



## SfS Away from the Classroom

### E03: (Re)Building a Bridge (Recommended for Grades 3-8)

Please use the following resources to learn about the engineering process and bridges!

**Watch this Video:** <https://www.youtube.com/watch?v=fxJWin195kU> and then answer these questions:

- What is an engineer?
- What's the first step of the engineering process?
- What does an engineer do if their first idea doesn't work?

#### **Activity:**

You will need:

<ul style="list-style-type: none"><li>• 1 sheet of paper</li><li>• 2 books</li></ul>	<ul style="list-style-type: none"><li>• Markers</li><li>• 2 blocks (or 2 objects that are the same height)</li></ul>	<ul style="list-style-type: none"><li>• Several coins (or other small weights)</li></ul>
--	--	--

Watch this video and follow the instructions to make your own sturdy paper bridge!

<https://www.youtube.com/watch?v=XfQYqvC5phk>

1. After testing the bridge designs in the video, try out some of your own!
2. How many coins can a single sheet of paper support before collapsing?
3. What designs work best?

#### **Make observations & use Claims, Evidence, and Reasoning!**

1. **Claim:** Engineers and inventors often fail many times before they succeed.
  - **Evidence:**
  
  - **Reasoning:**
2. **Claim:** Modern devices (such as telephones) have gone through the engineering process many times.
  - **Evidence:**
  
  - **Reasoning:**