ICEBREAKER

ENGINEERING OBJECTS IN YOUR HOUSE

In this virtual icebreaker participants discuss what kind of engineering goes into different everyday objects.

Time needed

15-20 minutes

Materials

You may need:

- List of descriptions for objects found around the house
- Image that helps participants know what kinds of problems different engineers solve. See page 3.

Planning ahead

If you have a large group, you can do this activity in breakout rooms with groups of 4. You can shuffle people between groups with each different kind of object to give people more opportunities to get to know others in the group.

Use object descriptions that are sufficiently broad so that everyone should be able to find something that matches. Here are some possible descriptions:

- Something that rolls
- Something magnetic
- Something warm
- Something cold
- Something flat (but not paper)
- Something that is only one color
- Something that produces music
- Something recyclable
- Something that floats
- Something that produces light

As the host, you may want to have an object on hand for each description that you might use.

Steps

1. Read out a description, for example, “something that rolls”.
2. Have everyone compete to find an object in their house that resembles that description. Whoever brings an object back first wins the round.
3. To avoid competition between participants, set a timer for 45 seconds and play a loud, unusual sound when the time is up.
4. Have the group discuss what types of engineering went into each object. If working in a large group, you may discuss only two or three objects in each round.

Use the image attached for a reference on the different types of engineering.

This icebreaker was designed by 2020 EngineerGirl Ambassadors Diana DiProfio, Emerson Utgaard, and Faye Liu

What Kind of Problems Do Engineers Solve?

Civil Engineers solve problems with infrastructure and large structures.

- Bridges
- Buildings
- Highways

Electrical Engineers solve power generation/distribution problems.

- Electrical equipment
- Communications systems
- Power stations

Mechanical Engineers solve problems with systems in motion.

- Engines
- Turbines
- Robots

Biomedical Engineers solve clinical/ healthcare problems.

- Medical devices
- Surgical implants
- Prosthetics

Aerospace Engineers solve aircraft and spacecraft problems.

- Aviation systems
- Defense systems
- Rockets and fuel systems

Chemical Engineers solve problems with chemicals and materials.

- Plastics and polymers
- Medicines and food
- Petrochemicals

Environmental Engineers solve pollution and ecological problems.

- Systems that promote sustainability
- Waste disposal systems
- Pollution control mechanisms