

## Plastics Palooza Learning by Design Challenge 2017



**THE CHALLENGE:** Waste Management: To refashion everyday plastic containers to a new purpose.

<http://www.paeablog.org/category/learningbydesign/>

**DESCRIPTION:** Design a functional object that will perform a basic task. Photo-document your object and its use.

1] Collect everyday plastic consumable packaging like orange juice containers, laundry detergent bottles, beverage bottles, etc. (Soft plastic containers are soft and easy to cut with good quality scissors.)

2] Explore the function of the material(s):

- Investigate the parts.
- Deconstruct it.
- Cut it open and spread it out.
- Identify what it can do, and what it cannot do; i.e. bright colored, opaque, flexible, water proof, etc., or cannot fold, cannot see through, cannot glue, etc.
- List the attributes or features and build a library of materials and what packaging came from.
- Create a notebook with material swatches with images of containers and list of the physical attributes. List ways that you attempted to connect things to it or connect material to itself i.e. staple, stitch, sew, heat, rivet, tape, other. Add a section to list what the material would be good for. Record your ideas and thoughts. Include sketches/drawings.

We can no longer live in a throwaway society, so let's reuse this stuff! How? You have to figure out what it is made of and what are the physical properties of the materials.

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3] **Create a functional object:** The object can be decorative or whimsical or inherently functional. The object can be used to make another object, it can be the object, or it can be combined with others to make a large object.

- Use a minimum of 4 containers (as appropriate to student age), which can be the same or different.
- You may add an additional object or part to make product function, like a hinge, a handle or a string.
- Please limit yourself to plastics as they are lightweight inexpensive and easy to work with. Note you will have to clean out containers and sometimes remove labels. Keep material in original color; do not paint, as paints will not stick to plastics.
- Make models full size with a practice version. Then remake perfectly 2 or 3 times to make a prototype. You can practice with cardboard and tape. Take pictures of using the device to show design intent. Take many pictures, including a front angle, a side angle, and a top angle.
- Also document what is already available on market, to determine what and how things are being used now with catalog/internet images. Think of the following process: identification of problem; what's out there now [market research]; concept ideation [sketches]; realization exploration of materials [models]; prototyping images of final concept.
- **PUBLICATION:** You are invited to submit photographs of student work to kfontes2@gmail.com. Student work will be featured on the PAEA website.

Thank you to the Wisconsin Art Education Association's 2014 Visioneer Challenge for granting us permission to use this challenge and John Caruso, professor of industrial design and consulting designer at the Milwaukee Institute of Art and Design.