STEM FOUNDATIONS

Make Things Strong

KINDERGARTEN | ACTIVITY GUIDE

KIDSPARK EDUCATION

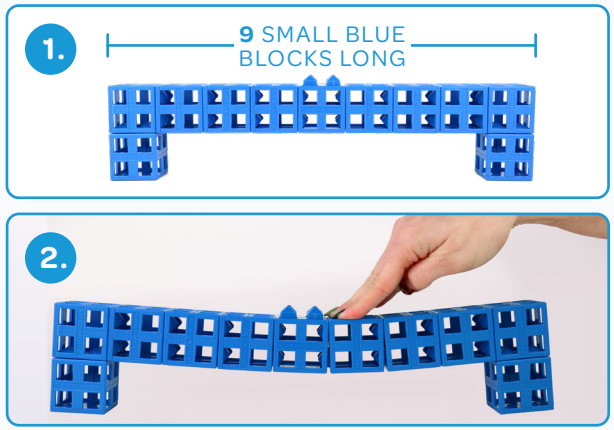
STEP 01: LEARN & EXPLORE

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

Now let's build a bridge and test how strong it is!

Build a Bridge

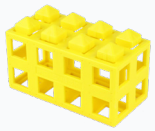
1. Use **11 Small Blue Blocks** to build a bridge like the one in the picture.



2. Press down gently to **test** the bridge. If it comes apart, it's not strong enough!
3. Read on to learn how to add strength to your bridge!

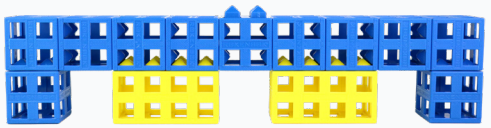
Make Your Bridge Strong

Here are two ways you can strengthen your bridge:



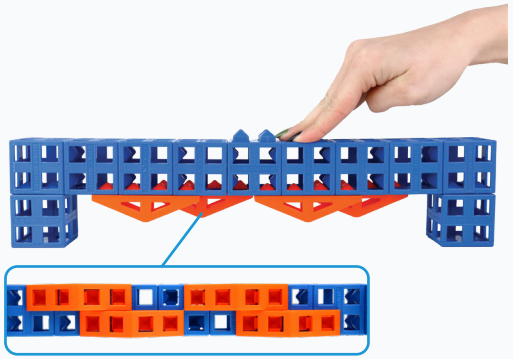
ADD BLOCKS

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



ADD GIRDERS

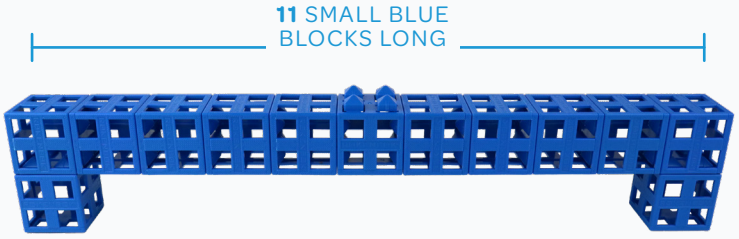
Add 4 **girders** along the bottom of your bridge.



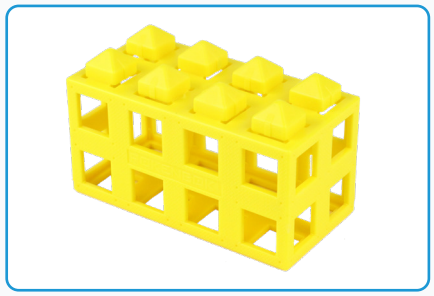
STEP 02: INVENT

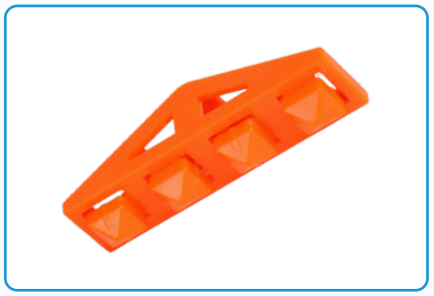
Now it's your turn to design your own strong bridge!

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



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





Real-World Connection

Bridges must be strong to hold people, cars, and trucks. Engineers add supports under bridges to help hold them up. Supports spread out the weight so the bridge doesn't bend or break. Before anyone uses a bridge, engineers test it to make sure it is safe and strong.

Reflection Questions

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