

Blossoms: “Recognizing Chemical Reactions”

Information about Modeling with Bricks

Plastic bricks are needed in only two sizes: 2x4 and 1x2 bricks. The numbers and colors needed for each kit for a student team are:

- 2x4 brick size: 2 pinks, 2 light greens, 1 green, 6 reds, 2 blacks
- 1x2 brick size: 2 whites

Multiply the bricks by the number of teams in your class to obtain the final number. Note that two students per team using 1 kit is best, but you can have up to 4 students in a team with a kit. In the ideal arrangement, if you have 20 students you might build ten kits for the teams of two.

LEGO® Atoms and Molecules Sets

HISTORY

The Edgerton Center at the Massachusetts Institute of Technology (MIT) with Kathleen M. Vandiver helped to develop sets of bricks called “LEGO Atoms and Molecules Sets” for teaching middle school science lessons including chemical reactions, photosynthesis, cellular respiration, and air pollution. The website describing the LEGO sets and lessons can be found at <http://mindandhand.mit.edu/>

During April and May 2012, the Edgerton Center will update the website above to include changes to this set and its lesson materials.

The LEGO Atoms and Molecules Set will include several more chemical elements and change a few brick color designations to the CPK chemistry standard, because more LEGO brick colors have become available. See the website <http://mindandhand.mit.edu/> for details.

You can upgrade any previous LEGO Atoms and Molecules kit simply by adding 8 pink 2x4 LEGO bricks and 8 light green 2x4 LEGO bricks; adding a sticker inside the box lid; and printing out a new *Key for the Elements* which is posted on the website above. With the new key in hand, it will be easy to see which elements were affected by the addition of the new colors.

NOTE: The Blossoms LEGO photosynthesis lesson is unaffected by changes to the set in 2012. The brick colors for carbon, hydrogen and oxygen are the same.

Preparations for the Chemical Reaction Activity with Bricks

After obtaining the bricks, print out the following papers for each student kit from the pdf files on the webpage.

- Key for the elements (side1) and LEGO Brick Layout mat (side 2)
- Baking Soda and Calcium Chloride Reaction – reactants(Side 1) and products (Side 2)