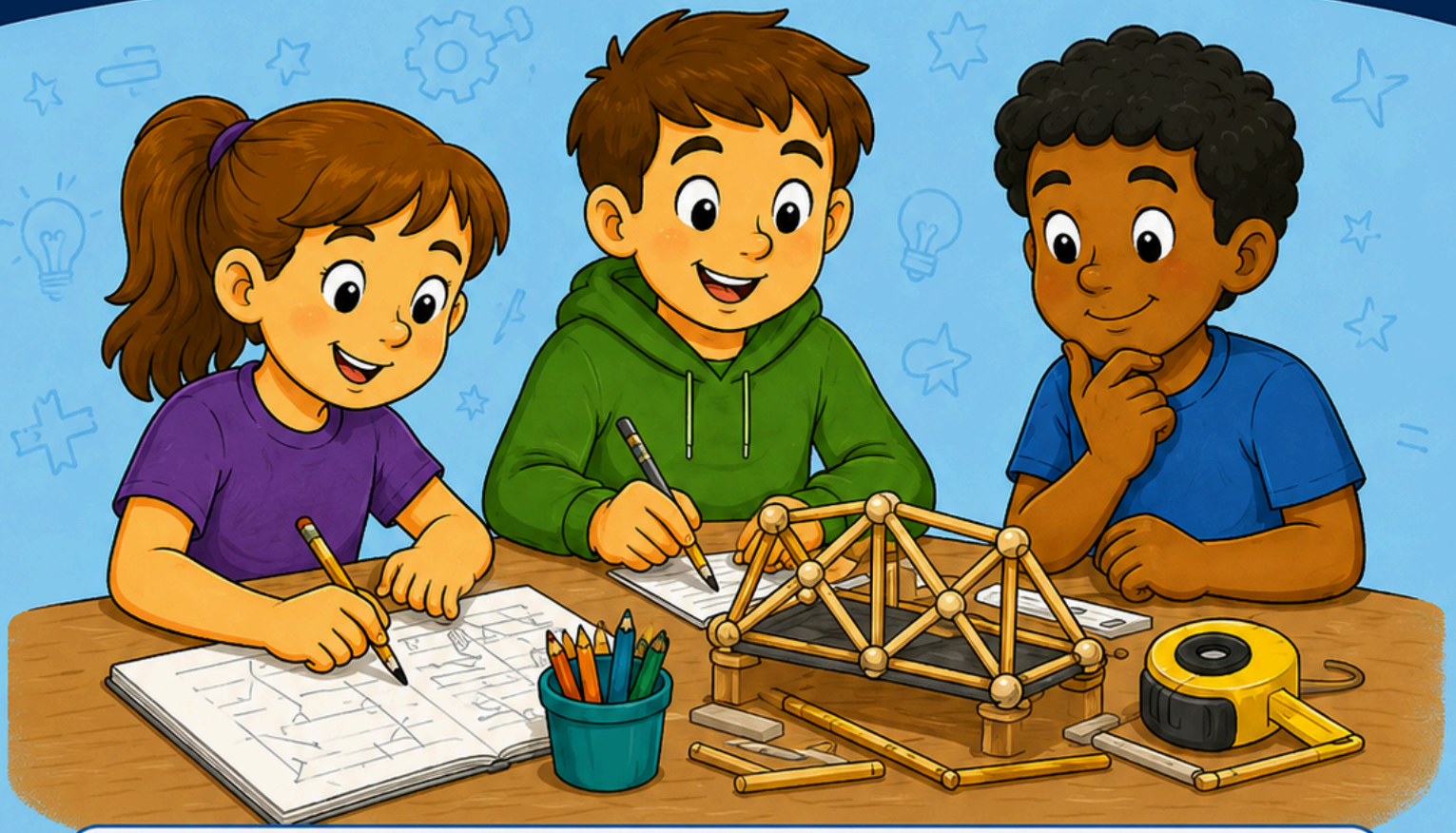
STEM DESIGN WORKBOOK

BOOK 1 OF 3

Planning pages for classroom design challenges.



IMAGINE
Think of ideas

PLAN
Make a plan

CREATE
Build your design

IMPROVE
Test and make it better

DESIGN • BUILD • TEST • IMPROVE

Name: _____

1 PLAN YOUR DESIGN

Step 1: Understand the Challenge

What is the problem you are trying to solve?

_____

_____

_____



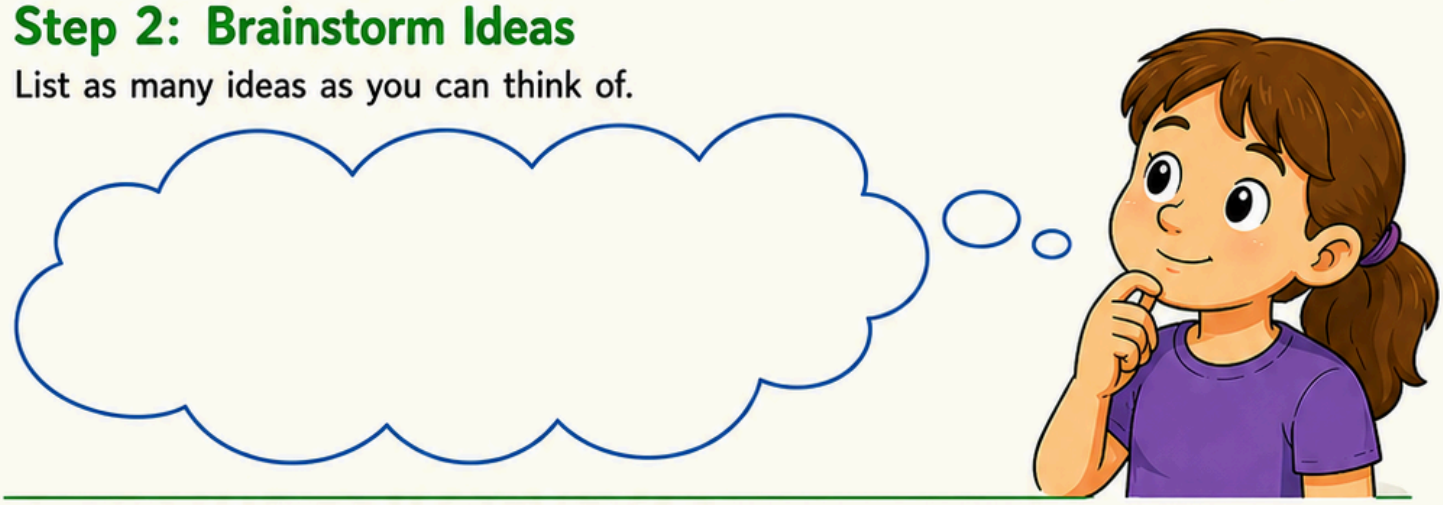
What are the rules or limits?

- _____
- _____
- _____



Step 2: Brainstorm Ideas

List as many ideas as you can think of.



Step 3: Choose Your Best Idea

Draw a picture of your best idea.

Why is this your best idea?

_____

_____

_____

_____

Great ideas start with a plan!

2 BUILD & TEST

Step 1: Gather Materials

List the materials you will use.

- _____
- _____
- _____
- _____
- _____



Step 2: Build Your Design

Draw or describe what you built.



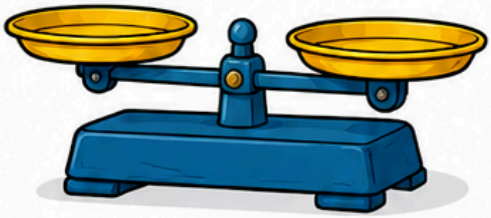
Step 3: Test Your Design

How will you test it?

_____

_____

_____







Test it out and see how it works!

3 REFLECT & IMPROVE

Step 1: What Worked Well?

What are the strengths of your design?



Step 2: What Could Be Better?

What problems did you find?



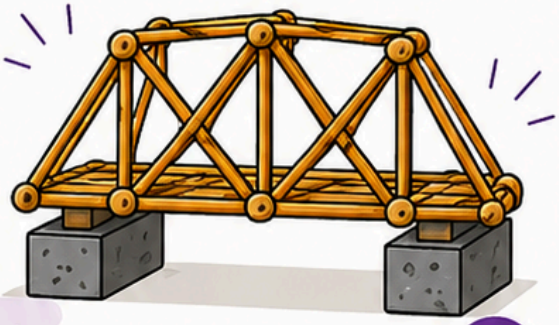
Step 3: Improve Your Design

What changes will you make next time?



Step 4: Final Sketch

Draw your improved design.



Every challenge helps you learn and grow!