

STEM Career Exploration

Step 2: Discover the possibilities in the STEM Pathway

- Whether you want to invent something, make a huge discovery, or help others, you could make that happen with a career in STEM. Visit the STEM Pathway to find some career possibilities. Using the screen titled “What does your future look like?” answer a few simple questions about yourself to discover your dream job. So, what are you waiting for? You know more about you than anyone else, so find a career that can build the future!

Robotics: Designing Robots (Badge 2)

Step 4: Create a prototype

- Engineers create prototypes, a quick way to show an idea to others or to test it out. Prototypes can be as simple as a drawing or created with common materials, such as cardboard, paper and string. Visit the STEAM center and utilize the materials available to create a prototype of a robot.

Coding for Good: Coding Basics (Badge 1)

Step 1: Create algorithms for a computer that follow a sequence in Make-It Workshop

- A computer can only do exactly what you tell it to do, in exactly the order you tell it. The directions that programmers write is called an algorithm. The order of the directions is called a sequence. Now it is your turn to create an algorithm for a small-computerized robot in the Make-It Workshop. In the ‘Connect-it’ section, choose from either the Ozobot or Botly and code a simple set of direction for the robot to follow. Need Help? Ask a STEAM team member for help!

Coding for Good: Coding Basics (Badge 1)

Step 1: Experiment with different materials in the Art Studio

- What you use to draw can have a major effect on how your picture looks! In the Art Studio, choose three different mediums, or materials, to work with. Draw the same still life or portrait three times using a different medium each time. What do you like or dislike about each material?

Step 2: Learn how to add shading in the Art Studio

- Shading is a major part of drawing that allows the artist to add highlights and shadows. Shading adds depth to a picture making it look three-dimensional and realistic. In the Art Studio using oil pastels or chalk, try the smudging technique to add shadows to a landscape or still life drawing. Need help? Ask a STEAM team member for some tips!

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Step 3: Get some perspective in the STEAM Center

- Visit the Art Studio/Science Lab to create a “Zoomed in” drawing! Choose an object, either from your own bag or something from around the room, to observe and draw. Pick a part of your object to zoom in on. Use the Microscopes in the Science Lab to take a closer look. Enlarge that area when you are drawing to fill your entire paper. Don't forget to add lots of details to make your viewer feel like they are focused in on your object.

Step 4: Use your imagination like a graphic artist in the Art Studio

- Draw a new cover for your favorite book. As a graphic artist, you need to create visual art that communicates a message or idea. How can you show the theme of a book using only images? Are there important characters or settings you need to include. Look at some of the storybooks around the Art Studio to gain inspiration before you begin your own design!

Democracy

Step 4: Find out about our country's executive branch in the Star-Spangled Center

- Create presidential trivia. Make sure you bring a pencil and paper when you visit our Star-Spangled Center! In the Oval Office as well as the entrance to the Star-Spangled Center you will find fun trivia facts about our country's past presidents. Write down some of your favorite facts, then quiz your family and friends when you get home!

Flowers

Step 1: Uncover the Science of one flower in Mary Ann's Garden

- Scientists called botanists track the history of different kinds of plants. Act like a botanist, and go on a flower hunt! Find at least five flowers around The Magic House, do not pick them, but inspect them closely. Make observations and sketches for your botanist's notes.

Step 4: Have fun with flowers in the STEAM Center

- Make your own bouquet of “fresh flowers” you can have anytime! These flower look-alikes can be made from materials found in the STEAM Center. Need inspiration? Think about the flowers in our garden or go outside and take a look! What materials can you use to create them here? Paper plates, pipe cleaners, cardboard and tissue paper are all great items to work with!