received.**

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**March 2020 Elementary Mind & Body Calendar**

<table>
<thead>
<tr>
<th>SUNDAY</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
<th>SATURDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 <strong>Mindful Minute</strong> For 60 seconds, clear your mind and focus on your breathing. If your mind starts to wander, bring your attention back to your breathing. <strong>Self-Injury Awareness Day</strong></td>
<td>2 <strong>Musical Frogs</strong> This game is just like musical chairs except players hop around like frogs and sit on lilypad (pillows).</td>
<td>3 <strong>Mindful Minute</strong> For 60 seconds, clear your mind and focus on your breathing. If your mind starts to wander, bring your attention back to your breathing.</td>
<td>4 <strong>Walking Race</strong> Pick a distance and challenge a friend to a speed-walking race. No running!</td>
<td>5 <strong>Sidewalk Chalk Message</strong> Draw different kinds of lines on the ground with chalk. Walk along them one foot in front of the other balancing.</td>
<td>6 <strong>Bear Walk</strong> With your bottom in the air, step forward with your right hand and step forward with your left foot. Step forward with the left hand then the right foot. Continue to move across the room.</td>
<td>7 <strong>Wild Arms</strong> As fast as you can complete: 10 Arm Circles front &amp; back. 10 Forward punches 10 Raise the Roof’s Repeat 3x</td>
</tr>
<tr>
<td>8 <strong>Sugarcane Pose</strong> Hold Sugarcane Pose for 30 seconds on each side.</td>
<td>9 <strong>Limbo</strong> Grab a broom stick and have 2 people hold it. Take turns going under the stick arching backwards. Lower the stick after each successful pass. How low can you go?</td>
<td>10 <strong>Crazy 8’s</strong> 8 jumping jacks 8 leaps 8 frog jumps 8 vertical jumps (as high as you can) Repeat 3 times</td>
<td>11 <strong>Between the Knees</strong> Gather round objects of varying size. Startling with the largest try walking around your house keeping the object between your knees.</td>
<td>12 <strong>Happy Baby Pose</strong> Straighten your legs for an added challenge.</td>
<td>13 <strong>Toe Fencing</strong> With a partner, hold each other’s shoulders. Try to tap the other person’s toe without having yours tapped.</td>
<td>14 <strong>Chair Pass</strong> Practice your chest passes against a brick wall. Remember to step forward.</td>
</tr>
<tr>
<td>22 <strong>Dance, Dance</strong> Put on your favorite song or turn on the radio. Dance however you like during the entire song!</td>
<td>23 <strong>Arm and Leg Tag</strong> A regular game of tag, but if someone touches your arm or leg you can no longer use that body part. If both legs are tag, start a new round.</td>
<td>24 <strong>Read &amp; Move</strong> Pick a book to read and select an “action word” that will be repeated often. When the action word is read stand up and sit down.</td>
<td>25 <strong>Army Crawl</strong> Lay on your stomach resting on your forearms. Crawl across the room dragging your body as if you’re moving under barbed wire.</td>
<td>26 <strong>Do this:</strong> - Hop on one leg 30 times, switch legs. - Take 10 giant steps - Walk on your knees - Do a silly dance - Sprint for 10 seconds</td>
<td>27 <strong>Set the Menu</strong> Talk with who takes care of you about choosing the dinner menu. Pick whole grains and vegetables.</td>
<td>28 <strong>Vertical Jump</strong> Jump as high as you can for 30 seconds. Repeat.</td>
</tr>
</tbody>
</table>

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**Design**

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questions:
● What task are you trying to solve? (Closing a door is a great task to start with, but you can choose anything!)
● What steps will you include in your machine? (Try to include at least 10!)
● What materials will you need?
● What will you do if your machine doesn’t work at first?

Surrealist Drawing: Using a single piece of paper, fold it into three equal parts lengthwise. It should look like this when you unfold it:

<table>
<thead>
<tr>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torso</td>
</tr>
<tr>
<td>Legs</td>
</tr>
</tbody>
</table>

Re-fold the paper so you just see the top. Think of a creature or character you’d like to draw, but draw only their head and neck! Next, turn the paper so you only see the middle section, called “Torso.” Think of a new creature or character and draw their torso. Now, turn the paper so you can only see the bottom section, called “Legs.” Think of a third creature or character you’d like to draw and sketch their legs in this space. Once this round is complete, unfold the paper to see a unique creature that is a combination of all three of your ideas!

Musical Art: Gather paper, any art supplies (crayons, markers, paints), and a music source. Play any song and listen to the music. What do you see in your mind? What do you hear? What do you feel? Use your art supplies to express what you are seeing/hearing/feeling on paper. Repeat with two more songs. Trying to find songs that sound different from one another. After you finish, talk about (or write) about what you created. Do they look different based on what you heard? Develop titles for your artwork.

Paper Chains: Ask an adult to help you cut paper into two-inch lengthwise strips. Decorate/design your strips (see ideas below), and then tape/staple your strip into a loop. Create a paper chain by looping new strips through one another:

- Pattern Chains: create a pattern by alternating different colors or designs
- Appreciation Chains: draw one thing you appreciate on each strip
- All About Me Chains: design each strip to tell the world something about you
- Connection Chains: draw a picture on one strip. Think of another picture that connects with the first picture you drew, draw that on the second strip, and loop them together. Think of a third picture that connects with the second picture you drew. Repeat.

City Planner: On the first day, draw a picture of a street you would want to live on. What would your house/apartment look like? What would you like to have on your street? On the second day, start adding other streets, to begin building out your city. What kind of stores will you need? Think about the things you like to do and the places you like to go. Think about the things that people need. Ask other people what they would like to see in their city. Keep adding to your city day after day!

Water Music: Grab four or five glasses and a pencil/pen. Fill one glass with any amount of water. Tap the side of the glass with your pen or pencil. Listen to the sound the glass makes. Pour water into a second glass to try to make a lower sound. Should you pour more or less water into the glass? Try it out. Fill up your glasses with different amounts of water and tap each side. You can now play a song with the different high and low tones!
Cereal Box Book Reports: Materials needed: paper, cereal box, tape/glue. In this activity, you are going to cover/decorate a cereal box to celebrate your favorite book! Think of your favorite book. Take one piece of paper and invent a cereal that is related to your book (for example, if your favorite book is Harry Potter, your cereal might be “Wizard Wands”). Tape that piece of paper to the front of the box. Take another piece of paper for the back of the box. Design a game that relates to your book for the back of the box. Cut a piece of paper to go on the side of the box. Write the names of the characters and the setting of the book to go on this side of the box. Cut another piece of paper to go on the other side of the box. Write down the most important things that happened in the book on this piece of paper. Cut a piece of paper to go on the top of the box. Write a review of the book to answer the question: why should another kid read this book?

Magic Paper: Did you know that just four pieces of paper and some tape are strong enough to hold up a stack of heavy books? Come up with a design plan using four pieces of paper and some tape to hold up heavy books so they don’t touch the table. See how many books you can stack without the stack tipping over! Try different shapes and designs to see how high you can get your stack! (Hint: think “tubes”).

Pepperoni Pizza: Roll two dice. The first roll tells you how many pizzas to draw. The second roll tells you how many pepperonis to put on each pizza. Then, write a number sentence to help answer the question, “How many pepperonis in all?” For example: I roll a dice and get 4, so I draw 4 big pizzas. I roll again and I get 3, so I put three pepperonis on each pizza. Then I write $3 + 3 + 3 + 3 = 12$ or $4 \times 3 = 12$ and that tells me that there are 12 pepperonis in all. (See this task & others at youcubed.org/tasks)

1 to 10 Game: The object of the game is to get rid of all your cards. One player gets all the red cards, the other gets all the black cards. Materials Needed: two dice and a deck of cards with face cards removed. Directions:

1. Each player is dealt 10 cards.
2. Player 1 rolls the dice and finds the sum of the two numbers. Discard any set of cards in your hand that you can use to create that sum. (For example, if you rolled a five and a three, you may discard any cards that make up $8 - 4 + 4$, $6 + 1 + 1$, $9 - 1$, $8 + 2 - 2$, etc.)
3. If you can’t make the sum with your cards, you must draw one card.
4. Players take turns rolling and discarding cards.
5. First player to get rid of all his or her cards is the winner.

Multiplication Memory Game: The object of the game is to develop fluent recall of multiplication facts. Materials Needed: a deck of cards with the face cards removed (use the Ace as a 1). Directions:

1. Lay out 3 rows with 6 cards in each row face down.
2. Player A flips over two cards and multiplies the values. If Player A is correct, Player A keeps the cards. If wrong, the cards are turned back over.
3. Player B takes a turn and repeats Step #2.
4. The player with the most cards at the end of the game wins.
5. The game is over when the face down cards have been used up. The players count the number of pairs that they made, and the player with the largest number wins.
Problem Solver: Oh no! There is a Kindergarten class that needs some help! Can you help them solve their problems?

- **What a Mess!**: A kindergarten classroom is SO messy. Kids are leaving their things everywhere! Draw (or write) a poster to convince them to keep their classroom organized. Why should they stay organized? What are some things that the students can do to clean up?
- **Sharing**: There are kids in a kindergarten class who are not sharing with their classmates. Draw (or write) a poster to convince them to share. Why is it important to share? What are some things that the students can do to make sure they share with one another?
- **Learning**: There are kids in a kindergarten class who say they don’t want to learn. Draw (or write) a poster to convince them to learn in class. Why is it important to learn? What are some things the students should do each day to make sure they are learning?

I’m the Greatest: (can be played with a partner). Write out the digits 0-9 on ten separate small slips of paper. On a large piece of paper write blanks for a 3 or 4-digit number (like this: ___ ___ ___). Put your small slips of paper into a container. Draw one slip of paper at a time. Look at the digit on the small slip. Place that digit into one blank space trying to make the greatest number possible. But, once you write it down you cannot move it! Draw the remaining digits and fill out your blanks. If you think you created the greatest number, yell out “I’m the Greatest!”

Improve Your World: Think about something you want to make better in your classroom, your community, or the world. Draw (or write) a picture that shows what this problem looks like, sounds like, or feels like now. On a second piece of paper, draw (or write) what you want it to look like, sound like, or feel like when it is better. Now think about how you would solve this problem.
- Do you need to work with other people? Draw or write a list of people you need to talk to. What questions do you want to ask them? What do you want to say to them?
- Do you need to invent or create something new? Draw or write some ideas about what you would make.