

Structure Building- Cooperative and Collaborative Learning/ Shadow Puppet Creation

Submitted by: Connie Walters Outlook Elementary School, Grade 3

Materials: Variety of choices of materials and joinery. Toilet paper rolls, paper towel rolls, straws, popsicle sticks, lego of various sizes, toothpicks, spaghetti, cardboard, tape of various sizes.

-Used Pearson Science3 Textbook to learn about structures and vocabulary

- **Discussed what gives structures strength:** materials, joinery, shapes (-ie., triangles, arches) braces, layering, adding bulk, widening bases, points of contact (Spreading out the weight).

Activity-

1. Divide the students into groups. Introduce action plan and materials available for use to create the strongest and tallest structure.
2. Each group has to draw and label a blueprint of their plan/design.
3. Create a rubric with students to evaluate their structures.
4. Facilitate and ask each group questions – What are you using in your design to create strength and stability.(We used this to create a shadow puppet on the ipads that demonstrated their learning.)

Assessment

5. Students will test their structures strength using textbooks. Video tape. (Have textbooks readily available)
**While presenting to each group in front of the class.
6. Students collaboratively created a **Shadow Puppet**, designed a dialogue together, and share their learning about structures.
7. Parents were engaged as we showcased our learning at **Student Led Conferences** on our Smartboard.

Creativity-

Use creativity as a different way to showcase learning. Creativity was demonstrated through the process of free choice and group brainstorming.

Evidence- Shadow Puppet (Below)

Evidence- Shadow Puppet

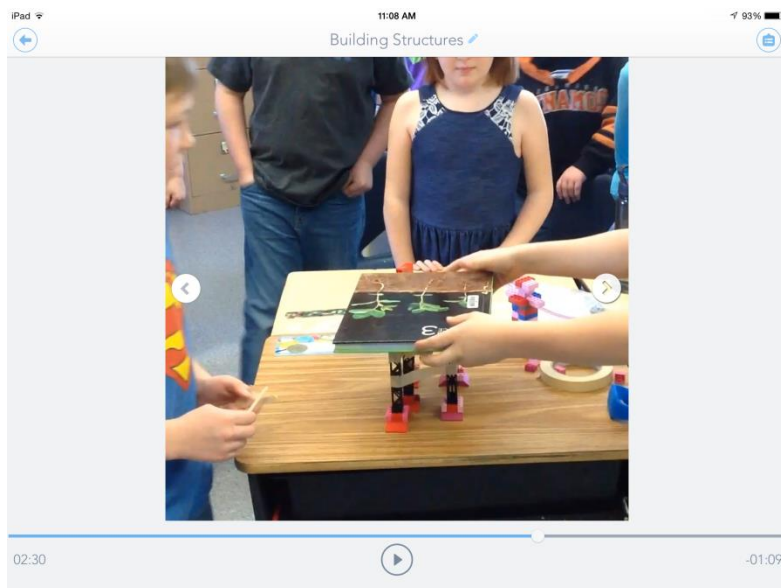
Planning Blueprint/Design- Choices



Creating-



Testing-



Structure Rubric

	5	4	3	2	1
Strength	60 + Textbooks	21-59 Textbooks	11-20 Textbooks	1-10 Textbooks	0 Textbooks
Appearance (Materials)	Various materials and joinery. Complex structure. Several materials used.	Several materials and different joinery used. Somewhat complex structure.	Basic structure. Some materials used. One type of joinery.	Simple structure. Few materials used. One type of joinery.	No structure created.
Stability Features	Various strategies explained to create strength and stability.	Good knowledge of strategies explained to create strength and stability.	Some knowledge of strategies explained to create strength and stability.	Little knowledge of strategies explained to create strength and stability.	No knowledge of strategies explained to create strength and stability.

Self Evaluation

	5	4	3	2	1
Group Work	Each group member worked well together all of the time.	Each group member worked together most of the time.	Most group members worked together most of the time. Some disagreements.	Some group members worked together. Lots of disagreements. Difficult to move forward with plans.	Group members did not work together. Group members did not agree.
Cooperation	I worked with my entire group, contributed to my group.	I worked with most of my group, contributed to my group. and helped	I worked with my group, contributed to my group.	Sometimes I worked with my group, contributed to my group.	I did not work with my group well. I did not get along with

	I helped others. I respected my group members all of the time.	others most of the time. I respected my group members most of the time.	I helped others some of the time. I respected my group members most of the time.	I helped others very little. I respected my group members some of the time.	or help others. I was not respectful.
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References- Pearson Grade 3 Science Textbook