

# Materials List

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## Printed Materials

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Can be downloaded at [www.physicscentral.com/physicsquest](http://www.physicscentral.com/physicsquest)

- PhysicsQuest Manual
- Warsaw Map
- Map Grip Overlay
- Ruler Template
- PhysicsQuest Challenge / Final Report
- Extension Activities

## Hardware

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The quantities listed here are enough for one group to do each activity.

### Activity 1: Checking Temperatures

- Piece of glass about 3" x 3"  
*These are available at any hardware or frame store.*
- Piece of aluminum about 3" x 3"  
*Aluminum flashing which can be purchased at any hardware store works well.*
- 3" x 3" piece of felt  
*Felt is available at any craft store*
- Liquid crystal thermometer  
*These can be purchased at an aquarium supply store.*
- 4 small ice cubes
- 3" x 3" piece of corrugated cardboard
- Paper towels
- Stopwatch
- Scissors

### Activity 2: Racing Molecules

- 3 dye tablets  
*These are available from Educational Innovations for \$5.95 a bag. <http://www.teachersource.com/LightAndColor/ColorMixing/ColorSplashDyeTablets.aspx>*
- Bulb thermometer  
*These are available from science supply stores such as Science Kit & Boreal Labs, [http://sciencekit.com/product.asp\\_Q\\_pn\\_E\\_IG0026485](http://sciencekit.com/product.asp_Q_pn_E_IG0026485) for about \$4.99 each.*
- 3 transparent cups
- Warm and cold water
- Stopwatch
- Calculator

## Hardware

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### Activity 3: Measuring Change

- Glass vial  
*Available in sets of 12 for \$7.39 at <http://www.pilotvials.com/Screw-Thread-Bottles.html>, size 5.*
- Modeling clay, about 2 oz  
*This is available at any craft supply store.*
- Clear drinking straw
- Bulb thermometer  
*These are available from science supply stores such as Science Kit & Boreal Labs, [http://sciencekit.com/product.asp\\_Q\\_pn\\_E\\_IG0026485](http://sciencekit.com/product.asp_Q_pn_E_IG0026485) for about \$4.99 each.*
- Dye tablet  
*These are available from Educational Innovations for \$5.95 a bag. <http://www.teachersource.com/LightAndColor/ColorMixing/ColorSplashDyeTablets.aspx>*
- Ruler template
- Warm and cold water
- 3 styrofoam cups
- Tape

### Activity 4: Creating Heat

- Rubber band
- Film canister
- Bulb thermometer  
*These are available from science supply stores such as Science Kit & Boreal Labs, [http://sciencekit.com/product.asp\\_Q\\_pn\\_E\\_IG0026485](http://sciencekit.com/product.asp_Q_pn_E_IG0026485) for about \$4.99 each.*
- Yeast
- Hydrogen peroxide (*from any drugstore*)
- Styrofoam cup