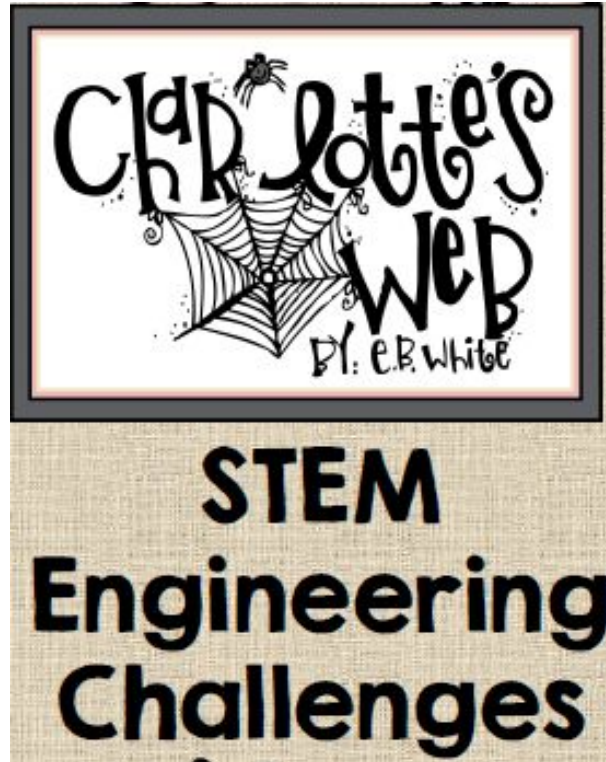
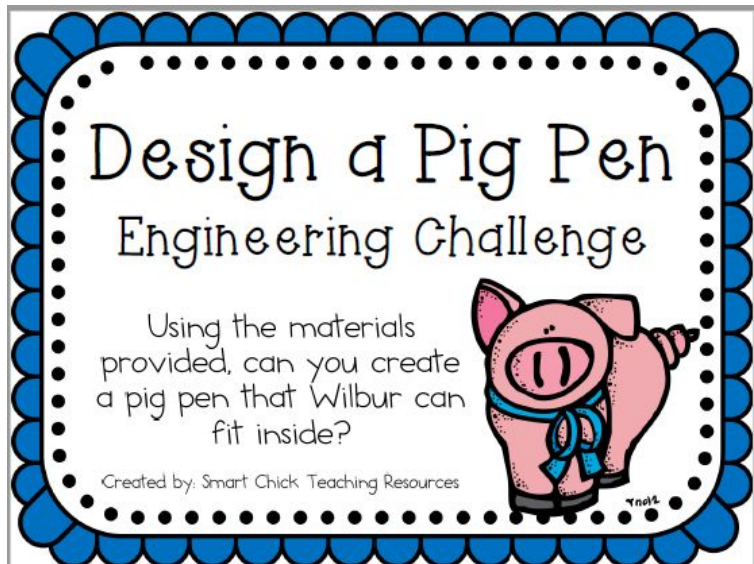


3rd Grade Summer Project



After reading “Charlotte’s Web”, complete the “Design a Pig Pen” STEM activity. Bring the activity with you on the first day of school.



Teacher Directions

Materials:

- Popsicle sticks (large and small)
- Cardboard pieces
- Aluminum foil
- Tape and scissors
- Straws



Set-Up:

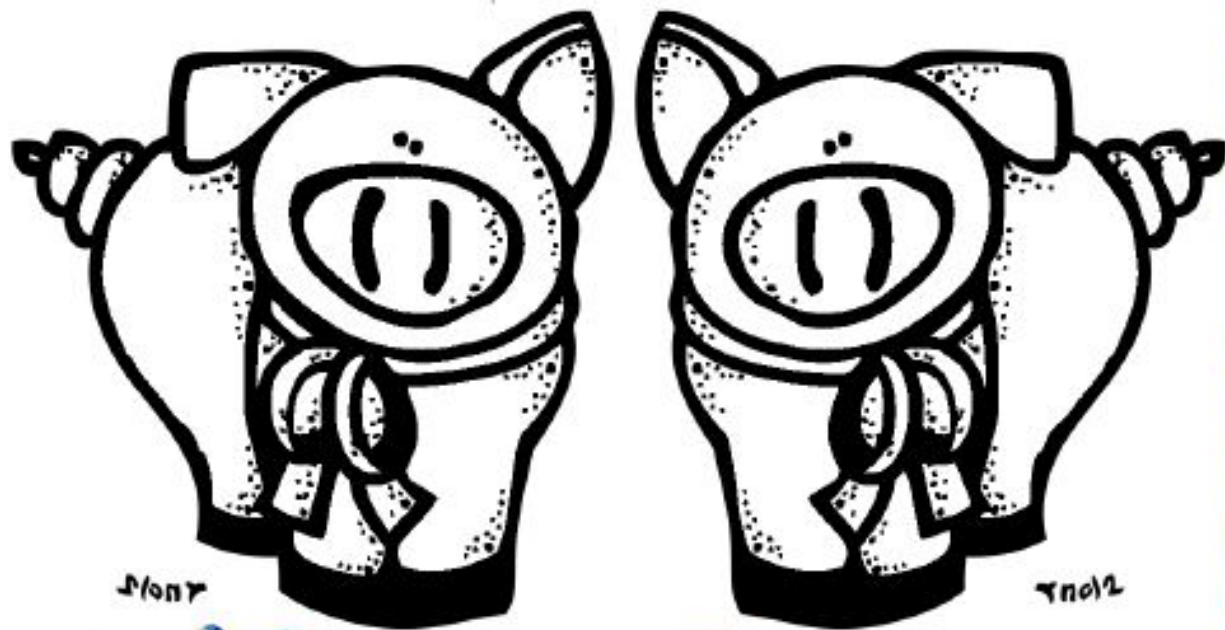
- Place materials in a central location, you can also ask students to bring in additional materials to share with the classroom. Challenge them to think of and find items that they could use to build a free-standing pig pen.
- Provide a flat surface for the construction of the pig pens.
- Students will need to color the cut out their Wilbur. They can also create a stand for him.

Goal:

Students will construct a pig pen using the materials provided that will fit their Wilbur cut-out inside.

Cut out a Wilbur to use in your pig pen. He must fit inside the pig pen. You may want to make a stand for Wilbur with a popsicle stick.

*Copy onto cardstock.



1/017

2/012

Challenge Rules

- You must use only the materials provided.
- The pig pen you design must be able to fit the Wilbur cut-out inside of it.
- Your goal is to build a free-standing pig pen for Wilbur.
- You may use tape, glue, and scissors to modify the supplies as needed.
- There are many different ways to complete this challenge. Be creative!

Student Lab Sheet: Pig Pen Challenge

Name _____

Were you successful in this challenge? Why or why not?

What was the most difficult part of this challenge? Why?

What was the best idea you came up with during this challenge?

What are the dimensions of your pig pen? Does Wilbur fit inside the pig pen? Why or why not?

What did you learn about construction and engineering during this challenge?

Sketch your solution on the back of the sheet.

My Questions:

Student Lab Sheet: Pig Pen Challenge

Name _____

S

What is the science behind this challenge?



Research this topic using books and/or the Internet and record any information you find.

e

What was your design solution for this challenge?

M

What data can you record from this challenge?

Spider Web Message

Engineering Challenge

Can you create a spider web with a message inside it using the materials provided?

Created by: Smart Chick Teaching Resources



Teacher Directions

Materials:

- Paper plates
- Yarn
- Pipe cleaners
- Plastic spiders (optional)
- Glue and scissors
- Hole punch
- Tape measure or ruler



Set-Up:

- Place materials in a central location, you can show students an example or let them try to do the challenge without one.
- Provide a flat surface for the construction of the webs.
- Students can use pipe cleaners or a paper plate as the base for their web.

Goal:

Students will construct a spider web with a message inside it using the materials provided.

Challenge Rules

- You must use only the materials provided.
- The spider web you create must include a message related to the book inside it.
- Your goal is to build a spider web with a message using the materials provided.
- You may use glue and scissors to modify the supplies as needed.
- There are many different ways to complete this challenge. Be creative!

Student Lab Sheet: Spider Web Challenge

Name _____

Were you successful in this challenge? Why or why not?

What was the most difficult part of this challenge? Why?

What was the best idea you came up with during this challenge?

What message did you place in your spider web? How much yarn do you think you used in your design?

What did you learn about construction and engineering during this challenge?

Sketch your solution on the back of the sheet.

My Questions:

Student Lab Sheet: Spider Web Challenge

Name _____

S

What is the science behind this challenge?



Research this topic using books and/or the Internet and record any information you find.

e

What was your design solution for this challenge?

M

What data can you record from this challenge?

Ferris Wheel

Engineering Challenge

Can you create a
working ferris wheel
using only found
materials?

Created by: Smart Chick Teaching Resources



Teacher Directions

Materials: (per student)

- Variety of found materials (recyclable or craft)
- Scissors, tape and glue
- Cardboard and paper scraps
- Popsicle sticks, straws, small plastic cups, etc.
- Metal brads

Set-Up:

- Give students the materials needed. Students can also bring in a variety of materials for this challenge.
- Students may need to sketch some of their ideas before they begin construction of their ferris wheel.
- Provide a flat surface for the construction.

Goal:

Students will construct a working ferris wheel from found materials.



Challenge Rules

- You must use only the supplies provided.
- The ferris wheel must be constructed on a flat surface.
- Your goal is to build a working ferris wheel using found materials.
- You must be able to demonstrate how your ferris wheel works once it is completed!
- There are many different ways to complete this challenge. Be creative!

Student Lab Sheet: Ferris Wheel Challenge

Name _____

Were you successful in this challenge? Why or why not?

What was the most difficult part of this challenge? Why?

What was the best idea you came up with during this challenge?

Did your ferris wheel work? Why or why not? Describe how it works and how you made it.

What did you learn about construction and engineering during this challenge?

Sketch your solution on the back of the sheet.

My Questions:

Student Lab Sheet: Ferris Wheel Challenge

Name _____

S

What is the science behind this challenge?



Research this topic using books and/or the Internet and record any information you find.



E

What was your design solution for this challenge?

M

What data can you record from this challenge?