Intro to Design Concepts 1

A simple start to getting youth to think about decision making in design

Project Type: Creative Tactile

Group/Individual: Individual or Collaborative

Lesson Plan Audience: Maker

Time: 15min - 60min

Soft Skills: Decision making, analytical skills, critical thinking, design concepts

Ideal # of Participants: 4 - 8

Age Group: 6 - 12 (Really any age over 6.)

Ideas for Taking it Further: This is just the first step in a buildable curriculum. Follow it up with exercises that slowly introduce other aspects of the design process.

Difficulties/Tips:

I've found this activity to be best with a smaller group. If you're group is really attentive and disciplined though, go ahead and do it with more people!
Something that caused conflict was the Lego "extras" (people, animals, tools, hats, etc). I let participants choose 5 of each of those items each, and put them away. However there were still fights over things, and people grabbing them from each other. I would recommend putting things like that away from the get-go and not even allowing them as an option.

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Materials:

Legos, blocks, or other modular materials.

Paper, pens/pencils, markers

Steps:

(1) Introduce a modular material, like legos or blocks. You should avoid using a material that students made (that is not the focus of this exercise), or a material that is dependent on the students' skill. Participants should all be on the same playing field, regardless of their experience with a material, their dexterity, or their knowledge of construction techniques. The goal is for students to focus on ideas, not materials.

(2) Present a building challenge to the students. It can be as specific or abstract as you want, depending on what you think the group will respond to. You can ask them to make a car, a building, etc. You can also let them collectively decide or vote on what they want to make.

(3) Before participants start, bring their attention to something in the room you think will capture their interest. Stick to something simple, like a door or a marker, or maybe pull out a toy. Talk about the size, shape, and material of the object. Talk about the object's functionality. Ask them to think about the person who designed the object, and question them on why they think the designer made certain decisions. Now may be a good time to give a breakdown of the definition of design if you feel the group is attentive enough to absorb that information.

(4) Now participants can get started making. Tell them to keep in mind what was just discussed when constructing their object. You can also frame the activity as a contest or competition if you think that will inspire more interest. Set the activity up so that participants can engage with the activity on their own time. Completed projects can be put off to the side, while students move onto other activities. This will remove pressure to finish the project during a designated timeline, and allow students to walk away from the project and come back to it if they chose. This will also make things easier in a drop in environment, because students who come in later in the session can easily jump in.

(5) At the end of the session, have everyone come together. Have each student discuss what they made, and explain why they built it the way they did. If the activity was framed as a contest, have students vote on their favorite project after everyone talks. Discuss what they liked about it, and why they thought it was the most successful.

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