



storybook

STEM

KINDERGARTEN
THE BUNDLE

BROOKE BROWN & KATIE KING

STEM challenges

SHADY SPOT FOR FERDINAND



ELF TRAP



STRAWBERRY HIDEOUT



CAMOUFLAGED CRITTERS



TREE TOWER



SHAPE FENCES



CATCH THE RAIN



MITTEN MEASUREMENT



RISE UP



RAINBOW GARDEN

REFLECT THE LIGHT



HIBERNATION HOME



PET PARADE



BALANCE THE BED



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

FLOAT 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 BIKE

CLIP TO

LET'S EXPLORE SINKING AND FLOATING!

SINK OR FLOAT WHY DO SHIPS FLOAT?

FLOAT A BOAT

LAW OF FLOATATION

LET'S EXPLORE PUSHES & PULLS!

PUSHES AND PULLS

RAMPS

LET'S GET ROLLING

FRICTION

LET'S EXPLORE COLORS!

MIXING COLORS

PRIMARY & SECONDARY COLORS

MAKE A RAINBOW

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

LET'S EXPLORE MEASUREMENT!

NONSTANDARD MEASUREMENT

MEASUREMENT TOOL SONG

MEASURING GAME

CAPACITY

HIBERNATION HOME

HIBERNATE

SHELTER

SURVIVE

INSULATE

BALANCE THE BED

BALANCE

equal distribution

STABLE

firmness position

REFLECT 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

PUSH a force that moves an object away from you

PULL a force that moves an object toward you

VEHICLE

an object used for moving people or things

WHEEL AND AXLE

a circle that turns around an axle to hold a rotating wheel

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

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
- or building

RAINBOW GARDEN

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

Use your creativity 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

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

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

SLOW

RISE UP

NAME: _____

THINGS THAT FLOAT

My BLUEPRINT

Did your knight rise to the top of the wall?

YES NO

How many drops of water 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

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

NAME: _____

What is BALANCE?

Things that need to be balanced

Our design Ideas

STEM Components

SHADY SPOT

Ferdinand needs to stay cool in the shade!

Create a shade structure that Ferdinand will fit underneath.

YOU WILL NEED:

- cardstock
- glue
- scissors
- string
- paper
- marker
- string
- paper
- marker

STRAWBERRY HIDEOUT

The mouse needs to hide the red ripe strawberry from the big hungry bear!

Build a hideout that will keep the strawberry safe and completely hidden.

YOU WILL NEED:

- base ten blocks
- ruler

ELF TRAP

The elf keeps getting into mischief!

Create a trap that will lure in the elf and keep him or her contained.

YOU WILL NEED:

- popstick sticks OR baby carrots and toothpicks
- Creepy Carrots cutout

CATCH THE RAIN

Let's track the weather!

Create a rain gauge to measure how much rain falls each day.

YOU WILL NEED:

- plastic bottle with the top cut off
- permanent marker
- base ten rod
- rocks or pebbles

TREE TOWER

The animals need a safe place to live!

Build the tallest possible redwood tree to hold as many animals as you can.

YOU WILL NEED:

- base ten blocks
- ruler

CAMOUFLAGED CRITTERS

Your chameleon needs a habitat to hide in!

Can you create a paper collage habitat and camouflaged chameleon using only warm or cool colors?

YOU WILL NEED:

- paper plate
- paper chameleon
- glue
- popstick stick
- 2 pieces of construction paper (blue, green, purple OR red, yellow, orange)

SHAPE FENCES

Jasper Rabbit needs to keep the Creepy Carrots from escaping!

Build shape fences to completely surround the Creepy Carrots.

YOU WILL NEED:

- popstick sticks OR baby carrots and toothpicks
- Creepy Carrots cutout

LET'S EXPLORE ANIMAL ADAPTATIONS!

CAMOUFLAGE **ANIMAL TRICKS**

CHAMELEONS **WINTER COAT**

LET'S EXPLORE WEATHER!

THE WATER CYCLE **CLOUDS**

THUNDER AND LIGHTNING **WEATHER WATCH**

LET'S EXPLORE SUNLIGHT & SHADOWS!

THE SUN **SHADOWS**

HOW ANIMALS KEEP COOL **THE SUN SONG**

LET'S EXPLORE TREES!

WORLD'S TALLEST TREES **TREE RINGS**

IMPORTANCE OF TREES **TREE SONGS**

LET'S EXPLORE SHELTERS!

HOUSES **SHEET FORTS**

LET'S EXPLORE MACHINES!

RAMPS **PULLEYS**

LEVER **MACHINES**

CAMOUFLAGED CRITTERS

Color or draw your critter to match its environment.

WARM COLORS "Red like the sun!"

COLD COLORS "Cool like the ocean!"

CATCH THE RAIN

Track the weather!

TYPE OF WEATHER **WHAT TO WEAR**

HOW MANY DAYS DID IT RAIN?

SHADY SPOT

How the sun is helpful!

HOW THE SUN IS HELPFUL

HOW THE SUN IS HELPFUL

TREE TOWER

How many animals can you fit in your tree?

HOW MANY ANIMALS CAN YOU FIT IN YOUR TREE?

STRAWBERRY HIDEOUT

How many strawberries can you hide in your hideout?

HOW MANY STRAWBERRIES CAN YOU HIDE IN YOUR HIDEOUT?

SHAPE FENCES

How many shapes can you use to build your fence?

HOW MANY SHAPES CAN YOU USE TO BUILD YOUR FENCE?

ELF TRAP

How many carrots can you catch in your trap?

HOW MANY CARROTS CAN YOU CATCH IN YOUR TRAP?

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

ELA Components

Name: **Ellie**

Teachers 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

Beginning Middle End




Setting




Imagination


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



1. Print the Vocabulary Picture Cards! color version for display in the class with four identical cards should response cards. Give each child one. Give examples or definitions. Student live the card that matches. Teachers room to check for understanding!

Dialogue

Name: **Dara**

"That's my bear!"

yelled Molly.




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

speech bubble

- "I love you!"

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

I think that:





ELA Components

What's that sound?
bee



What's that sound?
popcorn



BOOM

Character Thoughts

How do the different characters think about the butterfly?

Exeter thought: "Dinner time!"



Exeter thought: "Yummy!"

Exeter thought: "I see a butterfly. Time to eat!"

Exeter thought: "No, I'm not hungry!"

Bugs thought: "Look at her wings!"

Bugs thought: "We helped! I make that!"

Bugs thought: "She's beautiful!"

Bugs thought: "She's flying!"

Words to Describe Ferdinand

1. gentle

Character Thoughts



Different characters can have different thoughts about the same thing!

Describing Character



What character inside and

Sounds Words
(also called Onomatopoeia)

BOOM BOING ZOOM ZAP CRACK POP

Learning from Illustrations



Adjective
words that describe



Ending



The ending of the book is where the **problem** is usually solved. Sometimes there is a **surprise!**

Characters



Ferdinand
Strong

Ferdinand
happy

Sound WORDS



BAM!

Whack



POOB

Wahoo



Tick-Tock

BONG!



Who-Who-Who-Who

Wee-wee-wee-wee

Learning from

ILLUSTRATIONS

1.



• More

An adjective that is a **Color**

• Strong

An adjective that shows **Size**

Two

2.



• All or tells very

• Speaks like this

3.



• M

• N

4.



• The Show it

• Mo and

Predictions

I predict **the sun** turns them **yellow**.

I predict **leaves** turns them **green**.

I predict **grapes** turns them **purple**.

I predict **night** turns them **black**.

I CAN Predict

↳ guess based on clues.

Before

- Look at cover
- Picture walk
- Think about what I know

During

- Paying attention to words and pictures... what next?
- Think about what I know

After

- Check predictions to see if you were right
- What did I miss?