

Acids and Bases in Solution

Lesson 2 Acidic, Basic, and Neutral Solutions



Grade 8 Science Content Standards—5.e: Students know how to determine whether a solution is acidic, basic, or neutral.

Skim Lesson 2 of your book. Write three questions that come to mind. Look for answers to your questions as you read the lesson.

1. _____
2. _____
3. _____

Review Vocabulary

atom

Define atom using your book or a dictionary.

New Vocabulary

acid
hydronium ion
base
pH
indicator
pH meter

Write a paragraph using all the vocabulary terms in a way that shows their meanings.

Academic Vocabulary

approximate

Define approximate, using your book or a dictionary. Then use it in a sentence to show its scientific meaning.

Name _____ Date _____

Lesson 2 Acidic, Basic, and Neutral Solutions (continued)

Main Idea

What are acids and bases?

I found this information on page _____.

Acids

I found this information on page _____.

Bases

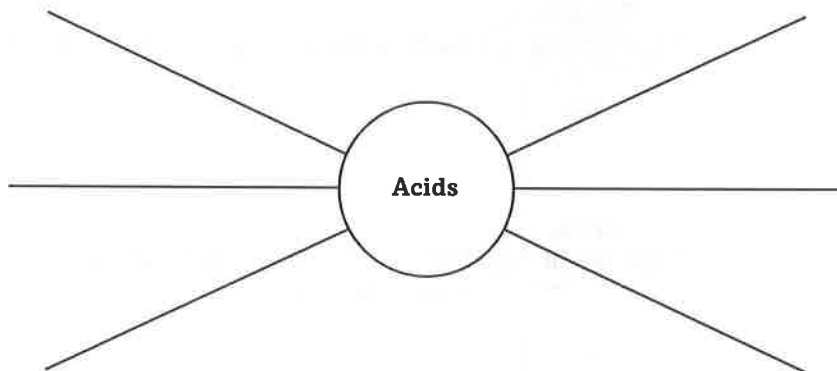
I found this information on page _____.

Details

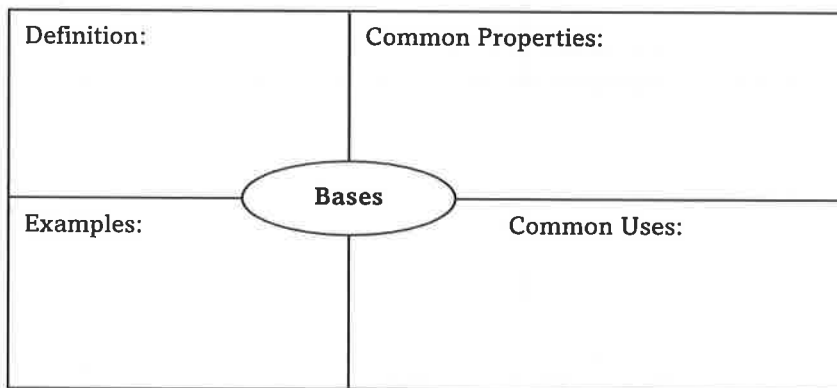
Identify at least two examples of everyday acids and bases.

Acids	Bases

Summarize important facts about acids. List one fact on each line.



Organize information about bases. Complete the diagram.



SUMMARIZE IT

Summarize the main ideas of the above sections with two bullet points.

Lesson 2 Acidic, Basic, and Neutral Solutions (continued)

Main Idea

What is pH?

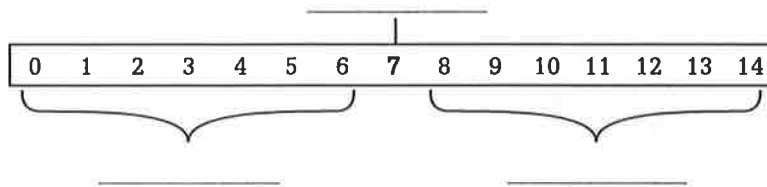
I found this information on page _____.

I found this information on page _____.

I found this information on page _____.

Details

Label the locations of acids, bases, and neutral substances on the pH scale below. Draw arrows to show how the concentrations of hydronium ions and hydroxide ions change across the pH scale.



Hydronium ions

Hydroxide ions

Complete the equations below to compare pH values.

A substance with pH 2 and a substance with pH 1

_____ - _____ = _____; $10^n = \text{_____} = \text{_____}$ times more acidic

A substance with pH 5 and a substance with pH 2

_____ - _____ = _____; $10^n = \text{_____} = \text{_____}$ times more acidic

Define neutralization.

SUMMARIZE IT

Summarize three main ideas of the above sections using bullet points.

Name _____ Date _____

Lesson 2 Acidic, Basic, and Neutral Solutions (continued)

Main Idea

What is pH?

I found this information on page _____.

How is pH measured?

I found this information on page _____.

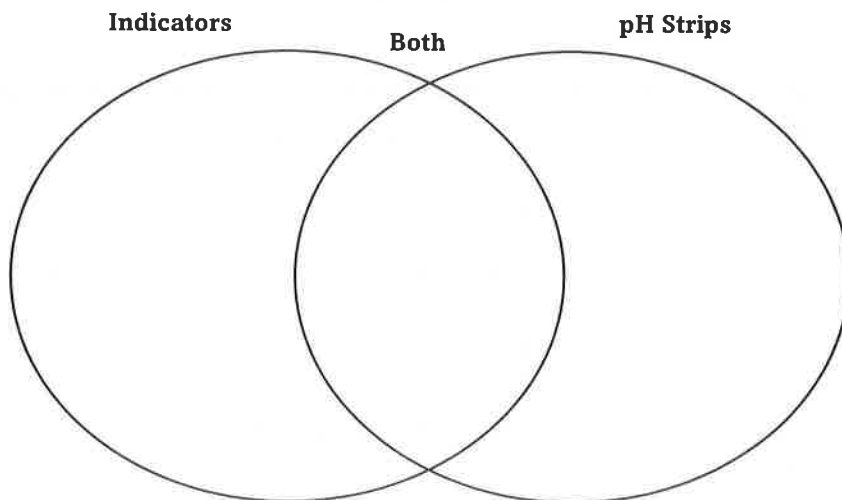
Details

Label the neutralization reaction below to identify its reactants and products as an acid, a salt, a base, and water.



Compare and contrast the methods for measuring pH. Complete the Venn diagram with the facts below. Then describe what a pH meter is.

- change color
- universal indicator is an example
- litmus paper is an example
- approximate pH



A pH meter is an _____ with an _____ that is sensitive to the _____ in a solution.

SUMMARIZE IT

Summarize three main ideas of the above sections.
