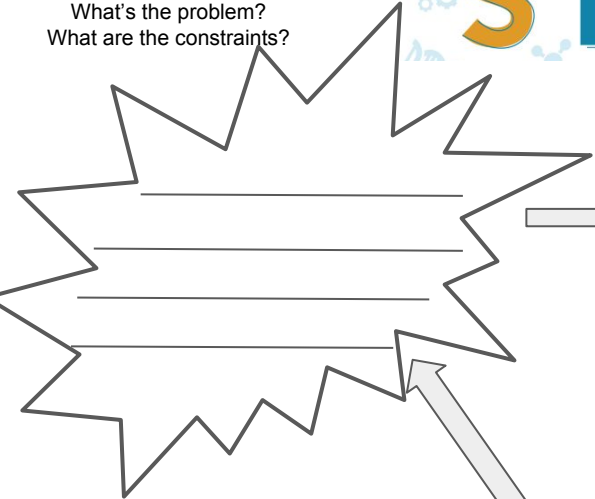


STEM CHALLENGE

ASK!

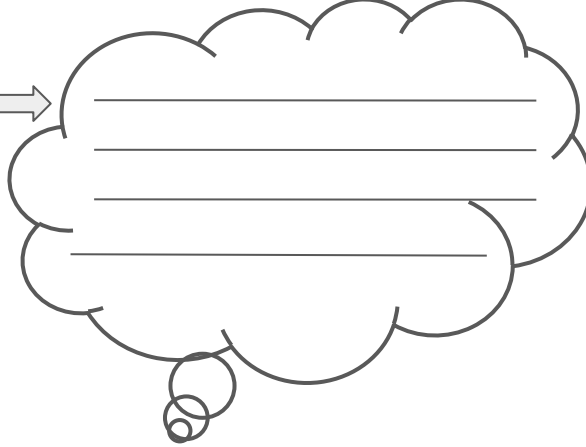
What's the problem?
What are the constraints?



A starburst-shaped box with five horizontal lines for writing.

IMAGINE!

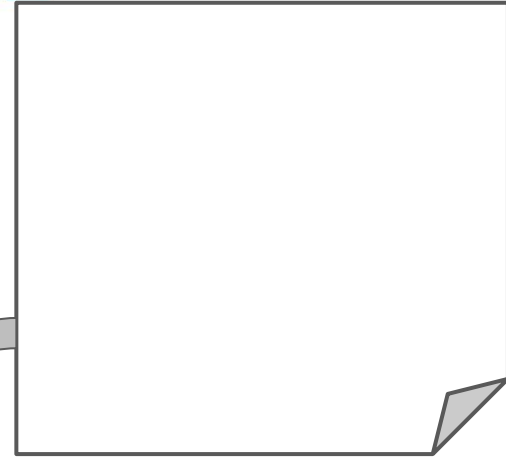
Research, Brainstorm, Develop Possible Solutions



A thought bubble-shaped box with five horizontal lines for writing.

PLAN

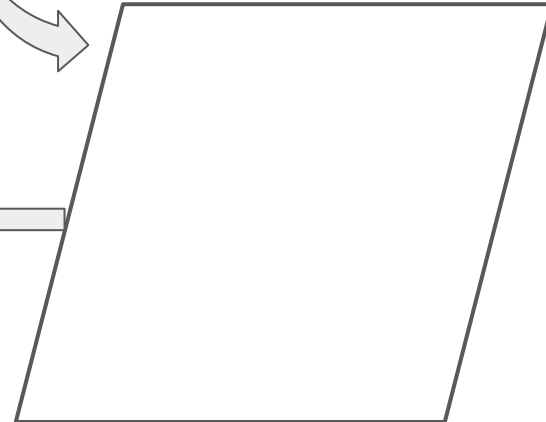
Materials, Draw



A rectangular box with a folded bottom-right corner, intended for drawing materials and plans.

CREATE and TEST

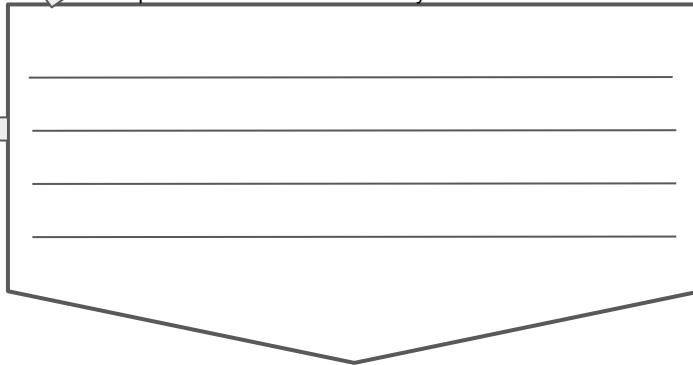
Build your prototype and try it out



A parallelogram-shaped box intended for drawing a prototype.

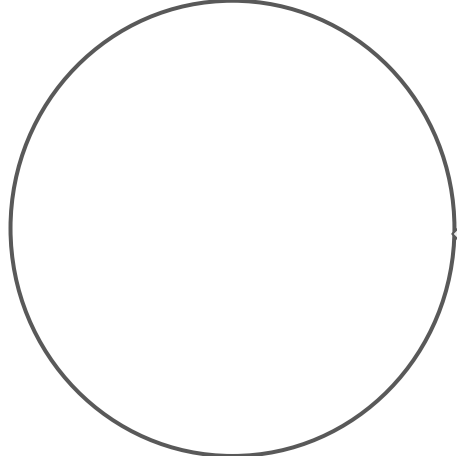
IMPROVE and Re-TEST

What problems occurred? What did you do to make it better?

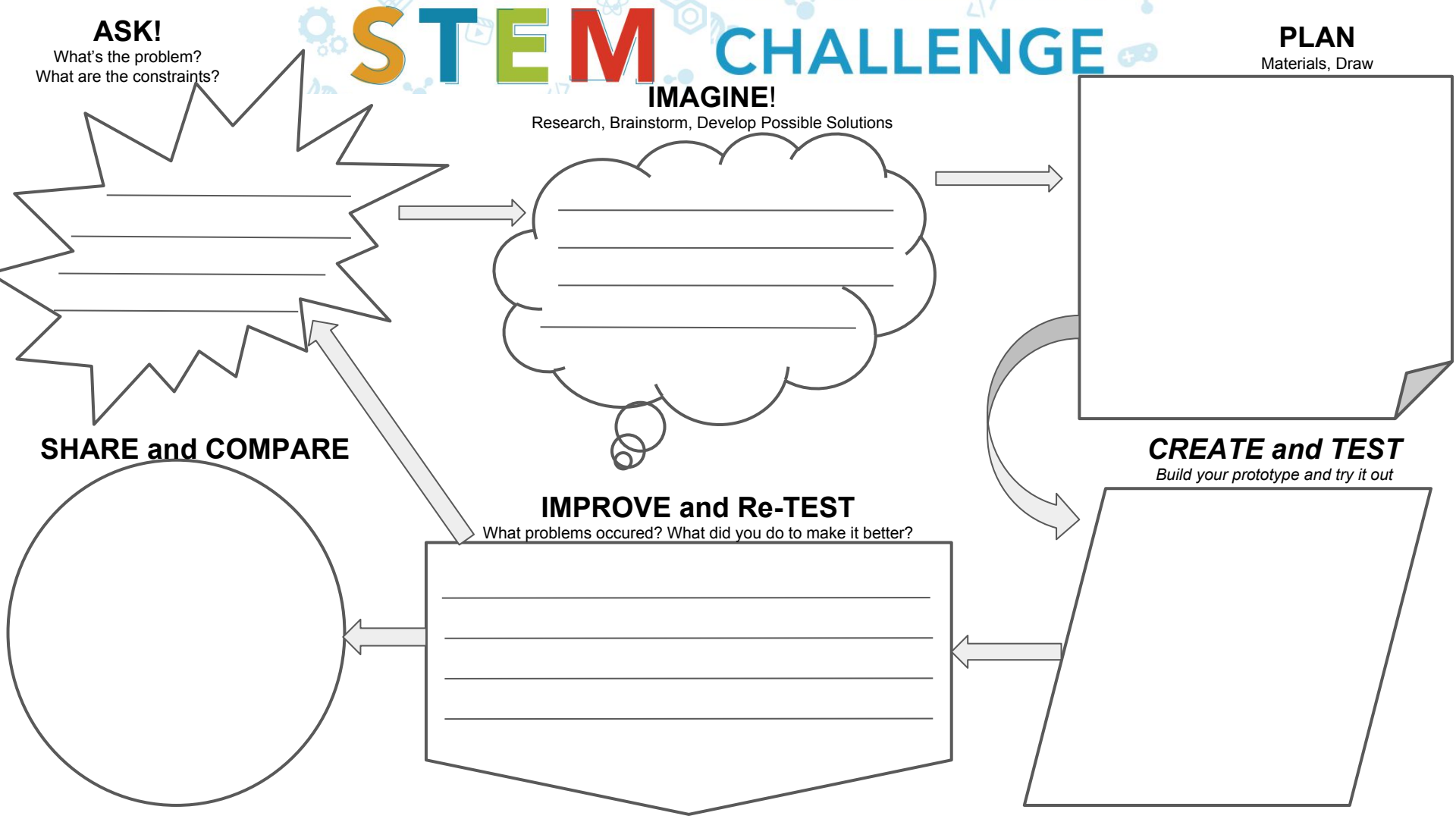


A rectangular box with five horizontal lines for writing reflections.

SHARE and COMPARE



A circular box intended for sharing and comparing results.



Have an idea?

[Tell me!](#)

Wonders Unit 1

Big Idea: How can learning help us grow?

*Red indicates
grade level
science standard

Week	Essential Question	STEM Ideas for RWW	STEM Ideas for Lit Anth
Week 1	EQ: What can stories teach you?	Whole group: Adaptations for keeping warm activity	Use the site Story Jumper to have students create their own story. They can also add their voice and read their story aloud like the wolf.
Week 2	EQ: What can traditions teach you about cultures?	Make your own (simple) dream catcher or (more advanced) dream catcher . Family Traditions or design your own family flag	
Week 3	EQ: How do people from different cultures contribute to a community?	Whole group: Grow your own herbal tea , record the sequence of events, compare different kinds of teas growth and time it takes to germinate	
Week 4	EQ: How can problem solving lead to new ideas?	Create own invention to solve a real problem. Some problems (fidgeting in class, pencil keeps rolling off desk, playground safety, slippery hallways, portable speaker for iPhone, pen marks on left handed kiddos when they write, etc) Use a MaKey MaKey to create a new controller for a video game. Static Electricity Experiment in 3rd story	
Week 5	EQ: How do landmarks help us understand our country's story?	VR using Expeditions of American landmarks Google Tour Builder of the Sites in Wonders!	

Have an idea?

[Tell me!](#)

Wonders Unit 2

*Red indicates
grade level
science standard

Big Idea: What Does it Take to Solve a Problem?

Week	Essential Question	STEM Ideas for RWW	STEM Ideas for Lit Anth
Week 1	EQ: Why is working together a good way to solve a problem?	Why did the rocks sink? Why did Anansi float? Test different items floating ability Page 12	Create new animal and write how it could solve a problem Build a snake trap
Week 2	EQ: Why do people immigrate to new places?	What makes a boat float? Design a boat that can hold weight	Ellis Island VR on Google Expeditions or have students look at street views on google maps Create a map from Russia to Ellis Island
Week 3	EQ: How do people make government work?	Design a campaign poster using paint, Google Drawings, or Educreations if iPads available or a campaign ad using flipgrid .	
Week 4	EQ: How can people help animals survive?	Design a device to clean an oil spill Or this if you have more time	Design a bird puppet to help with feeding Flying device to help the Whooping Cranes
Week 5	EQ: How do people figure things out?	Use Engineering Design Process to determine a current problem in your classroom or at home, invent something new that would help solve problem.	

Wonders Unit 3

Have an idea?

[Tell me!](#)

Big Idea: Why are individual qualities important?

*Red indicates
grade level
science standard

Week	Essential Question	STEM Ideas for RWW	STEM Ideas for Lit Anth
Week 1	EQ: What makes different animals unique?	Design a tool to help get down a mountain Structure/Function of animals that help them survive	Design a “backbone” for a playdough animal Design something that could protect an animal
Week 2	EQ: How can 1 person change the way you think?	Make a PSA about a problem you feel passionate about. Use flipgrid , create a video, or make an online book	
Week 3	EQ: What do we know about Earth and its neighbors?	Design a space rocket . If you need a template, you can find one here . Or if you have more time, this has many activities	Design and create your own space station. What things would you have to consider? Build a model to showcase your new home. Or maybe a Digital Breakout
Week 4	EQ: *What ideas can we get from nature? 1-LS1-1	Build your own animal inspired invention. (something to reach high like giraffe neck, something to protect your head like a turtle shell) Make connections to real life items	Google Expeditions DaVinci's inventions AR experience using iPads or cell phones
Week 5	EQ: How is each event in history unique?	Build a wagon to help travel across rough terrain	Design a railroad and car to carry a heavy load from one point to another

Have an idea?

[Tell me!](#)

Wonders Unit 4

*Red indicates
grade level
science standard

Big Idea: What are different ways to meet challenges?

Week	Essential Question	STEM Ideas for RWW	STEM Ideas for Lit Anth
Week 1	EQ: What choices are good for us?	Healthy recipes. Students can research a recipe that has 3 or more healthy ingredients. Could serve as an introduction to fractions and require students to adjust recipe to feed class. If you have parent involvement, students can prepare and bring for class on a Friday. If not, students could design a model of the dish they chose. Or make a whole class recipe using fractions.	
Week 2	EQ: How can you use what you know to help others?	Debuggers , see different coding problems and have to work to figure out what is wrong and how to fix it. Students watch video first to learn what to do. Level 2 Debugger	
Week 3	EQ: *How do animals adapt to challenges in their habitat? 3-LS4-3	Read or watch "What If You Had Animal Feet?" Create a new and unique animal that will survive a particular habitat. Students must think about the adaptations other animals in that area have and what their purpose is in survival. Compare animals and determine how they would survive in a different habitat (well, less well, not at all)	
Week 4	EQ: How are people able to fly?	Do experiment in reading about paper airplanes. Design own airplane and test in a safe testing zone. Compare designs.	Design a glider or a device that can get a figurine/lego man to float in the air. (Use things like coffee filters, paper, balloons, etc. More advanced .)
Week 5	EQ: How can others inspire us?	Create own poems using StoryBird Must sign up through Google and set up a class. Cool poetry challenges students can create.	Sled Challenge

Have an idea?

[Tell me!](#)

Wonders Unit 5

*Red indicates
grade level
science standard

Big Idea: What are ways people can take action?

Week	Essential Question	STEM Ideas for RWW	STEM Ideas for Lit Anth
Week 1	EQ: How do we get what we need?	Would You Survive Game Bartering ideas	Catapult Bartering. Give each group or person a different material than the others, do engineering design process but focus on bartering for what you truly want from others (1 group gets popsicle sticks, 1 rubber bands, 1 spoons, 1 tape, etc)
Week 2	EQ: How can we reuse what we already have?	Watch news report on Caine's Arcade. To see full video of arcade . Design your own game as a group out of recycled materials.	Example rubric for arcade game More inspiration .
Week 3	EQ: *How do teams work together? 3-ESS3-1	Fire Prevention and Analyzing Patterns (Good week to teach Earth and Human Activity standard)	Stop Disasters Game runs with Flash so may not work, choose wildfire challenge
Week 4	EQ: What do good citizens do?	Using brainpop as a starting point, find and research a famous female scientist. Create a StoryBird or a Padlet to showcase information. Or create a fake social media profile page for that person. Make a copy first then you can edit Instagram Facebook Time Magazine	
Week 5	EQ: What are different kinds of energy?	Create a solar oven to cook a 'smore. More ideas	Build a wind turbine if you have access to a small DC motor&voltmeter, if not then this one could work, or let kids design their own blades out of cardboard

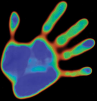
Have an idea?

[Tell me!](#)

Wonders Unit 6

*Red indicates
grade level
science standard

Big Idea: How do we decide what's important?

Week	Essential Question	STEM Ideas for RWW	STEM Ideas for Lit Anth
Week 1	EQ: How do you decide what's important?	Use a MaKey MaKey to let kids make own controller and Midas Touch Game	Create a glove that Midas could use so things don't turn into gold, Extension: Test on a Touch and See Square (ask your science teacher) 
Week 2	EQ: *How can weather affect us? 3-ESS3-1.	How do we stop floods? (This would take about a week to complete but is a big science standard for 3rd grade) Beat the Flood (can register for Free Account) or get materials here For a quick experiment idea, click here Windproof your home mystery science (if you have a license)	
Week 3	EQ: Why are goals important?	NASA team building exercise and lots more Create a moon habitat	
Week 4	EQ: *How can learning about animals help you respect them?(Life Science Standards could all be addressed this week) 3-LS1-1	Make 3D models of life cycles of animals discussed. Look for similarities and differences. May want to assign different ones to different groups in order to compare the stages.(all have birth, growth, reproduction, and death) Create and design a butterfly feeder	
Week 5	EQ: What makes you laugh?	Create own Idiom Posters	One side could be literal meaning, one side figurative. Use Google Drawings to create poster