

Lesson 5: In the Year 2121

Summary

Grade Level: 6–12

Students research the advances of an invention’s industrial design over decades or centuries. They then project improvements and innovations for the future in drawings and descriptive pros.

State of Wisconsin Academic Standards

Fine Arts, Language Arts, Social Studies

Objectives

- Research an invention’s industrial design over a period of time
- Project design improvements and innovations of a product
- Communicate effectively projections and ideas through verbal format, visual format, and written descriptive pros

Materials Needed

- *Victory Car Design* and *Jeep Station Wagon*
- *Brazilian Jeepster Model*
- *Excalibur*
- *Studebaker Hawk* and *Studebaker Sceptre*
- Various images of automobile examples spanning the last 100 years
- Sketch paper, drawing pencils, erasers, rulers, colored pencils, markers, and various other drawing materials

What to Do

Discuss with your students how industrial designers also dream up what tomorrow’s products will look like. Not all of these ideas reach the market or stores, but designers often make drawings and models of things we may use in the future. Share with your students magazine or other images of the most modern, futuristic products you can find and/or have them talk about the newest products they have seen or heard about. As the discussion progresses, focus their attention on transportation.

In the “Motor City”—Detroit, Michigan—automobile fans celebrated the 100th anniversary of the car in 1996 (See the November 1996 issue of *American Heritage* magazine for a retrospective). Few of the early automobile designers could have envisioned today’s road wonders—fully automatic, electronic, sleek, and sporty. What will the next 100 years bring in car design? Each year, automakers showcase concept cars of the future. Few concept cars ever make it to manufacturing, but the ideas and innovations are what propel the industry forward.

Most new products/inventions are improvements on objects of the past. Ask the students if they agree or disagree with this statement. Can you think of a recent product/invention that it totally original?

Using the preceding images of automobiles designed by Brooks Stevens and other various images of automobile examples spanning the last 100 years, ask the students to describe the changes in automobiles over the last 100+ years. Which changes made the cars run better? Which changes were for fashion only? For example:



Victory Car Design



Jeep Station Wagon



Brazilian Jeepster Model



Excalibur



Studebaker Hawk



Studebaker Sceptre

- The first cars just had to work—no frills, no fast speeds, no extra power.
- In the early 20th century, automakers needed a design they could copy over and over with little cost. The Model T and similar automobiles were developed to fit this need.
- Cars in the 1940s began to include luxuries. Power and speed were important, but drivers also wanted cars that were easy to drive.
- In the late 1950s, cars had exaggerated tail fins and lots of chrome, which were a fashion statement.
- The small, boxy cars of the 1970s were designed to save fuel during the “energy crisis.”
- Cars of the 1990s emphasized safety features such as air bags.

Share and discuss the following quote by Henry Ford with your students:

“I invented nothing new. I simply assembled into a car the discoveries of other men behind whom were centuries of work...So it is with every new thing.”

After the discussion, allow time for the students to research and document what other inventors and inventions contributed to the modern automobile. Encourage students to utilize various research resources including libraries, archives, internet, museums, etc.

Ask the students what they think automobile buyers of the 21st century in the United States will look for in an automobile. Have them consider these projections before they answer:

- The United States’ population is aging. More car buyers will be senior citizens.
- The United States may experience a fuel shortage again or alternative fuels such as methane and natural gas may gradually replace gasoline.
- Solar and electric cars may become more practical.
- Computers will continue their rapid advancement in speed, memory, and features such as voice recognition.

Review with the students that industrial designers often draw pictures of ideas they have for new products. Using drawing materials, have the students create sketches of three ideas for a future kind of transportation. Have them choose their favorite idea for completing a final drawing in color with available drawing materials. Have students share their finished drawings with the class. Encourage them to include information about their transportation features, what it will be used for, and choices they made (examples: Why is it yellow? How did you decide how many wheels to use? What makes it look fast? How did you make it safe for people?). Encourage listeners to ask questions and give feedback.

Another approach to this project is to divide your class into teams. The first team designs and draws a form of transportation for the year 2020, including a description of its features. They then hand this design to the second team, who must improve it and add innovations for the year 2040 by making another drawing. The designs continue to be passed to the "next generation" of designers until the last team has completed its drawing. Display the drawings in a timeline format and discuss the progression of ideas as a class.

Teacher Options

- Have the students predict possible future inventions and create a timeline of them from the present to the year 2121 (examples: vaccine for AIDS, Saturn mining, Mars colony, cure for cancer). For each event, ask the students what products/inventions will be necessary or will result from the event and how each event will change existing inventions and/or lifestyles.
- Individual students or teams of students develop three-dimensional or computer generated models of their future transportation inventions.