Engineering – Popsicle Stick Bridge

Definition: Engineers solve problems. They use chemistry, physics, and math to figure out the best way to create new things or to improve a product.

Bridges are vitally important to humans, historically and contemporarily! They are also an important feature on golf courses. Think about the golf courses you have been to…have you had to cross any bridges? One local golf course, Rouge Park, was designed and is played along the Rouge River. Many small bridges were built to accommodate golfing through this environment. Just on this small area of land there are numerous bridges. Think about the total number of bridges that must be used in the Detroit area overall! #mindblown

How do bridges work? … Check out this video!

Activity: Build your own bridge!

- Using popsicle sticks and glue, design and construct your own bridge!
- Your goal is to make it as structurally strong and sound as possible.
- There are a couple designs you should consider given the materials you have:
    - Truss bridge
    - Beam bridge
    - Which design is structurally stronger?

- Build your bridge and suspend it between two objects like chairs, two books, or two tables (the best way!)
- How are we going to measure how strong the bridge is?
  IMPORTANT – have an adult help you with this step to ensure you and others are safe!
    - A good way to start is with a few packs of golf balls
    - If the bridge is strong enough, you can try stacking books or other heavy objects.
- Conclusion:
    - What design elements would you change if you were to build another bridge?
    - Which would you keep?
    - We would love to see a picture of your bridge in action. How did yours hold up?