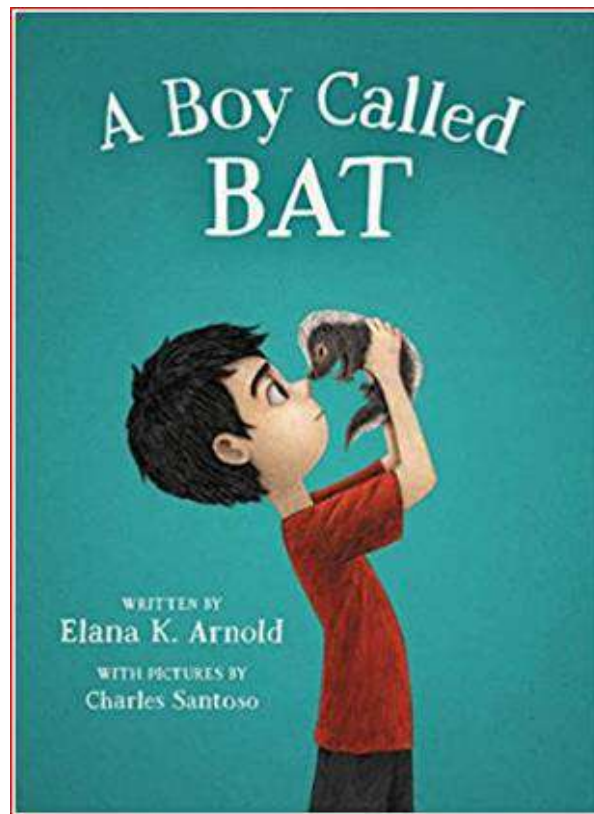


Santa Rosa County School District
One District One Book

4th Grade

Learning Packet



One District, One Book Project for parents and care-givers

Our district is proud to be participating in this family-focused program. Over the coming weeks, we will **ALL** be invited to participate in our first "One District, One Book" experience.

What is it? In short, all families and staff will be given a copy of the same book. A learning packet will go home with the copy of the book on May 4. The packet will guide your family as you read the book over the coming weeks.

What does this mean for me as a parent? Our school is asking that regardless of whether your child is a kindergartner or a fifth grader, you read every word out loud as a family. For a few short weeks we will ask you to make reading this book an extra-special daily or nightly event in your home. In the learning packets, you will find grade level specific activities in reading, math, and science. At the end of each packet you will find extensions and resources to continue learning. Your child's teacher will check in weekly to talk about the book and activities.

Why? Readtothem.org shares that, "The benefits of reading aloud are remarkable! Studies have shown that reading to children helps them to listen better and longer, build better vocabularies, understand concepts better, feel positive about both books and learning, and more. When an entire school reads the same book, the buzz and excitement around the book being read increases these benefits, and there is the added joy of building community in the school family." This is not to mention the added benefit of spending real quality time with your children while simultaneously promoting the benefits of reading and school!

The big question! How can a fifth grader and kindergartner read the same book?

The simple truth: they can't all read it, but if it is read to them, they can all enjoy a good story.

Visit our district's website! There is a special place on our website dedicated to this program. On this page, your family will find videos of each chapter being read aloud, all the information that is being sent home, a few of the pictures we are collecting along the way, and much more!

Suggested Reading Schedule

Weeks	Day 1	Day 2	Day 3	Activities
May 4-8	Chapters 1-2	Chapters 3-5	Chapters 6-7	Reading/Math #1 & #2 Science #1
May 11-15	Chapters 8-9	Chapters 10-12	Chapters 13-14	Reading/Math #3 & #4 Science #2
May 18-22	Chapters 15-16	Chapters 17-18	Chapters 19-20	Reading/Math #5 & #6 Science #3
May 25-29	Chapters 21-22	Chapters 23-24	Chapter 26	Reading/Math #7 & #8 Science #4

*This is just a suggested schedule. Feel free to adjust this to meet your needs.

Questions to Ask Before, During, and After Reading...

Before Reading

What do you think the story will be about?

What characters do you think might be in the story? Why do you think that?



During Reading

Who are the main characters in the story?

What do you think or predict will happen next?

How do the illustrations help you understand the story?

Who is telling the story?
How do you know?

What is the story about so far?

After Reading

What was the main message of this book?
What does the author want you to think about?

Were your predictions correct?

How might the story have been different if it was told by another character?

Do you think this was a good title for the book?
Why or why not?

Reading Activity 1: Characterization

Character Traits

We learn about characters by their thoughts, words, and actions.

What can you tell about Bat based on the following words, quotes, and actions?

“Bat only liked certain snacks; he loved his room because he knew where everything was; he was upset when his mom wasn’t home on time...”

What does this reveal about Bat?

This tells me that Bat _____

When Bat realizes the surprise is a skunk kit, he wants to “learn everything he can about skunks.”
 What does this reveal about Bat?

This tells me that Bat _____

“I love him.” Bat said, He hadn’t meant to say it out loud. Mom laughed. “Careful or you might make me jealous.” she said.

“But it’s true,” Bat said. “I love him.”
 What does this reveal about Bat?

This tells me that Bat _____

Character Traits

Use what you’ve read to complete the character web for Janie. You can add to this as you continue to read the story.

Character Trait:

Evidence from text:

Character Trait:

Evidence from text:

Character Trait:

Evidence from text:



Sample Common Character Traits

annoyed	faithful
bold	generous
brilliant	graceful
charming	helpful
clever	impatient
courageous	loyal
energetic	sensitive
discouraging	talented

*Feel free to come up with your own

Reading Activity 2:

"Just the Facts"

Skunk

Read the passage "Skunk"
After reading, identify new information learned from the story in the top box, then write down facts learned from the passage.

Facts I learned from A Boy Called Bat



Facts I learned from "Skunk"

Skunks live all over North and South America, in rural areas, suburbs, and the city. But if you see one, watch out!

You may not have seen a skunk in your neighborhood, but you've probably smelled one. Their smelly spray, called musk, is not easy to ignore!

The spray, which comes from two glands near the base of the skunk's tail, can hit a target 12 feet (3.7 meters) away. If you are lucky, you may get a warning before being sprayed. If threatened, skunks stamp their front feet, lift their tail, and growl. Some species of skunk even spring into a handstand before spraying, which puts the skunk's warning markings on full display. If the person or animal doesn't retreat, the skunk aims the spray at the eyes, allowing the skunk to escape. The spray can remain on its target for days.

Skunks are nocturnal, which means they search for food at night and sleep in dens lined with leaves during the day. Their favorite foods include fruit and plants, plus insects, bird eggs, small rodents, and birds. Birds, like the great horned owl, prey on skunks. Scientists believe it's because the birds don't have a very good sense of smell, which makes the skunk's spray useless in an attack.

Skunk

National Maps - <https://kids.nationalgeographic.com/animals/mammals/skunk/>

Reading Activity 3: "Exploring the Genre"



A Boy Called Bat is a realistic fiction story.

Features of Realistic Fiction

- Tends to take place in the present or recent past
- Characters are involved in events that could happen
- Settings that could be or are real
- Characters seem like real people who do things in a realistic way
- Things that happen to characters are things the reader could experience in everyday life

Read the excerpt below from Elana Arnold's *A Boy Called Bat*. Underline three examples of realistic fiction that are evident in the text.

Sometimes Bat wished that Janie went to his school, because it would be kind of neat to see her in the hallways and at lunchtime, but most of the time he was glad that his school was something that he didn't have to share with her. Janie attended Robert E. Willett Elementary School, but this was her last year. Next fall, she would be going to junior high school.

Bat went to a private school. It had smaller classes than the public school, and his parents thought it was a "better fit for him," which was fine with Bat. Mr. Grayson was a good teacher who never yelled and who usually let Bat wear his earmuffs if things got too loud. Also, his school-the Saw Whet School- was named after a type of owl

The main hallway of the Saw Whet School was a busy place until 8:35 a.m., when class officially started. Until then, it was full of parents walking the younger kids (those in kindergarten and first grade) to their classrooms and older kids walking themselves, all while the principal, Mrs. Martinez, stood outside of the administration office, smiling and being friendly.

What are some other realistic fiction books that you've read?

Reading Activity 4:

"Emojify the Story"

People use emojis to respond or show their feelings. Read each excerpt from the story. For each one, draw an emoji to represent a reaction to the quote.



Excerpt from Story	
He cradled the bundle in his arms. He felt his face stretch into a wide smile, so wide it made his cheeks sore.	
"I'm doing it," Bat whispered. "I'm feeding him." "You sure are," Mom said. "I love him," Bat said. He hadn't meant to say it out loud.	
On Monday afternoon, after Miss Kiko rang the bell, Bat walked as fast as he could without running. ... But mom's burgundy station wagon wasn't in the line of waiting cars. One by one Bat watched his classmates climb into cars...	
"I'm not sure it's a good idea to be naming the skunk," Mom said. "If you name him, it will be too easy to get attached. And remember, he's only staying with us for few more weeks."	
"Thor can't sleep in your bed. Thor is a wild animal. Wild animals don't sleep in beds."	
"And tomorrow after school, instead of staying home with Janie, how about you come by the clinic? I'm going to weigh and measure Thor to make sure he's getting enough to eat, and you can help."	

Reading Activity 5: "Dear Diary"



In Chapter Nineteen, Bat has an idea that doesn't go as planned. Bat wanted to thank Janie for coming up with Thor's name so he put her unicorn pajama top in Thor's enclosure so Thor would know Janie's scent. When Janie realizes what Bat did, she is beyond upset. Bat is left feeling confused about why Janie is so upset. People have different ways of looking at things...this is called **POINT OF VIEW**.

If Janie kept a diary, what would she write in her diary on this fateful day? (Janie's Point of View)

Dear Diary,

If Bat kept a diary, what would he write in her diary on this fateful day? (Bat's Point of View)



Dear Diary,

Reading Activity 6:

“Figurative Language”


People sometimes use expressions that they do not mean to be taken literally. These are called “figures of speech.” Because Bat takes most things people say literally, he can have trouble understanding the meaning of figures of speech.

An idiom is one example of figurative language. Idioms are phrases that do NOT mean exactly what they say. Look at the following examples.

Examples	What it Does NOT Mean	What it Actually Means
Since we’ve been home during this quarantine, I’ve become a real couch potato .		Someone who sits around for most of the day
Those math problems were a piece of cake .		The problems were really easy

Read the following quotes from the story. For each one, what do you think the character really means?

“You sure inherited my **sweet tooth**,” Dad said, loading up his own plastic bag with jelly beans.




“Actually,” Bat said, “teeth have nothing to do with it. People taste with their tongues and their noses.”

I think Dad means

“Mr. Grayson,” Bat said. “I need your help.”

Mr. Grayson put the cap on his pen and set it down. “**I’m all ears**,” he said.



That was a funny expression, and for a second Bat pictures Mr. Grayson made entirely of ears, with ears for eyes and an ear for a nose and two tiny rows of little ears for teeth.

I think Mr. Grayson means

I am BAT

I am sensitive and kind.
I wonder how animals communicate.
I hear a bat sighing.
I see worlds spinning.
I want structure.
I am sensitive and kind.

I pretend I understand why grown-ups laugh at things.
I feel Mrs. Martinez rumple my hair.
I touch the rain in the sky.
I worry about Every Other Weekends.
I cry when things are out of place.
I am sensitive and kind.

I understand sometimes Janie is nice.
I say I know about hands.
I dream of being a veterinarian.
I try to take good care of Thor.
I hope I can keep Thor.
I am sensitive and kind.

Reading Activity 7: "I am..."

We have learned a lot about our characters throughout the story.
Read the "I Am" poem about Bat.
You will now write your own version of an "I Am" poem. You may select to do your poem about a *different* character in the story OR you may choose to write the poem about yourself. Use the template included in your packet.



Using the "I Am Bat" model, write your own version of an "I Am" poem about *another* character in the story OR you may write one about yourself. Use the template below to fill in your responses.

I Am _____

I am _____ (two special characteristics)
I wonder _____ (something you are actually curious about)
I hear _____ (an imaginary sound)
I see _____ (an imaginary sight)
I want _____ (an actual desire)
I am _____ (the first line of the poem restated)

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

I understand _____ (something you know is true)
I say _____ (something you believe in)
I dream _____ (something you actually 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)

Reading Activity 8: "Summing it Up"

SWBST (Somebody Wanted But So Then) is a strategy that can be used to write a summary of a story. It allows you to describe the most important parts of the story in a few words.

Somebody	Who is the main character?
Wanted	What does the main character want? What is their goal?
But	What is the problem or what is keeping the character from reaching their goal?
So	How is the problem solved or how does the character reach their goal?
Then	How does the story end?

Use the chart to the left to help you write a summary of the story A Boy Called Bat. Write your answers in complete sentences.

Somebody	
Wanted	
But	
So	
Then	

Optional Activities and Extensions

Article: "Do Skunks Make Good Pets?"
<http://www.pbs.org/wnet/nature/is-that-skunk-do-skunks-make-good-pets/4569/>

Wild Explorers- Meet a Skunk
<https://www.youtube.com/watch?v=5RiErxwVQQ>

Based on the article and video, write a response to the following:
Do you think a skunk would make a good pet? Why or why not?
 *Use information from both sources

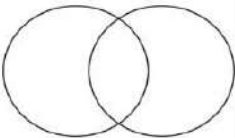
Do you think Bat was a good name for our main character? Why or why not? Write a response to explain. Using details from the text to support.

Create a Venn Diagram to compare and contrast two characters from the story.

How are they alike?

How are they different?

How are they the same?



Idiom Pictionary

In Activity 6 we identified some idioms that were found in the story. Select an idiom from the list below. Draw the literal meaning and have someone try to guess the idiom. Then discuss what it actually means.


Idioms:

- straight from the horse's mouth
- up in the air
- hit the books
- blew me away
- bite off more than you can chew
- at the drop of a hat
- under the weather
- hit the hay
- costs an arm and a leg
- hit the nail on the head

Want to read more about Bat and his adventures? Check out the other stories that Elana Arnold has written in this series.

[Bat and the Waiting Game](#)

[Bat and the End of Everything](#)



Janie had some specific reasons for selecting Thor as the skunk kit's name. Learn more at the following website:
<https://www.storytimemagazine.com/news/stuff-we-love/norse-myths-for-kids/>

Use information from the story and the article above to explain why Janie selected that name.

Bat was curious and loved to learn about animals. Select an animal that you would like to learn more about and research that animal. Would the animal you selected make a good pet? Why or why not?

Additional Websites to Explore

PBS Video on Skunks
<https://youtu.be/vFctVa6YicQ>

DK Find Out! Skunk Facts for Kids
<https://www.dkfindout.com/us/animals-and-nature/weasels/skunks/>

Skunk-National Geographic Kids
<https://www.nationalgeographic.com/animals/mammals/s/striped-skunk/>



STEM Activities

STEM Challenge: Rescue Device

All living things need a place to live. Safety and comfort are key to the place where something lives. As you know, Bat is desperate to keep Thor and seems to think of him as his pet.

This STEM challenge is to create a pet rock and then design the perfect pet home environment for your pet rock. This will require you to learn about the properties of rocks.

Materials available include: recycled small boxes, pipe cleaners, masking tape, toothpicks, paper, straws, rubber bands, popsicle sticks, foil, wiggle eyes, paints, feathers.

Things to consider when creating your pet rock and its home environment:

- What will your pet rock look like?
- What home environment will make your pet rock comfortable and content?
- Will the environment provide for your rock's needs?

STEM Challenge: Lego Pet

If you don't already have a pet, you probably dream of having your own pet! Well, what if you could create a pretend pet for now?

This STEM challenge is to use LEGO® blocks to create a pet for yourself. Your LEGO® pet can be any animal you want it to be!

Optional: Research your pet's needs, traits, and habitat. Create a power point or poster about your pet.

STEM Challenge: Pet Food Dispenser

There are a lot of animals at Bat's mom Valerie Tam's veterinary clinic! Of course there are helpful vet techs like Laurence to help care for the animals which includes feeding.

Dr. Tam needs a pet food dispenser that the animals can use to feed themselves. This STEM task is to create a functioning pet food dispenser that will open to release food but also have a way to close off so the food doesn't continuously spill out. For this task you can also create pretend food.

Available materials include: *recycling cardboard boxes, plastic water bottles or clear "solo" cups, pipe cleaners, string, masking tape*

STEM Challenge: Rescue Device

In chapter 5 of *A Boy Called BAT*, we learn that Bat's mom has rescued a baby skunk after its mother had been hit by a car. Sometimes animals get stuck in challenging places and have to be rescued creatively. Thankfully, there are animal lovers like Bat and his mom who will go to great lengths to help animals in need!

This STEM challenge is to create a device that would **rescue an plastic animal from a well, deep enclosure or tight space**

Suggested materials include: *small plastic animals, straws, dixie cups, yarn, pipe cleaners, masking tape*

Credit for Resources

Ideas for the activities and resources included in this packet were inspired by:

Hyperdoc created by Bobbi Hopkins

https://magic-of-reading.weebly.com/uploads/7/8/8/9/78899162/copy_of_a_boy_called_bat.pdf

Ideas adapted from the Educator's Resource for [A Boy Called Bat](#) available through the publisher Walden Pond Press.

<https://www.walden.com/wp-content/uploads/2017/01/A-Boy-Called-Bat-Educators-Resource.pdf>

National Geographic Kids

<https://kids.nationalgeographic.com/animals/mammals/skunk/>

Math Activities

Math Activity 1: "Piggy Bank"

BAT and Janie like to go to the candy store when they visit their dad!

Janie opened her piggy bank and counted the coins inside that she could spend at the candy store.

Look to the right to see the coins Janie found.

Now, decide the following:

- How many coins are in Janie's piggy bank?
- What fraction of the coins in the piggy bank are dimes?
- What is the total value of the coins in the piggy bank? Give your answer in cents: for example, \$2.35 is 235 cents.
- What fraction of the total value of the coins in the piggy bank is made up of dimes?



Math Activity 2: "Let's Take a Bath"

At Mom's veterinary office, they must buy shampoo for all the animals they bathe!

Complete the table below by following the rule:

Number of Packs Purchased (n)	$5 \times n + 4$
1	
2	
3	
4	
5	
10	
23	
46	
64	
100	

Mom is buying bottles of shampoo. She started with only four bottles of shampoo. Shampoo bottles come in packs of five. If we let n represent the number of packs she purchases, you could use the rule $5 \times n + 4$ to determine how many bottles she would have for any number of packs she purchases. Complete the table below by following the rule.



Math Activity 3:
“Let’s Trade!”

Lucca liked to share lunches with Israel in the cafeteria. Israel has a candy bar that he’s divided into 7 equal pieces. Lucca has a different type of candy bar that is the same size that is divided into 5 equal pieces. Israel offers to trade one piece of his candy bar for one piece of Lucca’s. Lucca says this is a bad trade, because $\frac{1}{7}$ of a candy bar is smaller than $\frac{1}{5}$ of a candy bar. Is this true? Why or why not?



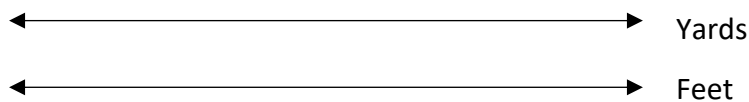
Israel then offers to trade two pieces of his candy bar for one piece of Lucca’s. Lucca thinks about this to decide if it’s a good trade. She compares both $\frac{1}{5}$ and $\frac{2}{7}$ to a common fraction, $\frac{1}{4}$, to decide. Think about this comparison. Draw models to help your thinking. What do you think? Is $\frac{1}{5}$ of a candy bar more or less than $\frac{2}{7}$ of a candy bar? Should Lucca make the trade?

Challenge: Use Lucca’s strategy to compare $\frac{29}{60}$ and $\frac{45}{88}$, this time comparing both fractions with $\frac{1}{2}$. What fraction might you use to compare $\frac{8}{25}$ and $\frac{19}{45}$?

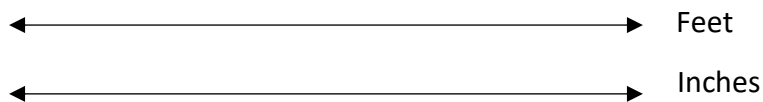
Math Activity 4:
“Shopping List”

The teachers at Saw Whet School are wanting to decorate their bulletins boards!

Mrs. Ramirez needs $\frac{2}{3}$ of a *yard* of fabric for her bulletin board. She wants to find the equivalent length of fabric in *feet*. Use the number lines below to show both $\frac{2}{3}$ of a yard and its equivalent in feet.



Mr. Grayson needs 1.5 *feet* of border for his bulletin board. He wants to find the equivalent length of border in *inches*. Use the number lines below to show both 1.5 feet and its equivalent in inches.

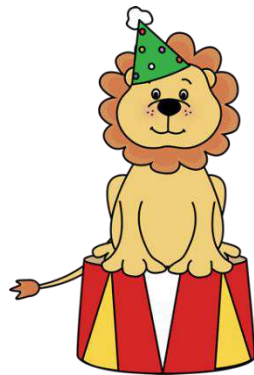


Math Activity 6:
“Our School Carnival”

Saw Whet School is holding their annual school carnival!

Every year a carnival comes to BAT’s school. Students buy groups of tickets in a package that allow them to go on rides and play carnival games. The price of these ticket packages has gone up every year. Use the chart below to answer the following questions:

Year	Ticket Price
2016	\$8
2017	\$9
2018	\$10
2019	\$11
2020	\$12



In 2016, Hallie earned \$35 a month walking dogs in her neighborhood. How many carnival tickets could she buy with one month's earnings?

If her earnings had stayed the same, \$35 a month, how many carnival tickets could she buy in 2020?

In 2019, Hallie’s monthly earnings were \$48.00 per month. How much did her monthly earnings increase between 2016 and 2019?

How much more did a carnival ticket cost in 2020 than it did in 2016?

Was Hallie able to buy more carnival tickets in 2016 or in 2020 with one month's allowance?

What would Hallie's allowance need to be in 2020 for her to be able to buy as many carnival tickets as she could in 2016?

What happens to your ability to buy things if prices increase and your allowance doesn't increase?

Math Activity 7:
“Dogs as Pets”

Mom sees many dogs at the vet’s office and she has to measure the height and weight of each one!

Write an equation for each problem. Include a symbol to represent the unknown quantity. Then solve each problem!

Problem 1

A typical Yorkshire terrier weighs $\frac{1}{6}$ times as many pounds as a Dalmatian. A Dalmatian weighs 54 pounds. How much does the typical Yorkshire terrier weigh?



Problem 2

The average Yorkshire terrier is $\frac{1}{2}$ ft tall. However, the average Dalmatian measures 4 times taller than a Yorkshire terrier. How tall is the average Dalmatian?



Math Activity 8:
“Measuring Time”

BAT spends a lot of “time” thinking about time. He thinks about the time he’s at school, the time he’s not with Thor, and the time he spends with his Dad.

Help BAT understand how to convert time into different measurements.

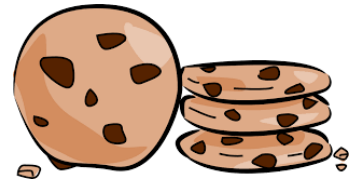
Time is measured using seconds, minutes, hours, days, weeks, months and years. Different events and activities are measured using these units of time.

Common Units of Measuring Time

Second (sec)	Minute (min)	Hour (hr)	Day
There are 60 seconds in 1 minute.	There are 60 minutes in 1 hour.	There are 24 hours in 1 day.	There are 7 days in a week and 365 days in a year.
Activities measured in seconds: <ul style="list-style-type: none">• Tying your shoes• Taking a sip of a drink	Activities measured in minutes: <ul style="list-style-type: none">• Brushing your teeth• Driving to your school	Activities measured in hours: <ul style="list-style-type: none">• Length of a football game• Driving to Disney World	Activities measured in days: <ul style="list-style-type: none">• Length of a vacation• Length of Winter Break

Choose a unit of time you would use to measure to length of the following activities:

1. Baking cookies _____
2. Driving from your house to Louisiana _____
3. Brushing your hair _____
4. Vacuuming your room _____
5. Watching a movie _____
6. Riding your bike _____
7. Pouring a glass of milk _____
8. Length of your school day _____
9. Writing your name _____
10. Writing a novel _____



Help BAT make the following time conversions:

1. 1 min = 60 sec
4 min = ____sec

2. 1 day = 24 hr
3 days = ____hr

3. 1 week = 7 days
____weeks = 35 days

4. 6 hr = ____min

8. ____sec = 9 min

5. 2 years = ____days

9. 6 weeks = ____days

6. 48 hr = ____days

10. ____hours = 4 days

7. 21 days = ____ weeks

11. ____min = 3 hr

Challenge: 1 hr. = _____sec

1 day = _____min

Science Activities

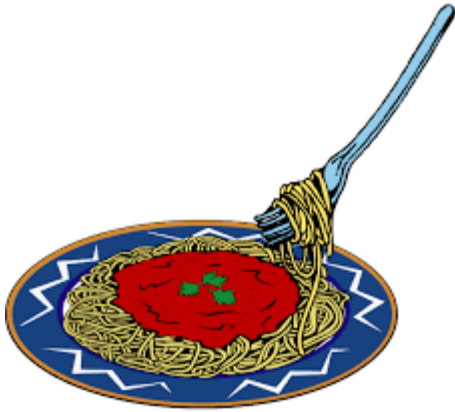
Science Activity 1: "Cooking"

BAT's mom prepared tea for her family (page 81).

1. How do you think the temperature of the water that she poured into cups from the kettle compared to the temperature of the water that comes out of the tap?
2. Why do you think it is important to change the temperature of water to make tea?
3. Compare what would happen to a tea bag placed in cold water to a tea bag placed in hot water.



BAT's mom also prepared spaghetti and meatballs for her family (page 118).



4. Describe the temperature water must be in order to prepare spaghetti noodles and make them ready to eat.
5. What change of state does the water go through as the noodles cook?
6. What is the difference between spaghetti noodles before they are cooked and after?

Challenge: Go ask your parent to make you spaghetti for dinner. Offer to help them cook the noodles!

**Science Activity 2:
“Weather”**

Saw Whet School’s philosophy was that students should go outside at recess rain or shine or snow. BAT observed the weather closely because he did not enjoy going to recess in the rain.



1. What weather-related event did BAT observe (page 45) that made him infer that recess would be wet?
2. What weather patterns have you observed that allow you infer that will rain?
3. Now, it’s your turn to closely observe the weather just like BAT!

On your paper, draw 5 blocks like the example provided. Record weather information over a period of 5 days in the chart you create. Go outside each morning and make careful observations about the weather. While outside, observe the sky, the temperature, and how the air feels. Record these observations in the weather observation box. After you’ve recorded your observations each morning, based on those observations, try to infer what the weather will be like all day. Will it be sunny, rainy, windy, cloudy? Do you expect the weather to change during the day? Record your inferences in the weather inference box. Each afternoon, return to your record sheet and note the actual weather. Compare your weather inference to the actual weather. Were your inferences correct?

Weather Observation:
Weather Inference:
Actual weather:

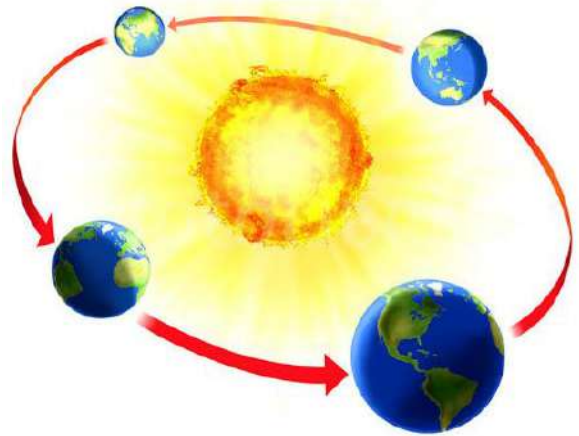
4. What tools do you think meteorologists use to make observations and inferences about the weather? Would their inferences be different than yours? Why or why not?

**Science Activity 3:
"The Earth & Sun"**

When BAT and his dad pulled up to his sister's school to pick her up, he recognized Janie right away because of her bright-yellow rain slicker. BAT admired the way she looked, like a shiny yellow sun.

We see the Sun during the day -- sunrise in the morning until sunset in the evening -- because the Earth rotates on its own axis while it revolves around the Sun.

We do not see the Sun at night -- after the Sun sets in the evening until the morning sunrise -- because the Earth rotates on its own axis while it revolves around the Sun. How many hours does it take for the Earth to make a full rotation on its axis? Hint: How many hours are in one day?



How long does it take for the Earth to revolve around the Sun? Hint: How many days are in one year?

**Science Activity 4:
"Metamorphosis"**

BAT often thinks about animal facts or sees things that remind him of animals. At one point in the story BAT wanted to tell his teacher, Mr. Grayson, about the life cycle of the monarch butterfly. Later in the story, BAT considered telling Mr. Grayson that his mustache looked a lot like a caterpillar.

Do you know how butterflies and caterpillars are related?

Metamorphosis is when an animal changes from a young form to an adult form that is completely different in 2 or more stages. An example of complete metamorphosis is when a caterpillar transforms into a butterfly. Put the following stages of complete metamorphosis in order by putting a number in the blank next to each one: (1, 2, 3, & 4)



_____ Pupa (cocoon)



_____ Caterpillar



_____ Butterfly (adult)



_____ Egg

Reading Standards Addressed

Questions before, during and after reading: LAFS.4.RL.1.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.; LAFS.4.RL.1.2 Determine a theme of a story, drama, or poem from details in the text; summarize the text.; LAFS.4.RL.1.3 Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions); LAFS.4.RL.2.6 - Distinguish their own point of view from that of the narrator or those of the characters.; LAFS.4.RL.3.7 Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.

Activity 1: LAFS.4.RL.1.3- Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

Activity 2: LAFS.4.RI.1.2 Determine the main idea of a text; recount the key details and explain how they support the main idea. LAFS.4.RI.4.10 - By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range. LAFS.4.RL.4.10-By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 4-5 text complexity band independently and proficiently.

Activity 3: LAFS.4.RL.1.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers; LAFS.4.RL.4.10- By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 4-5 text complexity band independently and proficiently.

Activity 4: LAFS.4.RL.1.3 Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

Activity 5: LAFS.4.RL.2.6- Compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.

Activity 6: LAFS.4. L.3.5- Demonstrate understanding of word relationships and nuances in word meanings.

Activity 7: LAFS.4.RL.1.3- Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

Activity 8: LAFS.4.RL.1.2- Determine a theme of a story, drama, or poem from details in the text; summarize the text.

Math Standards Addressed

Activity 1: MAFS.4.NF.1.1 - Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

Activity 2: MAFS.4.OA.3.5 - Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.

Activity 3: MAFS.4.NF.1.2 - Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$. Recognize that comparisons are valid only when the two fractions refer to the same whole.

Activity 4: MAFS.4.MD.1.2 - Use the four operations to solve word problems involving distances, intervals of time, and money, including problems involving simple fractions or decimals. Represent fractional quantities of distance and intervals of time using linear models.

Activity 5: MAFS.4.MD.1.3 - Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

Activity 6: MAFS.4.OA.1.3 - Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity.

Activity 7: MAFS.4.MD.1.2 - Use the four operations to solve word problems involving distances, intervals of time, and money, including problems involving simple fractions or decimals. Represent fractional quantities of distance and intervals of time using linear models.

Activity 8: MAFS.4.MD.1.1 - Know relative sizes of measurement units within one system of units. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit.

MAFS.4.MD.1.2 - Use the four operations to solve word problems involving distances, intervals of time, and money, including problems involving simple fractions or decimals. Represent fractional quantities of distance and intervals of time using linear models.

Science Standards Addressed

Activity 1: SC.4.P.8.2 - Identify properties and common uses of water in each of its states. SC.4.P.9.1 - Identify some familiar changes in materials that result in other materials with different characteristics, such as decaying animal or plant matter, burning, rusting, and cooking.

Activity 2: SC.4.N.1.6 - Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations. SC.4.N.1.2 - Compare the observations made by different groups using multiple tools and seek reasons to explain the differences across groups.

Activity 3: SC.4.E.5.3 - Recognize that Earth revolves around the Sun in a year and rotates on its axis in a 24-hour day.

Activity 4: SC.4.L.16.4 - Compare and contrast the major stages in the life cycles of Florida plants and animals, such as those that undergo incomplete and complete metamorphosis, and flowering and nonflowering seed-bearing plants.