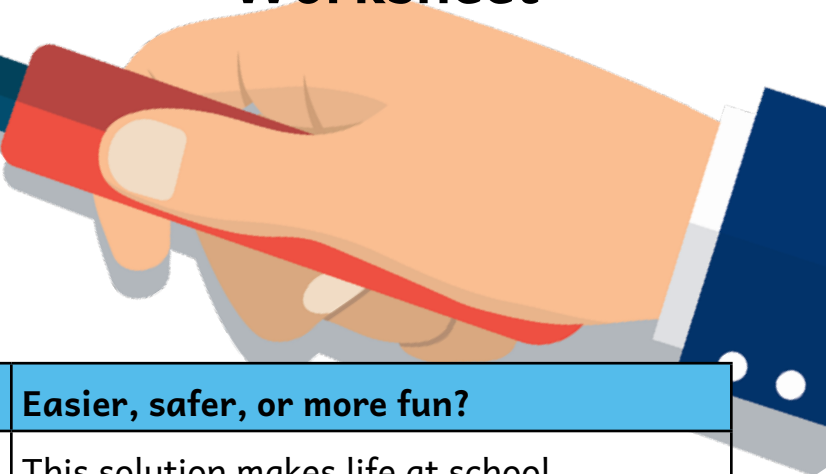


Name: _____

Date: _____

Exploring My Community Worksheet



Solutions in My School Community

Name of solution	Easier, safer, or more fun?
	This solution makes life at school _____.
	This solution makes life at school _____.
	This solution makes life at school _____.
	This solution makes life at school _____.
	This solution makes life at school _____.
	This solution makes life at school _____.
	This solution makes life at school _____.
	This solution makes life at school _____.

Solutions in My Home Community



Name of solution	Easier, safer, or more fun?
	This solution makes life at home _____.
	This solution makes life at home _____.
	This solution makes life at home _____.
	This solution makes life at home _____.
	This solution makes life at home _____.
	This solution makes life at home _____.
	This solution makes life at home _____.
	This solution makes life at home _____.

Solutions in My Neighborhood Community



Name of solution	Easier, safer, or more fun?
	This solution makes life in my neighborhood _____.
	This solution makes life in my neighborhood _____.
	This solution makes life in my neighborhood _____.
	This solution makes life in my neighborhood _____.
	This solution makes life in my neighborhood _____.
	This solution makes life in my neighborhood _____.
	This solution makes life in my neighborhood _____.
	This solution makes life in my neighborhood _____.

Name: _____ Date: _____

Mindset Sorting Chart

Read the statements below. Which show a growth mindset? Which show a fixed mindset? Sort the statements and write them in the chart.

If I keep trying, I know I can finish it.

I will keep practicing until I get it right.

It is too hard. I can't figure it out.

I am just not good at it.

I will never get it right.

I can't wait to learn something new.

I will try it a different way next time.

I haven't found the answer yet.

Growth Mindset	Fixed Mindset

Name: _____ Date: _____

Engineering Challenge Sheet

Time to be an engineer and find a solution to a problem! Are you up for the challenge?

Jack and Jill need help to carry their bucket of water up the hill.

Design a way to lift a bucket from the floor to the top of your desk.

Your design must:

- Use paper as one material
- Include three or more materials in total
- Be easy to use and carry
- Hold the bucket safely as you lift it from the floor to the desk
- Make sure no water spills!




Start by filling your bucket with water. Lift it to see how heavy it is. Then, get started!

Planning Our Design

Here are our ideas:

Our best idea is: _____

These are the materials we will need:

A large, empty rectangular box with a black border, intended for listing the materials needed for the project.

This is what our design will look like:

A large, empty rectangular box with a black border, intended for drawing or illustrating the design of the project. The background of the page features a blue sky with white clouds and green hills.

Name: _____ Date: _____

Model Planning and Testing Sheet

Planning Our Model

Our solution:

Planning our model

How will you show your idea? Write down the steps your group will take to build a model of your solution.

Materials

Write down all of the materials you will need to build your model.

Draw a picture of how your model will look:



Testing Our Model

Try out your model to see if it solves the problem. Write down things that worked, and things that could be better.

Things that worked	Things that could be better

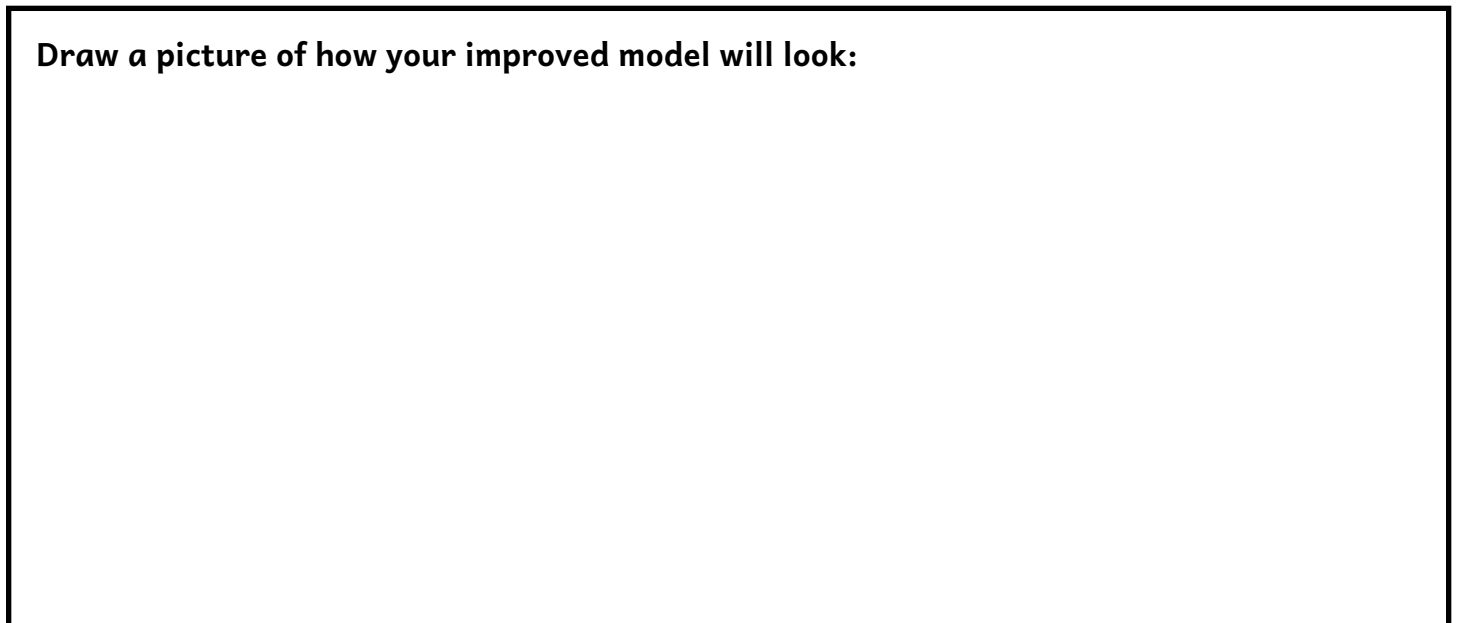
Does my model solve the problem?

Yes

No

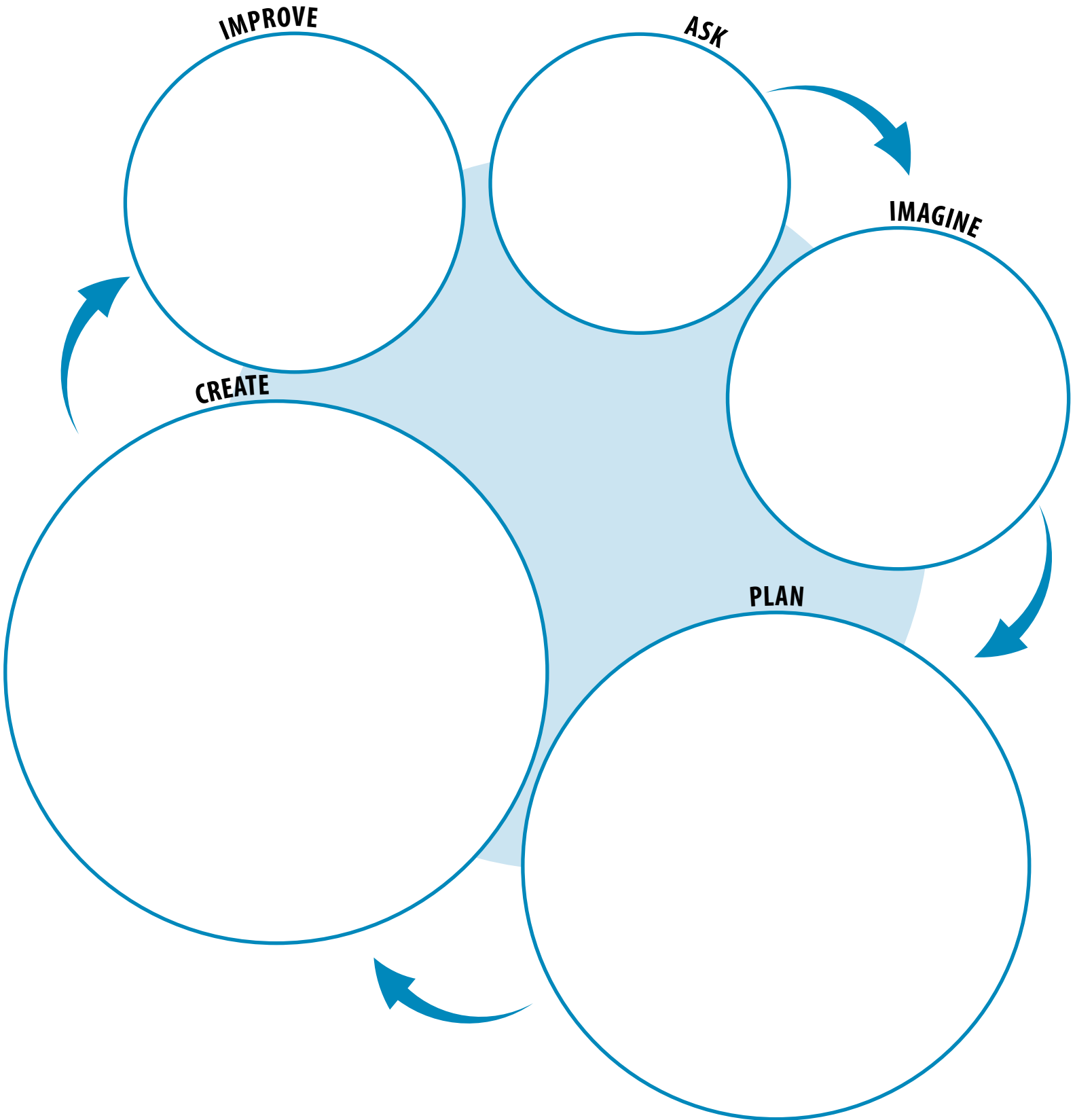
Write down at least one way you will improve your idea:

Draw a picture of how your improved model will look:



Name: _____ Date: _____

Engineering Design Process Worksheet



Names: _____ Date: _____

Model Worksheet

Jane brings her lunches to school in a lunch box. But every time she opens it at lunchtime, her juice box has squished her sandwich! Help Jane design a solution.



Brainstorm ideas for a lunchtime solution here:

Make a drawing or diagram of your best solution idea here:

Our best solution idea is:

What materials will you need to make a physical model of your solution?

- _____
- _____
- _____
- _____
- _____
- _____

When you are finished this page, show it to your teacher.

Name: Completed Example

My Solution Story Worksheet

Sally and Henry are engineers. But they have a problem!

They were late for work every morning! They could not wake up on time, no matter how hard they tried.

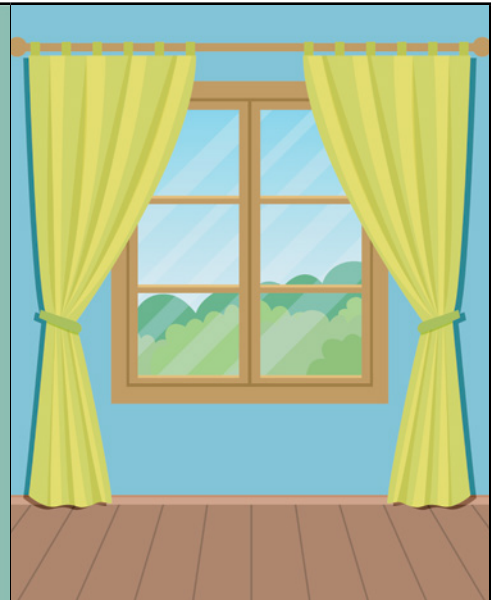
Sally and Henry knew they could find a solution. They brainstormed ideas.



go to bed extra early



alarm clock



machine that opens curtains every morning

Sally and Henry looked at their ideas. They picked the best solution. It is an alarm clock.

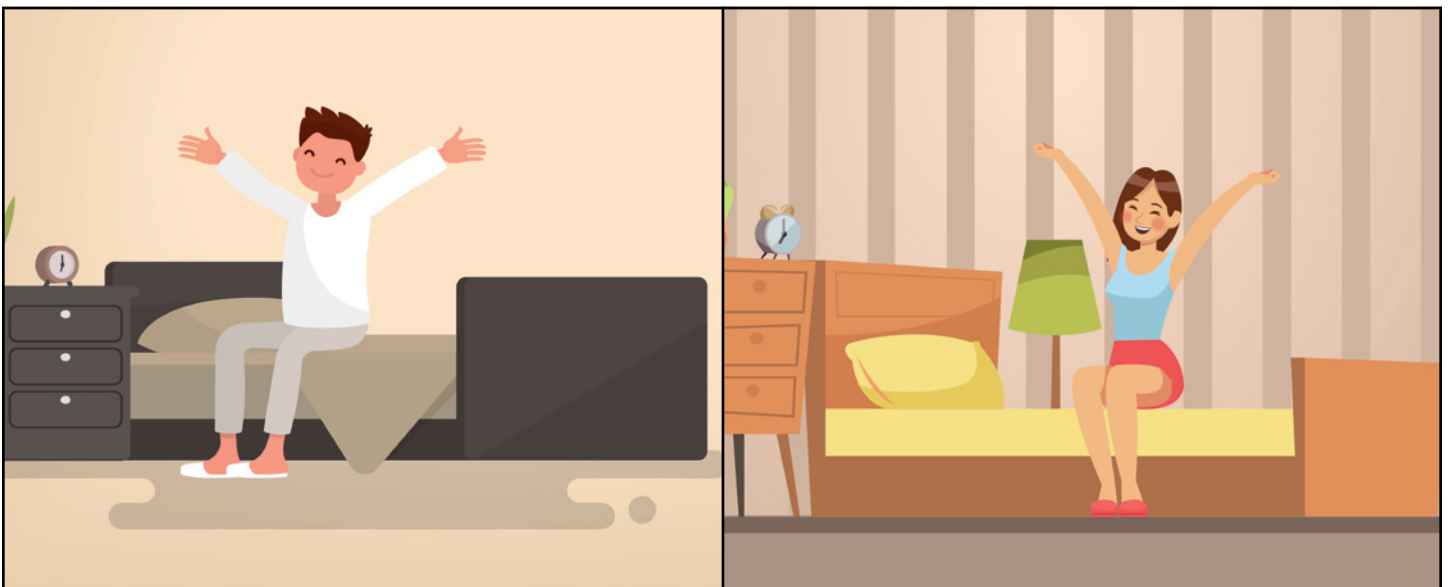
They tested the solution. But their tests found a problem!



The alarm clock is TOO LOUD! It could hurt people's ears.

Let's fix it!" Sally said. "We can let people choose how loud the alarm should be."

"Good idea," agrees Henry. The engineers improve the model. Sally and Henry have found the best solution!



The alarm clock helps Henry and Sally wake up on time every morning.

Name: _____ Date: _____

My Solution Story Worksheet

Sally and Henry are engineers. But they have a problem!

Sally and Henry knew they could find a solution.
They brainstormed ideas.

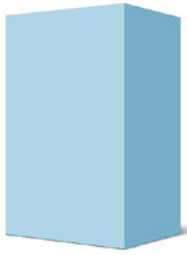
Sally and Henry looked at their ideas. They picked the best solution. It is _____.

They tested the solution. But their tests found a problem!

Let's fix it!" Sally said. _____

"Good idea," agrees Henry. The engineers improve the model.
Sally and Henry have found the best solution!

Names: _____ Date: _____



Card Challenge Handout

Your Challenge: Make the tallest or strongest structure you can, using only cards and whatever you need to hold them together.

What problem are we trying to solve?

How much time do we have? What materials do we have to work with?

What are some solutions to the problem? Draw pictures if that is easier.

Which solution do we think will work best? Why?

Ready? Set? Build!

Animal Experts Handout



Names: _____ Date: _____

Invent It! Worksheet

Study your animal carefully. Follow the steps below to come up with an idea based on your animal.

Write the name of your animal: _____

STEP 1: Describe your animal. What parts do most people notice?

STEP 2: What does each part of the animal help it do?

**STEP 3: What inventions could you come up with based on these parts?
What needs could they fill?**

Choose one of your ideas. Draw it on another piece of paper.