Year 8 Science
Distance Learning Quiz and Learn Booklet
Part 1 (week 1-4)
Summer 2

Name:

Form:
Guidance
Scientists have proven that when we do not use information we know, the pathways in our brain actually decay (breakdown) - this is what happens when we forget something. By engaging with your study (reading and doing quizzes) you are not just learning new information you are actually holding on to the information you have already have!

Well done on all the work you have done to this point, you are not letting all your hard school work and study go to waste! 😊

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Your responses in this quiz allows your teacher to give you specific instructions on how to improve, only by doing this can we make sure you make the progress you deserve!

If you have any questions please email your teacher.
5.4.1 The Periodic Table

**Learning Objectives**
- Understand the periodic table and its structure.
- Identify periods and groups within the periodic table.
- Recognize trends and patterns across the periodic table.

**Summary Questions**
1. What is the periodic table? 
2. Identify the periods and groups in the periodic table.
3. Explain the trends observed in the periodic table.

**Periodic Table**

- **Periodic Table**
  - Periods: 1st, 2nd, 3rd, 4th, 5th, 6th
  - Groups: 1A, 2A, 3A, etc.

**Key Words**
- Elements
- Periods
- Groups
- Trends

**Periodic Table Facts**
- **Groups**
  - 1A: alkali metals
  - 2A: alkaline earth metals
  - 3A: transition metals
  - **Periods**
    - Period 1: 2 elements
    - Period 2: 8 elements
    - Period 3: 8 elements
    - Period 4: 18 elements
    - Period 5: 18 elements
    - Period 6: 32 elements

**Periodic Trends**
- **Atomic Radius**
  - Decreases from left to right across a period
  - Increases from top to bottom in a group

**Example Problems**

- **Problem 1**
  - **Question:** Identify the group of the element with atomic number 11.
  - **Answer:** Group 1A

- **Problem 2**
  - **Question:** What is the trend in atomic radius for elements in group 7A?
  - **Answer:** Atomic radius decreases as you move down the group.

- **Problem 3**
  - **Question:** Explain why the atomic radius of potassium (K) is larger than that of lithium (Li).
  - **Answer:** Potassium (K) is in group 1A, and lithium (Li) is in group 2A. Elements in group 1A have larger atomic radii than those in group 2A.

**Exercises**
- Practice identifying elements in the periodic table.
- Solve problems involving periodic trends and patterns.

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**Note:** This text is a summary of the learning objectives and key concepts covered in the periodic table section. For detailed explanations and exercises, please refer to the full text or online resources.
The Periodic Table: Week 3 (15th June)

Summary Questions

Big Idea: What is the 9th periodic table element? Answer: Hg (Mercury)

With water:

1. Ammonia (NH₃) reacts with water to form ammonium hydroxide (NH₄OH).
2. Water reacts with sodium (Na) to form sodium oxide (Na₂O).

Chemical Properties

Group 1: Alkaline Earth Metals

- Physical Properties
  - Soft and malleable
  - Good conductors of electricity
  - Reactions with water and acids

- Chemical Properties
  - React with water to form hydroxides
  - React with acids to form salts

Group 2: Alkaline Metals

- Physical Properties
  - Soft and malleable
  - Good conductors of electricity
  - React with water to form hydroxides

- Chemical Properties
  - React with water to form hydroxides
  - React with acids to form salts

Group 3: Alkaline Earth Metals

- Physical Properties
  - Soft and malleable
  - Good conductors of electricity
  - React with water to form hydroxides

- Chemical Properties
  - React with water to form hydroxides
  - React with acids to form salts

Group 4: Transition Metals

- Physical Properties
  - Hard and brittle
  - Good conductors of electricity
  - React with water to form hydroxides

- Chemical Properties
  - React with water to form hydroxides
  - React with acids to form salts

Group 5: Nitrogen Family

- Physical Properties
  - Good conductors of electricity
  - React with water to form hydroxides

- Chemical Properties
  - React with water to form hydroxides
  - React with acids to form salts

Group 6: Oxygen Family

- Physical Properties
  - Good conductors of electricity
  - React with water to form hydroxides

- Chemical Properties
  - React with water to form hydroxides
  - React with acids to form salts

Group 7: Halogen Family

- Physical Properties
  - Good conductors of electricity
  - React with water to form hydroxides

- Chemical Properties
  - React with water to form hydroxides
  - React with acids to form salts

Group 8: Noble Gases

- Physical Properties
  - Good conductors of electricity
  - React with water to form hydroxides

- Chemical Properties
  - React with water to form hydroxides
  - React with acids to form salts

The Elements of Group 1

Learning Objectives:

- Describe the reactions of Group 1 elements with water, acids, and oxygen.
- Compare the physical and chemical properties of Group 1 elements.

Key Words:

Group 1: Alkaline Earth Metals

- Calcium (Ca)
- Strontium (Sr)
- Barium (Ba)

Group 2: Alkaline Metals

- Lithium (Li)
- Sodium (Na)
- Potassium (K)

Group 3: Transition Metals

- Titanium (Ti)
- Vanadium (V)
- Chromium (Cr)

Group 4: Nitrogen Family

- Nitrogen (N)
- Phosphorus (P)
- Arsenic (As)

Group 5: Oxygen Family

- Oxygen (O)
- Sulphur (S)
- Selenium (Se)

Group 6: Halogen Family

- Chlorine (Cl)
- Bromine (Br)
- Iodine (I)

Group 8: Noble Gases

- Helium (He)
- Neon (Ne)
- Argon (Ar)
The Periodic Table: Week 3 (15th June)

Summary Questions

1. Write a question to test the knowledge of the group 7 elements.

2. Describe how the reaction of the group 7 elements with water is important.

3. Evaluate the significance of the group 7 elements in the water treatment process.

Chemical Properties

The chemical properties of the group 7 elements are similar.

Physical Properties

These elements are gases at room temperature.

Boiling Points

The boiling points of the group 7 elements are similar.

Learning objectives

- Describe the reaction of the group 7 elements with water.
- Compare the properties of group 7 elements with other non-metals.
- Describe the significance of group 7 elements in water treatment.

Key Words

- Group 7 elements
- Chemical properties
- Physical properties
- Boiling points
- Water treatment
Summary Questions

- Define the meaning of the word "periodic.
- Describe the pattern in the periodic table for Group 0 elements.

Key Words

- Electronegativity
- Atomic radius
- Group 0 elements

Physical Properties

- Group 0 elements are characterized by their noble gases.
- They are non-reactive and do not participate in chemical reactions.

Learning Objectives

- Understand the electronic configuration of Group 0 elements.
- Recognize the properties of Group 0 elements and their noble gases.
- Use the periodic table to identify Group 0 elements.
### 5.4.1 The Periodic Table

<table>
<thead>
<tr>
<th>In-text questions</th>
<th>A groups</th>
<th>B periods</th>
</tr>
</thead>
</table>
| **Activity** | **Predictable patterns?**  
Credit bar charts to show atomic radii of elements in Period 2 and Period 3.  
For both periods, atomic radii are larger at the start of the period (Li and Na) than at the end (F and Cl).  
Atomic radii decrease more rapidly at the start of a period than at the end.  
Atomic radii for Period 3 are larger than those of Period 2. |          |           |

| Summary questions |  
1 groups, periods, down, across left, right (6 marks)  
2 Credit suitable bar charts for density data (one for cobalt, rhodium, and iridium, and another for nickel and platinum). Credit a predicted palladium density of 9–15 g/cm³. The actual density of palladium is 10.4 g/cm³. (3 marks) |  
3 Example answers (6 marks):  
Vertical columns are called groups. Horizontal rows are called periods. Numerical data for one element can be predicted given data of surrounding elements. These elements can be neighbouring elements in periods or groups. Melting points increase down a group. Atomic radii decrease across a period. The density of elements increases down a group. |
### 5.4.2 The elements of Group 1

#### In-text questions

A Group 1 metals have lower melting points than other metals.
B The boiling point decreases as you move down Group 1.
C Hydrogen

#### Activity

**Which conclusion?**
Credit reasonable explanations that support either Sam’s or Ben’s theory.
A more detailed description of the pattern may be: The density of Group 1 metals increases down the group in a roughly linear fashion. Potassium is an anomaly because it has a smaller density than that of sodium.
Densities of caesium and francium are required to understand the trend in Group 1 metal densities better.

#### Summary questions

1 Any five of the following, for one mark each:
   - From top to bottom of Group 1, boiling point decreases (1).
   - From top to bottom of Group 1, the vigour of the reaction with water increases (1).
   - From bottom to top of Group 1, melting point increases (1).
   - All Group 1 elements have low densities (1).
   - All Group 1 elements conduct electricity (1).
   - All Group 1 elements react with water to make hydrogen and an alkaline solution (1).
2a Credit appropriate bar chart, with hardness decreasing from Li to Cs. (6 marks)
   b Hardness decreases down Group 1. (2 marks)
   c 0.4, because hardness decreases by 0.1 for each element down Group 1. (2 marks)
3 Very vigorous reaction, which is more violent than that of potassium with water.
   - Rubidium is below potassium in Group 1.
   - Bright flame, bubbles of hydrogen produced as for potassium.
   - Products are hydrogen and rubidium hydroxide.
   - The other elements in the group also react with water to make hydrogen and a solution of a hydroxide.
   (6 marks)
4 Example answers (6 marks):
   - Physical properties down Group 1: decreasing hardness, decreasing melting point, decreasing boiling point.
   - Chemical properties down Group 1: increased reactivity with water.
### 5.4.3 The elements of Group 7

| In-text questions | A Destroy bacteria to make water safe to drink or swim in.  
|                  | B fluorine, chlorine, bromine, iodine, astatine  
|                  | C Boiling points increase down Group 7.  
|                  | D Reactions become less vigorous down the group.  

| Activity | Better bar charts  
|          | Credit correctly drawn bar charts where boiling points increase down Group 7 (from F to At). Students should offer suggestions on how to improve each other’s bar charts.  

| Summary questions | 1 halogens, increase, less (3 marks)  
|                  | 2 Reactions a, c, and d will happen. In each case the Group 7 element on its own is more reactive/higher up in Group 7 than the Group 7 element in the compound. A displacement reaction occurs. (3 marks)  
|                  | 3 The product is iron fluoride.  
|                  | Products of other Group 7 elements with iron are iron chloride, iron bromide, iron iodide, so this fits the pattern. The reaction would be very vigorous, with a flame and the production of brown fumes. It is like the reaction of iron with chlorine, but more vigorous. (4 marks)  
|                  | 4 The halogen is below chlorine in Group 7. If it were above chlorine, it would displace chlorine from its compound, potassium chloride, so a reaction would occur. (3 marks)  

### 5.4.4 The elements of Group 0

| In-text questions | A helium, neon, argon, krypton, xenon, radon  
|                  | B Boiling points increase down the group.  
|                  | C Unreactive means that the elements take part in very few reactions.  

| Activity | Using Group 0  
|          | Credit suitable eye-catching and persuasive adverts about the merits of using Group 0 elements or compounds in the correct product.  
|          | For example, neon in advertising signs, helium in balloons, argon as insulating gas between the layers in double glazing, or krypton in lasers.  

| Summary questions | 1 The noble gases are all in Group 0 of the Periodic Table. The element at the top of the group is **helium**. The noble gases are **non-metals**. They have **very few** reactions. From bottom to top of the group, boiling point **decreases**. (5 marks)  
|                  | 2 Melting point increases down Group 0. Credit predictions for the melting point of argon between −180 and −220 °C. (The melting point of argon is −189.4 °C.) (2 marks)  
|                  | 3 In Group 7 the boiling points increase from top to bottom of the group. This is the same as for Group 0, in which the boiling points also increase from top to bottom of the group. The highest boiling point for a Group 7 element is greater than the highest boiling point for a Group 0 element. (4 marks)  

Separation techniques: Week 4 (22nd June)

**Summary Questions**

**Key Words**

**Words**

**Learning objectives**

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**Mixtures**

**Pure Substances and mixtures**

The first juice in the picture was made by squeezing

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**Separation techniques are applied by:***

- Explain how to use separation techniques
- Make our common substances
- Mixtures
- Substances
- Study the properties of pure
- After this section you will be able to...
Summary Questions

1. What are the benefits of water filtration?
   - Water filtration helps to remove impurities and pollutants from water, making it safe for consumption.

2. How does filtration work?
   - Filtration works by passing water through a filter that removes impurities and particles from the water.

3. What are the types of filters used in filtration?
   - Types of filters include sand filters, multimedia filters, and reverse osmosis filters.

4. What is the purpose of filtration in water treatment?
   - Filtration is used to remove impurities, bacteria, and viruses from water to make it safe for drinking and other uses.

Learning Objectives

- Explain the process of filtration
- Identify the types of filters used in filtration
- Discuss the importance of filtration in water treatment
Separation techniques: Week 4 (22nd June)

Summary Questions

What is distillation?

Key Word

Learning Objectives

For many countries, people have obtained salt from seawater. How do they do this?
## 5.2.1 Pure substances and mixtures

| In-text questions | A Two or more different substances not chemically joined together.  
| B Any four examples of mixtures.  
| C Substances with clearly-defined melting (or boiling) points are pure. If the melting or boiling point of a substance occurs over a temperature range then it is impure.  
| Activity | Toothpaste tales  
| Ingredients list and uses should include hydrated silica (removes plaque), sodium fluoride (prevents cavities), sodium lauryl sulfate (makes foam), carrageenan (thickens toothpaste), and titanium oxide (whitener).  
| Summary questions | 1a A mixture is made up of different substances that are not joined together.  
| b You can change the amounts of substances in a mixture.  
| c A pure substance has no other substances mixed with it. (3 marks)  
| 2 Substances is pure because the change of state takes place at a clearly-defined temperature. (2 marks)  
| 3 Extended response question (6 marks). Example answers: A pure substance contains one substance only, but a mixture contains more than one substance. In a pure substance, all the particles are the same. A mixture contains different types of particles, which are not joined together.  

## 5.2.4 Filtration

| In-text questions | A A liquid from insoluble solid, or solution from an insoluble solid.  
| B glitter = residue, water = filtrate  
| C Removing coffee from ground-up coffee beans, removing solid impurities from oil, making water safe to drink.  
| D Salt is soluble in water and sand is not.  
| Activity | Solubility puzzle  
| Remove undissolved solid solute by filtering the solution into a pre-weighed beaker.  
| Find the mass of the filtrate by: final mass of beaker − initial mass of beaker  
| Pour the filtrate into a measuring cylinder to measure volume; volume of solution = volume of solvent  
| Convert volume of solvent to mass by using 1 cm³ of water = 1 g  
| Solubility of zinc sulfate in the volume of solvent used can be found by: mass of solution − mass of solvent  
| Scale up or down to give solubility in g per 100 g of water  
| Summary questions | 1 insoluble residue (top), liquid filtrate (bottom) (2 marks)  
| 2 Amount of solute dissolved in 100 g of water: calcium chloride = 100 − 25 = 75 g  
| calcium hydrogencarbonate = 100 − 84 = 16 g (least soluble)  
| calcium bromide = 100 g (most soluble)  
| calcium iodide = 100 − 33 = 67 g (4 marks)  
| 3 Students design a suitable model and identify at least one advantage and one disadvantage of their model. They also include relevant diagrams that help describe their model. (6 marks)  

## 5.2.5 Evaporation and distillation

<table>
<thead>
<tr>
<th>In-text questions</th>
<th>A Pour some seawater into an evaporating dish. Heat over a water bath until some of the water has evaporated. Leave in a warm place for the rest of the water to evaporate.&lt;br&gt;B making copper sulfate crystals, drying of glue, obtaining lithium compounds from solution&lt;br&gt;C Salt has a much higher boiling point than water.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>Ancient distillation&lt;br&gt;Credit sensible suggestions for how the alembic might work. Answers should include evaporation of the mixture and condensation once vapours reach the curved lid.</td>
</tr>
<tr>
<td>Summary questions</td>
<td>1 differences, physical, properties (3 marks)&lt;br&gt;2a Evaporation because water has a lower boiling point than copper chloride, so on heating the water evaporates, leaving copper chloride in the container. (1 mark)&lt;br&gt;b Distillation because propanone has a lower boiling point than water, so on heating the propanone evaporates first. It then condenses and is collected as a liquid. (1 mark)&lt;br&gt;c Distillation (same reasoning as b). (1 mark)&lt;br&gt;d Evaporation because water has a lower boiling point than potassium chloride, so on heating the water evaporates, leaving potassium chloride in the container. (1 mark)&lt;br&gt;3 Extended response question (6 marks). Example answers: Evaporation separates solute from a solution. The solvent evaporates and enters the atmosphere. The solvent cannot be obtained from evaporation. Distillation uses evaporation and condensation to obtain a solvent from a solution. Solids (mainly solute and other soluble impurities) remain. Only distillation can be used to obtain a solvent from solution. Both distillation and evaporation can be used to obtain solutes from solution, but evaporation uses much simpler apparatus and is therefore easier to set up, and to carry out.</td>
</tr>
</tbody>
</table>
5.2.6 Chromatography

In-text questions
A Chromatography separates substance in a mixture that are soluble in the same solvent.
B The result from a chromatography experiment, where different colours have travelled up the chromatography paper by different amounts.

Activity
Clever chromatography
Answers must include three uses of chromatography, for example, separating mixtures in solution, identifying coloured dyes, identifying the presence of vitamins and minerals, matching an unknown sample to a known specimen, and checking the progress of a reaction against a known product. Credit detailed descriptions of how chromatography is used, and check that scientific terminology has been used correctly.

Summary questions
1 a mixture, solvent, chromatogram (3 marks)
2 Some substances are more soluble than others, some stick to the chromatography paper more/better than others. (3 marks)
3 Plant C - all the pigments in the unknown plant match all the constituent pigments in plant C. The pattern of spots for plant C is exactly the same as that for the unknown sample, so it is reasonable to be fairly confident that the answer is correct. However, there could be more than one plant producing identical chromatograms, so it is not possible to be 100% certain. (4 marks)
4 Examples answers (6 marks):
Place a sample of the unknown ink into chromatography paper. Obtain samples from the three possible pens. Place dots of sample inks along a line with the unknown sample on the same piece of chromatography paper. Carry out the chromatography procedure to obtain a chromatogram. Compare chromatograms obtained and one of the samples will match the unknown link. Possible issues: Obtaining the sample of the unknown ink from the note. If more than one person uses the same ink (same brand) then their chromatograms will look the same. Chromatography tests the ink for the soluble substances inside it, not the pen itself.
Guidance

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Nutrients: Week 1 (01st June)

Learning objectives

1. Describe the components of different foods or diets and their contribution to the nutritional content of the diet.
2. Explain the importance of vitamin D and the effects of vitamin D deficiency.
3. Describe the importance of vitamin D and the effects of vitamin D deficiency.

Nutrients

We all know that sweet food should only be eaten as a treat and that a balanced diet is important. Dietitians recommend eating a healthy diet that includes a variety of different foods in the correct amounts. A healthy diet contains foods from all the major food groups - carbohydrates, proteins, vitamins, minerals, and fats - in the correct amounts.

Dietary fibre

Dietary fibre is important for overall health and well-being. It helps to keep the digestive system running smoothly and prevents digestive problems such as constipation. Dietary fibre is also important for maintaining a healthy weight, as it helps to fill you up and keep you feeling full for longer.

Key words

- Nutrients
- Healthy eating
- Dietary fibre
- Water
- Proteins
- Vitamins and minerals
- Key words

Summary of lesson

1. Match the nutrient to its role in body function.
2. The foods give the ingredients of the recipe.
3. The foods and ingredient guide the cooking.
4. The foods and ingredient guide the cooking.

Nutrients in foods:

- Carbohydrates
- Lipids
- Proteins
- Vitamins and minerals

Healthy eating

- Eat a balanced diet
- Include a variety of foods
- Eat plenty of fruits and vegetables

Dietary fibre

- Helps to keep the digestive system running smoothly
- Prevents digestive problems such as constipation
- Helps to maintain a healthy weight

Vitamins and minerals

- Essential nutrients for overall health and well-being
- Help to keep the body healthy and strong

Proteins

- Essential nutrients for growth and development
- Help to keep the body healthy and strong

Water

- Essential for life
- Helps to maintain body temperature
- Helps to keep the digestive system running smoothly

Lipids

- Provide energy for the body
- Help to keep the body healthy and strong

Carbohydrates

- Provide energy for the body
- Help to keep the body healthy and strong

Proteins

- Essential nutrients for growth and development
- Help to keep the body healthy and strong

Vitamins and minerals

- Essential nutrients for overall health and well-being
- Help to keep the body healthy and strong

Key words

- Nutrients
- Healthy eating
- Dietary fibre
- Water
- Proteins
- Vitamins and minerals
- Key words
Unhealthy diet:

Week 1 (01st June)

1. Unhealthy diet

2. Energy requirements

3. Why is unhealthy to overweight?

4. How much energy do you need?

5. What are vitamins and minerals deficiencies?
Digestive system: Week 1 (01st June)

**Summary Questions**

**Link**

**Key Words**

**Moving through the digestive system**

**8.4.4 Digestive system**
Drugs:

Week 1 (01st June)

Drug Fact Sheet

Drug Glossary

What is a recreational drug?

What are the effects of drugs?

Medical versus recreational drugs

Types of drugs

Medication

Medications and their effects

Some drugs can seriously damage your health or even

Learning Objectives

Describe the effects of drugs

Differentiate between medical and recreational drugs

Note: The above text is a natural representation of the document's content.
Alcohol: Week 1 (01st June)

**Summary Questions**

1. **Name three conditions that are more likely to occur if a person drinks a lot of alcohol for a long time.**
   - Depression
   - Liver damage
   - Heart disease

2. **What is alcohol?**
   - Alcohol is a type of drug that is made from the fermentation of sugar, typically from grains, fruit, or potatoes.

3. **How much alcohol can you drink safely?**
   - It depends on your body's alcohol tolerance.
   - The recommended maximum number of alcoholic drinks is 1 drink per day for women and 2 drinks per day for men.

**Key Words**

- drink
- alcohol
- body
- brain
- liver
- heart
- condition
- safe
- tolerance
- recommended

**Dangers of Alcohol**

- Depression because it slows down your body's response.
- Drowsiness.
- Driving while under the influence is illegal.
- Dizziness.
- Many adults drink alcohol, but it can be harmful.
Smoking: Week 1 (01st June)

Key Questions

1. How does smoking cause disease?
2. Name three conditions that a smoker is more likely to get.
3. What are the effects of tobacco smoke?

Key Words

1. Tobacco smoke
2. Cancer
3. Heart disease
4. Lung disease

How does smoking cause disease?

Cigarette smoke contains hundreds of chemicals, some of which can cause cancer. When smoke is inhaled, these chemicals can enter the bloodstream and reach the lungs, where they can cause damage to the cells and tissues.

Name three conditions that a smoker is more likely to get:

1. Lung cancer
2. Heart disease
3. Stroke

What are the effects of tobacco smoke?

- Cancer
- Heart disease
- Stroke
- Respiratory problems
- Birth defects
- Tooth decay

Learning objectives:

- Understand the effects of tobacco
- Develop strategies to avoid smoking
- Promote healthy living choices
### 8.4.1 Nutrients

<table>
<thead>
<tr>
<th>In-text questions</th>
<th>Activity</th>
<th>Summary questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong> An essential substance the body needs to survive.</td>
<td><strong>Healthy eating</strong></td>
<td>1 carbohydrates – provide energy vitamins and minerals – needed in small amounts to keep you healthy lipids – energy store and insulation water – needed in cells and bodily fluids protein – growth and repair dietary fibre – provide bulk to food (6 marks)</td>
</tr>
<tr>
<td><strong>B</strong> provide energy</td>
<td><strong>2</strong> Provides you with a store of energy (1), keeps you warm by providing a layer of insulation under your skin (1), protects your organs from damage (1).</td>
<td><strong>2</strong> Constipation can be caused by a lack of fibre in the diet. Therefore they would need to eat fibre-rich foods, such as fruit and vegetables. This provides bulk to move faeces through the gut. (3 marks)</td>
</tr>
<tr>
<td><strong>C</strong> For growth (new cells) and to repair body tissues.</td>
<td><strong>3</strong> Example answers (6 marks): A balanced diet is eating food containing the right nutrients in the correct amounts. Nutrients are essential substances that your body needs to survive. A balanced diet should contain: carbohydrates to provide energy; lipids to provide an energy store and insulation; proteins for growth and repair; vitamins and minerals to keep you healthy; water, which is needed in all cells and body fluids; dietary fibre, which provides bulk to food to keep it moving through the gut. (Only award a maximum of 5 marks if a definition of a balanced diet is not given.)</td>
<td></td>
</tr>
<tr>
<td><strong>D</strong> Calcium is needed for strong teeth and bones, iron is needed for red blood cells.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 8.4.3 Unhealthy diet

<table>
<thead>
<tr>
<th>In-text questions</th>
<th>Activity</th>
<th>Summary questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong> joules/kilojoules</td>
<td><strong>Energy requirements</strong></td>
<td>1 energy, joules/kilojoules, gain, obese, heart, tired (6 marks)</td>
</tr>
<tr>
<td><strong>B</strong> The person will often suffer health problems (poor immune system), lack energy, and is likely to suffer from a lack of vitamins or minerals.</td>
<td>Approximately 9000 KJ, equivalent to a female office worker.</td>
<td>2a 11 000 KJ – 9000 KJ = 2000 KJ (2 marks)</td>
</tr>
<tr>
<td><strong>C</strong> Any three from: heart disease, stroke, diabetes, some cancers</td>
<td><strong>b</strong> Difference in energy requirement = 15 000 KJ – 10 000 KJ = 5000 KJ Percentage increase from original job = 5000 KJ ÷ 10 000 KJ × 100 = 50% (4 marks)</td>
<td></td>
</tr>
<tr>
<td><strong>D</strong> night blindness</td>
<td><strong>3</strong> Example answers (6 marks): Underweight people often suffer from health problems, such as a poor immune system, often lack energy to do things, and are likely to suffer from a lack of vitamins or minerals.</td>
<td>Underweight people have an increased risk of heart disease, strokes, diabetes, and some cancers.</td>
</tr>
</tbody>
</table>
## 8.4.4 Digestive system

| In-text questions | A Large molecules are broken down into smaller molecules.  
|                  | B gullet  
|                  | C Muscles in the wall of the gut squeeze food along it.  
| **Activity**     | **Wordbank**  
|                  | Wordbanks should include all the key words on the student-book spread. Credit sensible additions to this list.  
| **Summary questions** | 1 stomach – food is mixed with acid and digestive juices  
|                  | small intestine – small molecules of nutrients are absorbed into the bloodstream  
|                  | large intestine – water is absorbed back into the body  
|                  | rectum – faeces are stored here until they pass out of the body  
|                  | mouth – food is chewed and mixed with saliva (5 marks)  
|                  | 2 The small intestine has a thin wall, large surface area due to villi, and blood capillaries to carry away any nutrients absorbed. (3 marks)  
|                  | 3 Dietary fibre is not digested. It adds bulk to the food, allowing muscles to push against this as food is squeezed along the gut. This prevents constipation. (3 marks)  
|                  | 4 Example answers (6 marks):  
|                  | Food is chewed and mixed with saliva in the mouth. Teeth help to break the food into smaller chunks. Food passes down the gullet into the stomach. Food is churned with digestive juices and acid in the stomach. Small molecules pass through the villi of the intestine wall into the bloodstream in the small intestine.  
|                  | Water passes back into the body in the large intestine. This leaves a solid waste of undigested food called faeces. Faeces are stored in the rectum. They are passed out of the body through the anus.  

### 8.3.3 Drugs

| In-text questions | A A chemical substance that affects the way the body works.  
|                  | B A drug taken for a medical purpose.  
|                  | C A drug taken for enjoyment.  
|                  | D Any three from: heroin, cocaine, cannabis, and ecstasy.  
|                  | E Dependency on a drug.  

| Activity | **Drug factsheet**  
|          | Factsheet should include information on one of cannabis, cocaine, ecstasy, or heroin. Factsheet should be suitable for a teenage audience, but include scientific information about the effects of taking this drug.  

| Summary questions | 1 chemicals, recreational, medicinal, addiction, withdrawal symptoms (5 marks)  
|                  | 2 Any three paired reasons, for one mark each:  
|                  | Medicinal drugs are used in medicine, benefit health, treat symptoms, or cure an illness. Recreational drugs are used for enjoyment, may help a person relax or give them more energy, have no health benefit, are harmful in some cases, and many are illegal.  
|                  | 3 Example answers (6 marks):  
|                  | Drugs are chemicals that affect the ways the body works. They alter chemical reactions inside the body.  
|                  | Medicinal drugs are beneficial to health/not taken for enjoyment. For example, paracetamol reduces pain.  
|                  | Recreational drugs are often harmful to health. These are taken for enjoyment/not beneficial to health. For example, caffeine speeds up the nervous system. You can become dependent on a drug/become addicted.  
|                  | If you try to give up you may suffer withdrawal symptoms.  

### 8.3.4 Alcohol

| In-text questions | A ethanol  
|                  | B A person who is addicted to alcohol.  

| Activity | **Units of alcohol**  
|          | One unit of alcohol = 10 ml pure alcohol. So, 200 ml of 10% wine = 0.1 × 200 ml = 20 ml of pure alcohol.  
|          | Units of alcohol in 200 ml of wine = 20 ÷ 10 = 2 units  

| Summary questions | 1 ethanol, depressant, nervous, liver (4 marks)  
|                  | 2 Alcohol passes through to baby’s bloodstream. It affects development of organs/brain/nervous system. This increases the risk of miscarriage, Fetal Alcohol Syndrome (FAS), stillbirth, premature birth, or low weight babies. (3 marks)  
|                  | 3 Visual summary example answers (6 marks):  
|                  | Alcohol is a depressant. It affects the nervous system. Some people feel relaxed and happy, while others get aggressive and depressed. Alcohol slows reaction times. People under the influence are more likely to have an accident. Large amounts of alcohol can cause stomach ulcers, heart disease, brain damage, and liver damage. Drinking alcohol while pregnant affects the development of the foetus’ organs. This increases the risk of miscarriage, FAS, stillbirth, premature birth, or low-weight babies.
## 8.3.5 Smoking

| In-text questions | **A** Any three from: breathing conditions, cancer, strokes, heart attacks  
|                  | **B** Breathing in other people’s smoke.  
|                  | **C** nicotine  
| Activity         | **Deadly smoke**  
|                  | 1 lung diseases  
|                  | 2 $1 \times 000 \times 900 \times 000 = 300 \times 000$  
|                  | 3 $1 \times 000 \times 500 \times 000 = 2$; twice as likely  
| Summary questions| 1 Tar – contains chemicals which cause cancer.  
|                  | Nicotine – addictive and makes the heart beat faster.  
|                  | Carbon monoxide – reduces the amount of oxygen the blood can carry. (3 marks)  
|                  | 2 To remove mucus, as cilia that would normally do this are paralysed by smoking. (2 marks)  
|                  | 3 Any two of the following, for one mark each:  
|                  | Increased risk of a miscarriage (1), cause low-birth-weight babies (1), affects fetal development (1).  
|                  | Carbon monoxide in cigarette smoke stops oxygen binding to haemoglobin, so less oxygen reaches baby (1).  
|                  | 4 Example answers (6 marks):  
|                  | Heart disease – arteries blocked, prevents blood flowing properly, causes heart attacks or strokes.  
|                  | Emphysema – weakens walls in alveoli/burst, reduces amount of oxygen supplied to blood, person becomes breathless.  
|                  | Respiratory infections – cilia paralysed, mucus flows into lungs, makes breathing hard, mucus in lungs causes infections.  

Photosynthesis:

**Learning objects**

- Recall how plants make glucose
- Describe the resources they need
- Describe photosynthesis
- Use the word equation to describe photosynthesis

**What is a producer?**

Plants and algae are called producers because they make their own food. They convert radiant energy from the sun into food using sunlight. This brings energy into the food chain. Plants can live underground or on land, but they all need water. Some plants do not need soil to grow. Most plants need carbon dioxide, water, and sunlight to grow. Some plants need mineral substances too.

**What is the word equation for photosynthesis?**

\[ 	ext{CO}_2 + 	ext{H}_2	ext{O} + 	ext{energy} \rightarrow 	ext{glucose} + 	ext{O}_2 \]

**How do plants get the energy they need for photosynthesis?**

Plants get the energy they need for photosynthesis from the sun. They use this energy to convert carbon dioxide and water into glucose and oxygen.

**How does a plant get energy?**

Plants get energy from the sun through the process of photosynthesis. They use the energy from the sun to convert carbon dioxide and water into glucose and oxygen. This process also releases oxygen into the atmosphere.

**How do plants make food?**

Plants make their food by using sunlight, carbon dioxide, and water. The sunlight provides the energy needed for the process of photosynthesis, while carbon dioxide and water are the raw materials used to create the glucose and oxygen.

**What is the role of chlorophyll in photosynthesis?**

Chlorophyll is a green pigment found in the leaves of plants. It helps absorb sunlight, which is necessary for the process of photosynthesis. Without chlorophyll, plants would not be able to make their own food.

**Key words**

- Energy
- Chlorophyll
- Photosynthesis
- Sunlight
- Carbon dioxide
- Water
- Glucose
- Oxygen

**Summary questions**

1. What is photosynthesis?
2. Why is photosynthesis important? (reasons)
3. List the raw materials used by plants for photosynthesis.
4. Describe the process of photosynthesis.
5. How does photosynthesis help the environment?
Leaves: Week 2 (08th June)

Key Words

Leaf - A flat organ of the plant at the end of the stem that manufactures food for the plant through the process of photosynthesis.

Cross section of a leaf - A section of a leaf cut in a way that allows us to see the internal structure.

What does the inside of a leaf look like?

a. Size and shape of stomata
b. Size and function of chloroplasts

c. Chloroplasts are green

Learning Objectives

- Describe the structure of a leaf
- Explain the function of the leaf
- Identify the different parts of a leaf

Observing Structures

- Leaf - A flat organ of the plant at the end of the stem that manufactures food for the plant through the process of photosynthesis.
- Cross section of a leaf - A section of a leaf cut in a way that allows us to see the internal structure.

How do gases get into and out of the leaf?
Investigating photosynthesis: Week 2 (08th June)

Summary Questions

1. What are the key differences between autotrophs and heterotrophs?
2. How do autotrophs obtain energy and what is the role of chlorophyll?
3. What is the importance of photosynthesis in the ecosystem?

Learning Objectives

- Investigate the process of photosynthesis
- Understand the role of chlorophyll in photosynthesis
- Explore the factors that affect the rate of photosynthesis

Keywords

Photosynthesis
 Chlorophyll
 Stomata
 Leaf
 Carbon dioxide
 Oxygen
 Sunlight
 Water

How does light intensity affect the rate of photosynthesis?

- Light intensity is directly proportional to the rate of photosynthesis.
- Stronger light intensity allows for more photosynthesis, thus releasing more oxygen and glucose.

3.4.3 Investigating photosynthesis
Aerobic respiration: Week 2 (08th June)

**Summary Questions**

1. How does carbon dioxide leave the body?
2. How do the electrons move in the electron transport chain?

**Key Words**

- Glucose
- Oxygen
- ATP
- electron transport chain
- respiratory chain
- mitochondrion

**Learning Objectives**

- Describe aerobic respiration.
- Explain the role of oxygen in the process.
- List the main products of aerobic respiration.

**Questions**

1. What is the formula for glucose formation during aerobic respiration?
2. Explain the role of oxygen in the electron transport chain.

**Link**

- See Chapter 12 for more information on oxygen transport.
9.3.2 Anaerobic Respiration

Learning Objectives
- Know the process of anaerobic respiration.
- Understand how anaerobic respiration occurs in the body.
- Be able to describe the end products of anaerobic respiration.

Key Words
- Fermentation
- Alcoholic fermentation
- Lactic acid fermentation

Summarize Questions
1. How is anaerobic respiration used in the body?
2. What are the end products of anaerobic respiration?
3. Where does anaerobic respiration occur in the body?

9th June

Anaerobic respiration: Week 2 (08th June)
# 9.4.1 Photosynthesis

## In-text questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>An organism that makes its own food.</td>
</tr>
<tr>
<td>B</td>
<td>carbon dioxide + water $\xrightarrow{\text{light}}$ glucose + oxygen</td>
</tr>
<tr>
<td>C</td>
<td>chloroplasts</td>
</tr>
<tr>
<td>D</td>
<td>Root cells have hairs to increase rate of diffusion of water. The stem has hollow tubes to transport water all over the plant.</td>
</tr>
</tbody>
</table>

## Activity

**Hypothesis**
Credit hypotheses along the lines of: If a plant is placed in the dark for a week, photosynthesis will decrease/ glucose and oxygen will not be produced. Students should include a suitable plan for testing this hypothesis.

**Definitions**
Producer – organism that makes its own food. Photosynthesis – process by which plants make their own food. Consumer – organism that has to eat other organisms to gain energy.

## Summary questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>algae, producers, photosynthesis, carbon dioxide, glucose, light (6 marks)</td>
</tr>
<tr>
<td>2</td>
<td>Photosynthesis provides energy for plants to grow. Animals cannot make their own food. Animals have to eat plants to gain energy. (3 marks)</td>
</tr>
<tr>
<td>3a</td>
<td>Yes because sunlight is available. (1 mark)</td>
</tr>
<tr>
<td>b</td>
<td>No because no sunlight is available. (1 mark)</td>
</tr>
<tr>
<td>c</td>
<td>No because there is no sunlight. There are no chloroplasts in the root hair cells. (2 marks)</td>
</tr>
<tr>
<td>4</td>
<td>Example answers (6 marks): Carbon dioxide and water are the reactants. Carbon dioxide enters through the stomata in the leaves. Water enters through root/root hair cells by diffusion/osmosis. Water travels up the xylem to leaves (transpiration). Light is also required for photosynthesis to occur. Light is trapped in chlorophyll/ chloroplasts in leaf cells. Oxygen and glucose are the products. Oxygen comes out through stomata. Glucose is taken to all cells in the plant (via the phloem). The plant cells use glucose to provide energy.</td>
</tr>
</tbody>
</table>
9.4.2 Leaves

| In-text questions | A They contain chlorophyll.  
|                  | B top of the leaf  
|                  | C To reduce evaporation of water.  
|                  | D They allow gases to diffuse into and out of the leaf. They close to prevent water loss.  
| Activity         | **Observing stomata**  
|                  | For the labelled diagram of the underside of a leaf, labels should include: stomata, guard cells, veins, and, possibly, the waxy cuticle.  
| Summary questions | 1 stomata – allow gases to diffuse into and out of the leaf  
|                  | waxy layer – reduces amount of water evaporating  
|                  | guard cells – open and close stomata  
|                  | veins – transport water to cells in leaf  
|                  | cells in palisade layer – main site of photosynthesis (5 marks)  
|                  | 2 To prevent water evaporating. (1 mark)  
|                  | 3 Example answers (6 marks):  
|                  | Leaves contain chlorophyll, which traps light. Leaves are thin, which allows gases to diffuse in and out of the leaf easily. Leaves have a large surface area to absorb as much light as possible. Leaves have veins/xylem to transport water to cells. Leaves have a palisade layer/cells with more chloroplasts near the top of the leaf, to maximise the absorption of sunlight. Leaves have stomata to allow carbon dioxide into (and oxygen out of) the leaf.  
|                  | 4 Example answers (4 marks):  
|                  | During the day high levels of carbon dioxide diffuse into the plant for photosynthesis. A small amount leaves as a result of respiration. At night very little carbon dioxide enters the plants as it is not needed for photosynthesis. Higher levels leave the plant as a waste product of respiration. Respiration takes place constantly so oxygen is always entering the plant but more leaves during the day than the night as photosynthesis only occurs during the day.  

9.4.3 Investigating photosynthesis

| In-text questions | A So you can more easily see if the leaf changes colour when iodine is added.  
B Place a glowing splint in the test tube. The splint will relight in the presence of oxygen. 
C light intensity, carbon dioxide, temperature |

| Summary questions | 1 water, ethanol, chlorophyll, iodine, blue-black (5 marks)  
2 The temperature is higher and/or the light intensity is greater, so the rate of photosynthesis is greater. This causes the plant to grow more quickly. (2 marks)  
3a Example answers (6 marks):  
Place pondweed in a beaker of water or in a beaker of water under an upturned funnel and test tube filled with water. Place a light source x cm from the beaker. Count the bubbles released per minute/unit time, or measure the time taken to displace the water from the test tube. Move the light source y cm further from the beaker and repeat the experiment. Repeat for (at least) five different distances from the beaker. Repeat whole experiment to collect three sets of results. The more bubbles released per unit time, the greater the rate of photosynthesis, or the less time taken to displace the water from the test tube, the greater the rate of photosynthesis.  
b Sketch of a graph showing rate of photosynthesis against light intensity. (1 mark) |

9.3.1 Aerobic respiration

| In-text questions | A (aerobic) respiration  
B glucose + oxygen carbon → dioxide + water (+ energy)  
C in the mitochondria  
D red blood cells or haemoglobin  
E plasma |

| Activity | Defining respiration  
Answers should include a definition and a description of aerobic respiration. Students could include the word equation for aerobic respiration.  
Students should swap answers with a partner, and discuss ways to improve their answers. |

| Summary questions | 1 mitochondria, respiration, glucose, energy, water (5 marks)  
2 Aerobic respiration occurs in the mitochondria. Mitochondria are found in cells. Oxygen reacts with glucose. It releases carbon dioxide and water, together with energy. (4 marks)  
3 Example answers (6 marks):  
Inhaling fills alveoli in the lungs with oxygen. Oxygen diffuses into the bloodstream. Oxygen is carried to the cells in the red blood cells/haemoglobin. Glucose is taken in through food. Food is digested and glucose is absorbed through the wall of the small intestine. Glucose is carried to the cells in the blood (plasma). Respiration occurs in the mitochondria of cells, releasing carbon dioxide and water. Waste carbon dioxide is carried to the lungs in the blood plasma. Carbon dioxide is exhaled. Excess water is lost as water vapour in exhaled breath, or in urine. |
### 9.3.2 Anaerobic respiration

#### In-text questions
- **A** glucose $\rightarrow$ lactic acid (+ energy)
- **B** Aerobic respiration releases more energy and doesn’t cause muscle cramps (from lactic acid).
- **C** glucose $\rightarrow$ ethanol + carbon dioxide (+ energy)

#### Activity
**Fermenting sugar**
Students use boiling tubes of sugar solution that have been kept in different temperature water baths. The rate can be measured by counting how many carbon dioxide bubbles are produced per minute.

#### Summary questions
1. anaerobic, oxygen, energy, lactic acid, cramp, fermentation, ethanol (7 marks)
2. Anaerobic respiration is without oxygen, produces lactic acid, does not produce water, produces less energy per glucose molecule. Aerobic respiration is with oxygen, does not produce lactic acid, does produce water, has more energy per glucose molecule. (4 marks)
3. anaerobic/very little oxygen is present under the surface of the skin (2 marks)

4. Example answers (6 marks):
A marathon runner requires energy over a long period of time. A sprinter requires a lot of energy in a short period of time. A person can only respire anaerobically for a short period of time but can respire aerobically for a long period of time. A sprinter requires extra energy for a short period of time. A sprinter cannot take in enough oxygen to respire aerobically to produce the required amount of energy. If a runner respires anaerobically for a longer period of time, lactic acid would build up in their muscles. This would cause cramp.
Health and lifestyle Sum 2 Week 1

You should have reviewed pages 1 to 3 on the link below before attempting this quiz
https://www.bbc.co.uk/bitesize/guides/zy2hpv4/revision/1

Hi Ashana, when you submit this form, the owner will be able to see your name and email address.

* Required

1

Which organ in the list below can be harmed if we eat too much fat? *
(1 Point)

- Brain
- Heart
- Lungs
- Ribs

2

Which food is a good source of vitamin C? *
(1 Point)

- Cheese
- Chicken
- Eggs
- Oranges
Some athletes take glucose tablets before a race. Why do they take glucose?

* (1 Point)

- for growth
- to prevent disease
- for healthy bones and teeth
- to provide energy

The diagram shows part of the human digestive system. Write the letter which labels the small intestine. *

(1 Point)

Enter your answer
5

Which of the following is required in the diet to keep food moving through the intestine? *
(1 Point)

○ fat

○ protein

○ fibre

○ starch

6

What is the addictive substance in tobacco smoke? *
(1 Point)

○ Nicotine

○ Tar

○ Carbon monoxide

7

Which of the main substances in tobacco smoke causes cancer? *
(1 Point)

○ Carbon monoxide

○ Carbon dioxide

○ Tar
8

Which statement about drugs is correct? * 
(1 Point)

- All drugs are medicines
- Most drugs have no effect on the body
- Alcohol and tobacco are legal drugs

9

Which of these is an example of a stimulant? * 
(1 Point)

- Alcohol
- Solvents
- Caffeine

10

Which drug is a depressant? * 
(1 Point)

- Cocaine
- Alcohol
- Nicotine

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Photosynthesis and respiration Sum 2
Week 2

You should have reviewed pages 1 to 4 on the link below before attempting this quiz
https://www.bbc.co.uk/bitesize-guides/zpwmxnb/revision/1

Hi Ashana, when you submit this form, the owner will be able to see your name and email address.

* Required

1

Turnip plants make food by photosynthesis. Which part of a plant makes food? *
(1 Point)

- Root
- Leaf
- Flower
- Fruit

2

What process do plants carry out in the light and in the dark to release energy? *
(1 Point)

- photosynthesis
- absorption
3

What are the products of photosynthesis? *

(1 Point)

- Carbon dioxide and water
- Glucose and oxygen
- Lactic acid

4

Grass plants have root hairs. Which diagram shows a root hair cell? *

(1 Point)

- A
- B
- C
- D
5

The tree has root hairs. What are the functions of root hairs? Tick the two correct boxes. *
(2 Points)

☐ They absorb water from the soil.
☐ They produce seeds.
☐ They attract bees for pollination
☐ They absorb sunlight.
☐ They absorb minerals from the soil.

6

Complete the word equation for photosynthesis.
carbon dioxide + ................................... → glucose + ................................... *
(2 Points)
Enter your answer

7

Respiration takes place in the cells of all plants. Complete the word equation for respiration.
oxygen + ................................... → carbon dioxide + ................................... *
(2 Points)
Enter your answer
Sugar is also produced during photosynthesis. Give two ways in which the plant uses sugar. *

(2 Points)

Enter your answer

Submit
The Periodic Table Sum 2 Week 3

You should have reviewed pages 1 to 4 on the link below before attempting this quiz
https://www.bbc.co.uk/bitesize/guides/z84wjxs/revision/1

Hi Ashana, when you submit this form, the owner will be able to see your name and email address.

* Required

1
Which statement about elements is correct? *
(1 Point)

- Most elements are metals
- Most elements are non-metals
- There are about the same number of metals and non-metals

2
Where are the metals found in the periodic table? *
(1 Point)

- On the right
- On the left
- Scattered all over
3

Which of the following is a general property of non-metals? *
(1 Point)

- Shiny
- Good conductor of heat
- Poor conductor of electricity

4

Who developed the modern periodic table? *
(1 Point)

- Isaac Newton
- Dmitri Mendeleev
- Gregor Mendel

5

Why is copper sulphate not found in the Periodic Table? *
(1 Point)

Enter your answer

6

Sodium chloride is formed when sodium and chlorine combine together in a chemical reaction. Write the symbols for sodium and chlorine. *
(2 Points)

Enter your answer
7

Elements with similar chemical reactions are placed in columns, known as *
(1 Point)

- groups
- periods
- rows

8

Which letter, A, B, C, D or E, represents an alkali metal? *
(1 Point)

Enter your answer

9

Which letter, A, B, C, D or E, represents the element Calcium? *
(1 Point)
Which letter, A, B, C, D or E, represents a Group 4 element? * 
(1 Point)
Separation techniques Sum 2 Week 4

You should have reviewed pages 1 to 5 on the link below before attempting this quiz
https://www.bbc.co.uk/bitesize/guides/zgvc4wx/revision/1

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* Required

1

Which is the best way to get salt from salty water? *
(1 Point)

- Evaporation
- Distillation
- Filtration
- Chromatography

2

Which method can be used to separate dyes? *
(1 Point)

- Evaporation
- Distillation
- Filtration
- Chromatography
Chris separated the sand from the saltwater as shown below. What is this method of separation called? *
(1 Point)

- Chromatography
- Filtration
- Distillation
- Magnetism

What is substance A? *
(1 Point)

Enter your answer
5

What is the part labelled B? *
(1 Point)

Enter your answer

6

Rema used the apparatus below to distil 100 cm\(^3\) of water-soluble ink. Which processes occur during distillation? *
(1 Point)

- condensation then evaporation
- evaporation then condensation
- melting then boiling
- melting then evaporation
7

Give the name of the colourless liquid that collects in the test-tube. *
(1 Point)

Enter your answer

8

A scientist poured a blue solution into a dish. Two days later there were blue crystals in the dish, but no liquid. What happened to the liquid in the dish? *
(1 Point)

Enter your answer

9

Reshma had a mixture of iron filings and sand. What could she use to separate the iron filings from the mixture? *
(1 Point)

Enter your answer
What is the correct order for obtaining salt from a mixture of sand and salt?

(1 Point)

- Dissolving in water - filtration - evaporation
- Evaporation - filtration - dissolving in water
- Filtration - dissolving in water - evaporation