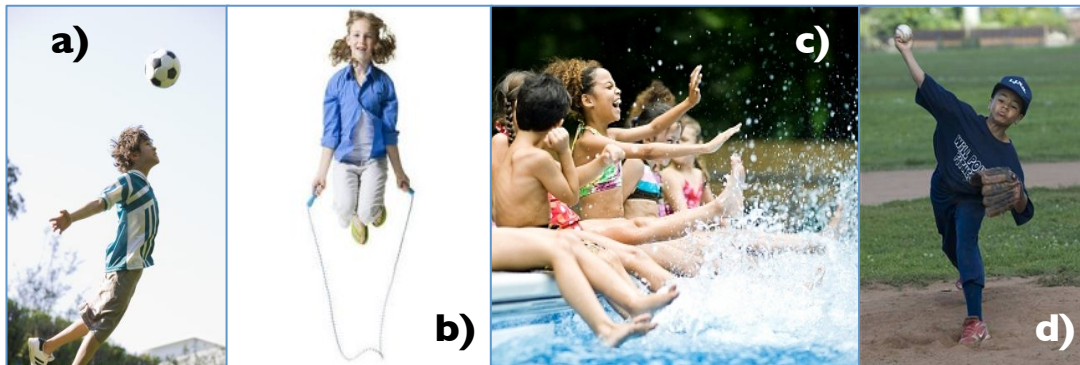


Name:

All About ENERGY (Teacher Version)

Everyday Energy

Where do you see energy in the following pictures?



a) Child using energy to jump and transferring energy into ball to send it the other way.

b) Child using energy to spin the rope and jump over it.

c) Children using energy to kick their legs and send water into the air.

d) Child using energy to move arm and torso to throw the ball forward.

Inertia Zoom Ball!

Materials:

- Scissors
- Two 2L Plastic Bottles
- Masking Tape
- Coloured Paper and Ribbons (for decoration)
- Two 12-foot strings
- Straws (for handles)



Instructions:

1. With a grown-up's help, cut the bottoms from two soda bottles.

3. Thread the two strings through the necks.

2. Tape the bottles end to end so they form a football shape. Decorate the bottles, if you'd like!

4. Tie the pieces of straw into a circular pattern to make two handles at each end. Now, zoom!

Name: _____

Talk About It!

1. How does this toy work?
The pushing action of the strings sets the bottle in motion. When it reaches the other end, an opposite pushing action from the second player stops the ball for a moment before sending it back to the first player.
2. Where does the ball get its energy to move from?
The energy from students moving their arms is transferred into the string, sending the ball away from them.

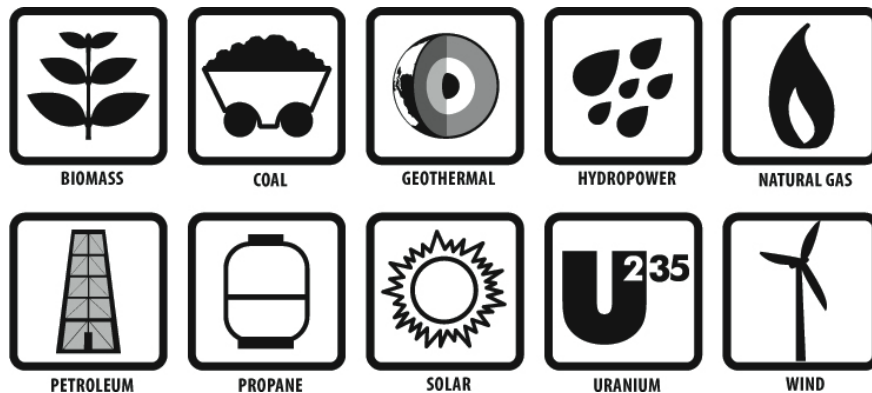
Newton's Corner

Have you ever wondered about motion and energy? Sir Isaac Newton did. He came up with three simple laws that explain how things move around. When Newton was 23, he had to leave University because many people were very sick. Newton kept working at his mom's farm, and made these amazing discoveries while being there!



Energy Sources

Can you match the pictures of energy sources to their symbol?



Name:

Image Sources:

Everyday Energy:

1. Think Stock Photos: <http://www.thinkstockphotos.ca/image/stock-photo-young-boy-heading-a-soccer-ball/81926267/?countrycode=CAN>
2. Jump Rope Institute: <http://www.jumpropeinstitute.com/kids.htm>
3. Corbis Images: <http://www.corbisimages.com/stock-photo/royalty-free/42-20854216/little-kids-splashing-water-in-swimming-pool>
4. Pax Arcana: <http://paxarcana.wordpress.com/2008/08/27/jericho-scott-is-overrated/>

Inertia Zoom Ball:

1. Clipart Best: <http://www.clipartbest.com/clip-art-scissors>
2. Creating More Questions: <http://www.creatingquestions.com/2011/04/hw-bring-in-2-liter-bottles-of-soda.html>
3. iTapes: <http://itapes.in/about-us.php>
4. Amazon: <http://www.amazon.co.uk/Coloured-Paper-Value-Assorted-Colours/dp/B00702SS8C>
5. Sin Wah: <http://www.sin-wah.com/ribbons.html>
6. Second Law Media: <http://www.secondlawmedia.com/how-much-time-does-it-take-to-manage-a-ppc-campaign/>
7. Bulk Bar Products: <http://bulkbarproducts.com/products/Straws>

Newton's Corner:

1. Newtons: <http://www.newtons.net.au>

Energy Sources:

1. What's The Deal With...: <http://understandhistorynow.wordpress.com/2012/06/27/whats-the-deal-with-a-counter-evolution-against-gmos/>
2. Commodity HQ: <http://commodityhq.com/2012/how-well-does-ung-track-natural-gas/>
3. Science Media Centre: <http://www.sciencemediacentre.co.nz/2011/05/24/hotter-and-deeper-geothermal-energy-exploration/>
4. The Telegraph: <http://www.telegraph.co.uk/finance/newsbysector/industry/mining/9735823/UK-Coal-Britains-biggest-coal-miner-makes-final-bid-for-survival.html>
5. MathWorks: <http://www.mathworks.com/company/newsletters/articles/solving-large-scale-optimization-problems-with-matlab-a-hydroelectric-flow-example.html>
6. Energy Industry Photos: <http://www.energyindustryphotos.com/Photos%20of%20Oil%20Rigs.htm>
7. Dwell Development: <https://plus.google.com/communities/103432449574638052985>
8. Wisegeek: <http://www.wisegeek.com/what-is-nuclear-energy.htm#didyouknowout>
9. Wikipedia: http://en.wikipedia.org/wiki/Wind_farm
10. Wikipedia: <http://en.wikipedia.org/wiki/Propane>