

ACID AND BASE

Subject

Basic Science

Prepared By

[Instructor Name]

Grade Level

4

Overview

This lesson plan covers teaching content for;

1. Physical properties of acid and base.
2. Types of acid and base.
3. Uses of acid and base.
4. Naming acid and base.

Objectives

Students should be able to;

1. Differentiate between acid and base
2. List and name the types of acid and base
3. List the uses of acid and base.

Activity Starter/Instruction

1. Ask students if they have ever tasted an unripe orange or banana.
2. Ask them how does it taste or fill in the mouth. (it is sour)
3. Explain to them that the unripe fruit is sour because of the presence of an acid.
4. Have someone taste a very little pinch of baking soda.
5. Ask the student how it tastes. (bitter)
6. Also put a little in the student's hand add a little water and ask the student to rub his or her hands together.
7. Ask if it's soapy. (yes)
8. Explain to them that the presence of a base makes the baking soda bitter and soapy.
9. Stating that a base is the opposite of an acid

Guided Practice

Day 2/ Lesson 2: 15 Mins

1. Explain to students that acid can be naturally occurring or can be prepared in the laboratory.
2. List the examples of acid on the board such as : nitric acid, hydrochloric acid (in our

Teacher Guide

Day 1/ Lesson 1: 15 Mins

1. Explain to pupils that properties are features, characteristics or qualities of something. They can be used to identify something.
2. Get a red and blue litmus paper
3. In a small cup squeeze an unripe orange/lemon juice.
4. In another cup put a clean fluid preferably ammonia based.
5. Insert the blue litmus paper in the unripe fruit juice and the red litmus paper in the clear fluid.
6. After a while you will notice the red litmus paper in the unripe fruit juice turns blue and the red litmus paper in the clear fluid turns blue.

Guided Practice

Day 3/ Lesson 3: 15 Min

1. Explain to pupils that acids and bases are very useful in our daily lives.
2. In almost all the food and fruit we consume acid is present.

Materials Required

- Baking soda
- Water
- Cups (2)
- Red and blue litmus paper
- Unripe orange/lemon

Additional Resources

- <https://www.teacherspayteachers.com/Product/2286079>
- <https://www.teacherspayteachers.com/Product/2433839>
- <https://www.thoughtco.com/acids-and-bases/>
- <https://www.brainpop.com/science/matter/>

Additional Notes

stomach), ascorbic acid (in lemon juice), lactic acid (in our milk) etc

3. Also with base, explain to them that it can occur naturally or it can be prepared in the laboratory.

4. List examples of base on the board such as: sodium hydroxide, potassium hydroxide, caustic soda, baking soda etc.

5. Ask students to draw the table below and write all the names of acids and bases they have learnt today.

Names of acid	Names of base

Assessment Activity

Assess if pupils can:

1. Identify and explain the properties of acid and base.
2. List and name the types of acid and base

Summary

1.

3. Give examples such as: Lactic acid –

important in milk production. Sulphuric acid – it is our car battery it helps the car to start.

4. For base without it we won't have soap to wash plate or our clothes. stubborn stains on our clothes won't remove (sodium hypochlorite in bleach); we will have dirty mirrors (ammonium hydroxide used in glass cleaners)

Assessment Activity

Assess if pupils can:

1. List the uses of acid and base
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