Physical and Chemical Changes

http://www.bbc.co.uk/bitesize/ks2/science/materials/reversible_irreversible_changes/play/
Agenda

• Introduction
• Physical Changes
• Chemical Changes
• Experiments
• Movement Demonstration
• Examples
• Slime
• Conclusion
Introduction

- What do scientists do?
- Where are they?
- What types of scientists are we?
- How does this type of science affect you?

If you can’t explain it simply, you don’t understand it well enough.

– Albert Einstein
Physical Changes

• What is it?
• States of matter
• Can it be reversed?
• Examples
Chemical Changes

• What is it?
• Can it be reversed?
• Examples
Experiment Time!

• Are the following examples of chemical or physical changes?
  – Snow melting
  – Baking soda and vinegar

• How do you know?
Get Moving!

- Student Volunteers
- States of matter
  - Solids
  - Liquids
  - Gases
Real World Examples

• Metal screws: Chemical or Physical Change?
• Rubber Tires: Chemical or Physical Change?
  – Melting: Are tires sticky?
  – Added sulfur
  – Cross-linking activity
  – “vulcanization”
Creating Slime

• Food Dye allergies?
• Creating your own chemical change
• Start with a liquid
• Add another substance that ties the molecules together
• End up with a more solid material
• Work with a partner
Creating Slime

- Solution A (partner 1)
  - Warm Water
  - Elmer’s White Glue

- Solution B (partner 2)
  - Borax
  - Warm Water
  - Mix until dissolved

- Mix Solution A and Solution B together to make slime!

- Roll it into a ball
Creating Slime

• What does it feel like?
• Which state of matter have you created?
• Can you reverse the change?
Conclusion – Physical and Chemical Changes

• What is a physical change?
• What is a chemical change?
• Examples of each
• Which kind of change did you create? How do you know?
• Careers that relate to science
Thanks for having us!