

To: Parents of STEAM Ahead Students

From: John Sassman

A Little Bit About Me

We are delighted that you have chosen for your child to attend this 365 SMART Academy: STEAM Ahead course. This is my third year running the Summer Sessions Engineering & STEAM (Science, Technology, Engineering, Art, & Math) Courses. I am an elementary school teacher with the Fairbanks North Star Borough School District and I have a background in STEM integration into the classroom. Your child will have an exciting week filled with fun and education. To prepare for a successful experience, I wanted to share the following information with you.

Course Format

We'll meet via Zoom each Wednesday 3:00PM - 4:30PM to "show off" what they have made the day before and speak to the group about key learnings. I will then explain to the group the details of the present day's kit/activity and answer any questions they may have. The first day, instead of the "show and tell" intro, we will use that time to set up expectations of the class and get to know each other!

In conjunction with Zoom meets, I've created a series of YouTube videos to guide the kids through the processes and deliver a mini-lesson about the concepts they are exploring. This should help students who want additional guidance, or if a participant misses a meeting for any reason they will be able to catch up on the day's activities. Spencer (from Summer Sessions) or I will send out the videos for the day after each meeting concludes.

Course Content

Activity 1/Day 1: "Scribble Bots" is a fun kit that integrates electrical engineering with art. Kids will create mini-robot-artists. They will learn about closed electrical circuits and make an art piece representing their name.

Activity 2/Day 2: "Towers" is a kit where students will learn about the Engineering Design Process and relate it to the Scientific Method. It is a STEM lesson, with the emphasis on engineering. Kids will work with paper and plastic cups, construction paper, scissors, string, and masking tape. They will have a set of constraints while creating a tower with specific objectives.

Activity 3/Day 3: "Brooklyn Bridge" is a lesson that combines STEM topics and focuses on types of bridges, budgets, constraints, and the history of the Brooklyn Bridge. Kids will engage in math, reading, and building bridges, using real-world scenarios. We'll

build bridges with the provided K'NEX kit.

Activity 4/Day 4: “Mars Pathfinder” will conclude the series of kits. The kids will learn about the history of landers designed to travel and successfully deliver rovers to the surface of the planet. Kids will construct a lander based on the real design by NASA from newspaper, balloons, tape, and paper. The design must protect precious cargo from being destroyed when dropped from 20 feet or higher. ***Parents must be present for the launch (at home of course) and encouraged to join in the process. Feel free to make improvements and test your lander several times.

Activity 5 (Enrichment/Optional): “Space Art” is about making out-of-this-world art with spray paints, creativity, and some cool art techniques! We will have an instructional video on how to do this activity but due to spray paint being one of the ingredients and some of our participants need kits mailed to them, we are not able to provide the ingredients. We highly recommend putting this activity on the family calendar though! See the attached document for the supplies needed. Minimal supplies will yield many pieces of art!

Attendance and Parental Collaboration

We understand that there are a number of factors which may make it more difficult to consistently attend zoom this year (e.g. internet outages, unexpected events). This course is constructed so that even if connecting synchronously proves to be a challenge, the YouTube videos should provide enough basic direction that your child will be able to complete the activities, but they will get much more out of it if they are able to attend the synchronous meetings with the rest of the students (and have more fun too!). Part of the goal of these courses is to provide that connection and shared experience to participants, especially in this time where it may otherwise be difficult.

Certain activities in this online course may require some guidance from a guardian or other adult. Similarly, the technological aspect of this course may require (at least initial) assistance to get your child connected to the meetings and sites which are necessary for the course. If you have any difficulties connecting/accessing resources, don't hesitate to call the Summer Sessions Office at 474-7021 to alert them to the circumstances and they will get in touch with me.

If you have any questions or concerns, email me at john.sassman@k12northstar.org, or call/email Summer Sessions. Thank you!