



SCIENCE CAREER
ADVENTURES

Desmond the Structural Engineer: Building Bridges

Meet Desmond!



Hi guys! My name is Desmond, and I am a structural engineer. A structural engineer is someone who designs buildings, like schools or stores. A structural engineer also designs structures, like a bridge.



Tools I Use

Tablet



I use my tablet to draw what buildings and structures will look like.

Headlamp



I wear a headlamp when I go to construction sites. A construction site is where buildings are built. Sometimes, I work in the dark. My headlamp has a flashlight on it to help me see!

Model



A model is a smaller version of the building or structure. A model shows what a building or structure will look like once it is built.

Building Materials

Every building and structure is made with materials. For example, houses are made of bricks, stones, or wood.

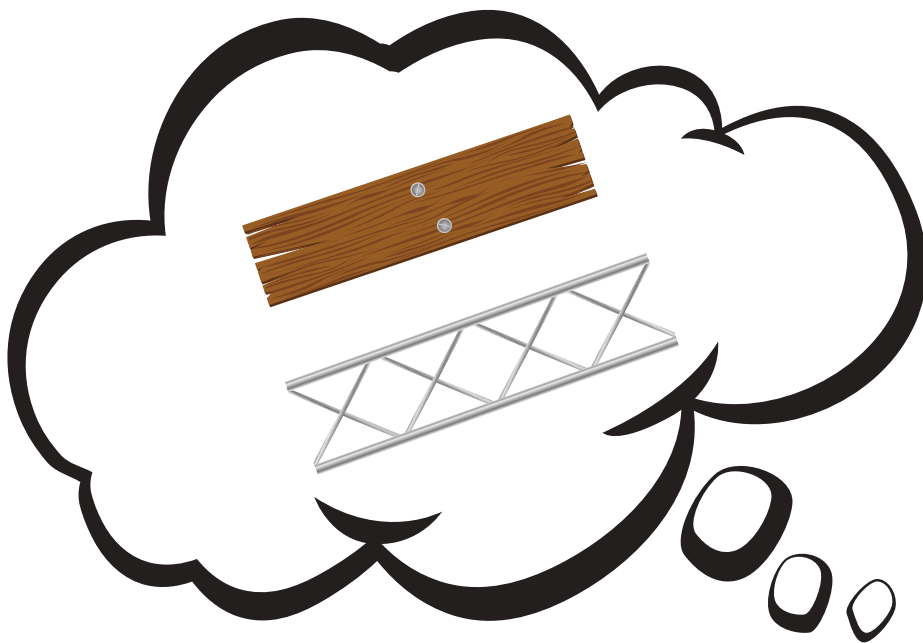


Tall buildings are usually made of steel. Steel is a very strong material



What I Am Working On

Today, I am deciding which material I should use to build a bridge. A lot of cars will drive across the bridge every day. This means the bridge needs to be strong and able to hold a lot of weight. I need to decide which materials would be best to build the bridge!

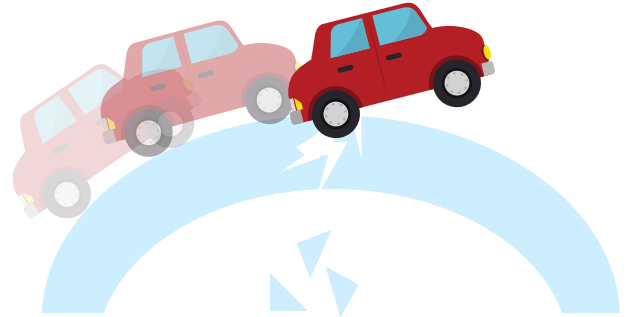


What I Am Working On

I am going to build 3 model bridges using different materials. Then, I will move a model car across each bridge. That way, I can see which bridge is the strongest and can hold the car!

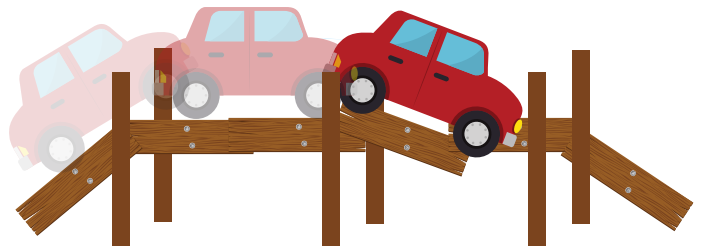
Glass Bridge ❌

First, I build a bridge with glass. I move the car across the bridge, and the glass shatters. Glass won't be strong or safe enough to hold cars on the real bridge!



Wooden Bridge ❌

Next, I build a bridge with wood. I move the car across the bridge. The wood breaks! It won't be strong or safe enough for the cars, either.



Stone Bridge ✅

Finally, I build a bridge with stone. I run the model car across the bridge. It makes it across! The stone will be strong and safe enough to hold the cars as they cross the real bridge. Stone is the perfect material for this structure.



Completing My Project

I learned that stone was the best building material for my bridge. I know that my bridge will be safe for people and cars to cross.

