

IQUEST STEAM MONTH

TOTAL HOURS : 14 hours

SUMMARY

We visit iQuest every Tuesday for the month of November to teach students about robotics, *FIRST*, and STEAM for the purpose of spreading STEM within our local community.

WHO	WHAT	WHEN	WHERE	WHY
Grades 1-6	Working with the students at iQuest to teach them about <i>FIRST</i> , robotics, and STEAM education.	Every Tuesday from Oct 30 - Nov 27	iQuest Academy	To recruit <i>FIRST</i> participants and engage students in the world of STEAM.

ACTIVITIES

		
Students look at our robot.	Students construct Scribble Bots.	Students look at our robot.

10 / 30 / 18 WEEK 1

2 hr, 2 members

ROBOT DEMO

We brought our robot into the school. The students were fascinated by our robot and had a lot of questions pertaining to the function and structure of the robot. They were eager to learn the robot's name and building process. We answered all of their questions and got them excited about *FIRST* programs by entertaining the possibility of them building a robot of their own.

SCRIBBLE BOTS

Simple make-and-take robot composed of a motor, paper cups, and pens. The final creation spins and struts on a table while also leaving behind drawings that display its movements. The students were eager to build variations of the robot to test how different factors affect the functionality of the robot. Some of the things they tested was the placement of the motor, angle of the markers, orientation of the cup, length of the markers and propellor, and other things.

Associated Skills: *Problem-solving, patience, creativity, hardware, FIRST knowledge*



Alfonso working with the kids to build a LEGO Mindstorm robot



Students constructing a LEGO Mindstorm robot



Students constructing a LEGO Mindstorm robot

11 / 6 / 18 WEEK 2

2 hr, 3 members

FLL ROBOTS

Today we brought a LEGO Mindstorms kit. The kids were really eager to build and program the robot. They had to cooperate with one another and learn how to work effectively in a team setting. They were able to learn what it would be like to participate in a *FIRST* program, and several of the kids expressed interest in doing so.

We did an activity where we had one of the kids read out the instructions while the other students had to build the robot without being able to look at the assembly manual.

Associated Skills: *Cooperation, teamwork, communication, hardware, software, patience, FIRST knowledge, problem-solving*



Kids working on circuit art project



Kids working on circuit art project



Kids working on circuit art project

11 / 27 / 18 WEEK 3

2 hr, 2 members

CIRCUIT ART

This week we introduced the kids to circuits by letting them create their own circuit art. Students drew their own pictures and designs on small pieces of cardboard. Then, we helped them poke holes through the cardboard and inserted small light bulbs through the holes, which then connected to a battery and lit up. The kids were delighted to see their Rudolfs, Christmas

trees, and fireworks light up right before their eyes. All of the kids wanted to create multiple designs, and some colored their lightbulbs in order to match it with the background design.

Associated Skills: *Creativity, patience, hardware, FIRST knowledge*

OUTCOME

EXPOSING YOUTH TO STEM PROGRAMS

The most effective way to get children involved in the STEM field is by exposing them to programs that allow them to explore topics in science, technology, engineering, and mathematics. By granting students creative freedom and encouraging them to solve problems in innovative ways, students will be better prepared for the future and possibly find a passion for STEM in the process.

PROMOTING *FIRST*

This event will allow us to spread recognition for *FIRST* and its programs. We have created brochures that explain *FIRST* values and programs, and includes information regarding how parents and students can bring the program to their communities.