Reactivity
Lesson 9 - Neutralisation

Chemistry - Key Stage 3

Miss Fenner

Are orange juice and vinegar acidic or alkaline?

Acidic

What pH are alkali’s?

pH 8 - 14

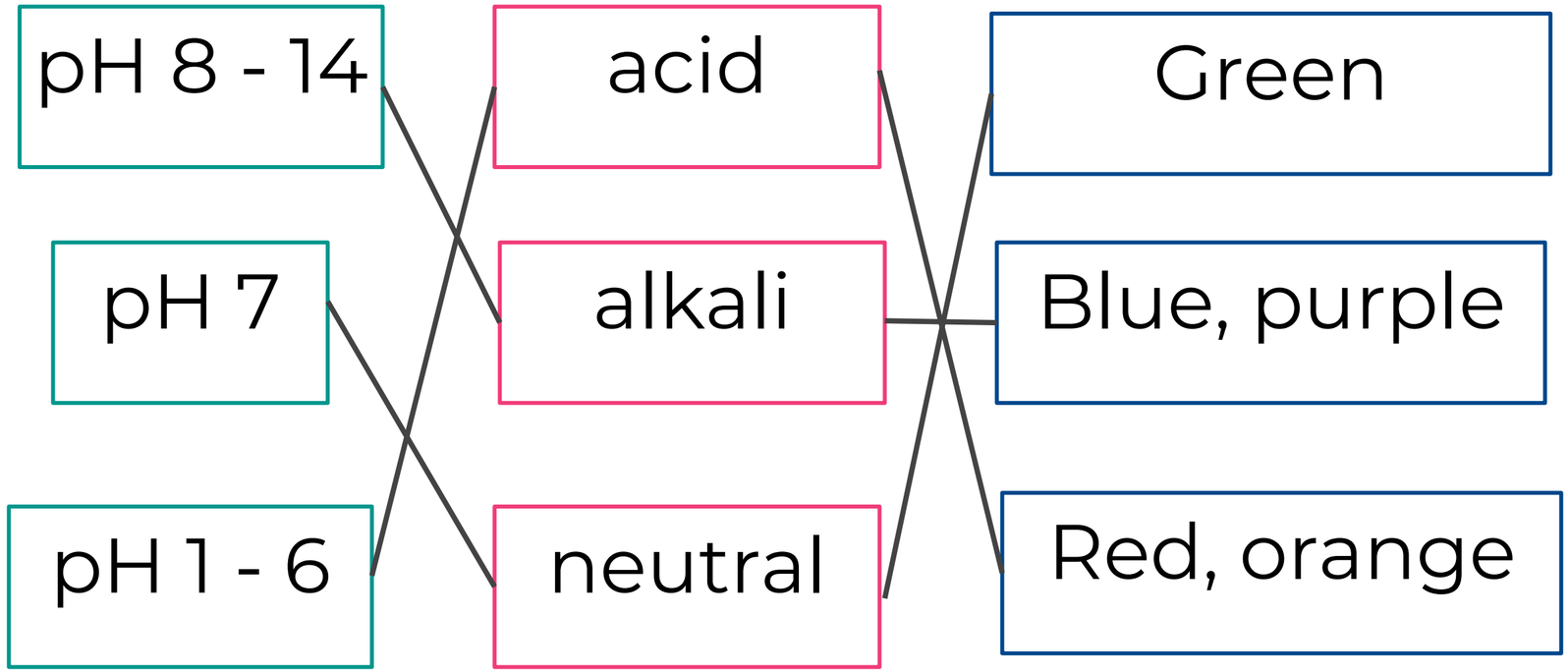
What colour does a neutral substance turn universal indicator?

Green

Independent Practice

pH 8 - 14	acid	Green
pH 7	alkali	Blue, purple
pH 1 - 6	neutral	Red, orange

Independent Practice



Acid + Alkali → Salt + water

The addition of acid to alkali is called a

neutralisation reaction.

Potassium hydroxide + nitric acid → potassium nitrate + water

Independent Practice

1. Write the general equation for a neutralisation reaction.

2. Label the reactants in this reaction.

3. Label the products in this reaction.

4. What pH are each of the reactants?

5. What pH are the products?

Independent Practice

1. Acid + Alkali → Salt + Water

2. The reactants are acid and alkali.

3. The products are salt and water.

4. Acid = pH 1-6
   Alkali = pH 8-14

5. Both of the products are neutral (pH 7).

Results

Trial number	1	2	3	4	Mean
Volume of acid (cm^3)	26.1	24.9	24.8	24.9	

1. Identify any anomalies.
2. Calculate the mean (excluding any anomalies).

Results

Trial number	1	2	3	4	Mean
Volume of acid (cm^3)	26.1	24.9	24.8	24.9	24.87

1. Trial number 1
2. $\frac{24.9 + 25.8 + 24.9}{3} = 24.87\ cm^3$

Independent Practice

Calculate the mean of the following sets of numbers. Don’t forget to exclude any anomalies from your calculations.

1. 3, 7, 8, 22 and 9.

2. 103, 17, 111 and 107

3. 62.5, 62.8 and 62.6

Independent Practice

Calculate the mean of the following sets of numbers. Don't forget to exclude any anomalies from your calculations.

1. (3 + 7 + 8 + 9) / 4 = 6.75
2. (103 + 111 + 107) / 3 = 107
3. (62.5 + 62.8 + 62.6) / 3 = 62.63