

Fall 2018

Makerspace Club

Carolyn Brady

University of Nebraska-Lincoln

Follow this and additional works at: <http://digitalcommons.unl.edu/honorshelc>



Part of the [Higher Education Commons](#), and the [Other Physics Commons](#)

Brady, Carolyn, "Makerspace Club" (2018). *Honors Expanded Learning Clubs*. 7.
<http://digitalcommons.unl.edu/honorshelc/7>

This Portfolio is brought to you for free and open access by the Honors Program at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Honors Expanded Learning Clubs by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

NEBRASKA HONORS PROGRAM
CLC EXPANDED LEARNING OPPORTUNITY CLUBS
INFORMATION SHEET

Name of Club: Makerspace Club

Age/Grade Level: 4th and 5th

Number of Attendees: (ideal number) 8-10

Goal of the Club: (learning objectives/outcomes)

To get children thinking about how things work in the world, and how they do. They gain knowledge about success and failure of these things by recreating them.

Content Areas: (check all that apply)

- Arts (Visual, Music, Theater & Performance)
- Literacy
- STEM (Science, Technology, Engineering & Math)
- Social Studies
- Wellness (Physical Education, Health, Nutrition & Character Education)

Outputs or final products: (Does the club have a final product/project to showcase to community?)

The children should gain some knowledge about STEM, in a relaxed way. I made sure to keep a fun environment so the children could enjoy learning about how things work in real life. The children should have a deeper understanding about how things work in their everyday life.

Introducing your Club/Activities:

I briefly told the children about the club and the types of things we would be doing. We would be looking into everyday structures or things that we may come into contact to every day, and we would be talking about how they work the way we do. As the club progressed, I noticed that it was best if I very briefly told the children the structure of the day, and also asked them the questions they would be thinking about. After this, I would let them get to work.

General Directions:

After listening to the introduction about the structure, the questions, and what materials we would be working on that day, I would let the children begin. While they were building or sketching out their ideas, I would talk to each individual group to make sure they were somewhat focused on the right structure and thinking about the right questions. I really wanted to let the kids get creative too, so I encouraged them to put their own twist on the things they were building.

Tips/Tricks:

Be extremely flexible with the lesson plans and editing them as the children go along that day. Familiarize yourself with the materials before introducing them during the activity.

LESSON PLAN

Lesson Activity Name: Building Sturdy Towers

Length of Activity: 40 minutes

Supplies: Keva Blocks

Directions:

Discuss with your partner(s) at your table (or with the class) to determine what makes a sturdy tower, and how you could create one with these blocks that is tall yet sturdy. After you have discussed, start building.

We evenly distributed the blocks between the tables.

Ask: What makes a sturdy tower?

What makes a strong base?

How should we test the sturdiness of the tower?

Conclusion of the activity:

We analyzed the towers as a group and attempted to find a way to test whether or not the tower was sturdy.

Lesson Activity Name: Build an Amusement Park

Length of Activity: 40 minutes

Supplies: Legos

Directions:

Children were encouraged to work together, but really got into the project when thinking by themselves. We allowed the children to scoop out Legos that they needed as they went, instead of evenly distributing. They knew exactly what piece they needed for each spot, so we allowed them to do their own thing. First, sketch your amusement park ideas with a pencil and paper. Think of how you will be able to transfer these ideas into 3D using Legos.

Ask: What will work and what will not work? What will you be able to build or not build from your sketches? We allowed the children to work and only interrupted them when we asked what they were building, what the purpose of it was, and if it was realistic or not. We encouraged both realistic and not realistic ideas.

Conclusion of the activity:

Think of rides and other things you see at an amusement park, and try to recreate them.

Lesson Activity Name: Build Your "Dream" House

Length of Activity: 40 minutes

Supplies: Legos

Directions:

Sketch your “dream” house on paper, then bring it to life. This is another simple yet great activity for the children to express their own creative ideas. I wanted to keep the criteria open so the children could express their creativity. Some of the children may have benefitted by some more structure. For example, ask the children what would be in their dream home, and how they could bring that to life. This way they have something to focus on and help get them started.

Conclusion of the activity:

The children did a great job with getting creative with their dream houses. It takes them a little while to get focused on their house, but after five or ten minutes they are in the zone!

Lesson Activity Name: Building from Small to Large

Length of Activity: 30 minutes

Supplies: Keva Blocks

Directions:

Build a tower with those around you, can you make the base smaller than the rest of the tower?

Conclusion of the activity:

Are you able to make a tower with this criteria?

Lesson Activity Name: Creating Bridges

Length of Activity: 20 minutes

Supplies: K’NEX

Directions:

Create a bridge, any kind of bridge out of K’NEX. Familiarize yourself with these materials before hand to save time.

Conclusion of the activity:

Little to our knowledge, K’NEX are extremely confusing to work with if you have not worked with them before. Some of the children had used them before so they were able to work, but unable to create the bridges because we did not have the right parts. I would have asked the children if they have used them before and see how they felt about them.
