Intro to Drafting

10/23/2017 - 11/3/2017

What are we learning today?

Toy design - Plastic building toys – for ages 3+

Product Design Process

What am I going to do today?

Play with toys – Toy Research - Handout

Videos – Toy Design and College Programs

Examples from the past

Design Process

3D printing

How will I show that I learned it?

Model 3d objects, create 2D Multiview drawings, and fabricate a 3-d printed prototype of your toy design.

Name: _____   Block:_____

Due End of Class Friday: 10/30

PowerPoint –   P1-   <u>Brief</u> – Design Problem written out. Define your user group (children ages 3 +)

P2-   <u>Background Toy Research</u>

Examples

P3-   <u>Ideation. Brainstorming. Sketching.</u>

How did you come up with your idea? What are at least 3 ideas/solutions? What are the reasons for why you picked your final design?

P4-   <u>Design, Prototype, Test</u>– Create a part file and an assembly file to test your idea using Inventor. Consider tolerances (how the pieces fit together). 2mm offset required for pieces to fit into each other. 3D print your parts. Min. 2 parts for test. If approved print 6-8 more.
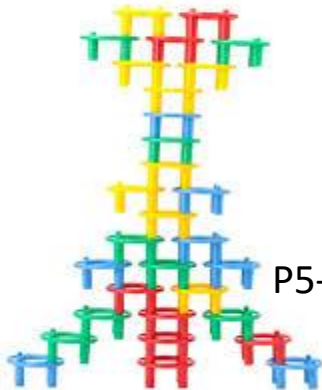
P5-   <u>Create Multiview drawings</u> of assembly + isometric – 10-12 modules combined and a

Multiview drawing of each part + isometric

Include dimensions.

P6-   <u>Photographs</u> of your finished 3d printed module + photographs of your assembly

P7-   <u>Evaluate</u> – Success? What would you change? Have people test your design and give you feedback.

Name: _____   Block:_____

10/23/17 Class activity:

Toy Research – Play with the toys set up around the room. 20 minutes

Answer the following questions:

1. What makes these toys fun?

2. Who is the best user for these toys? What makes them appropriate for young children?

3. What is educational about the toys? What can you learn from them? Skills?

4. How do they fit together?

5. What are they made out of? Materials?

6. How can they be better or improved?

7. On the back of this paper make two multi-view sketches of two different parts of a toy that interlock or connect in some way.

8. Make a sketch of an assembly – the two parts joined to show how they can fit together.