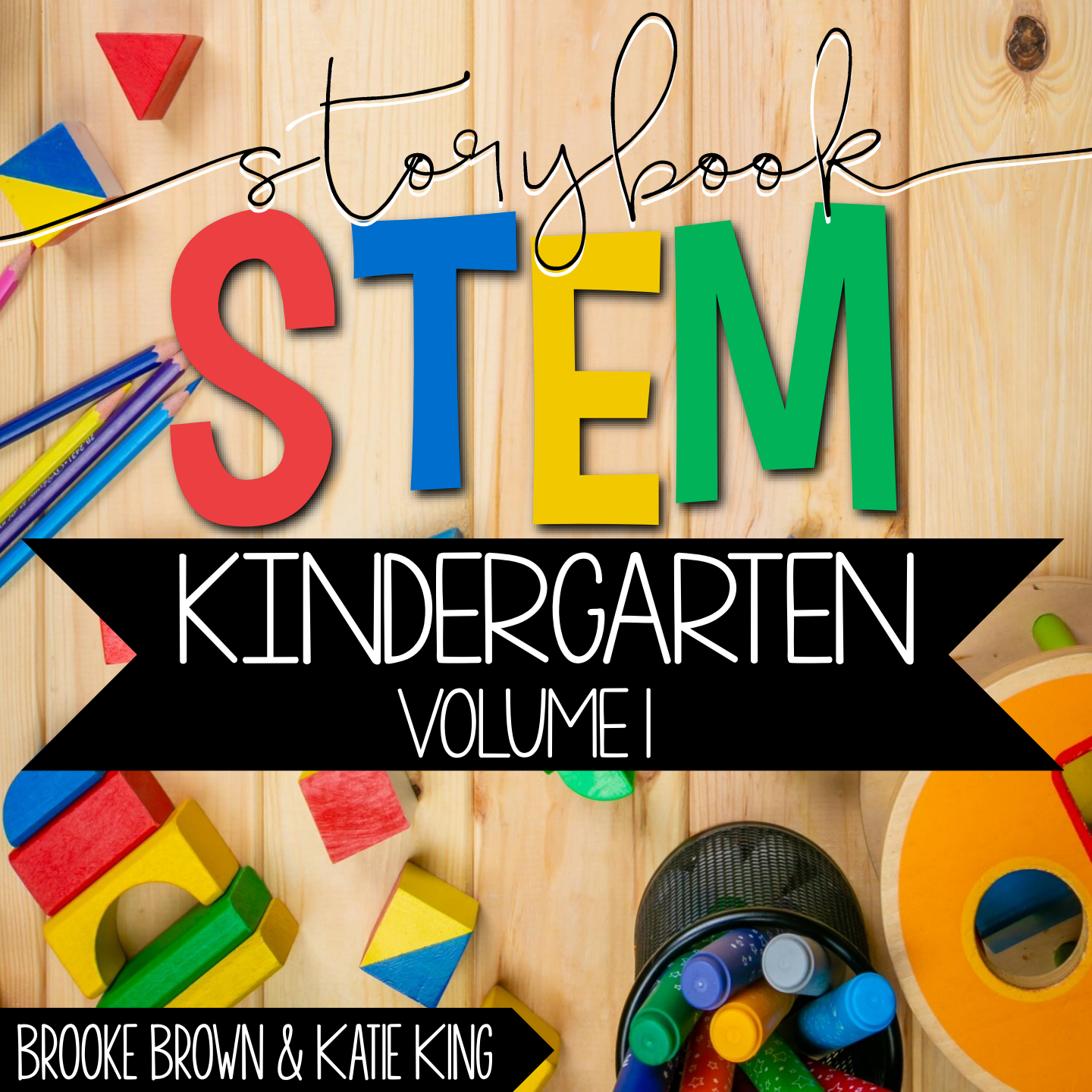




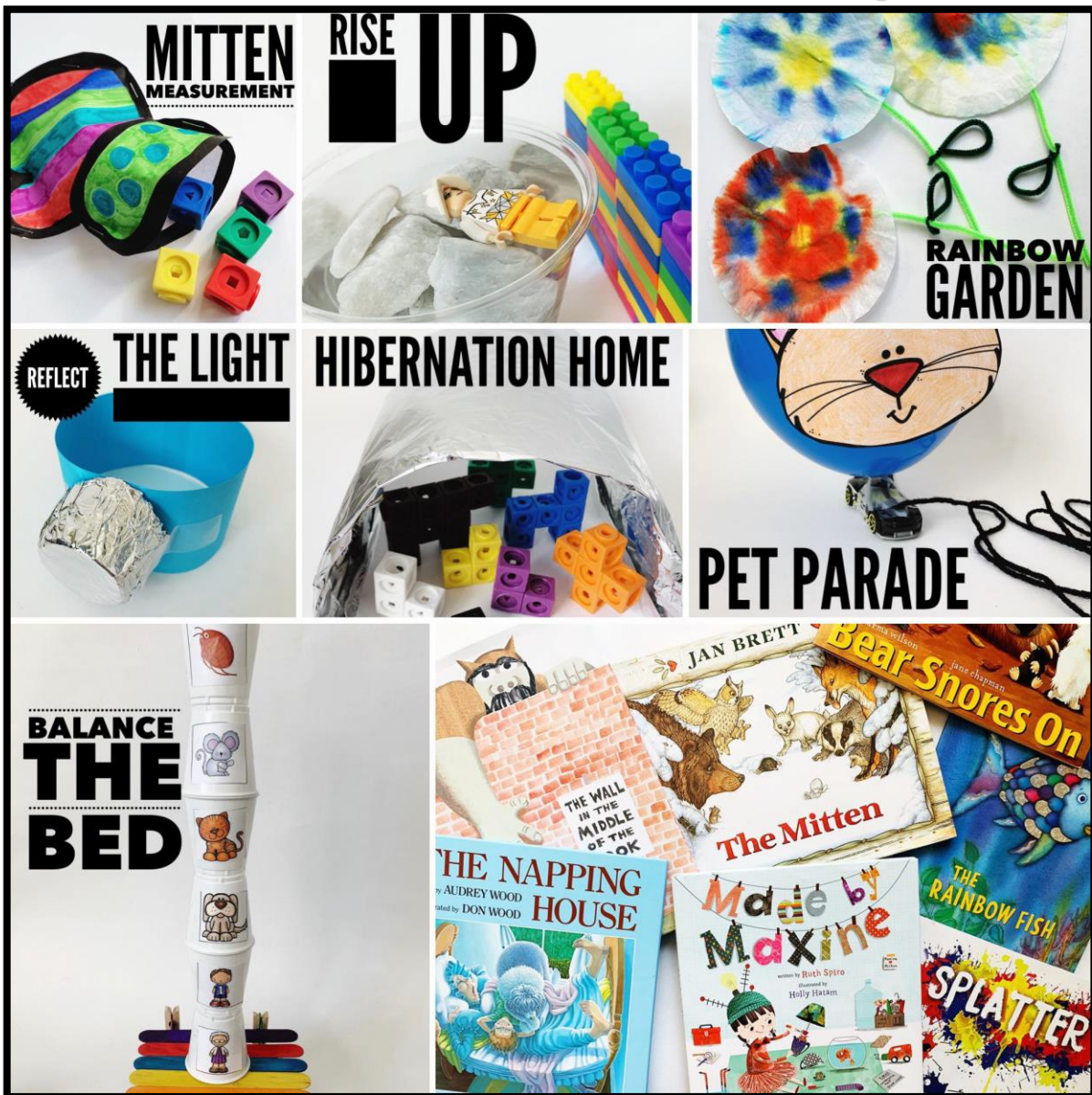
storybook

STEM

KINDERGARTEN
VOLUME I

BROOKE BROWN & KATIE KING

STEM challenges



STEM Components

RAINBOW GARDEN

PRIMARY COLORS SECONDARY COLORS

red yellow blue green orange purple

RAINBOW SPECTRUM

an arc of color in the sky that can be seen when the sun's rays bounce off rain droplets

a band of colors in a rainbow

RISE UP

SINK to go down below the surface of a liquid

FLLOAT to rest or move on the surface of a liquid

BUOYANT able to float

LIQUID a substance that flows freely

LET'S EXPLORE WEIGHT AND BALANCE!

THINK LIKE AN ENGINEER

BALANCE A BECK

CLIP TO

LET'S EXPLORE SINKING AND FLOATING!

SINK OR FLOAT WHY DO SHIPS FLOAT?

FLLOAT A BOAT

LAW OF FLATATON

LET'S EXPLORE PUSHES & PULLS!

PUSHES AND PULLS

RAMPS

LET'S GET ROLLING

FRICTON

LET'S EXPLORE COLORS!

MIXING COLORS

MAKE A RAINBOW

PRIMARY & SECONDARY COLORS

LIGHT AND COLOR

LET'S EXPLORE ANIMALS IN WINTER!

HIBERNATION

ANIMALS WITH WINTER COATS

MIGRATION

BEARS

LET'S EXPLORE LIGHT!

WHAT IS LIGHT?

REFLECTIVE WEAR

RAINBOWS

BENDING AND BOUNCING LIGHT

HIBERNATION HOME

HIBERNATE

SHELTER

SURVIVE

INSULATE

BALANCE THE BED

BALANCE

equal distribution

STABLE

firmness position

LECT THE LIGHT

REFLECTION

when light bounces off an object and comes back to you

FOR DEVICE

an object that was created for a purpose

PUSH PULL

a force that moves an object away from you

a force that moves an object toward you

VEHICLE

an object used for moving people or things

WHEEL AND AXLE

a circle that spins around an axle to help it rotate more easily

a rod that goes through the center of a wheel

LENGTH

a measure of how long an object is

CAPACITY

the total amount that something can hold

LET'S EXPLORE MEASUREMENT!

NONSTANDARD MEASUREMENT

MEASUREMENT TOOL SONG

MEASURING GAME

CAPACITY

BALANCE THE BED

All the characters in The Napping House are very sleepy! The bed needs to balance all the people and animals without breaking or falling over.

Can you build a bed that is off the ground and balance all the people and animals on top?

YOU WILL NEED:

- 4 clothespins
- 10 Jumbo pops sticks
- 6 mini cups

MITTEN MEASUREMENT

You've been asked to design a new mitten. Can you create a paper mitten and to explore measurement?

YOU WILL NEED:

- paper mitten
- crayons or markers
- glue
- linking cubes

REFLECT THE LIGHT

You need to stay safe while you are playing outside at night!

Create a reflective device that you can wear to help you to see better.

YOU WILL NEED:

- aluminum foil
- mini paper cups
- construction paper
- tape
- flashlight

PET PARADE

Your school is having a Pet Parade! Can you create an animal parade float that you can push and pull?

YOU WILL NEED:

- toy car
- balloon
- yarn
- tape
- paper animal

HIBERNATION HOME

Bear needs a place to hibernate and his animal friends need a warm shelter.

Create a cave for Bear and his animal friends. They must fit all the animals inside. They must also have a fire.

YOU WILL NEED:

- aluminum foil
- tub of linking cubes
- building

RISE UP

The knight needs to float to the top of the wall so he can get to the other side!

Build a wall. Float your knight on top of the wall. Then, drop rocks into the water to help him rise to the top.

YOU WILL NEED:

- building bricks
- clear cup of water
- mini figure
- rocks

RAINBOW GARDEN

Needs a large and colorful piece of art for the hallway!

With your classmates to create a garden with all the primary and secondary colors?

YOU WILL NEED:

- coffee filter
- red, blue, and yellow markers
- spray bottle with water
- 3 pipe cleaners

REFLECT THE LIGHT

Where does light come from? What can light do?

Objects that Reflect Light

How Reflectors Are Useful

MITTEN MEASUREMENT

Things that we measure

Why measure things is important

Measurements

PET PARADE

Examples of PUSHES

Examples of PULLS

Examples of VEHICLES

Things with WHEELS AND AXLES

BALANCE THE BED

NAME: _____

My BLUEPRINT

How many cups did your bed hold without falling over?

TEST 1 cups

TEST 2 cups

TEST 3 cups

Was your bed STRONG and STABLE?

YES NO

YES NO

MITTEN MEASUREMENT

NAME: _____

How many animals (cubes) does your mitten hold inside?

Measure your mittens with

MEASURING WITH MITTENS

How many animals (cubes) does your mitten hold inside?

TABLE

BOARD

FRIEND

REFLECT THE LIGHT

NAME: _____

MY BLUEPRINT

Does your device reflect light?

YES NO

Draw a picture of your reflector.

Draw your reflector on the person.

PET PARADE

NAME: _____

MY BLUEPRINT

Label the WHEEL AND AXLE.

Draw a picture of your parade float.

How did your float roll on a hard floor?

SMOOTH FAST

RAINBOW GARDEN

Where are the PRIMARY COLORS?

Where are the SECONDARY COLORS?

Where do colors come from?

How are rainbows made?

HIBERNATION HOME

What kinds of animals hibernate?

Why do animals hibernate?

How do people change or adapt in the winter?

What are some ways that we keep things warm?

BALANCE THE BED

What is a bed?

What is BALANCE?

Things that need to be balanced

Our design Ideas

RISE UP

NAME: _____

THINGS THAT FLOAT

THINGS THAT SINK

Did your knight rise to the top of the wall?

YES NO

How many rocks did it take to get your knight to the top of the wall?

rocks

RAINBOW GARDEN

NAME: _____

MY BLUEPRINT

Color the PRIMARY colors and SECONDARY colors that you see in your flower design AFTER you spray it with water.

RED

ORANGE

PURPLE

YELLOW

BLUE

GREEN

ELA Components

Plot

B The plot is the beginning, middle, and end of a story.

PROBLEM and SOLUTION

- Put up signs.
- Call the shelter.
- Pick it up. If it get dirty throw it away.
- Duck tape it and call a repair man.
- Talk calmly to him.
- Get some space.
- Look in her pocket.
- Ask an adult for help or go inside.



To put things in the order that they happen

Vocabulary EXPLOSION

Vocabulary CHAT

Whole group vocabulary activities on. Pick and choose which words best for go students!



Problem



What goes wrong or a challenge that a character faces.

How many CAN W



Describing Characters

We describe a character when we talk about what they are like.



We can look at what they say, do, think, and feel. This will help us understand what they are like on the inside.

Vocab ACT IT



Use the vocab. Pull the cards in front of the room. Classmates should word is being acted out.

NOUN



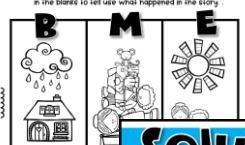
Person, place or animal

Describing CHARACTERS

ACTION ADJECTIVE

- Maxine makes new things from old things.
- Maxine cares about a small fish a lot!
- Maxine kept working on Milton's tank.
- Maxine leaves the fridge open and food on the floor.

She is creative and innovative.
Maxine is kind and compassionate.
She is a hard-worker!
She can be careless & messy.



In the beginning

Solution



How the problem is fixed or solved.

Using

- The wall protects this side of the book from the other side of the book.
- This side of the book is safe. The other side is not.
- The side of the book is safe. The other side is not.
- The side of the book is safe. The other side is not.

Using Illustrations



An illustrator gives us information in the pictures that helps us understand the story.

Vocabulary C

We are providing several whole group vocabulary individual activity. Pick and choose which words students!



1. Print the Vocabulary Picture Cards in a color version for display in the classroom with four identical cards should be used for response cards. Give each child one of all four cards. Give examples or definitions. Students should raise the card that matches. Teachers should scan the room to check for understanding.



ELA Components

Elie
Teacher: Cut out the pictures on the side and glue them under the word that they rhyme with.

mat	men
	
top	hug
	
nap	bet
	

RHyme IT!

	hug rug tug
	tip lip sip
	top mop hop
	let met

Mental IMAGES



Lesson



What the author wants us to learn from the story.

COLOR WORDS

red -apples -blood	yellow -sun -lemons	blue -sky -eyes
purple -grapes -mountains	orange -slices -setting sun	green -grass -sick face
white -snow -clouds	pink -cheeks	black -night -roads

Prediction



A prediction is a guess we make based on **clues** from the author and the illustrator.

VERBS

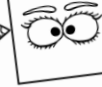
	swoop
	move
	wiggled

Name: Andy
My Prediction
Book: Knuffle Bunny
I think that the little girl gets a stuffed bunny.

MENTAL IMAGES

Directions: Draw what you picture in your head for the words.

The cold winds howl and the night sounds growl. 

Two glowing eyes sneak-peek in the den. 

Bear gulps. Bear gobbles. He sighs in delight. 

Rhyme



Rhyme is when the ends of two or more words sound alike.

PREDICT

What? to make a guess based on clues

When? Before, during, & after reading

Why? Help comprehension with hard words

How? Use Clues & What I know

Characters



Setting



Beginning Middle End



Imagery

he pictures you see in your mind as you are reading.



Vocabulary

We are providing several whole group vocabulary individual activity and choose which we students!

pout


flair


grumble


to have a stylish way

Dialogue

Name: Dara



"That's my bear!"

yelled Molly.

Dialogue



one or more characters in the story are talking

In the words

Written in the sentence with quotation marks.

- "My name..."

- words that are not said stay outside...

Picture PREDICTION




I think that:

Speech bubble

- "I love you!"

- only see the words & usually about character's feelings

