

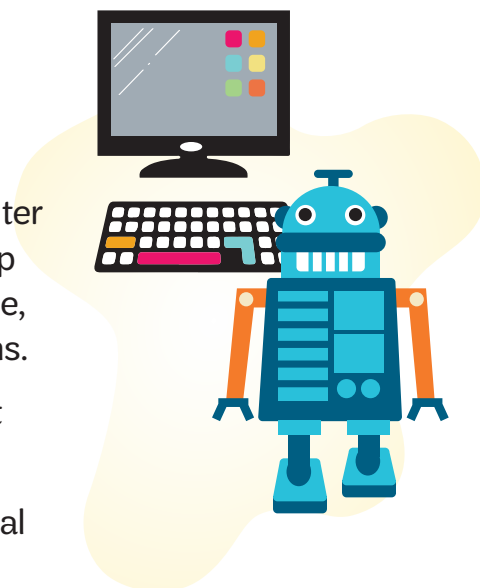
STEM Career Exploration 2

STEM Field Sheets

STEM FIELD: COMPUTER SCIENCE

Change the World with a Career in Computer Science:

- **Build devices:** **Computer hardware engineers** design computer parts, such as keyboards and memory chips. They stay on top of what's new in tech to make sure the new device, like a phone, tablet, or computer, can run the latest apps and other programs.
- **Design robots:** **Roboticians** build robots that can do jobs that are too hard, dangerous, or boring for humans.
- **Solve cybercrimes:** **Digital forensics experts** search for digital clues to keep us, our computers, and all of our data (that's information!) safe.

**Can you complete the challenge?**

Use the code below to write your name in Morse Code.

A • —	H • • • •	O — — —	V • • • —
B — • • •	I • •	P • — — •	W • — —
C — • — •	J • — — —	Q — — • —	X — • • —
D — • •	K — • —	R • — •	Y — • — —
E •	L • — • •	S • • •	Z — — • •
F • • — •	M — —	T —	
G — — •	N — •	U • • —	

STEM Career Exploration 2

STEM Field Sheets

STEM FIELD: CREATIVE TECHNOLOGY & DESIGN

Change the World with Creative Technology & Design:

- **Code apps, websites, or video games:** **Programmers** write code to design things that are both useful and fun: from creating an app, website or video game to animating a movie or TV show.
- **Create digital designs:** Tons of jobs use technology to bring an idea to life! **Architects** use computer software to sketch building plans. **Entertainment engineers** create museum exhibits that light up and respond to the viewer.
- **Design clothing and products:** **Industrial designers** might use a 3D printer to build a new pair of sneakers. **Fashion designers** might use sensors to create clothing styles that react to changes in weather and body temperature.



Can you complete the challenge?

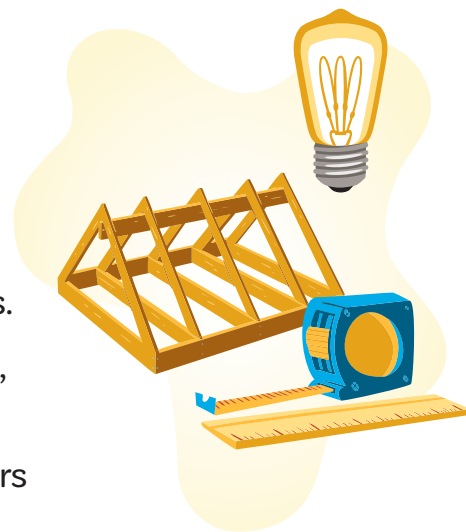
You're designing a speaker that lights up with the music you're playing!

Use the materials at the station to create a symmetrical mosaic design for the front of the speaker. **Symmetrical** means that if you draw a line across the speaker, one side of the design is the same as the other.

STEM Career Exploration 2**STEM Field Sheets****STEM FIELD: ENGINEERING**

Change the World with a Career in Engineering:

- **Engineer our world:** **Engineers** have jobs in every kind of field! They help to build solutions to problems big and small.
- **Understand our world:** **Chemical engineers** work in chemistry, physics, and biology to design new foods, medicines, and materials.
- **Build our world:** **Civil engineers** design infrastructure like bridges, water systems, and roads.
- **Power our world:** **Electrical engineers** build electronics like motors and sensors.
- **Invent our world:** **Mechanical engineers** create all types of machines, from batteries to refrigerators.

**Can you complete the challenge?**

Use the materials at your station to build a structure as tall as the table.

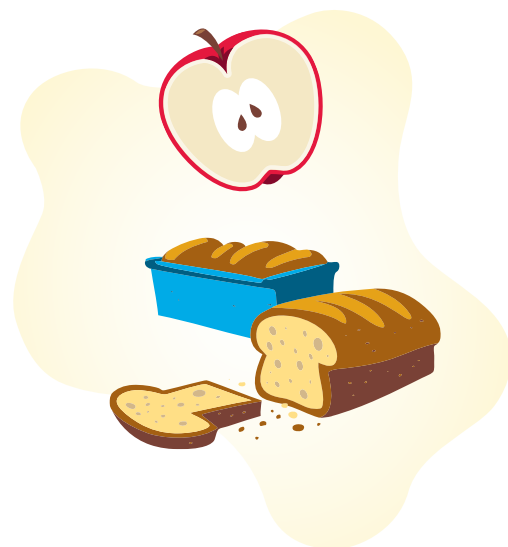
STEM Career Exploration 2

STEM Field Sheets

STEM FIELD: FOOD & AGRICULTURE

Change the World with a Career in Food & Agriculture:

- **Cook and bake:** Chefs and bakers have the important job of making food that's delicious! A **baker** makes tasty food using algorithms (recipes!) and the science of mixing different ingredients together. **Research chefs** create and test new recipes and menus for places like restaurants and hotels.
- **Farm in a city:** **Urban farmers** create green space in vacant lots, backyards, and even rooftops to create gardens and farms in city settings.
- **Design new recipes:** **Food scientists** create new flavors and food combinations to make a new dish or product to be made in a factory.



Can you complete the challenge?

It's time to create a delicious snack! Use the materials at the station to create a snack. Then, write down your recipe so you can share how to make it with others.

STEM Career Exploration 2

STEM Field Sheets

STEM FIELD: HEALTH & WELLNESS

Change the World with a Career in Health & Wellness:

- **Help others to be healthy:** You might first think of a **doctor** or **nurse**, but there are tons of jobs in medicine! For example, a **sports conditioning specialist** trains athletes to be game-ready and stay safe on and off the field.
- **Choose a specialty:** Medical professionals work in all different fields of medicine. For example, **pediatricians** are doctors who treat children, and **neurosurgeons** are surgeons who work with the brain.
- **Cure diseases:** **Medical scientists** conduct research to investigate how to treat and prevent people from getting sick.



Can you complete the challenge?

Time yourselves to see how long it takes your team to do:

- 10 jumping jacks
- 10 sit ups
- 10 toe touches

STEM Career Exploration 2

STEM Field Sheets

STEM FIELD: NATURE & THE ENVIRONMENT

Change the World with a Career in Nature & the Environment:

- **Care for animals:** Some people have jobs that focus on helping animals—a **veterinarian** treats household animals like cats and dogs, a **zoologist** studies bigger animals like elephants, and a **marine biologist** looks at aquatic animals like fish and dolphins.
- **Become a climate expert:** **Meteorologists** predict weather and study how it affects the earth and people. **Environmental scientists** look at how problems like pollution affect nature and human health.
- **Explore the universe:** **Aerospace engineers** are experts on flight and help astronauts travel to space. They build aircrafts, spacecrafts, satellites, missiles, and defense systems.



Can you complete the challenge?

Scientists use **observation** to understand nature. Observation is not just looking at, but thinking about what you're seeing.

Write down four observations you have about the meeting room.