

STEM FOUNDATIONS

KINDERGARTEN

ACTIVITY GUIDE



KIDSPARK
EDUCATION

Make Things Strong

SLIDE COMPANION

I CAN...

- make my bridge strong by adding blocks and girders.

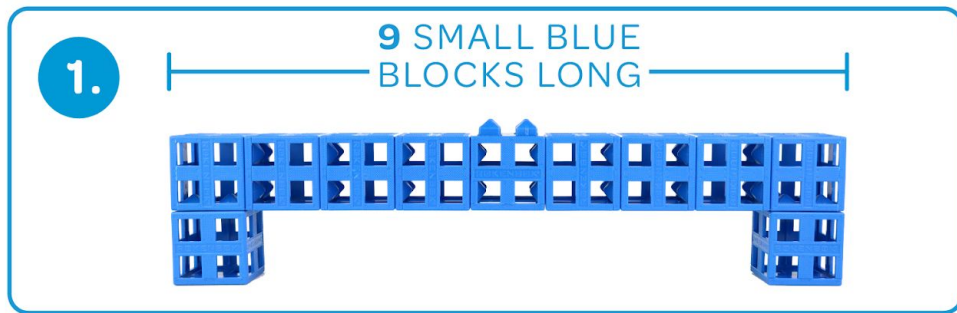


STEP 01: LEARN AND EXPLORE



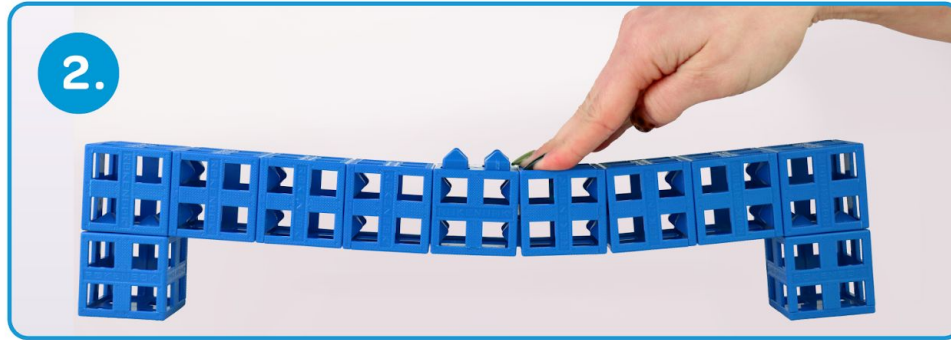
Strength means how strong something is. If something has strength, it can hold or carry weight without breaking.

STEP 01: LEARN AND EXPLORE BUILD A BRIDGE



Use **11 Small Blue Blocks** to build a bridge like the one in the picture.

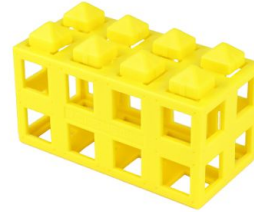
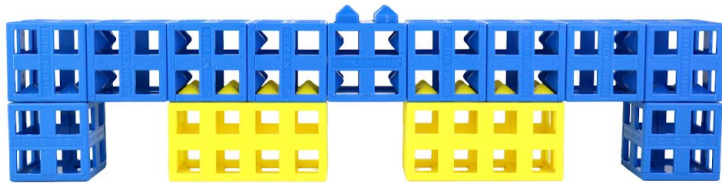
STEP 01: LEARN AND EXPLORE BUILD A BRIDGE



Press down gently to **test** the bridge.
If it comes apart, it's not strong enough!

STEP 01: LEARN AND EXPLORE MAKE YOUR BRIDGE STRONG

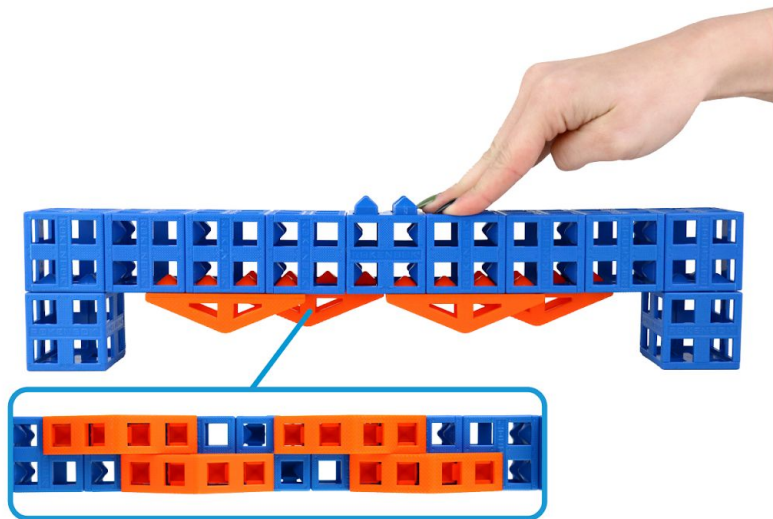
Here are two ways you can strengthen your bridge:



ADD BLOCKS

Add **2 Large Yellow Blocks** underneath to make the bridge stronger.

STEP 01: LEARN AND EXPLORE **MAKE YOUR BRIDGE STRONG**



ADD GIRDERS

Add 4 **girders** along the bottom of your bridge.

STEP 02: INVENT

Your task:

**Use at least 13 Small Blue Blocks to design your bridge.
Press gently to test—does it stay strong?**



STEP 02: INVENT

We agree that...



Inventors share.



Inventors listen.



Inventors build
together.

STEP 02: INVENT

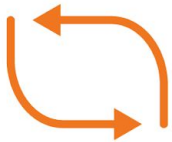
How to Talk to Others



Sharing an Idea:
"I have an idea."



Asking a Partner:
"What do you think?"



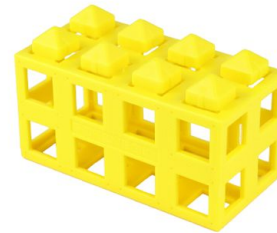
Taking Turns:
"Your turn, then my turn."



If You Don't Agree:
"Let's try something else!"

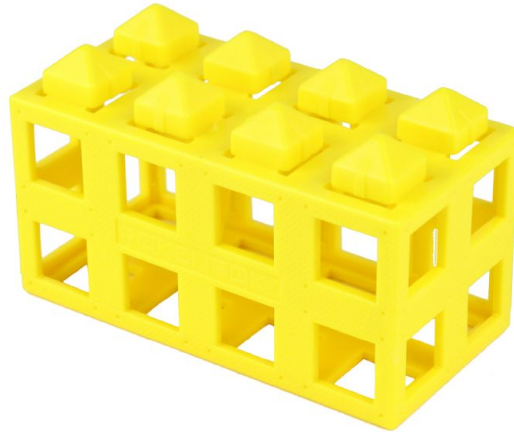
STEP 02: INVENT

Remember to place **blocks** and **girders** in weak spots to help make your bridge strong!



STEP 02: INVENT

Option 1: Add Blocks



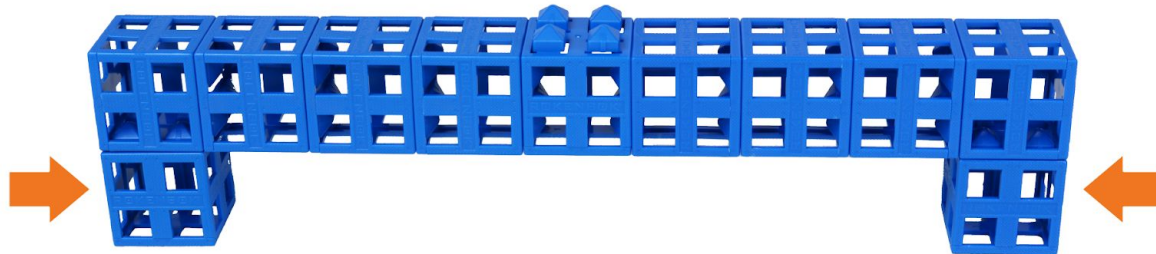
STEP 02: INVENT

Option 1: How to Build the Example Bridge

1.



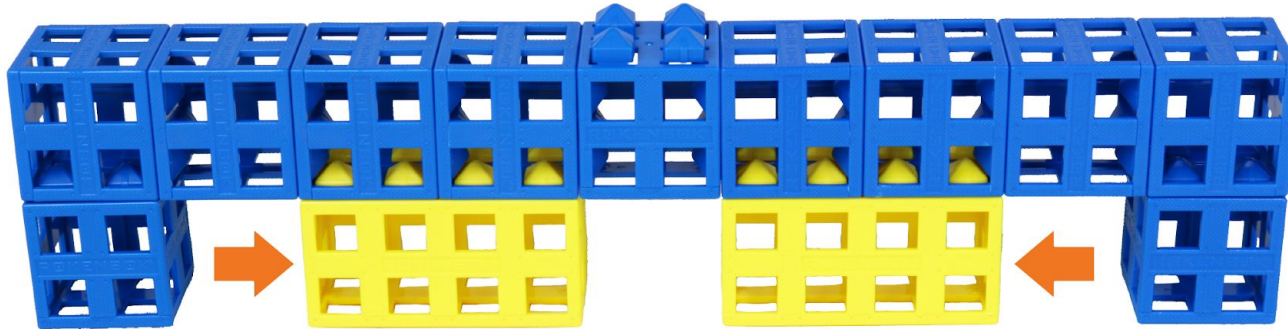
2.



STEP 02: INVENT

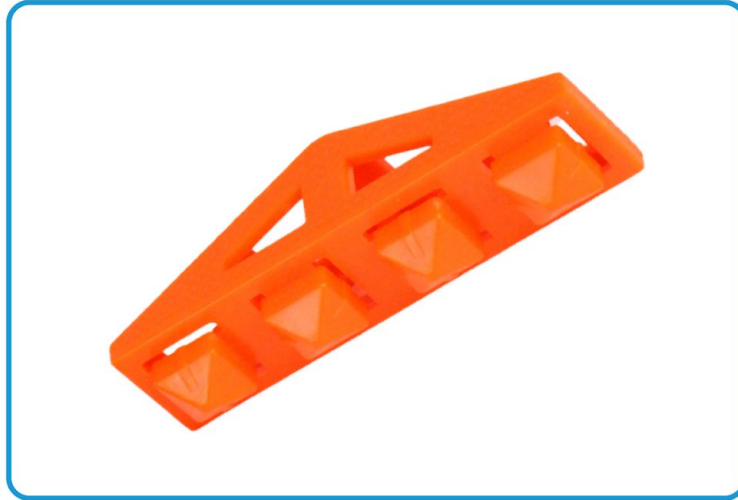
Option 1: How to Build the Example Bridge

3.



STEP 02: INVENT

Option 2: Add Girders



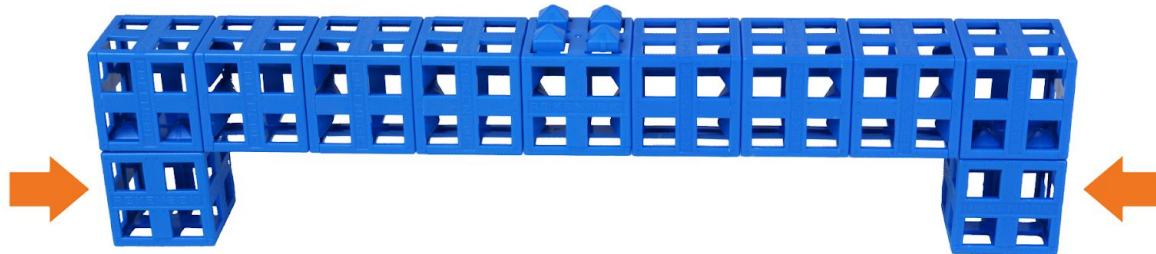
STEP 02: INVENT

Option 2: How to Build the Example Bridge

1.



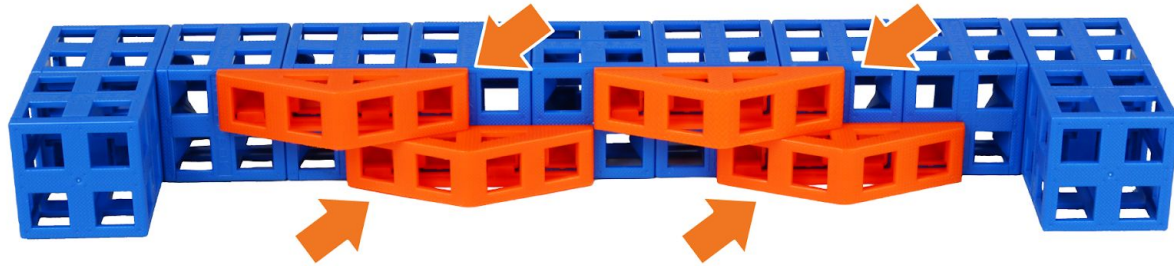
2.



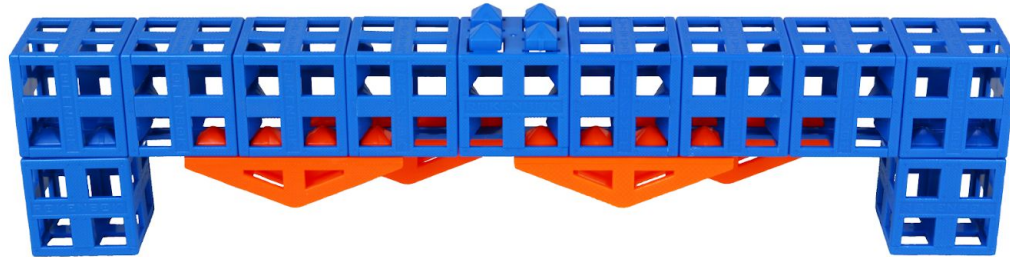
STEP 02: INVENT

Option 2: How to Build the Example Bridge

3.

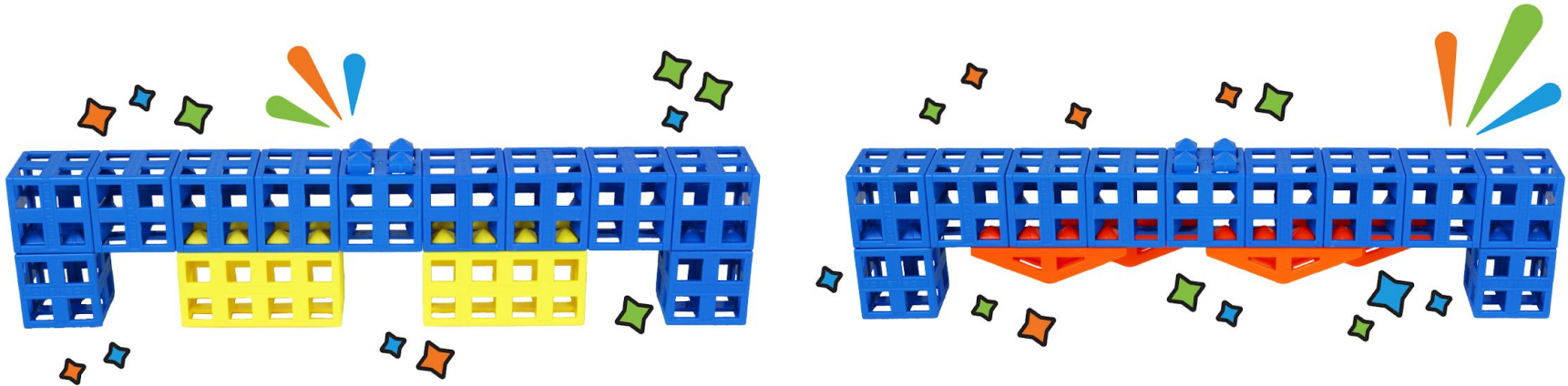


4.

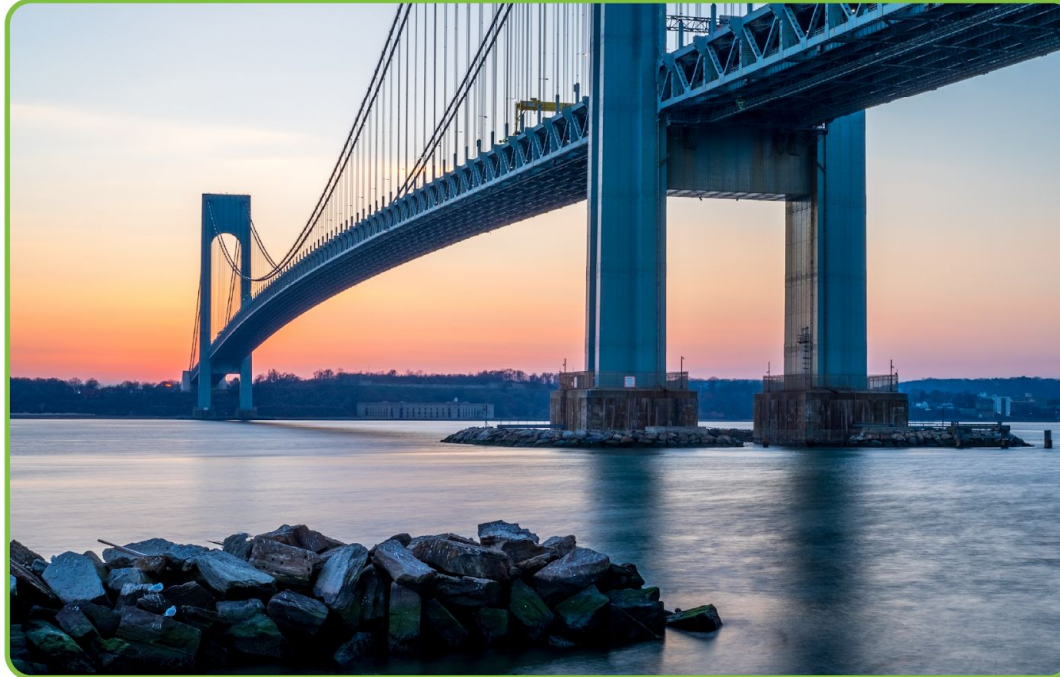


STEP 02: INVENT

How to Build the Example Bridge



REAL-WORLD CONNECTION



CLOSURE

Let's
Share!





REFLECTION QUESTIONS

- What did you do to make your design stronger? What happened when you tested it?
- How did you know your bridge was strong?
- Where did you add girders or blocks to support your bridge, and why did you choose those spots?
- How is your bridge like or different from real bridges you've seen?
- If you designed something new, what would you do to make it strong?