

Ride, Roll and Stroll

Energy Revealed
Activity
Grade Level: 4-7



Main Objective

Learners dream up creative ways to get to school, dance lessons, hockey practice or a friend's place. After analyzing the pros and cons of their wild rides, learners consider the more usual modes of transportation available to them and assess the environmental impacts of each. Empowered with new knowledge, learners revise their initial designs and embellish them with selling points so that they can attract others to their mode of transportation via video, poster or audio advertisement.

Learning Outcomes

By the end of this activity, learners will:

- Gather, evaluate and select modes of transportation based on their own experience and compare with available data
- Assess and determine solutions for local transportation challenges

Length of Activity: 3 hours

Step 1+2: Reflect about how learners get to school and complete worksheet.

Step 3: Reflect about what learners have learned.

Materials Required

- Internet-enabled device
- Energy Needs: The Ways We Use Energy Backgrounder
- Energy and the Environment: The Impacts of Our Energy Use Backgrounder
- Transportation Use Chart Worksheet
- Data & Facts About Transportation Use Handout
- Props for skits, paper/overhead for recording information

Activity

Step 1: How Do You Travel to School?

- In small groups, ask learners to brainstorm their ideas: If you could travel to school in any way you want, how would you travel? Why choose this method? Encourage learners to think outside the box. At this point, anything goes.
- With the whole class, share and list all of the methods proposed. Once listed, discuss the feasibility, the specific pros and cons, of each method.
- Tell learners they will consider how they currently travel to and from school and then compare and contrast these methods with their creative ideas.

Step 2: Main Activity

PART A

- Provide learners with a copy of the Transportation Use Chart. In groups of three, have learners complete the chart. A short refresher on fractions might help. You might also want to suggest a common denominator such as 5 or 10 for all learners. If your learners are familiar with percentages, you may prefer to have them use percentages. To complete the chart:
 - Learners estimate their own individual use of each mode of travel and enter it as a fraction (unless you have opted to work with percentages).
 - Learners provide three descriptor words—adjectives and adverbs—that they would apply to each mode, such as fast, smart, dangerous.
 - Learners estimate the fraction for each mode of transportation they think applies to the entire class and enter this number in the left-hand column.
- As you circulate around the room, take note what each learner has recorded as their individual use so that while the groups are working on the next two columns, you can calculate a rough class average for each mode of transportation. If your class is familiar with calculating averages, you may want to do this calculation as a class.
- Invite groups to share and record their estimates for the whole class to see. As a class, determine:
 - Which mode of transportation has the highest or lowest estimates?
 - Which mode has the largest range of answers? You might want to take a moment to review the concept of range.
 - What descriptor words were most common for each mode?
- Share your calculations for the class average use for each mode of transportation. Depending on the grade level of your learners, you could work as a class to calculate the class average use of each mode of transportation rather than provide these calculations for them.

- Ask learners to consider:
 - How close were your estimates of the average classroom use to your own actual use?
 - Which mode is most commonly used by this class?
 - What surprises you most about these results?
 - How might our actual use of these modes of transportation be more accurately measured?
- Hand out Data & Facts About Transportation Use. Looking at the two charts together as a class, discuss the differences and similarities between the learners and other Canadian commuters.

PART B

- In small groups, have learners prepare short skits to act out peculiar or unlikely transportation scenarios that focus on a specific mode of transportation.
 - Driving to the library 1 km away.
 - Walking to pick up a treat 10 km away.
 - Taking transit to the movie theatre 2 km away.
 - Cycling to a sports practice 8 km away.
 - Explain that the groups need to present persuasive arguments and facts within the skit to elaborate why a particular mode is the best choice for the scenario. Assign a scenario to each group and give the groups five minutes to rally as many arguments/facts as possible and then present them in a short skit to the class in one minute or less.
- Discuss the variables that emerged during the presentations and ask learners to consider the following questions.
 - What reasoning do you think best explains why certain modes are used in particular situations (e.g., learner age, bus routes, parental control, convenience, or safety issues)?
 - What connections do you see between these reasons and some of the descriptor words you used for different modes of transportation in the Transportation Use Chart?
 - How do your insights here compare with your creative ideas at the outset?

Step 3: Conclusion

- Ask learners to write a scenario that relates to them personally which builds an environmental case for adopting a change to their usual pattern of travel. Encourage learners to make use of some of the points that were made during the presentations (you could post them as a list). You may wish to have learners focus on particular barriers they see, ways to overcome them, and the benefits of making such a change.

Extension Ideas

- Expand the eLearning component. Invite learners to use the travel planning resource at:

 <https://www.viamichelin.com/web/Routes>.

- Alternatively, using a large map of your town or city, let learners use string to map their routes to school using the scale (review ratios and scales beforehand) and calculate their average distance to school. If you use coloured pushpins for the different modes of travel, your map could vividly illustrate how the class travels.
- Continue the explorations. Go beyond environment and transportation concerns directly to explore health, fun, freedom and mobility. Explore the case studies Improving Neighbourhoods, Fort Street Revival and The Bogota Project. Investigate how walkable and bikeable the school and nearby neighbourhoods are and engage in school-based travel planning. The Otesha project offers great information on transportation:

 <http://www.otesha.ca/otesha+book/index.en.html>.

- Plan a bike-a-thon. Organize a school bike-a-thon and see how transportation changes lives.
- Conduct a life-cycle study. Have learners in groups explore the four modes of transportation as a life-cycle study. For each mode, trace back to the resources used to manufacture the item (car, bike, shoes, bus), how long or the number of kilometres the item is expected to last, the impact the item will have on the environment while in use, and the impacts of disposal when the item is no longer in use.
- Introduce theatre games. Using invented or created scenarios, such as at the bus stop, bike rack, pedestrian crosswalk, mayor's office, learners create a storyline of their experience. Their scenarios are selected to show the challenges of transportation and unhappy outcomes. The skits are then re-enacted, this time with other learners choosing to take the place of the actors and play the scenes in a different way for a more productive and positive outcome. Learners may find inspiration in resources such as Bill Strickland's The Quotable Cyclist or Divorce Your Car by Katherine Alvord.
- Bring in a role model. Bring in an outside expert to inspire learners and further their thinking about sustainable transportation:
 - Bike education groups
 - Groups dedicated to improving air quality by reducing emissions, such as Clean Air Champions

 www.cleanairchampions.ca

- City planners who can discuss ideas and plans that learners can help support