



Science Virtual Learning

6th Grade Science

Bridges

April 13, 2020



6th Grade Science/Course
Lesson: April 13, 2020

Objective/Learning Target:

- Students will identify the types of bridges and how force is used to support the bridges load.

Essential Question:

- How is science important in non-science jobs?



Warm-Up

Think About:

- When traveling in a car or bus, have you ever noticed how many bridges you cross to get to where you are going?
- What are the different types of bridges that you have seen?

Write:

- List some characteristics you have noticed about bridges.



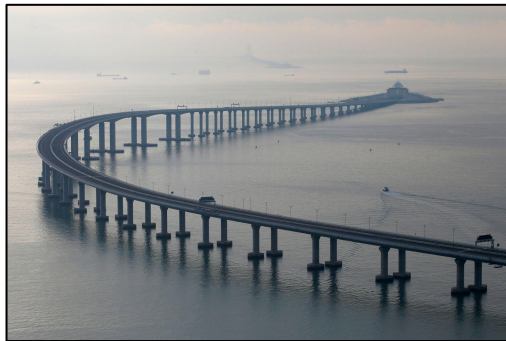
Warm-Up **Answer**

Write:

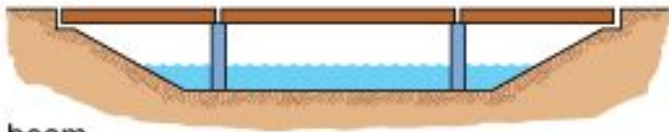
- List some characteristics you have noticed about bridges.

Possible Answers:

- They help us cross things we can't easily cross (streams, lakes, valleys, canyons, other roads, between buildings).
- They are different lengths
- They have different shapes (arches, triangles)
- They have different designs
- They are made out of different materials (rope, wood, concrete, steel)



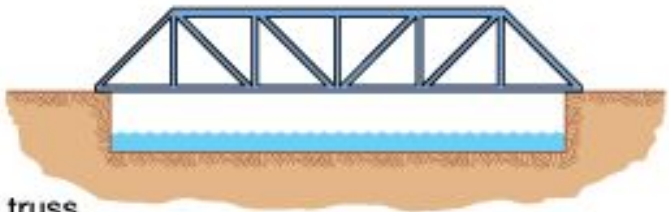
Types of Bridges



beam



arch



truss



suspension



cantilever



cable-stay

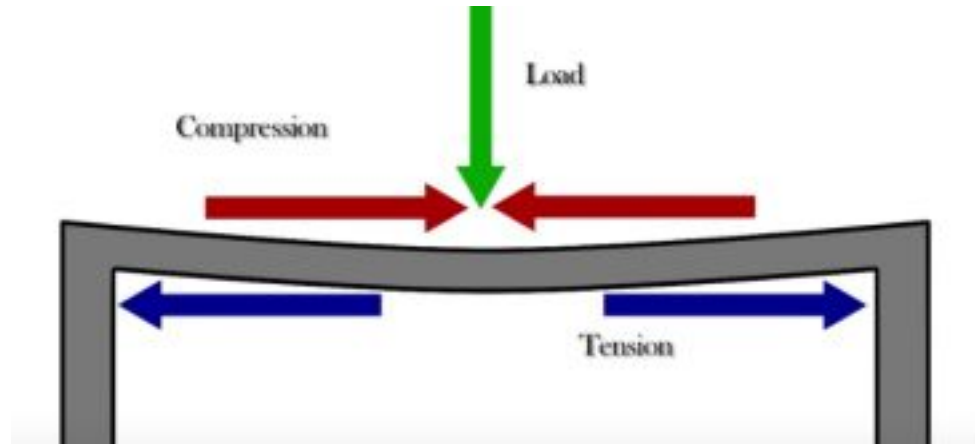
Key Terms:

force: a push or a pull

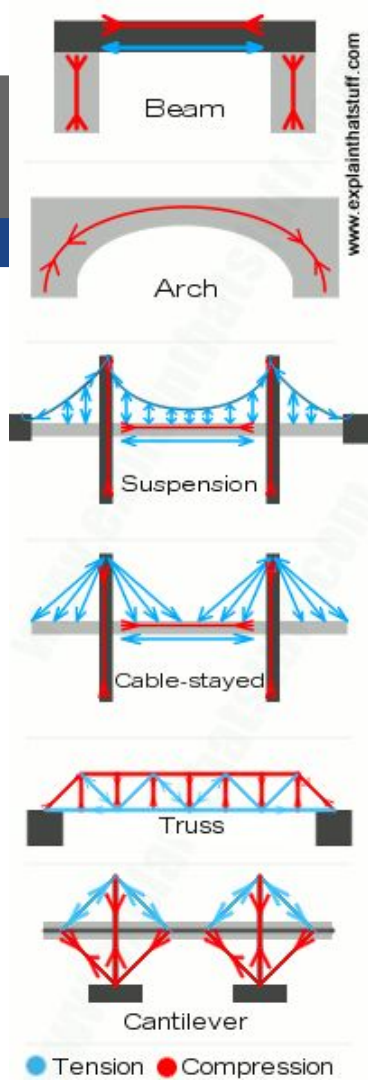
tension: a pulling force

compression: a pushing force

redistribute: redirect to a different place

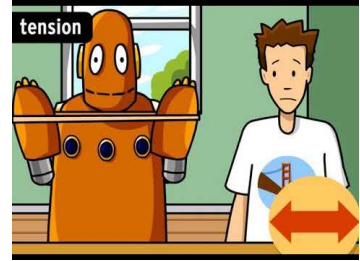


- Objects apply two forces to bridges: *tension* and *compression*
- The designs of bridges all do the same thing: *redistribute the forces on the bridge to a wider area so they don't collapse.*
- The different designs just redistribute the forces in different ways.



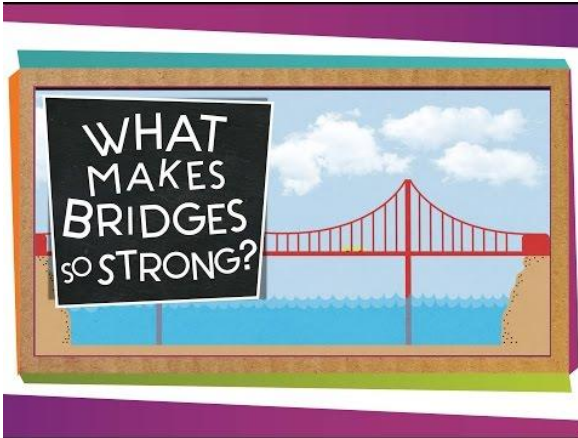
Practice 1

1. Watch the Brain Pop [video](#).
2. Then take the [quiz](#). Write your answer down on a piece of paper.
3. Check you answers using the [answer key](#).
4. How did you do?



Practice 2

- Watch the video using the first link then complete the bridge challenge in the second link:



[Sci Show: Bridges](#)

[Bridge Building Challenge](#)



Extra Practice

[NOVA: Build A Bridge](#)

[Research A Bridge Report](#)