Grit Makerspace Challenges

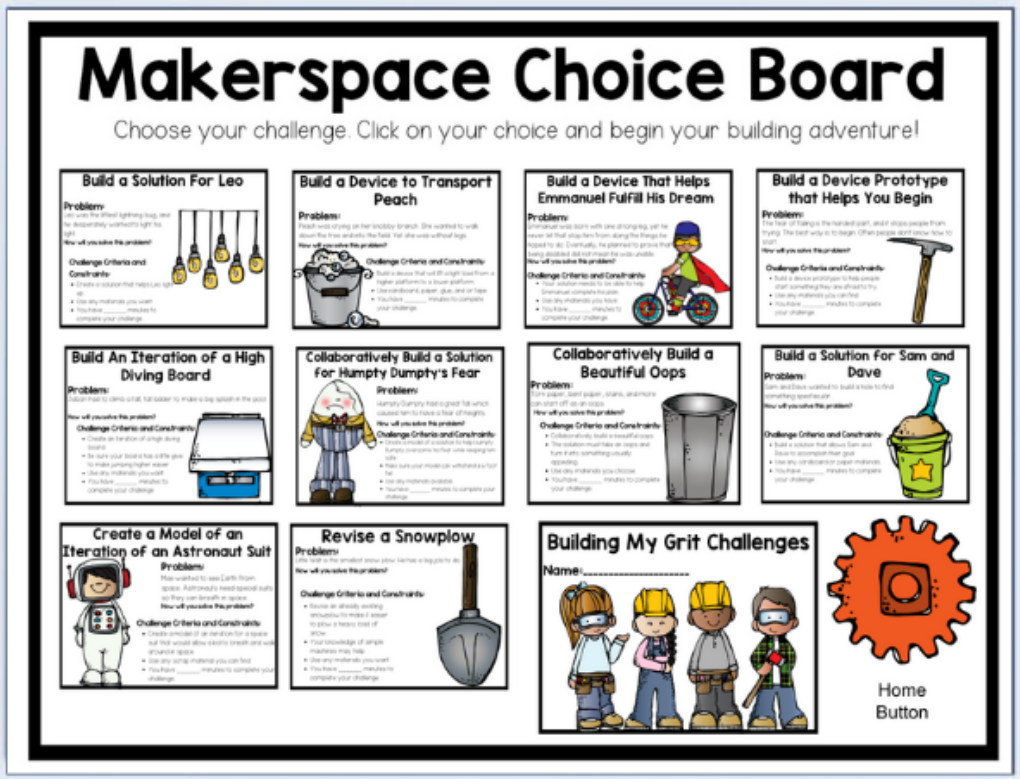
10 Story-Based Halloween Challenges

- Lesson Plans
- 10 Makerspace Challenges
- Digital Version Included
- Digital Choice Board
- Tied to 10 Stories Focusing on Grit

Keep Scrolling for a Closer Look!

Perfect for STEM or Makerspace

- Makerspace & STEM
- Encourages Reluctant Learners
- Centers or Stations
- Classrooms or Media Centers
- Hands-On, Outside-the-Box Thinkers
- Collaborative Work
- Problem Solving



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Complete Lesson Plans

One complete **Makerspace lesson plan** is done for teachers that can be used again and again with **10 different stories.** The lesson focuses on deeper comprehension, critical thinking, the engineering design process, and solving problems.

This Makerspace lesson plan can be used with any piece of literature.

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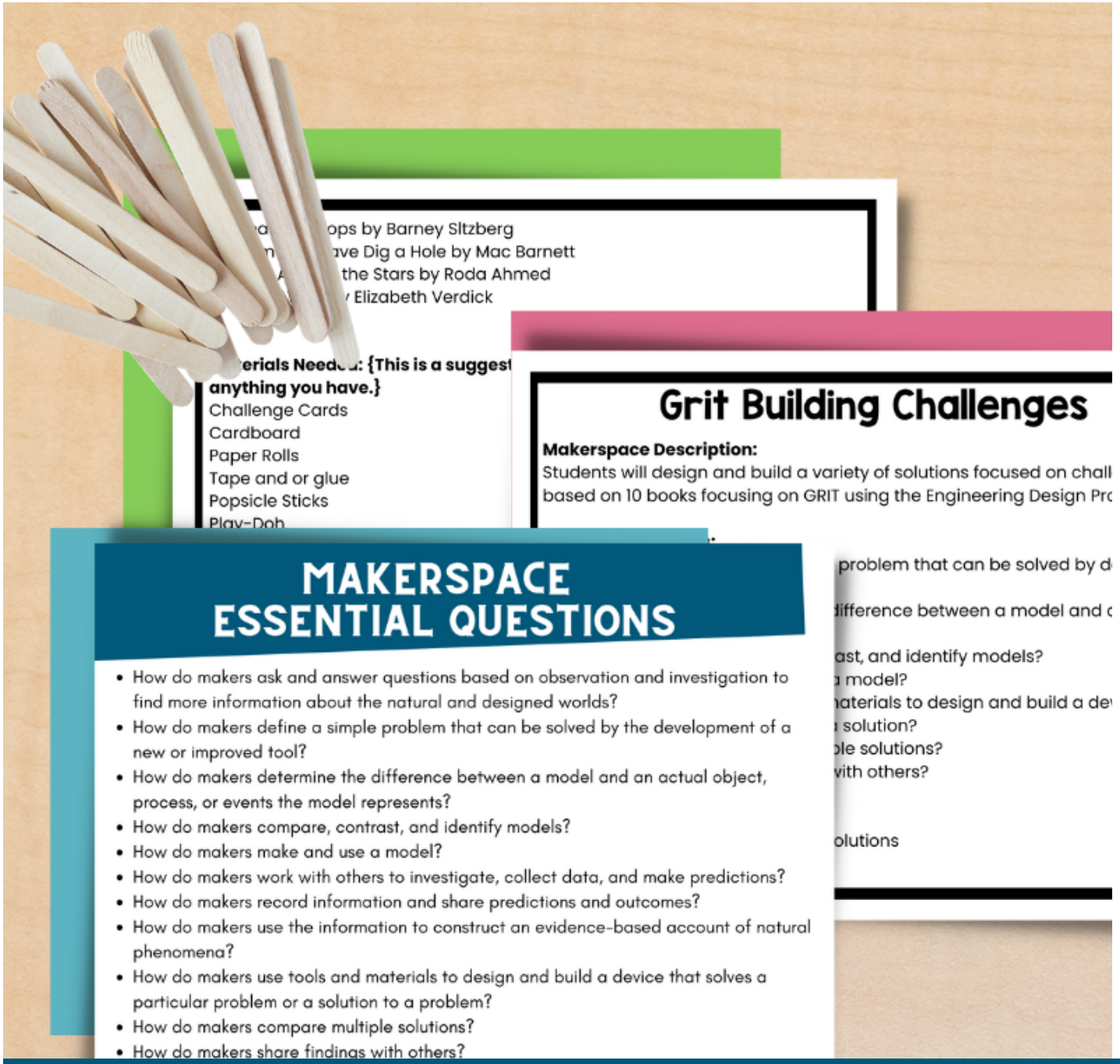

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Closer Look At Lesson Plans

- Objective
- Essential Questions
- Vocabulary
- Standards
- Book Titles
- Lesson

Grit Building Challenges

ge Lesson:

tart by telling students that they will be engineering a solution for a
em faced by the characters in the stories. They will be working in smal
s to develop their solution, create a model of their solution and share
lution with others. (Sharing could be done with a video, PowerPoint,
resentation depending upon time and available technology and
)

sential questions and possible vocabulary (this may be a review
terms)

hallenge card with students. Give kids a few minutes to make a
tions they have about building a solution. {This may take some
rmulating questions can be difficult for some students. Allow
quietly on their own for a minute or two and then open it up to
g or team sharing to encourage conversation and stimulate
ecord a question in Makerspace Challenge Notebook.

nts to create a construction plan.

nts to construct the solution to the problem.

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10 Open-Ended Challenges

Each challenge is left open-ended and focused on solving a problem from the story allowing students to problem-solve, work collaboratively, and inspire creativity.

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Challenge Samples

Create a Mo... teration of an As...

Proble...

Mae wan...

Build a Sol...

Problem:

Leo was the littlest lightning bug, ... he desperately wanted to light h...

...his problem?

Collaboratively Build a Beautiful Oops

Problem:

Torn paper, bent paper, stains, and ... can start off as an oops.

How will you solve t...

Ch...

Build An Iteration of Diving Board

Problem:

Jabari had to climb a tall, tall ladder to make a big splo...

How will you solve this problem?

Challenge Criteri...

...ld a Solution for Sam and Dave

...em:

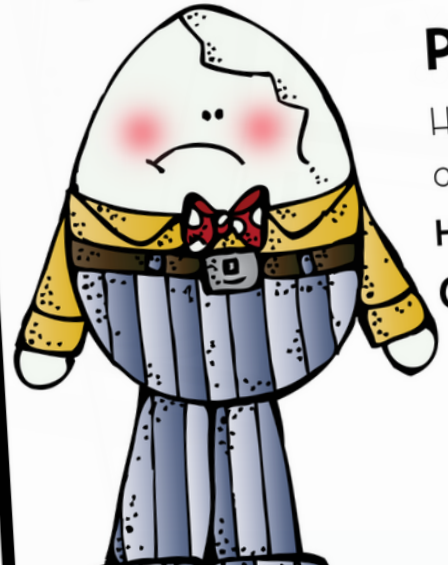
...d Dave wanted to build a hole to find ...ning spectacular.

...ill you solve this problem?

...llenge Criteria and Constraints:

- ...Build a solution that allows Sam and ... Dave to accomplish their goal.
- ...Use any cardboard or paper materials.
- ... minutes to complete

Collaboratively Build a Solution for Humpty Dumpty's Fear



Problem:

Humpty Dumpty had a great fall which caused him to have a fear of heights.

How will you solve this problem?

Challenge Criteria and Constraints:

- Create a model of a solution to help Humpty Dumpty overcome his fear while keeping him safe.
- Make sure ... fall.
- Use any ...

More

A Closer Look at Challenges

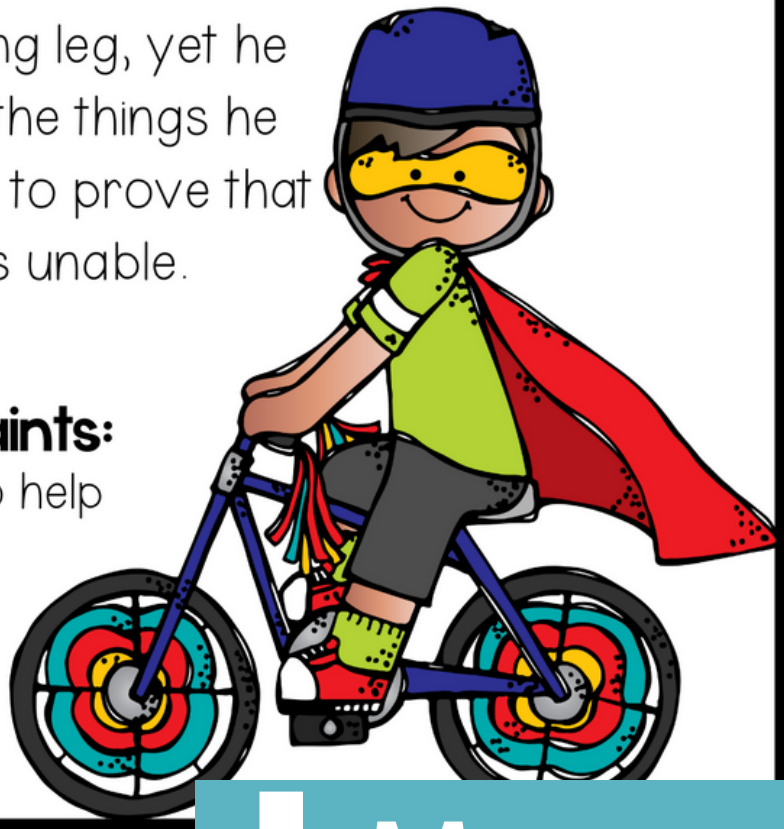
- Problem presented
- Criteria
- Constraints
- Based on Real Literature

Build a Device That Helps Emmanuel Fulfill His Dream

Problem:

Emmanuel was born with one strong leg, yet he never let that stop him from doing the things he hoped to do. Eventually, he planned to prove that being disabled did not mean he was unable.

How will you solve this problem?



Challenge Criteria and Constraints:

- Your solution needs to be able to help Emmanuel complete his plan.
- Use any materials you have.
- You have _____ minutes to complete your challenge.

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Books Used

Books Referenced for the Challenges:

- Leo the Lightning Bug by Eric Drachman
- Peach and Blue by Sarah S. Kilborne
- Emmanuel's Dream: The True Story of Emmanuel Ofosu Yeboah by Laurie Ann Thompson
- Trying by Kobi Yamada
- Jabari Jumps by Gaia Cornwall
- After the Fall by Dan Santqt
- Beautiful Oops by Barney Sltzberg
- Sam and Dave Dig a Hole by Mac Barnett
- Mae Among the Stars by Roda Ahmed
- Small Walt by Elizabeth Verdick

Maker Stations or Centers

Maker Stations focus on design thinking and allow students to work through the Engineering Design Process as well as focus on **building a classroom community** through creativity, collaboration, critical thinking, community, and curiosity **without taking up a ton of space.**

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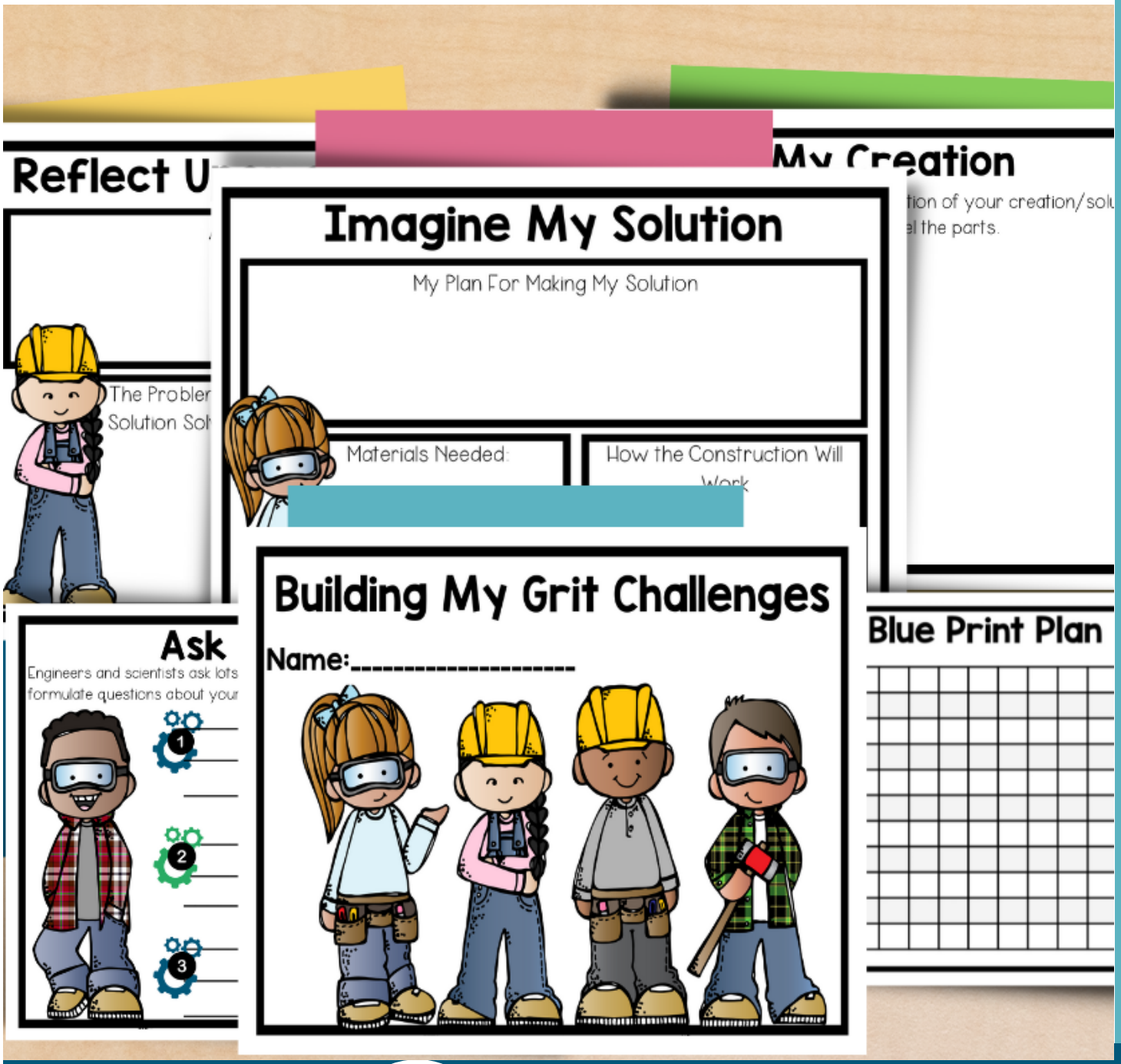
Students Work Through Engineering Design Process

- Ask Questions
- Imagine a Solution
- Plan Solution
- Create Solution
- Test Solution
- Revise
- Reflect



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A Closer Look at EDP

- Ask Questions
- Imagine Solution
- Plan
- Build and Create
- Test/Revise
- Reflect and Share

Imagine My Solution

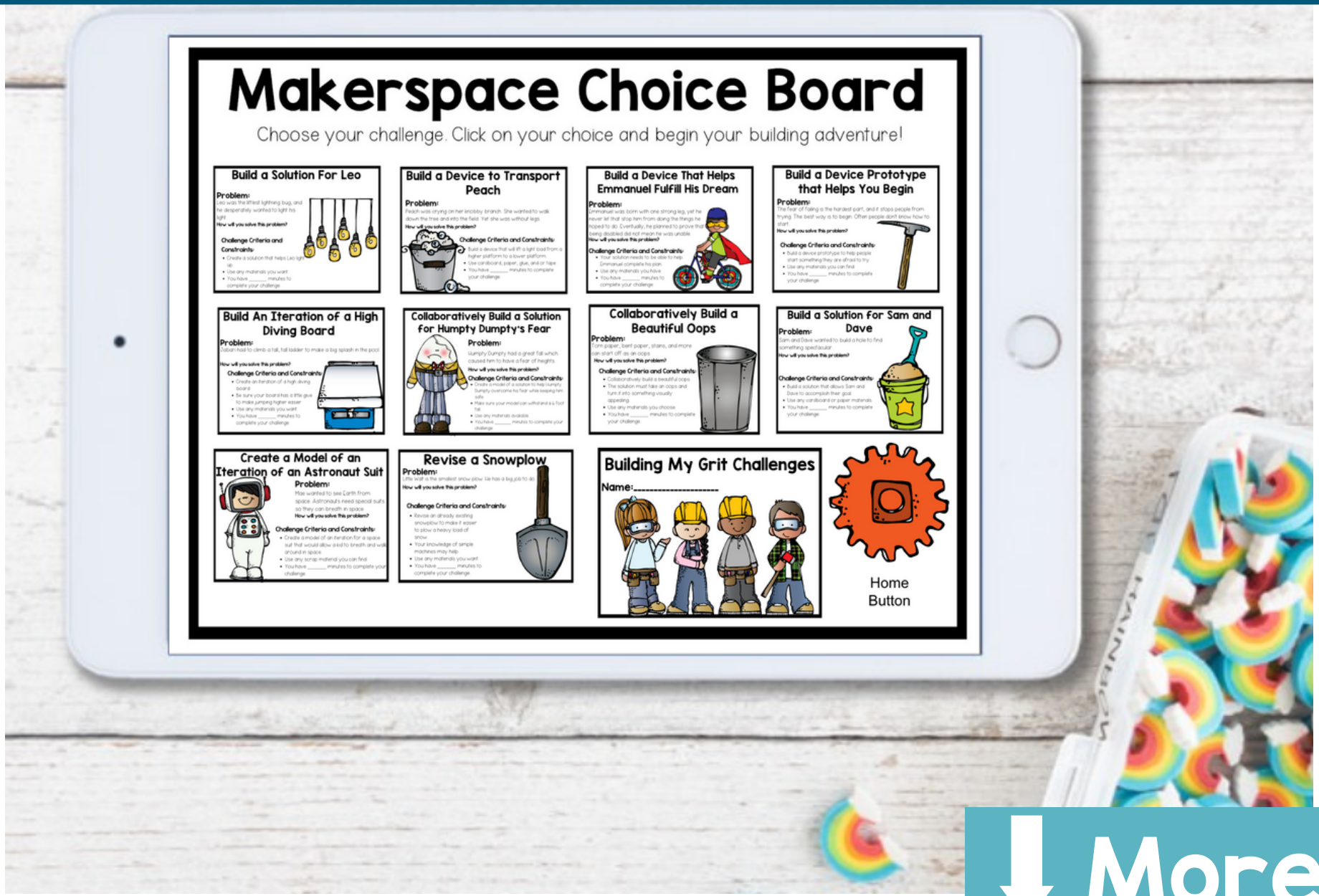
My Plan For Making My Solution

Materials Needed:

How the Construction Will Work

More

Digital Version Included With Choice Board



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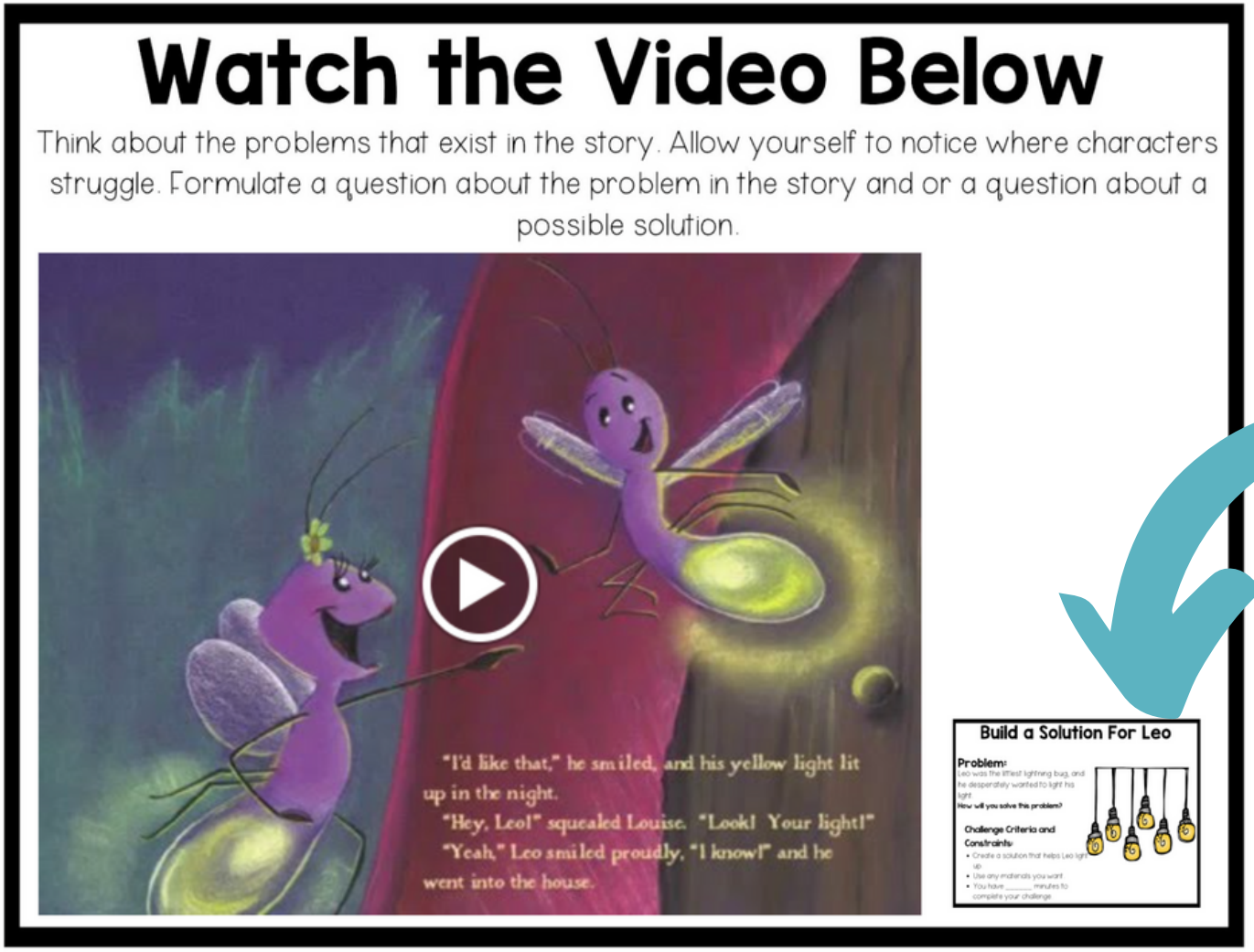
Each Choice Takes Students to Read Aloud On YouTube



Students click the challenge to go to the challenge slide.

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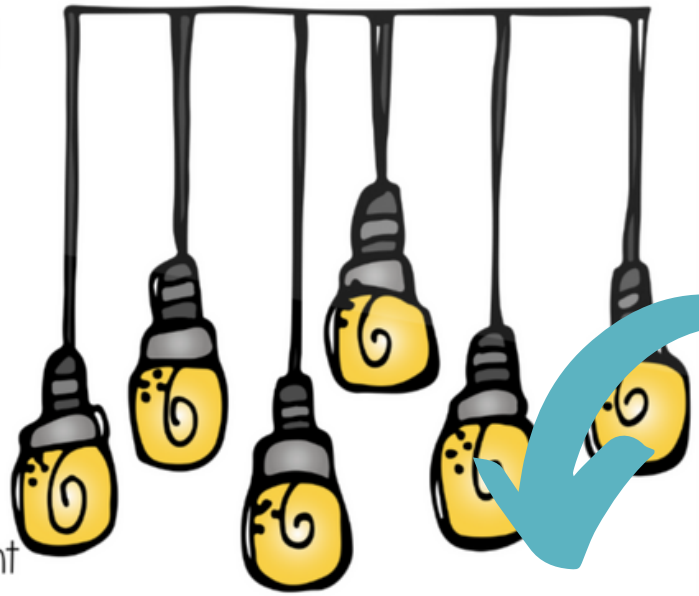
Solution Slide

Build a Solution For Leo

Problem:

Leo was the littlest lightning bug, and he desperately wanted to light his light.

How will you solve this problem?



Challenge Criteria and Constraints:

- Create a solution that helps Leo light up.
- Use any materials you want.
- You have _____ minutes to complete your challenge.

Students click the bear to go back Home.

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Let me know if you have any questions.