

# 1-Hour Challenge: Vehicles In Motion

## Challenge/Design Brief

Build something that moves with minimal human power.

## Resources

There is tremendous variation in what material you can use for this challenge. Here's what I used for one round (there were some duplicate items, as you'll see below):

1. 1 envelope with 5 rubber bands
2. 1 envelope with 5 rubber bands
3. 4 sheets of standard, plain copy paper
4. 4 sheets of standard, plain copy paper
5. 2 sheets of heavy, stiff construction paper
6. 1 balloon
7. 4 zip ties
8. 1 ball of string
9. 1 square of stiff paper
10. 4 straws
11. 1 pad of sticky notes (Post-Its)
12. 1 pad of sticky notes (Post-Its)

In addition to these resources, I allowed each team to use as much Scotch tape and masking tape as they needed, as well as using scissors. You may choose to make tape a resource, depending on the number of teams and the situation.

## Lesson Plan

1. Form teams (2 minutes)
2. Give out the challenge (2-3 minutes)
3. Design Phase: give the teams 5 minutes to discuss what they want to build and what materials they want. (5 minutes)
4. Have teams bid on resources. Each team gets 30 points, and they must use these points to bid for materials. This should be run as an auction, with each team that wants the resource bidding for a piece of material until a high bid is reached. (10 minutes)
5. Build the vehicles (20 minutes)
6. Demonstrate/race the vehicles (10 minutes)
7. Discuss (10 minutes)

## Discussion Questions

1. What issues did you face when building?
2. How would you improve the design?
3. How did bidding for materials change your approach or design?
4. How did your team's knowledge (or lack of knowledge) affect what you built?
5. Did you take aesthetics or visual appearance into consideration when designing and building? Why or why not?

## Personal Reflections

This project works well with a medium-to-large group. I taught it to only 4 students, and the bidding part wasn't as successful because there were only two teams bidding on materials.

## Acknowledgements

This lesson plan was developed by Bill VanLoo, based on a project led by Professor J. Holly Sisk as Eastern Michigan University in Spring 2006, for a Small Group Communication class (CTAC359).

## Copyright

This lesson plan was developed by Bill VanLoo. If not stated otherwise, all material is copyright Bill VanLoo, and licensed for use by educators via the Creative Commons Attribution-NonCommercial-ShareAlike 2.5 License.

See <http://www.creativecommons.org> for more information.