California State University of Bakersfield, Department of Chemistry

Hovercraft

Standards:

8th:

1. a, b, c, d, e & f; The velocity of an object is the rate of change of its position.
2. a, b, c, d, e & f; Unbalanced forces cause changes in velocity.

Introduction:

Transportation of goods and materials has concerned people for centuries. Goods end up travelling by ship, truck, train and even by hoof and foot. In many cases these items travel by two or more of these methods. So how do you move these items without having to switch from ship to train to truck etc.? Perhaps the answer is in a hovercraft.

Materials:

- (1) Compact Disc (CD)
- (1) Water bottle lid (the sports bottle type that pops up to use)
- Hot glue gun
- Balloons

Safety:

- Always have an adult with you to help you during your experiment.
- Always use caution while handling hot objects.

Procedure:

1. Glue water bottle lid onto the center of the CD
2. Blow up a balloon twist the end to prevent the air from leaking out.
3. Carefully stretch the lip of the balloon over the bottle lid.
4. Place whole assembly on a smooth flat surface.
5. Untwist the balloon and release the hovercraft.

Data and Observations:

Record your observations in this space

What did you see? Anything you were not expecting? Describe it here.

Questions:

Would using different size balloons affect how long the hovercraft moves?

References:

1. Stevespanglerscience.com http://www.stevespanglerscience.com/experiment/cd-hovercraft-sick-science (accessed July 23, 2012).