

## Family Activities

- Design and experiment like Zoey to figure out what a bug you may find outside would look like. Make sure that an adult helps you and that your bug can breathe, is kept out of direct sunlight and has access to water. After a few hours of observing your bug, release it back into the wild.
- Can you think of another magical creature that Zoey might encounter? Draw a picture of your magical creature. Then write or verbally explain what the creature is like and what it needs help with. Start a science journal just like Zoey after drawing your magical creature. Be sure to include a drawing of your creature and all the parts to the experiment of what your creature needs help with (question, hypothesis, materials, steps to the experiment and conclusion).

## What is the scientific method?

The scientific method is a way to ask and answer scientific questions by making observations and doing experiments. There are 6 simple steps to follow:

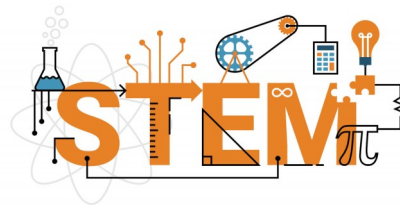
1. Ask a **question** or identify a **problem** you would like to solve.
2. Make **observations** and do **research** about the question or problem you would like to study.
3. Form a **hypothesis** (what you think will happen in your experiment).
4. Design an **experiment** to test your hypothesis.
5. **Collect** and **analyze** data from your experiment.
6. Use your data to form a **conclusion** (what happened and why).

## Who is Zoey?

In the first book of this series, Zoey discovers a glowing photo and learns an amazing secret. Injured magical animals come to their backyard barn for help! When a sick baby dragon appears, it's up to Zoey and Sassafras to figure out what's wrong using the scientific method. Will they be able to help little Marshmallow before it's too late?

## The Case for STEM Education

- "60% of U.S. employers are having difficulties finding qualified workers to fill STEM vacancies." - *Council of Foreign Relations*
- "54% percent of the nation's 4th graders and 47% of its 8th graders report that they "never or hardly ever" write reports about science projects. 39% of 8th graders report that they "never or hardly ever" design a science experiment." - *U. S Department of Labor*
- "Out of 65 education systems, American students rank 27th in math and 20th in science." - *U.S Department of Labor*



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## What is Arkansas

## Reads One Book?

This is a program designed to create a shared reading experience throughout a district at the elementary level.

Every student in the district receives a book with a family resource guide. The goal is to create a culture of family reading and STEM literacy in Arkansas.

# Zoey and Sassafras Dragons & Marshmallows



# K-2 Family Guide

## Chapter by Chapter

### Chapter 1:

- Who are Zoey and Sassafra?
- What does Zoey decide to do with the bugs?
- What is the difference between thinking goggles and regular goggles?
- What photo do you think Zoey's mom was holding at the end of chapter 1?

### Chapter 2:

- What was in the photo that Zoey's mom was hiding?

### Chapter 3:

- Who is Pip and how did he get hurt in the woods?
- How did Zoey's mom figure out how to help Pip?
- At the end of Chapter 2 Zoey smiles. What do you think this means?

### Chapter 4:

- How did Zoey feel about being in charge of the barn and all the magical creatures that might need help? Why do you think she felt this way?
- What questions and answers did Zoey have for her mom?

### Chapter 5:

- Zoey's mom gave her some advice on taking care of the animals. What was her advice?
- How did Zoey prepare for her new job of taking care of the magical creatures?
- Why couldn't Zoey's dad help her with the creatures in the barn?

### Chapter 6:

- What did Zoey see when she entered the barn?
- Who was Zoey's first patient?
- In this chapter, when the magic doorbell rings, Zoey sees a blue tail disappear into the bushes. Who do you think the tail belongs to and why?

### Chapter 7:

- In Chapter 7, Zoey used her "thinking goggles." How did these goggles help Zoey?
- Zoey observed reptiles and mammals. How are reptiles and mammals different?
- What did Zoey do to help the snake? Is a snake a reptile or mammal?

### Chapter 8:

- What was the first question in Zoey's science journal? Why do you think it's important to keep a science journal?
- What advice did Zoey's mom give about conducting an experiment?
- Why does Zoey offer the baby dragon more than one kind of food?

### Chapter 9:

- What mistake did Zoey make during her experiment?
- In Chapter 9 they talk about warm and cold blooded animals. How are warm and cold blooded animals alike and different?
- What did Zoey learn from her first experiment?

### Chapter 10:

- What plan does Zoey have to make Marshmallow feel better?
- How does Zoey's dad help Zoey with the magical creatures even though he can't see them?

### Chapter 11:

- What did Zoey do to help Marshmallow?
- In this chapter, Zoey is introduced to carnivores, herbivores and omnivores. Explain the difference between these three groups.

### Chapter 12:

- Describe and explain Zoey's new experiment?
- Why didn't Zoey write everything down in her science journal during her second experiment?
- What did Zoey learn from her second experiment?
- What evidence did Zoey see that eating fish helped Marshmallow?

### Chapter 13:

- What did Zoey's mom do to make her feel better?

### Chapter 14:

- Why was Zoey's mom proud of her?

### Chapter 15:

- Why did Marshmallow have to leave the barn?
- Why do you think it was hard for Zoey to say goodbye to Marshmallow?

### Chapter 16:

- What valuable lesson did Zoey learn from Marshmallow?

### Scientific Vocabulary

- Reptile— an animal that has scales instead of feathers or fur, cold blooded.
- Mammal— an animal that breathes air through lungs, has a backbone and grows hair or fur.
- Warm blooded—animals that can make their own body heat even when it is cold outside. Their body temperature stays the same (mammals and birds).
- Cold blooded—animals that become hotter and colder depending on the outside temperature (reptiles and fish).
- Carnivore—animals that eat meat.
- Herbivore—animals that eat plants.
- Omnivores—animals that eat both meat and plants.