Engineering the Winter Olympics

Many engineers work in sports technology. They design and build new and improved sports equipment.

In the Winter Olympics engineering is used in, for example, figure skating, bobsleigh and snowboarding.

Image : BLazarus via Pixabay

Figure skating

Skates are made out of tempered steel and chrome. These materials reduce the metabolic cost - the energy used by the human body to move.

Image: 134213 via Pixabay

Bobsleigh

The track is 1659m long has a 117m vertical drop and 16 curves. Engineers work on the construction and design of the track. They have to think how to build it so it is challenging but not too dangerous.

Image : dmncwndrlch via pixabay

Snowboarding

Snowboard designers look at gravity, momentum, acceleration and inertia to get snowboarders down the slopes quickly.

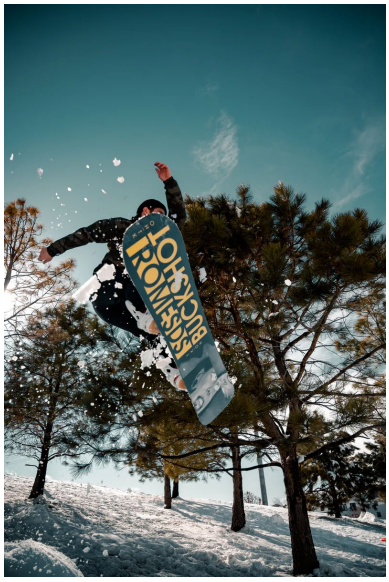

Image : Colin Lloyd via Unsplash

Watch this video from STEM Learning, about a snowboard designer.

Science Hunters | Royal Academy of Engineering | Ingenious | UWE Bristol University of the West of England

Optional: Can you design a model of a bobsleigh course? Engineers have to think about how gravity, momentum and acceleration will affect the bobsleigh athletes going down the track.

Can you design a course that is fast, but safe for the people going down it?

Minecraft challenge

For your Minecraft creation:

- Build in an ice plains biome.
- Make a model of any of the sports equipment you have looked at in the session.
- Use Minecarts and track to create a bobsleigh course with vertical drops and curves.

Image : 12019 via pixabay

Not an official Minecraft resource. This project was supported by the Royal Academy of Engineering under the *Ingenious Awards* scheme. For educational use only.

Science Hunters | Royal Academy of Engineering | Ingenious | UWE Bristol University of the West of England