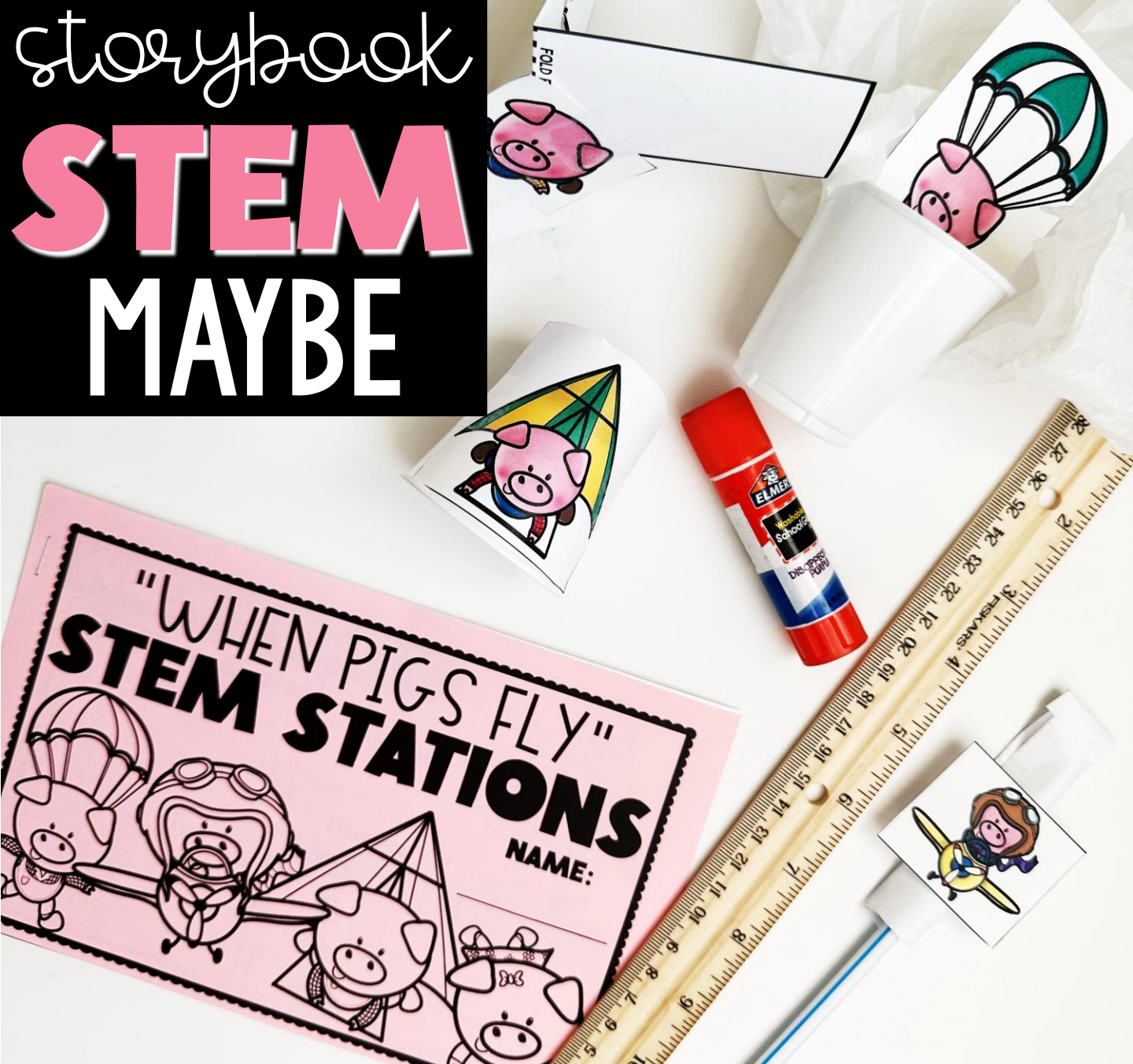


# storybook **STEM** MAYBE

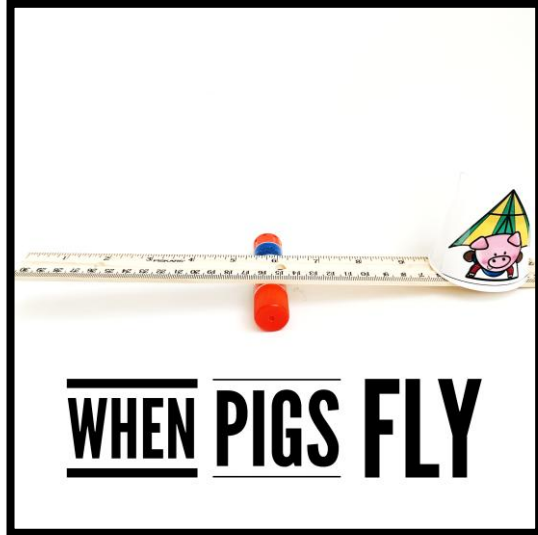


CREATED BY BROOKE BROWN AND KATIE KING

# STEM

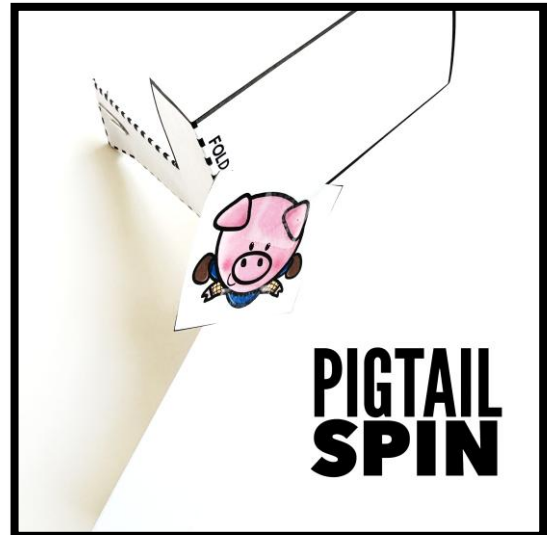
**4 flight-themed challenge stations with facts, video links, and student recording booklet!**

**CATAPULT**



**STRAW ROCKET**

**PARACHUTE**



**HELICOPTER**



# 4 "When Pigs Fly" STEM Stations

## WHEN PIGS FLY

Can you use a lever to launch your pig the farthest distance?




**YOU WILL NEED:**


- pig mini cup
- ruler
- glue stick
- yardstick or tape measure

## DID YOU KNOW?

You can use a **LEVER** to launch objects in the air by placing an object on one side and applying force to the other side. A **CATAPULT** uses a lever to launch objects.




**LEARN MORE**



## Words to Know


### LEVER

a bar that rests on a fulcrum that is used to move a load with one end when effort is applied to the other end




### THRUST

Force of flight that pushes an object forward




### GRAVITY

force of attraction of objects to the center of the Earth



### DRAW

the force on an object in the air that slows down motion



## Explore More

### HOW LEVERS WORK



### HOW ROCKETS FLY



### HOW HELICOPTERS FLY



### HOW PARACHUTES WORK



## BARNYARD BLAST-OFF

Can you create a straw rocket to launch your pig toward a target?




**YOU WILL NEED:**


- paper pig
- paper rectangle
- straw
- tape
- target

## DID YOU KNOW?

**THRUST** is the force that pushes an object forward. It is created with a propeller, jet engine, or rocket. You also use thrust when throw or blow an object.



**LEARN MORE**



## HIT THE TARGET!

Blow your straw rocket at the targets. How many points can you earn in 5 tries?




## LANDING TARGET

Drop your parachute. Can you land your pig on the target?



## PIGGY PARACHUTE

Can you create a parachute and basket and use it to help your pig land safely on the ground?



**YOU WILL NEED:**

- paper pig
- mini cup
- plastic grocery bag
- tape
- 5 pennies

## DID YOU KNOW?

**DRAW** is the force on an object in the air that reduce forward motion and slows it down. Parachutes use drag to help passengers land safely on the ground.

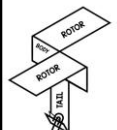



**LEARN MORE**

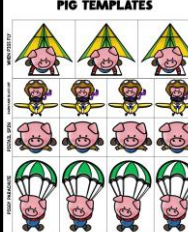


## PAPER HELICOPTER

• CUT on the bold lines.  
• FOLD on the dotted lines.  
• Add a paperclip to the end of the tail.  
• Tape your paper pig to the top.

## PIG TEMPLATES



## PIGTAIL SPIN

Can you create a paper helicopter to use it to transport your pig to the ground?



**YOU WILL NEED:**

- paper pig
- helicopter template
- paperclip

## DID YOU KNOW?

**GRAVITY** is the force that pulls all objects toward the center of the Earth. Without gravity, we would float in space! Airplanes and helicopters need gravity to land.




**LEARN MORE**



## PIGGY PARACHUTE

My Blueprint NAME: \_\_\_\_\_



## "When Pigs Fly" STEM STATIONS Reflection

NAME: \_\_\_\_\_

Which station was your FAVORITE? \_\_\_\_\_

Which station was EASIEST? \_\_\_\_\_

## BARNYARD BLAST-OFF

My Blueprint NAME: \_\_\_\_\_

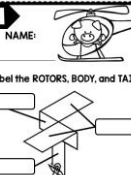
How many points did you make?

TEST	POINTS
1	
2	
3	
4	

## PIG TAIL SPIN

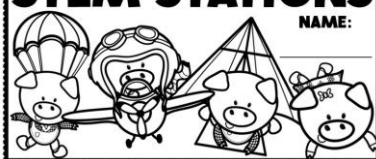
My Blueprint NAME: \_\_\_\_\_

Label the ROTORS, BODY, and TAIL.



## "WHEN PIGS FLY" STEM STATIONS

NAME: \_\_\_\_\_



## WHEN PIGS FLY

My Blueprint NAME: \_\_\_\_\_

How far did your pig go?

TEST	DISTANCE
1	
2	
3	



# ELA

## Idioms

### Impossible

Cold day in July

Don't hold your breath

When pigs fly

Not in a million years

### Hard

You've got your work cut out for you

Opened a can of worms

Grasping at straws

Pain in the neck

### Easy

It's not rocket science

A piece of cake

I can do it with my eyes closed

A walk

Idiom: "Pain in the neck"  
But I know... something is going to be difficult & annoying

When Pigs Fly AND OTHER IDIOMS

Idiom: "Don't hold your breath"  
But I know... it's very unlikely to happen

**Idioms:**  
Common phrases that don't mean exactly what they say.

When Pigs Fly AND OTHER IDIOMS

**BUCKET LIST**

- Get a mini-donkey
- Open a school
- Run 1/2 marathon

**Idioms**

Mrs. Jones told us that she would lower her expectations for our class when pigs fly.

A common phrase that does not mean exactly what it says.

**Growth Mindset**

This is hard. I want to quit. But I know I'll get better, bit by bit.

Grow that brain, make a plan. Know that your teacher is your biggest fan.

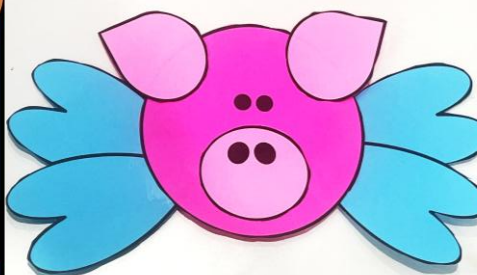
Today I will try my very best. I won't give up, I will not rest. I believe in the power of yet! I have a growth mindset!

**NOT IMPOSSIBLE!**

Name: Hannah

**GROWTH MINDSET**

Sometimes I struggle with my habits like cleaning up after myself, but I know I can do it. A clean place makes it easier to think!



**Bucket List**

I have accomplished:

- Ran a 5K with my sister
- Started a garden
- Travel out of the country

I want to accomplish:

- Read 50 books this year
- Get a new job
- Keep my room clean

**BIG DREAMS**

I would love to expand my little farm with ducks and a mini-donkey. It will help teach my kids responsibility.

**potential**

having the ability to change into something else

**surface**

the outside layer or top

**invent**

create something new

**powerful**

having great energy; strong

**potential**

having the ability to change into something else

**surface**

the outside layer or top

**invent**

create something new

**powerful**

having great energy; strong

Name: Jake

**WHEN PIGS FLY!**

I know that "when pigs fly" is an idiom that means something is impossible. Other idioms that mean something is impossible are "a cold day in July", "not in a million years", or "finding a needle in a haystack".