Lesson 1: What is Industrial Design?

Summary

Grade Level: 6–12

Introduce students to the field of industrial design as a career and a field of art. Explore the processes used by industrial designers to design useful, safe, and appealing mass-produced objects. Students will select an object from their home or classroom and redesign it to improve its function, feel, and/or appearance.

State of Wisconsin Academic Standards

Fine Arts, Language Arts, Science, Social Studies

Objectives

- Understand that industrial designers are visual artists who plan manufactured goods
- Identify the criteria for judging mass-produced objects
- Redesign and improve an everyday object
- Reflect on the industrial design of an everyday object through critical thinking questions and writing

Materials Needed

- *Holsum Peanut Butter Jar*
- *Toastalator* and *Toastalator Concepts Sketch*
- Examples of manufactured products for discussion such as staplers, lamps, chairs, etc.
- Collection of extra everyday objects for redesign (for students who forget to bring one)
- An everyday object to redesign—brought by students from home; examples: kitchen utensils, pen, chair, toy, wrench
- Scratch paper, 9 x 12 in. drawing paper or graph paper, pencils—HB and pencil sharpener, pink pearl erasers, ultra fine black markers, colored pencils
- Construction paper or tagboard for display of drawing (optional)

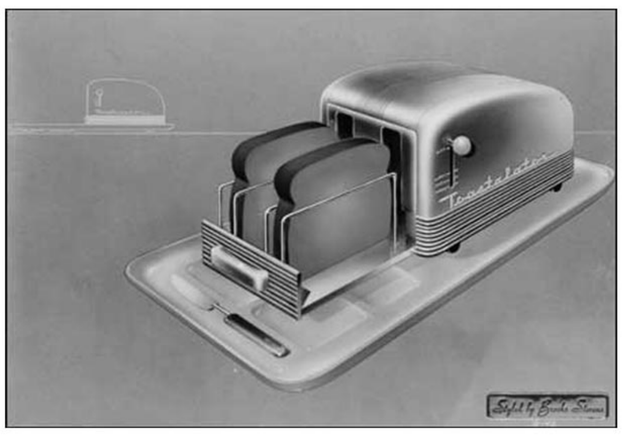
What to Do

Introduce students to industrial design. Below are suggestions for discussion topics about industrial design:

Factory products—who made it?

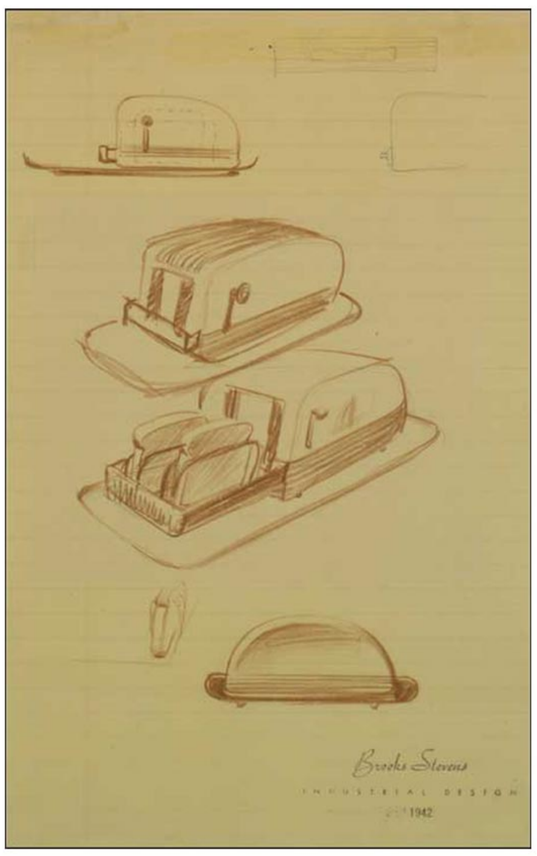
Ask the students to brainstorm a list of manufactured products they used today. Have them think about who made the products, who thinks up the ideas, and who decides how these things work and look? For example, inventors and engineers think of the idea and make it work. Industrial designers are concerned with the look, feel, and usability of the object. Only after industrial designers make it safe, attractive, and functional is it mass-produced by factory workers and machines.

Holsum Peanut Butter Jar



Toastalator

You may want to focus the discussion on the changes brought about by the Industrial Revolution in the making of functional objects (the move from individual artisans and craftspeople to mass-production). Students should understand that the career of industrial design came as a result of these changes. Mass-produced goods needed to have mass-appeal to sell in large quantities. Artists were needed to design products that would appeal to many people.



Toastalator Concepts Sketch

What does an industrial designer do?

Introduce to your students the idea of the industrial designer—an artist who makes factory-made things look nice and work well. Explain that many factory-made objects have been designed or planned by an industrial designer. These designers make detailed drawings of three-dimensional objects to show sizes, shapes, and textures of the product. They specify the materials and processes of manufacturing. Often, industrial designers will also make models of the product for testing. Industrial designers try to anticipate all the ways a person might use—or misuse—the object. Industrial designers are artists. It is their job to make the objects look good because as industrial designer Brooks Stevens said, "Today, the consumer buys on eye appeal and impression.' (Brooks Stevens, introduction to 1943 reprint of "Your Victory Car." Brooks Stevens Archive, Milwaukee Art Museum.) Henry Dreyfuss, another famous industrial designer of the twentieth century, stated that if people are made safer, more comfortable, more efficient-or just plain happier, the industrial designers have succeeded in their jobs.

Have students examine the examples of manufactured products that you gathered. Ask them to think like industrial designers and consider the following questions as they examine the objects.

Functionality
- What is it? Is it obvious what the object is or does?
- What is the object supposed to do?
- Is it easy to understand how it works?
- Does it work as you expect? (Have them try it out.)
- What would happen if the user used it incorrectly?
- What visual clues does the object have about how to use it?

Ergonomics
- How has the object been shaped to fit the human body?
- Is it comfortable to use?
- Who is it for? (size, age, ability of the person)
- Are there people with different body types and/or abilities that could not use it?

Safety
- Is it safe?
- Can you anticipate any safety problems?

Durability and Affordability
- Will it last as long as it needs to?
- How much will the object cost to produce?
- Can the product's intended user afford it?
- Will this object be worthwhile over time?

Aesthetics
- Is it appealing to look at?
- Is it pleasant to touch?
- Does its appearance suggest how to use it?
- How do you feel when looking at the object?
- Does the object look appealing to use?

Improvements
- What are the positive aspects about how the object solves the problem or its function?
- What are some of the problems with the object?
- What would you change to make the object a better product?
- Why do you think the object will or will not be successful?

Using Brooks Stevens' *Holsum Peanut Butter Jar*, *Toastalator*, and *Toastalator Concepts Sketch*, discuss the original objects and Brooks Stevens' redesign of each object. Use the industrial design critical thinking questions in #2 above and the background information below to initiate the discussion.

***Holsum Product Peanut Butter Jar*, 1934**

Brooks Stevens' earliest extant design is this humble peanut butter jar, designed for the Holsum Products brand of Milwaukee, Wisconsin wholesale grocer Jewett and Sherman. Lewis Sherman, the head of the company, hired Stevens fresh out of Cornell University in 1933 at the recommendation of the young man's father. Though Sherman first assigned Stevens to inventory management, he soon allowed him to redesign the firm's label, and was so pleased with the result that he assigned him the containers themselves.

One of the first jobs Stevens took on was the peanut butter jar. He transformed its overall shape, turning its tall and narrow-necked vessel traditionally used for peanut butter into a squat form with a wide mouth that gave easy access to the contents. Stevens insisted on the wide-mouth, he said, because he loved peanut butter so much that it frustrated him to waste any. Cartoon peanuts were mold-blown into the glass itself; bees were used for the similar honey jars Stevens did for the company. According to the designer's later testimony, his repackaging efforts paid off in the form of increased sales for the grocery. The wide-mouthed peanut butter jar, of course, is still with us.

• Have students try their hand at redesigning an everyday object. Ask them to think about the everyday object they brought from home or one from your collection using the industrial design critical thinking questions in above #2. Have them divide a sheet of paper in half and make two lists. On one side they list all the things the object does well—the things they like about the object. On the other side, they list the things the object does poorly—the things they dislike about it.
• When completed, allow time for the students to think about the lists. What could they change to improve the object? Have them write down ideas on the back of their paper with the lists.
• Review and discuss with the students that industrial designers draw plans of objects to tell manufacturers how to make them. They usually draw many views of the object to show how it should be made. Have the students make a drawing of their original object as it is now. Encourage students to show details and draw more than one view of the object. The drawings could be accurate, technical drawings or more free-form concept drawings. Students may want to note design changes they want to make on their drawings, including changes in size, color, shape, and/or materials.
• Next, have the students draw their redesigned object on drawing paper. For free-form drawings, consider having them draw with pencil then draw over the pencil drawing with an ultra fine black marker and erase any pencil lines. Use colored pencils for adding color and details.
• Have the students write a paragraph about their redesigned everyday object and how the changes they made improved it. Mount the drawings and paragraphs together on a piece of construction paper or tagboard for presentation and display with the actual objects.
• Have the students present their redesigned plans to the class. Presenters explain the changes they made and why, while listeners can give feedback on the changes and suggest other ideas they may have to improve the product.

Teacher Options

• Have students create advertisements about their products by means of other media, such as television, radio, or billboards.
• Suggest that students do an independent research of a famous industrial designer or invention