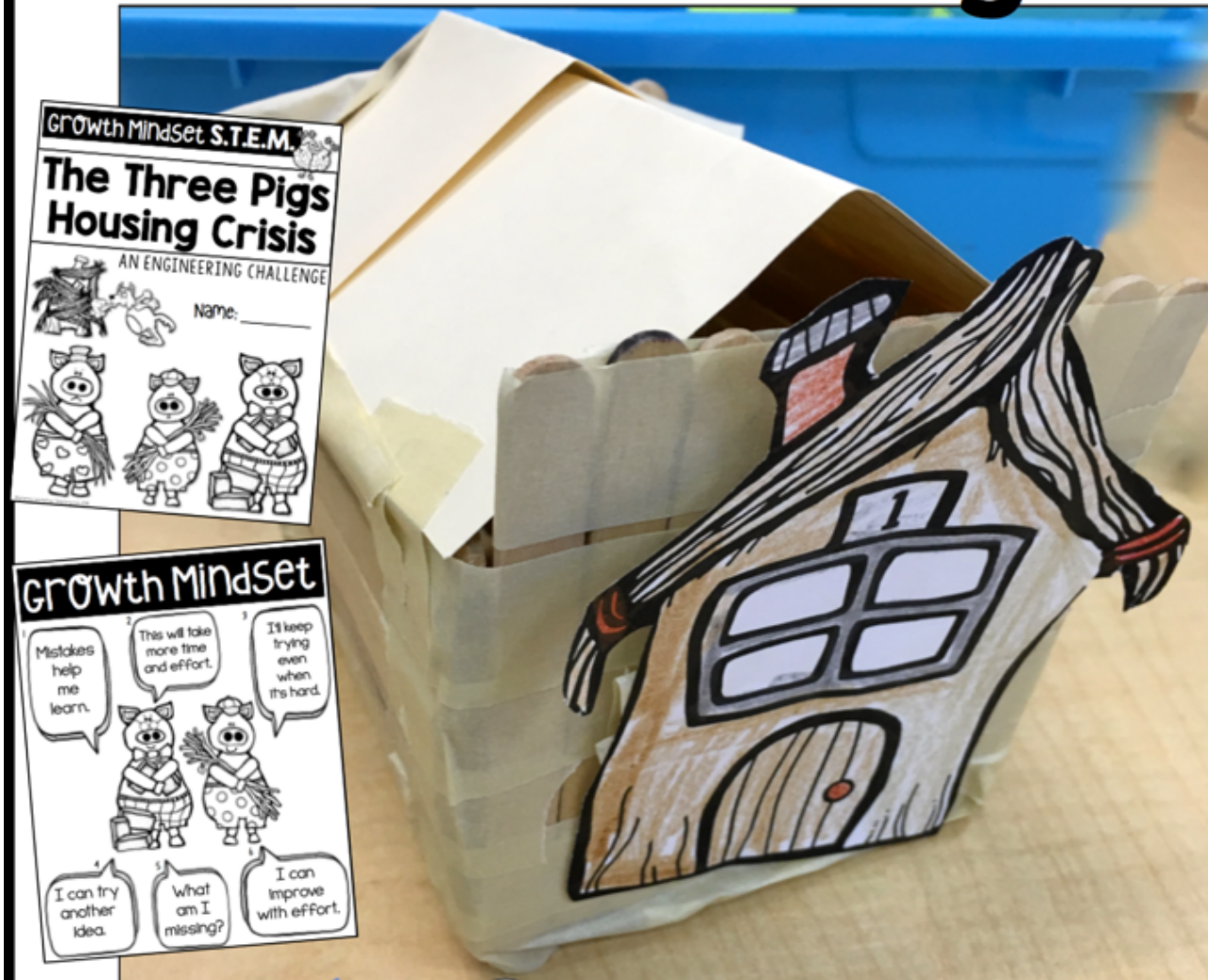


GROWTH MINDSET

S.T.E.M.

Three Little Pigs



The STEM Challenge:

This STEM challenge involves designing a house that can stand up independently, and that is strong enough keep a wolf out! Test the house to see if there are any spots that would allow a wolf to creep in! The house pictured below was later improved to fill the hole at the top so it was better sealed.

Then test the sturdiness of the house. You can do this by placing a heavy book on top of it. Will it stay up, or crumple?

Then, if you want to simulate huffing and puffing you can use an electric fan to blow on it!

Will it blow away?

In this example, students used popsicle sticks, thick paper, masking tape and a paper house front image (included).



Three Pigs

Narrator

Pig 1

Pig 2

Pig 3

Wolf

Narrator The three little pigs are in big trouble! The wolf is chasing them through the forest!
He wants to eat them up!

Pig 1 OH NO! That wolf wants to eat us up!

Pig 2 *I have a plan! Let's hide in the house made of straw!
Quick! Close the door so the wolf can't get in!*

Wolf: Oh little piggies! You can't get away from me! I will huff and puff and blow that straw house down!

Narrator:
So the wolf huffed and puffed and blew the house down, because straw isn't very strong at all.

Pig 1: OH NO! My house is ruined! I will never be able to build it again. And now the wolf can eat us! We will never get away, so we may as well just give up!

Pig 2: *Don't say that! We can think of a new plan! Come and hide in my house made of sticks! My sticks are much stronger than straw, so I think we will be safe.*

Wolf: Oh little piggies! You can't get away from me!
I will huff and puff and blow down that house made of sticks!

The Three Pigs

Narrator:

So the wolf huffed and puffed and blew the house down, because the sticks were not very well attached.

Pig 1: Oh NO! This is getting too hard for me. I'm just not as good as you are at figuring out what to do.

Pig 3: *Don't say that! We can think of a new plan! Come and hide in my house made of bricks! My bricks are much stronger than straw and sticks, so I think we will be safe.*

Wolf: Oh little piggies! You can't get away from me!
I will huff and puff and blow that brick house down!

Narrator:

So the wolf huffed and puffed and blew and blew, but he could not blow down the house of bricks. But the wolf was a problem solver, so he just hopped in the open window.

Pig 1: Oh NO! Now there's a wolf in our house! I am just so frustrated that every time we try an idea, it doesn't work!

Pig 3: *Don't say that! Come on, piggies, we have to RUN! We can think of a new plan while we are running!*

The Three Pigs

Narrator:

**So the three pigs ran as fast as they could through the forest! The wolf stayed in the brick house to eat the cake he found on the counter.
After a few hours, the pigs stopped running.**

Pig 1: I can't run anymore! I think we should just give up. Even if we build another house, the wolf will just blow it down again.

Pig 2: *Don't say that! The brick house was a very good house. It just needed a few improvements to do the job. Maybe we can figure out how to make it better.*

Pig 3: *You're right! Let's sit here and write down some ideas together. Then we'll go out and find some new materials to build a new house before the wolf comes back.*

Narrator:

**So the pigs wrote down ideas and drew some pictures.
They gathered materials to make a new house.**

STEM Challenge: Help the pigs design a very strong house that the wolf can't get inside.

Before you start, decide how you will test the strength of the houses, such as with an electric fan blowing right beside it, or stacking heavy things on top of it.

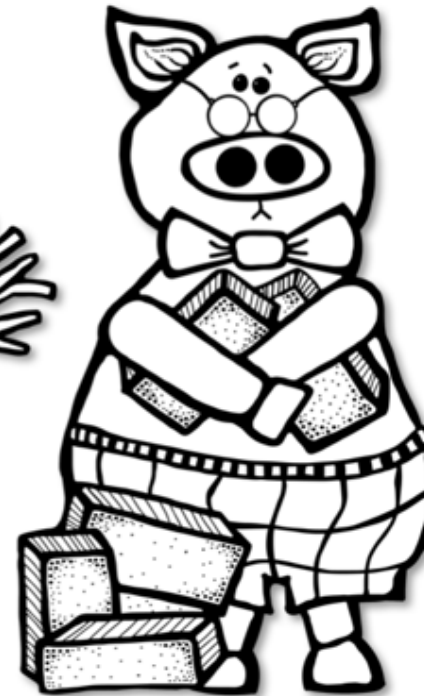
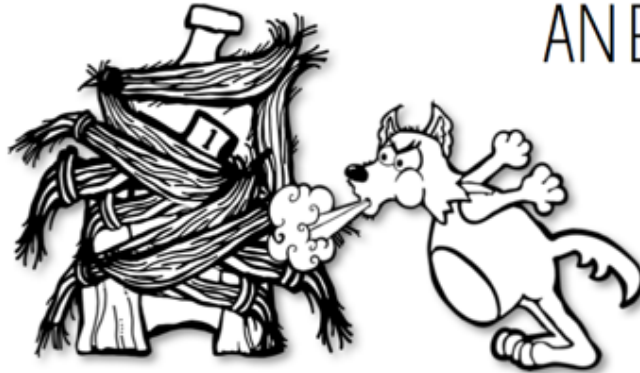
Growth Mindset S.T.E.M.



The Three Pigs Housing Crisis

AN ENGINEERING CHALLENGE

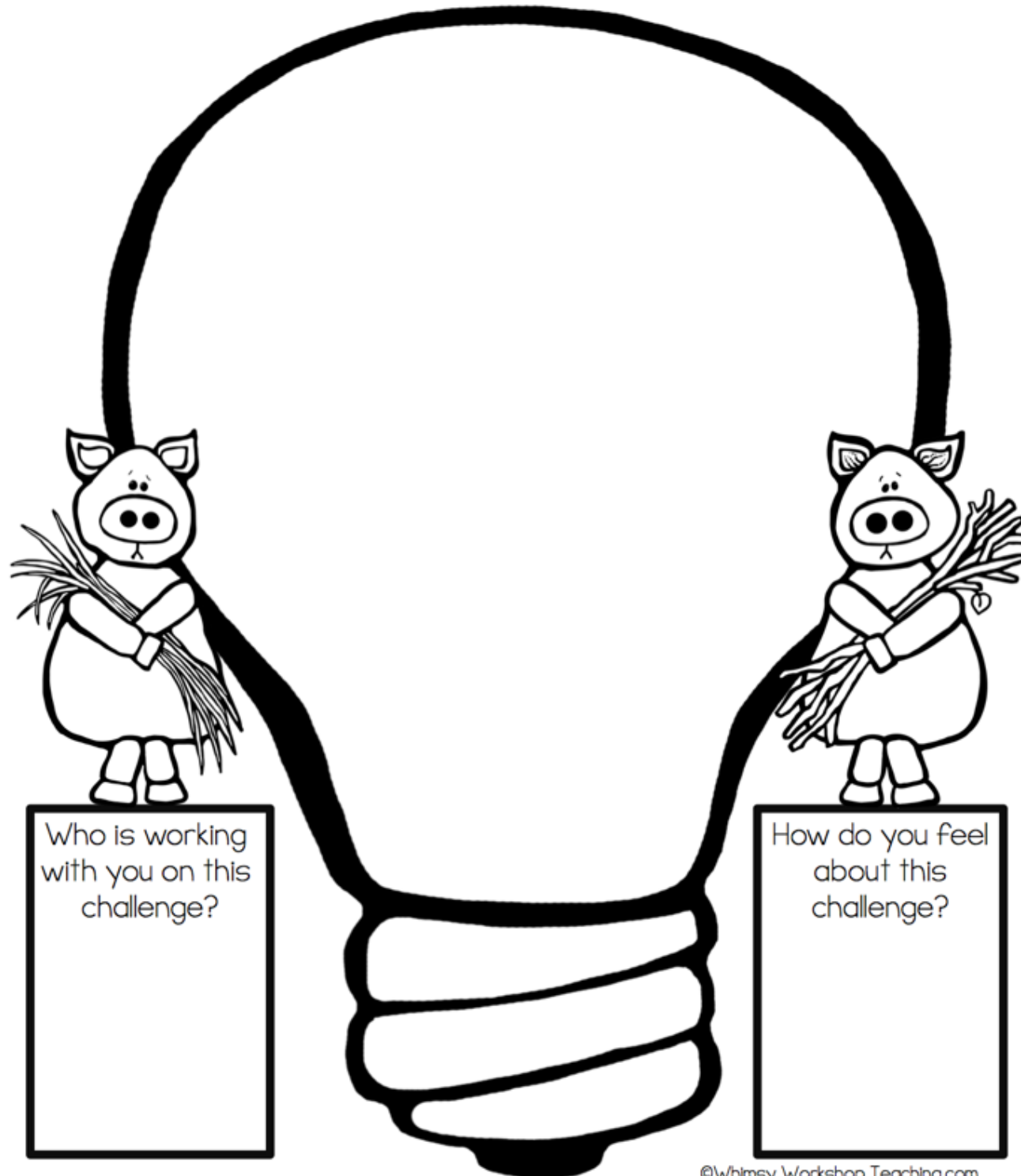
Name: _____



BRAINSTORM IDEAS



How can the pigs build a strong enough house?
Write and draw all your ideas for this challenge.



MY GROWTH MINDSET STEPS



Write about the steps you took during this challenge.
Did you feel excited or frustrated during some parts?

My STEM challenge was to



MY MATERIALS

The first thing I did was

I felt...



The next thing I did was

I felt...



The next thing I did was

I felt...



I completed my challenge by

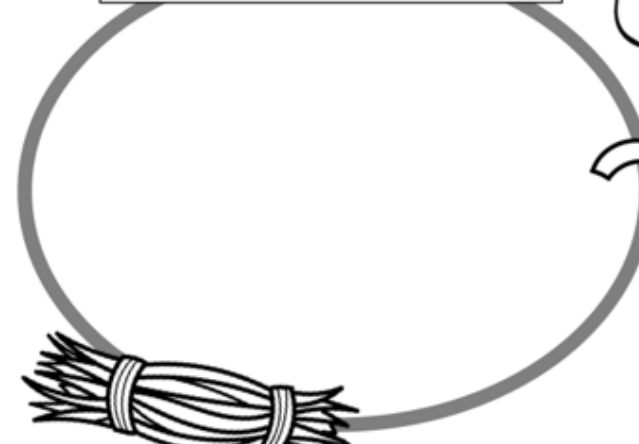
I felt...



STEM Challenge Review



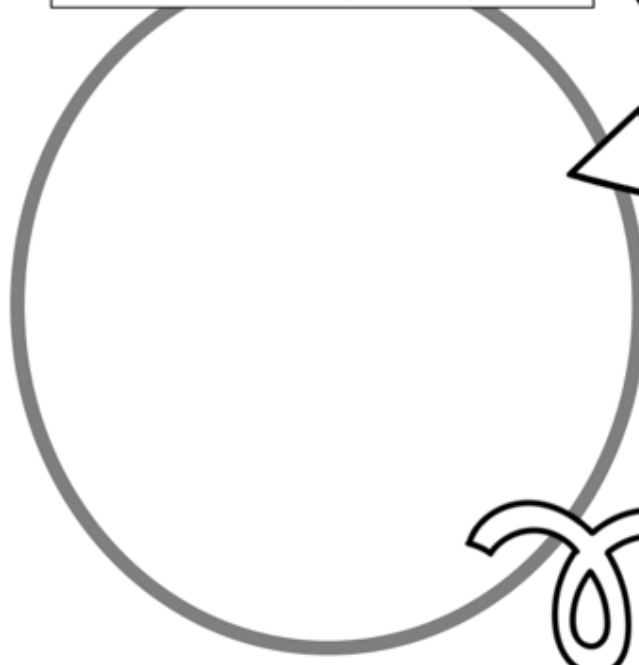
Some of the ideas we had:



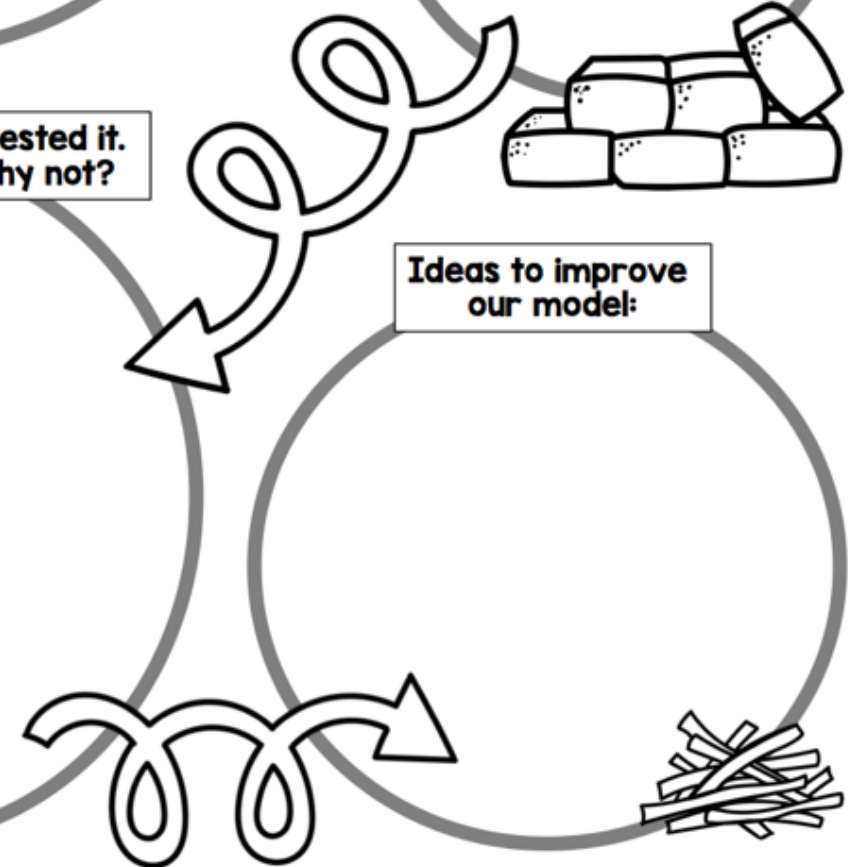
We chose this idea:



We made a model and tested it.
Did it work? Why or why not?



Ideas to improve
our model:



I used a growth mindset during my STEM challenge when _____

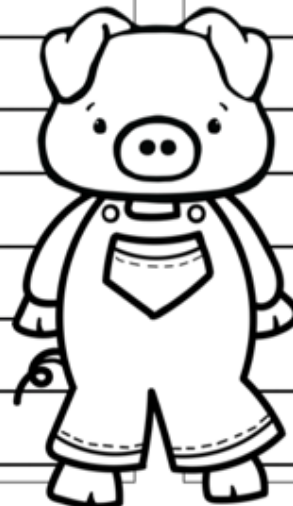
Growth Mindset STEM



Sometimes our first ideas don't work. Write about something that didn't work the first time, and what you did to fix or improve it.

What Didn't Work

What Did You Improve?



Growth Mindset STEM

Write about this challenge. What worked? What didn't work?
Did you have to change your ideas? What did you learn?



An idea that didn't work:



So here's what I did:

I improved my idea this way:



Here's what I learned:



Glue the two ends of the long strip together to make a loop behind the image. It will stand up by itself. Use these characters to help act out the story (optional).

