Museum of Science.

EiE | Families and STEM Events

Engineering on the Go: Technology Categories

2+ PLAYERS

FOR AGES 7+

Technology Categories

Welcome to **Technology Categories**, a question-and-answer activity about different kinds of technology. In this activity, players think of technologies that solve a certain problem. Playing as a family is a great way to have conversations about technology and the human-made world.

DID YOU KNOW?

A **technology** is anything designed by a person to help solve a problem or meet a need. It does not need to have a battery or use electricity! **Engineers** are people who figure out how to make technologies.

How to Play

1. Find a group of at least two players.
2. Each of the following cards has a different category of technology. Choose a card and read one of the questions out loud (questions get harder as you go down).
3. See how many answers you can think of as a group.

   OR

   Look on the “Other Ways to Play” card for competitive versions of the game.

Cleaning

What is a technology that . . .

- cleans teeth?
- cleans people's hair or bodies?
- helps people clean their homes?
- helps people clean outdoors?

DID YOU KNOW?

A **chemical engineer** figures out how to make technologies using chemicals, like toothpaste and cleaning sprays.

Clothes

What is a technology that . . .

- people wear on their heads?
- people wear on their feet?
- keeps people warm?
- keeps people dry?

DID YOU KNOW?

Clothing is a type of technology. Think about what problems clothing can solve.

Food and Cooking

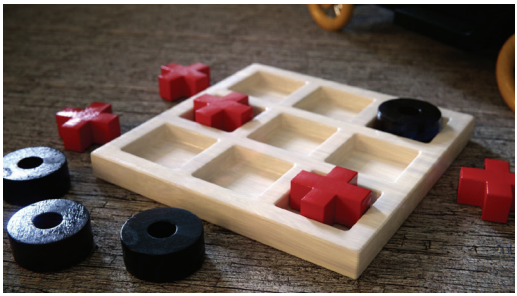
What is a technology that . . .

- holds food or drink?
- people use to eat or drink?
- makes food hotter?
- changes the shape of food?

DID YOU KNOW?

Humans began using fire hundreds of thousands of years ago. What are some technologies that start fires?

Games



What is a technology that . . .

- helps people have fun?
- can be played by many people?
- can be played without batteries or electricity?
- keeps game pieces together?

DID YOU KNOW?

People all over the world play games. Think about what problems a game can solve.

Health and Safety

What is a technology that . . .

- keeps people safe when they are biking?
- keeps people safe when they are driving?
- moves people when they are hurt?
- helps treat people's injuries? (scrapes, bruises, cuts . . .)

DID YOU KNOW?

Some technologies are made from materials, like metal and plastic. How many materials can you think of?

Other Ways to Play

For more competition or challenge, try one of these versions:

- Each player gets one point for every technology they name.
- Take turns. A player who cannot think of an answer is out. The last player left gets a point and chooses the next category.
- Only name technologies you can see while you are playing.
- Only name technologies that do not use electricity.

Holidays

What is a technology that . . .

- helps people decorate for a holiday?
- reminds people of holidays?
- contains or decorates gifts?
- cooks food for a holiday?

DID YOU KNOW?

Buildings are a type of technology. What are some buildings people go to on holidays?

Light and Vision

What is a technology that . . .

- makes light?
- makes shade?
- lets people see things far away?
- helps people's eyesight?

DID YOU KNOW?

An **optical engineer** figures out how to make technologies related to light and vision, like lasers and eyeglasses.

Movies

What is a technology that . . .

- plays movies?
- helps people choose movies?
- helps people make movies?
- helps people see and hear movies?

DID YOU KNOW?

The first movies were recorded on strips of film. What other technologies can movies be recorded on?

Music

What is a technology that . . .

- makes music?
- plays recorded music?
- helps people write music?
- shows people what music to play?

DID YOU KNOW?

Musical instruments are made from other technologies. How many can you think of that use strings? Levers?

Outer Space

What is a technology that . . .

- helps people see outer space?
- travels into outer space?
- keeps people alive in outer space?
- helps people come back safely from outer space?

DID YOU KNOW?

An **aerospace engineer** figures out how to make technologies like planes, rockets, and satellites.

Is It Technology?

Sometimes, players might disagree about whether a certain thing is technology. This is okay! Ask the following questions:

- Did someone design it?
- Does it help solve a problem?

If the answer to both questions is YES, it is probably a technology. If the answer to both questions is NO, it is probably not a technology.

If one answer is YES and one is NO, or if you cannot agree about the answers, that is a good chance to have a conversation!

Pets

What is a technology that . . .

- keeps pets clean and healthy?
- helps move pets around?
- keeps pets safe?
- entertains pets?

DID YOU KNOW?

Some animals build structures, like birds and beavers. Do you think these structures are technologies?

Snacks

What is a technology that . . .

- holds snacks?
- people use to eat snacks?
- keeps snacks cold or hot?
- sells snacks?

DID YOU KNOW?

Some foods, like fruit, can be eaten raw. What are foods that need to be cooked or prepared?

Sound

What is a technology that . . .

- makes sounds louder?
- blocks sounds or makes them quieter?
- sends sounds over a long distance?
- records sounds?

DID YOU KNOW?

An **acoustical engineer** figures out how to make technologies like speakers and sound barriers.

Sports

What is a technology that . . .

- people use to play sports?
- keeps people safe while playing sports?
- lets people watch or listen to sports?
- shows people are fans of a particular sport or team?

DID YOU KNOW?

A **sports engineer** designs technologies like sports equipment and facilities used by athletes.

Tools

What is a technology that . . .

- cuts things?
- connects things?
- breaks things?
- measures things?

DID YOU KNOW?

A tool is a type of technology.
What tools have you used today?

Keep Playing

You have almost gone through all the cards. That is okay! You can still play the game with your own categories.

1. Think of something that some technologies can do.

2. Make up a question about it. Start with "What is a technology that…"

For example, some technologies tell the time. You can ask, "What is a technology that tells the time?"

If you play for a few minutes each day, you can make thinking about technology and engineering part of your family routine!

Toys

What is a technology that . . .

- entertains kids?
- holds toys?
- makes electronic toys work?
- teaches kids while they play with it?

DID YOU KNOW?

A **mechanical engineer** figures out how to create machines, like motors, levers, and some kinds of toys.

Transportation

What is a technology that . . .

- lets people move on land?
- lets people move on or in water?
- lets people move on snow or ice?
- lets people move through the air?

DID YOU KNOW?

An **ocean engineer** figures out how to make technologies like submarines, platforms, and measuring devices.

Trash and the Environment

What is a technology that . . .

- stores or moves trash?
- is used for packaging?
- is used only once before being thrown away?
- is biodegradable (will break down into natural materials)?

DID YOU KNOW?

A **green engineer** figures out how to make environmentally friendly technologies, like compostable bags.

Weather

What is a technology that . . .

- protects people from the weather?
- tells people what the weather is?
- controls the temperature in a building or a vehicle?
- predicts the weather?

DID YOU KNOW?

Some **environmental engineers** study weather data to figure out where to put wind turbines and solar panels.

Words and Pictures

What is a technology that . . .

- lets people write or draw?
- lets people read?
- takes pictures or videos?
- displays pictures or videos?

DID YOU KNOW?

The process of **writing** is a type of technology. Think about what problems writing can solve.

Engineering Skills

Congratulations! By playing this game, you have practiced engineering skills like

- making detailed observations about the world around you.
- considering the uses of objects and tools.
- describing different technologies that solve a problem.
- communicating ideas and discussing questions.

You can use these skills in many other situations too!