

APPRENTICE

IMAGINATION:

Imagination is creating new ideas, images, or concepts that have never been created before. Using your imagination is a skill that you can develop.

Employers often look to hire people who have a good imagination. Companies want people who can be creative about how to solve problems, grow the company, and figure out various situations.

What is something you've imagined that you would like to create?

CHALLENGE:

Use your imagination to create an invention to change history.



MASTER

LIFE SCIENCE:

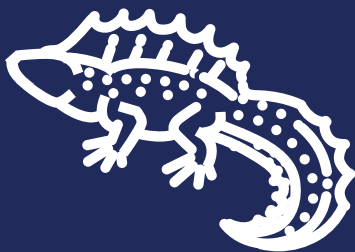
Animal conservation is protecting animals and plants in their natural habitat.

More than one million species are at risk of extinction. Zoos are working to preserve some of these species by recreating environments that allow these species to live.

Do you know of any animals, plants, or habitats that are being protected near you?

CHALLENGE:

Build a two room shelter for a pet.



LEGEND

READING:

Reading is the act of gathering information from text or images.

There are four generally accepted modes of reading.

- Skimming: used to get a broad idea of the topic
- Scanning: used to search for a particular piece of information
- Intensive: used for preparing for a test or when you want to learn something
- Extensive: used for relaxation and pleasure

What's your favorite type of book to read?

CHALLENGE:

Select a story and create a structure to demonstrate the theme of a book.



APPRENTICE

ART:

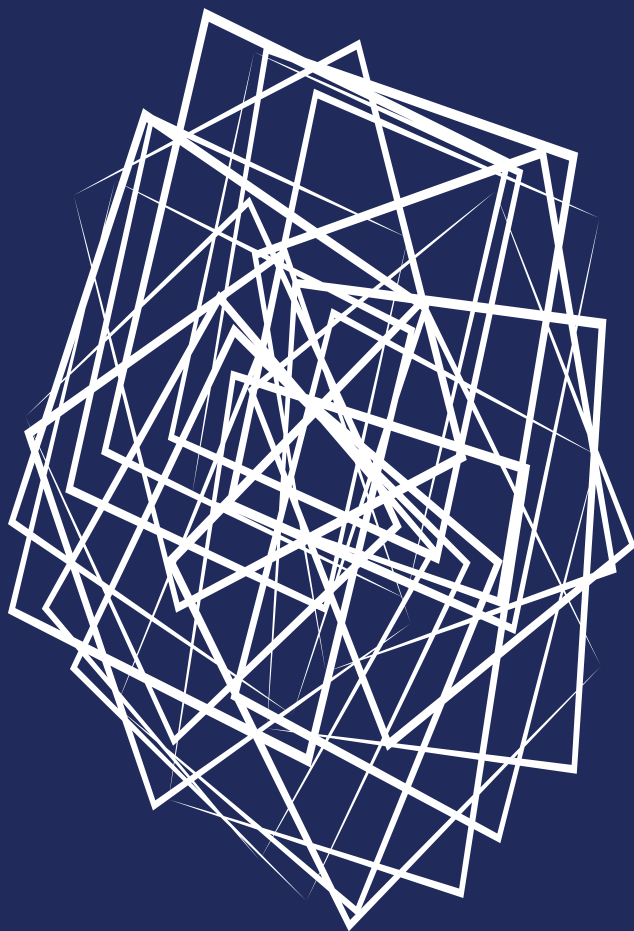
Art is the use of skill and creative imagination especially in the production of objects.

Art competitions used to be part of the Olympic Games. Between 1912 and 1948, medals were awarded for painting, sculpture, architecture, music, and literature.

How do you know if something is considered art?

CHALLENGE:

Create a free-form structure that represents how you feel today.



MASTER

STRUCTURES:

A structure is a combination of materials connected together in such a way to serve a useful purpose.

Listed are examples of different structure types.

- Supporting
- Sheltering
- Containing
- Directing

How many different structures can you think of?

MASTER

AUTOMOTIVE:

An automotive engineer is a person who designs, tests, and develops cars or the parts used in the cars.

Carl Benz is attributed to inventing the first gas-powered vehicle – all the way back in 1886!

What improvements to cars would you like to see?

APPRENTICE

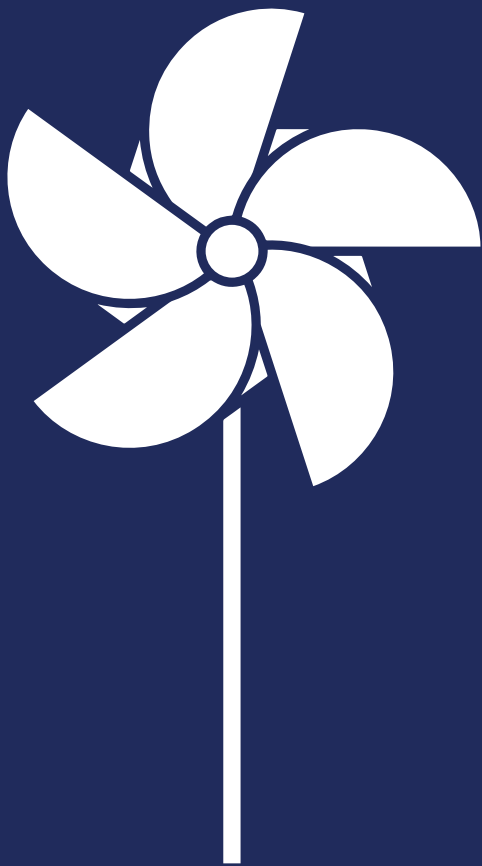
GREEN:

Wind turbines are used all over the United States to make electricity. They use wind power to turn the blades, which spins a generator, which creates electricity.

Have you seen any wind turbines in your area or while visiting another location?

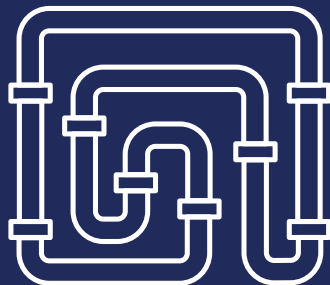
CHALLENGE:

Build a human-powered pinwheel.



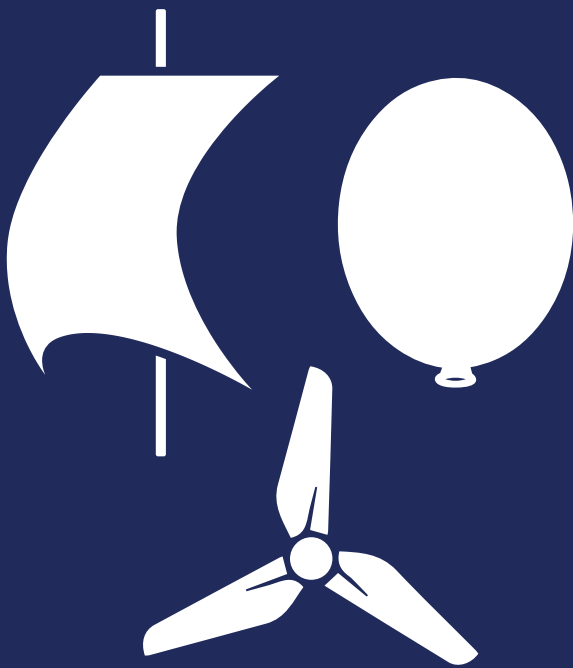
CHALLENGE:

Select a structure type, and build a structure that is 4" wide x 12" long x 6" tall.



CHALLENGE:

Construct a vehicle that uses a sail, balloon, or propeller for propulsion and can go the length of 5 steps.



5 steps