



Chemistry Lapbook -

by [Homeschool Helper Online](http://www.HomeschoolHelperOnline)
Submitted by JoAnn S.

2nd-8th Grade

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Library List:

Chemistry Matters by Grolier

Chemical Change: from Fireworks to Rust by Darlene Stille

Chemical and Change by Steve Parker

Acids and Bases by Carol Baldwin

Chemistry (DK Eyewitness Books) by Ann Newmark

Science Matters by Brian Knapp (volumes 3, 10, 15, 16, 21, 22)

The Complete Book of Science grades 5-6

The Usborne Internet-linked Science Encyclopedia by Judy Tatchell

Vocabulary: property, volume, mass, density, weight, space,

Activities:

1. Timeline
2. The Atom
3. The Molecule
4. Play an online game
5. Chemical Bonds
6. The Elements
7. Making a Molecule
8. Observable Properties
9. The 3 States of Matter
10. Changing States of Matter
11. Physical and Chemical Changes
12. Acids and Bases
13. The 3 Types of Matter
14. Just for Fun
15. Vocabulary

Resources and Links to complete activities:

Read pages 10-29 in the *Usborne Internet Linked Science Encyclopedia*

The Complete Book of Science grade 5-6 pages 258-281

[All about atoms](#)

[Atoms around us](#)

[What is a molecule?](#)

[Molecular Models](#)

[Interactive periodic table](#)

[Basic explanations on elements, matter, and atoms](#)

[Changing the state of matter](#)

[Chemical reactions](#)

[clip art](#) that you can use for your lapbook

[More clip art](#)

[Test tube pictures](#)

[Chemistry coloring page](#)

Activity 1: Timeline

Create a timeline of chemistry milestones. Use an accordion fold to attach it to your lapbook.

[Timeline for Matter and Molecules](#)

Activity 2: The Atom

Using the diagram of an atom on page 258 of *TCBOS* as a guide cut out 4 circles that size from different colors of card stock. On the first circle print the word atom and a brief description of what an atom is. On the second circle draw the 2 negative electrons just like the diagram. Then explain what an electron is and why it orbits the nucleus. Next on a 3rd circle draw the nucleus of an atom like in the diagram and write about it. For the 4th circle draw the inside of the protons and neutrons and write information about them. Then staple them together at the top and glue into your lapbook.

Do pg. 258 of *TCBOS*

Activity 3: Molecules

[Mirror Molecules](#) (make sure to click on the questions it the bottom corners)
There is an experiment for smell molecules to do.

Activity 4: Chemical Bonds

Make 2 flip flap books each with 3 flaps. The first one will be for the 3 major types of "strong" bonds. On the outside of the flap write the bond name and then on the inside write a brief description of the bond. They may want to include a drawing representation, this would probably be best for younger kids. The second flap book will be for the 3 major types of "weak" bonds. Then do the same thing with this as the first one. When they glue it in the lapbook they should write strong bond and weak bond above the right ones.

Activity 5: The Elements

Make element trading cards. For the younger kids I'll have them do the more popular elements. The amount will depend on their age.

We'll use a pocket fold to store our element cards in.

I will also have them do page 259 and 260 in *TCBOS*.

Activity 6: Making a Molecule

The [edible atom or molecule](#)

Activity 7: Observable Properties

This is the [template](#) we are going to use. When you cut the shape out, cut all the way down to the center shape making a slightly larger V. This way you will be able to fold the flaps towards the center. I found folding the side ones first and then the 2 bottom ones worked best. Of course you fold the top one down over the rest.

On the top flap write Observable Properties of Matter. Then on each flap write one of the observable properties. There are 7 properties so some flaps will have writing on the inside part also. In the center of the flower write the definition of a property.

Now get out 2 different kinds of cookies and ask the kids to use the observable properties to tell them apart. Have them draw one cookie on each remaining blank flap and write what kind it is by the picture. They should use 2 different colored pencils one to represent each cookie. Then on the property flaps have the kids write a word or two to describe each cookie. Make sure to use the colored pencil that matches which cookie they are talking about. Also you will want to make sure your cookies are quite different from each other.

Do page 276-277 of *TCBOS*

Activity 8: The 3 States of Matter

Here is a [simple interactive explanation of how molecules behave in the different forms of matter](#).

You will need 3 Ziploc bags, water with food coloring added, something solid that will fit in the Ziploc bag, a cup, and paper towels. Fill one bag with the colored water, one with the solids, and the third air. Let the kids examine the bags. Then with the solid ask them if it takes up space. Take it out of the bag ask them if it changes shape. Put it in the cup ask if it changed shape to fit the cup. Have them hold it. Then ask does it have weight? Ask them if you were to drop it on the table would it pass through the table? Do it, and then ask them why it didn't. They should respond because they are both solid.

Holding up the water bag ask them if it takes up space. Hand them the bag and ask if it has weight. Does it have a shape? Now open the bag and pour some of it into the cup. Did it change its shape to fit the cup? Ask them what would happen if you poured some on the table. Pour a little on the table and ask them what happened.

Holding up the bag of air ask them if it takes up space. Hand them the bag and ask if it has weight. Not much but there is some. Ask them if it has shape. Ask what would happen if you opened the bag. Open the bag and let some out. Did it change shape? Where did it go?

Here is another demonstration to show that air takes up space. You will need a funnel, a flask, clay, and water. Showing them the funnel, ask what would happen if you poured water through it. Then have one of them pour some water through it into the flask but holding the funnel above the flask. Pour the water back out. Now take the funnel and sit it on the flask. Put the clay around the area where the flask and funnel meet making sure to seal it well. Ask them what they think will happen when you pour the water into the funnel. Next pour the water into the funnel. Don't pour too slowly or you'll give the air room to escape. The water should stay in the funnel. Ask the kids why the water didn't run into the flask. The reason is because air takes up space.

Also matter can not share space. To prove this theory, do the experiment on page 265 of *TCBOS* gr. 5-6

You will need to cut out 3 large circles. I plan on using a different color of paper for each.

They will fold the circle in half and then in half again gluing just the back forth to the lapbook. Each circle will be for a different state of matter. On the front forth that is showing have them write the word liquid. Inside they should write this. Liquid - takes up space, changes shape to fit container, can pass through it, flow, and has weight. Solids - takes up space, has a fixed

shape, can't pass through it, has weight. Gases - takes up space, changes shape to fill space, can pass through it, invisible (usually), has weight.

Have them go through old magazines to find examples of each to glue on the appropriate circle.

Do page 275 of *TCBOS*

Activity 9: Changing the States of Matter

Here is a series of activities for them to try. These will show them how matter can change states.

[Here are some experiments that use dry ice.](#)
[Here's another head scratcher.](#)

[Grocery Store Matter](#): You could also take an ice cube explain that it's a solid put it in a cup and let it melt. What state is it now? Now that it is a liquid heat up a skillet and pour it into it. What's happening now? It's changing to a gas.

Do page 270, 273, of *TCBOS*

Activity 10: Physical and Chemical Changes

Take a piece of paper cut it in half. Then take one half and fold it in half. Open it up then take one end and fold it so the end meets the center. Do the same with the other end. This will be your mini book. On one tab write physical changes and then on the other write chemical changes. Under the appropriate tab explain what each is.

[Chemical and physical changes](#)

Here are several [experiments](#) to try. You can use these to help reinforce the idea behind chemical and physical changes. They only require simple household items. It also comes with a worksheet for the kids to record their finding on. They could fold into fours and attach it that way or you could make an envelope to put worksheets in.

Here are a few more [experiments for physical and chemical changes](#).

And if these weren't enough here are a few more [experiments](#).

Or you could just [watch them do it](#).

Do page 274,279-281 of *TCBOS*

Activity 12: Acids and Bases

Chemicals can be grouped according to their qualities. There are 2 groups' acids and bases.

With the other half of the paper from above, make another mini book. On this one write acid and bases and explain each.

Now do the experiment on page 263 of *TCBOS*.

Check things to see if they are [acid or base](#)

Here is a [form to record your results on](#). Across the top write solution/color/ acid,base,neutral. Then write the information in the appropriate areas. Then they can cut it out fold it in thirds and glue it into their lapbook. On the front write Acid/Base Experiments.

Activity 13: The 3 Types of Matter

What are the 3 types of matter? Element, compound, mixture

I'm going to use this [template](#) for this activity. I will enlarge it some.

Matter has mass and takes up space should be written on the front. Then on the inside of each flap the kids will write one type of matter and explain what it is. They could give some examples of each or find a picture to illustrate each kind.

There is an [experiment](#) at the bottom for a mixture

Here is a tasty mixture experiment.

Materials: blender
Vanilla ice cream
Milk
Bananas, strawberries
Knife
Large spoon
Cups

Fill the blender half full with ice cream. Dice the fruit up and add it to the blender. Pour in the milk and fill to about 2 inches from the top. Now you just blend it up and pour it into the cups.

This is a mixture because each ingredient still keeps its same chemical properties.

Do page 268-269 of *TCBOS*

Do page 271 of *TCBOS*

Activity 14: Just for Fun

You can find loads of [experiments](#) to have fun with at this site.

Activity 15: Vocabulary

Use a flip flap book to attach your vocabulary to your lapbook.