

Lesson Plan Outline		Teacher: Audrey Bergmann and Dagmar Wabel School: Elmcrest Elementary	
Subject: Science Date: 4/25/11 Time: 2:00 pm		Students will engage in: <input type="checkbox"/> Independent activities x Cooperative learning <input type="checkbox"/> peer tutoring <input type="checkbox"/> Visuals	x Simulations <input type="checkbox"/> pairing x hands-on <input type="checkbox"/> centres
Standards/Objectives met: Chemistry – acid & base N.5.A.2. – Students know how to compare the results of their experiments to what scientists already know about the world. P.5.A.1. – Students know matter exists in different states which have distinct physical properties.			
Time	Procedures followed	Material	
10 min	Engagement: The students are introduced to "acid & base". Hand out a few pickles for students to taste. Discuss how the pickles taste, why they taste like this and if they know other food that has similar taste (sour). Introduce the term 'acid' & 'tastes sour' and then ask about soap. How does soap feel? How does it taste? Introduce the term 'base' & 'tastes soapy'.	a few pickles, cut into little pieces, plate	
10 min	Exploration: Place a few items in the middle of the group, with 3 big labels on the floor "acid", "base", "don't know". Let the children discuss where the items are placed and do not interfere with their decisions. Explain that we will learn how to find out if they classified correctly or not, without tasting any items.	lemon juice, soap, baking soda, vinegar, washing powder, 7up, sparkling water	
10 min	Explanation: Use graphics on the Smartboard and introduce "pipette", "test tube" SAFETY CONCERNS! (long hair needs to be tied, don't spill anything, careful handling, glass tubes, do not put anything in the mouth!) Explain how the experiment works: test tubes contain liquid, put a few drops of red cabbage juice in each and wait and see. Record your findings on the worksheet. Leave the graphics on the Smartboard for later use during evaluation.	Smartboard with graphics of test tubes, pipettes. Student notebooks	
10 min	Elaboration: Students are sent to work in groups of four and conduct the experiment. They have to put a few drops of red cabbage juice in each test tube and watch how the colour changes. Two groups will have their test tubes labelled. Two groups will have their test tubes all mixed up, with no labels of what is inside.	items listed above dissolved in distilled water and filled into test tubes. 1 pipette/group, red cabbage juice & worksheets	
10 min	Evaluation: Gather students, show the graphic of the test tubes with the colours, have students discuss which colours represent "acid" and which represent "base". Discuss what the red cabbage juice is (an indicator). have students record the characteristics of base/acid. Discuss how it can now be determined what is in the tubes of the groups whose test tubes weren't labelled.	smartboard, worksheets and two set of test tubes to compare	
Teacher Notes: Safety Concerns are very important in this lesson and have to be strictly reinforced. On each table group a few visuals will also be placed to remind the children. - as an extension children can also be asked if they can reverse the colouring of the items; thus asking them what will happen if they add for instance vinegar to the coloured lemon juice or the baking-soda.			

Name:

Class:



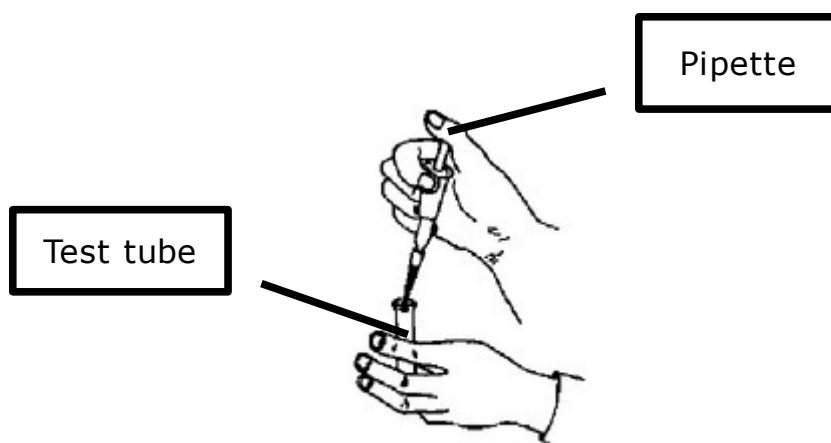
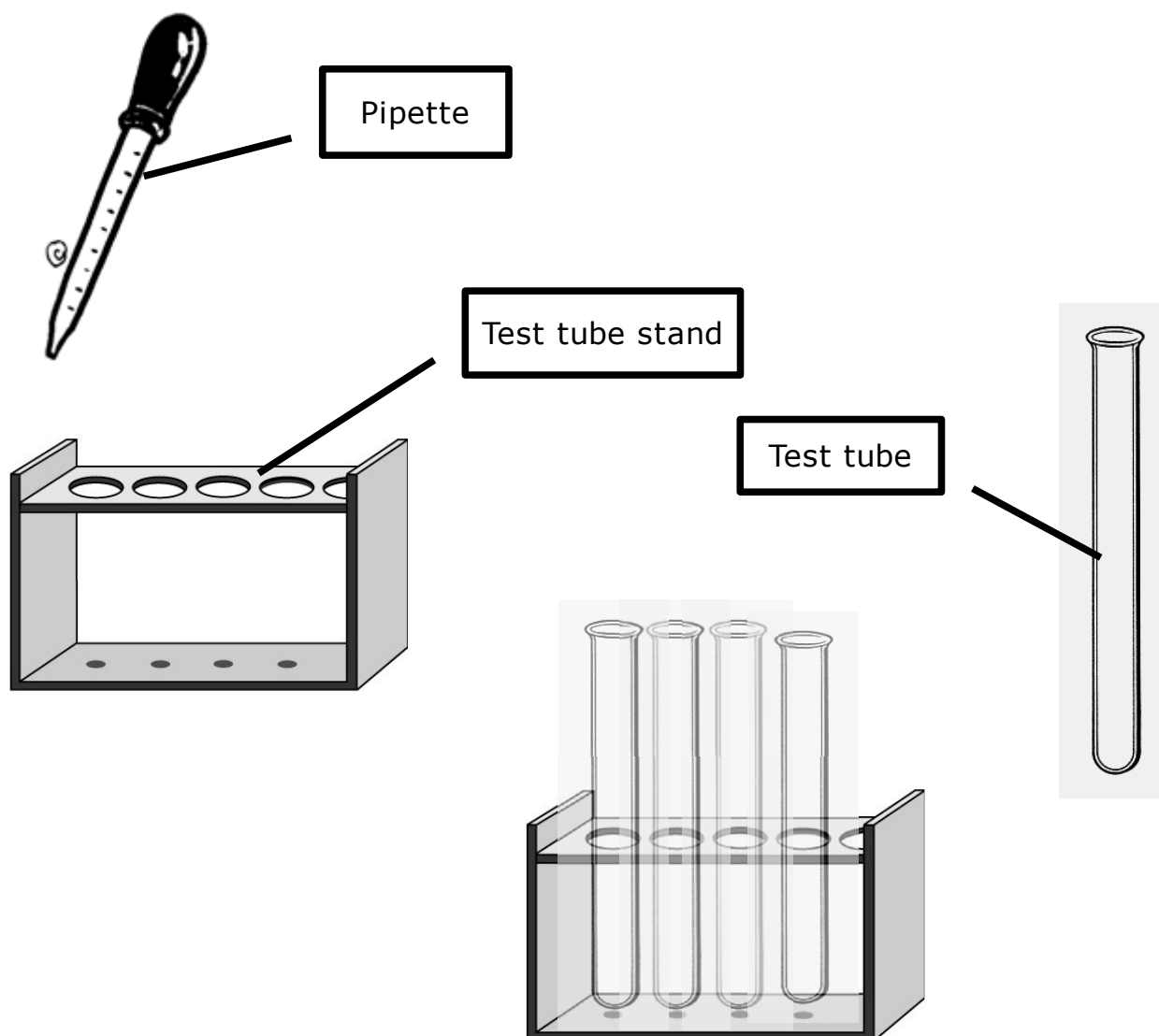
IMPORTANT

DO NOT PUT ANYTHING IN YOUR MOUTH!

HANDLE MATERIALS CAREFULLY!

Take notes in your notebooks. 

Things we use in Chemistry



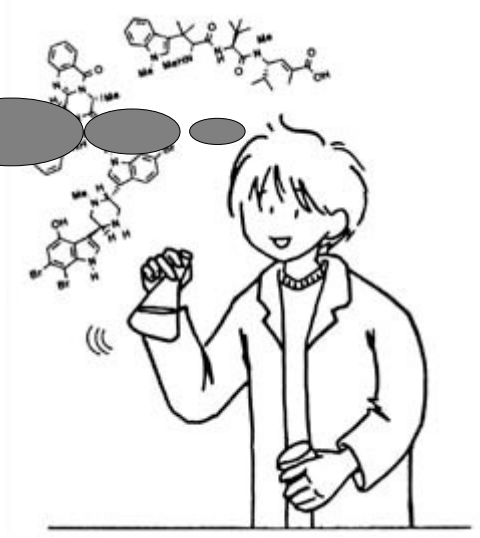
The Properties of Acid and Base

	Acid	Base
They taste...		
They feel...		
They color red cabbage juice....		



Magic Colors!

**In this experiment
you will use red cabbage juice.
It leaves UGLY stains on your clothes
that cannot be
removed. SO
BE CAREFUL!**



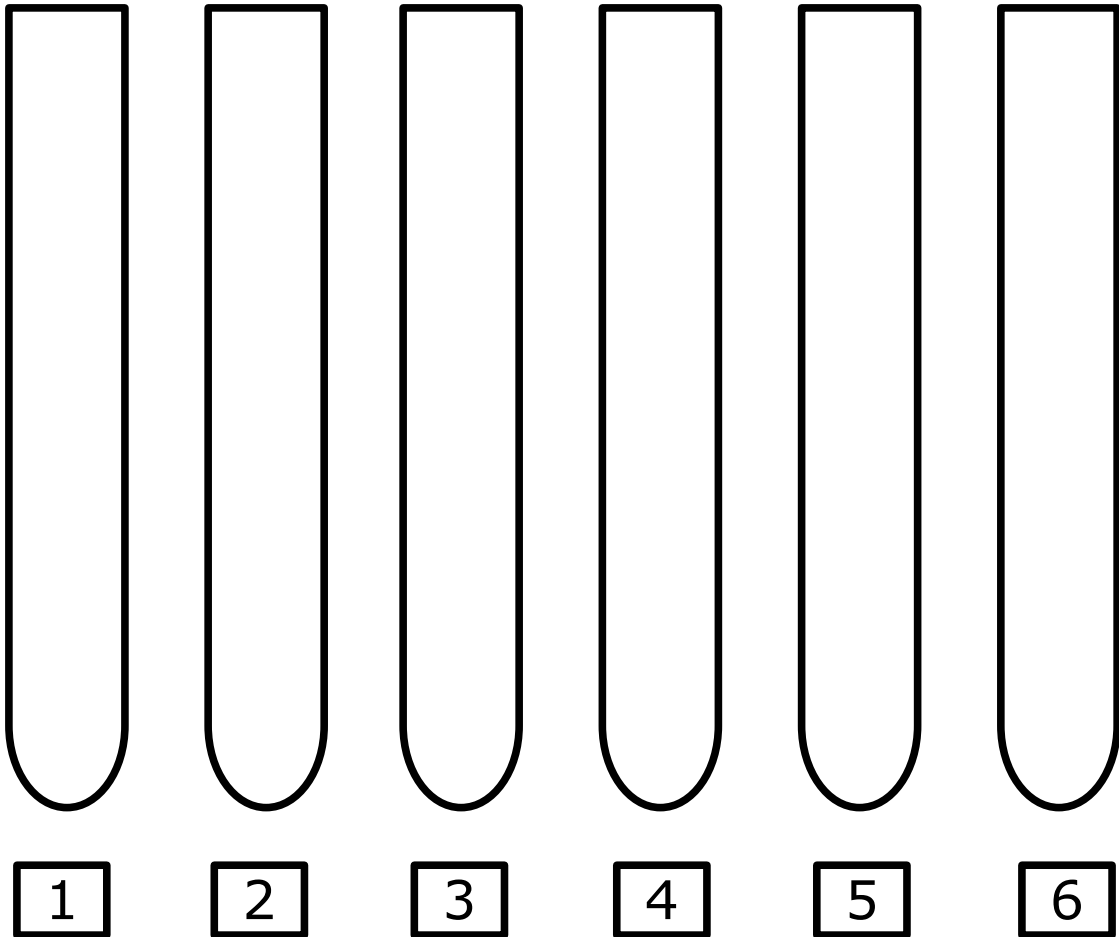
You will receive:

- test tubes
- test tube stand
- a pipette
- different liquids
- red cabbage juice

What you do:

- Wait until the teacher has filled your test tubes
- Be silent and well behaved!
- Fill one pipette of red cabbage juice into each test tube.
- Look what happens!
- Take notes on the next page.

Observations and Conclusions



The Colors of Acid and Base

