



The Future of Getting Around

60 - 90 minutes

In this lesson, students take a peek into the future of transportation by visiting “The Future is Now” museum exhibit to learn about innovations already in use around the country. Students then imagine their own futures, creating a vision of how they see themselves getting around in thirty years.

Objectives

- Students will examine present-day innovations, entrepreneurs, and case studies related to sustainable transportation.
- Students will discuss how technology, entrepreneurship, and policy play a role in creating a more eco-friendly transportation future.
- Students will create a representation of their sustainable transportation future, including modes, rules, and infrastructure.

Materials

Presentation: The Future of Getting Around

Art supplies

Drawing paper (one piece per student)

Background

The future of mobility is being determined by the values and needs of those of who presently rely on planes, trains, and automobiles for travel. As climate change becomes more of a central focus when considering future transportation options, so does the debate regarding the ongoing use of fossil fuels. Can we sustain our current course of dependency on coal, oil, and gas, and do we want to? If we do not, what other energy sources or fuels can take their place? Forward-thinking businesses and entrepreneurs have already started charting a course away from standard transportation technologies and fuels toward those that will have a much lighter footprint on our environment. The use of high-tech train components - such as the regenerative braking systems Amtrak uses on its electric locomotives - are an example of this transition. By checking out the current trends in mobility technologies and innovations, and applying imagination, students can come up with their own ideas about the future of transportation.

Advance Preparation

You will need computers with internet access for this lesson. Read through the lesson ahead of time to determine how you want to set up the “The Future is Now” museum exhibit, and bookmark those



websites ahead of time. The links offered below will help give you and the class some ideas to get started. You may consider adding your own links, depending on the interest and needs of your students.

Do Now

Project *Presentation: The Future of Getting Around* and have students examine the image of Leonardo da Vinci's helicopter. Then, ask students the following questions:

- What do you see?
- When do you think this drawing was created?
- Do you think this invention was based on actual examples, or on da Vinci's imagination?
- How important is the role of imagination in creating a sustainable future?

Mini-Lesson

1. Tell students that today they will use their creativity to envision the future of transportation. They will examine transportation innovations that already exist, as well as learn about entrepreneurs and communities who have paved the way for more sustainable traveling options with inventive ideas and policies.
2. Explain to students that they are going to visit "The Future is Now" museum exhibit that is set up around the room. The museum exhibit includes displays of the following topics:

"Incredible Innovations"

- Busycle: www.busycle.com/about.html
- Futuristic Cars: www.youtube.com/watch?v=FpAgUMUlhW4&feature=relmfu
- Jetpack: www.martinjetpack.com
- Wingsuit: www.howstuffworks.com/wingsuit-flying.htm

"Exciting Entrepreneurs and Organizations"

- American Public Transportation Association: www.publictransportation.org
- Plug-in America: www.pluginamerica.org
- Radio Taxis: www.radiotaxis.co.uk
- Zipcar: www.zipcar.com

"Cool Case Studies"

- Clean Cities Hall of Fame: www1.eere.energy.gov/cleancities/hall_of_fame.html
- Cambridge, Massachusetts: www2.cambridgema.gov/cdd/et/bike/index.html
- Edmonston, Maryland: www.edmonstonmd.gov/GoingGreen.html
- Minneapolis, Minnesota: www.minneapolismn.gov/environment/air/airquality_antiidling_home



3. Place students in pairs and have pairs circulate throughout “The Future is Now” museum exhibit and examine the information on the computers. Tell students they should take notes in their notebooks on each innovation, entrepreneur, organization, and case study they learn about. Their notes should briefly summarize what they learned, and explain how these ideas and inventions aim to make transportation more sustainable.
4. Invite pairs to share what they learned with the class. Then ask the following questions:
 - What did you learn that was most interesting or surprising?
 - What suggestions do you have that could improve on these ideas?
 - How do these ideas help us rethink the modes of transportation we might use?
 - How do these ideas help us rethink our rules for transportation?
 - How do these ideas help us rethink our transportation infrastructure (i.e. roads, bike paths, sidewalks, railways)?
 - Which of these ideas are possible for you, your family, and/or our community?

Activity

1. Tell your students that they are now going to create a vision of their transportation future.
2. Project the activity directions in *Presentation: The Future of Getting Around* and review the guidelines for the students:
 - It is thirty years in the future. Petroleum-based fuels are scarce and expensive.
 - Write or draw a representation of what the transportation future looks like, including the available mode(s) of transportation, the fuel or source of power they typically use, the rules put in place for transportation, and the infrastructure.
3. Give each student a large piece of drawing paper. Monitor students as they create their representations, encouraging them to be creative. Prompt students to think about the sustainable transportation ideas and concepts they have learned in all of the lessons.
4. Have students post their representations on the walls around the classroom. Conduct a gallery walk in which students take time to examine and appreciate the creative visions of their classmates.
5. Wrap up the activity by asking students to answer the following questions:
 - What were some of the most interesting ideas you saw?
 - How do these ideas will help make transportation more sustainable in the future?

Assessment

Have students discuss the following question: *What can you do now to make sure that the futures you envisioned are achieved in your lifetime?*



Modifications

- Prepare a bulleted summary of the information shown in the “Future is Now” museum exhibit for **English Language Learners**. The summary should include a brief overview of the innovation, entrepreneur, organization, or case study, as well as a note about the way the idea or policy helps make transportation more sustainable. Students should use this summary as a guide when visiting the museum exhibit, adding personal notes based on what they learn.
- Provide a graphic organizer, outline, or template for taking notes from the “Future is Now” museum exhibit for **Students with Special Needs**.

Extensions

- Extend this lesson by having students set up a “Future is Now” museum exhibit to share what they learned about sustainable transportation as well as their visions for the future. They might create a display in a physical space around the school, such as a hallway, or they might create a virtual exhibit online through their school’s website.