Science Department

2023/2024

Year 2

Summary notes

Term 1

Name: …….

Class: ……

Topics that have been covered

Unit 1 Environments and habitats	Unit 2 Forces and movement	Unit 3 Getting materials right
1.1 Habitats 1.2 Plants in different habitats 1.3 Animals in different habitats 1.4 Rocks and the environment 1.5 How can we care for our environment?	2.1 Forces around us 2.2 Changing shape 2.3 Changing speed 2.4 Changing direction	3.1 Natural and made materials 3.2 Properties of materials 3.3 Using the right material 3.4 Testing materials

Objectives of unit 1

- Explore the environment to find the habitat of a living thing.
- Talk about different living things in a habitat.
- Compare two local habitats.
- Describe the place an animal or plant lives as its habitat.
- Find out about how people can change the environment.

Objectives of unit 2:

- Learn that forces can make things move and make things stop.
- Make predictions and say if they are right.
- Learn that forces can change the shape of some objects.
- Use objects to measure.
- Find out how forces make things go faster or slower.
- Ask questions about how to make things go faster or slower.
- Find out how forces make things change direction.

Objectives of Unit 3

- **Learn about where materials come from.**
- **Learn which materials are natural and which materials have been made by people.**
- **Learn about the properties of different materials.**
- **Learn that materials have more than one property.**
- **Find out why a material can be good for making some objects but not others.**
- **Learn that we can test materials to find out their properties.**
- **Use objects to measure.**

Summary Unit 1

Environments and habitats

- Each animal needs an environment which is a good **habitat** for them.
- A **habitat** is the **home** for a living thing. It provides animals and plants with their needs.
- Animals **need** food, water, air and a home or a shelter in their **habitat**. Plants grow in many different habitats.
- Many plants grow in or by water like **rice**.

Most plants grow by a river in forests.
Plants **need** light, water, soil and air in their **habitat.**
Some plants live and grow in hot deserts like **cactus**.

- **Habitats** are desert, rainforest, arctic, savannah, Aquarium (ocean, sea, river and pond) and mountain.

Each habitat has its own animals and plants that live there.

- Many animals live by water. For example, the **habitat** for a frog must be a wet area, stream or pond. Some animals live in very hot deserts like Camels and some animals live in freezing weather like polar bears and penguins.
- **Insects** and other small animals need a safe place to live close to food. Many small animals eat twigs and dead leaves.
- We can tell that animals were here through **clues.**
- The clues might be tracks, droppings, leaves that have been eaten or birds singing.

What makes a rock?

Rocks are made out of little grains stuck together.

Planet Earth is made of rocks. Some rocks are deep underground; some rocks are at the surface. We use rocks to make roads, paths, bridges, walls, floors, buildings, roofs and even fire.

What is a stone?

A stone is a small rock.

What is a pebble?

Pebbles are stones that have been made smooth by the sea.

There are 2 types of rocks (hard and soft rocks):

Hard rocks are difficult to break or scratch.

Soft rocks are easy to break and scratch.

There are 2 types of rocks:

Permeable rocks (Absorbant):

Means that those rocks will let water run through it.

Permeable rocks have lots of pores inside it, those pores allow the water to pass through.
Example: Coal, chalk.

Impermeable rocks (Waterproof):

Means that those rocks won't let water run through it.

Impermeable rocks don't have lots of holes inside it so it will not let water run through.
Example: Diamond, granite, slate.

Digging up rocks:

We dig up rocks in:

- Quarries
- Mines
- River beds.

Things used to dig up and move the heavy rocks:

- Tools
- Diggers
- Trucks
- Trains

Quarries:

A quarry is a place where we dig rocks on the earth's surface. Sometimes we use explosives to break rock into pieces. This is a dangerous job.

Rocks that we get from a quarry:

Marble, slate and limestone.

Deep mine:

A deep mine is a place where we dig rocks deep underground. People use spades and other tools. This is very dangerous work.

Rocks that we get from a mine:

Diamonds, marble, coal and salt.

River bed:

A river bed is a place where we dig stones. We use spades and big diggers.

Rocks that we get from a riverbed:

Sand, gravel and pebbles

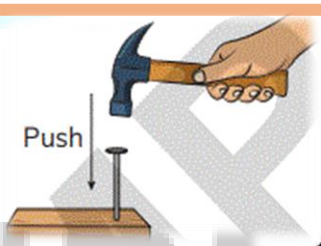
Rocks and their properties and what we use it for:

Name	Properties	Uses
Marble (impermeable rock)	**Color:** Usually white. Can have different colored veins in. Can be polished to look smooth.	Used for making buildings and artwork.
Chalk (permeable rock)	**Color:** Have a white color. Very soft and crumbly, it can easily break. its light in weight	It is most often used for writing and drawing.
Limestone (permeable rock)	**Color:** It can be white, grey or yellow. It's a soft rock.	We use it to make class and cement.
Sandstone (permeable rock)	**Color:** It can be red, brown, grey or white. It's a hard rock but not as hard as the granite. Returns to sand when damaged.	It is used to make buildings because it's difficult to be break.
Granite (impermeable rock)	**Color:** Usually red, pink, grey or white with dark grains. Usually very rough (hard) but can be polished.	It is commonly used in architecture (bridges and buildings). Granite is used as a building material because it is hard and durable. It can be cut and carved and can also be highly polished and used for kitchen worktops.
Coal (permeable rock)	**Color:** It's black or dark brown colored rock.	It is used to burn fire to keep us warm. Used in picnics to grill food.

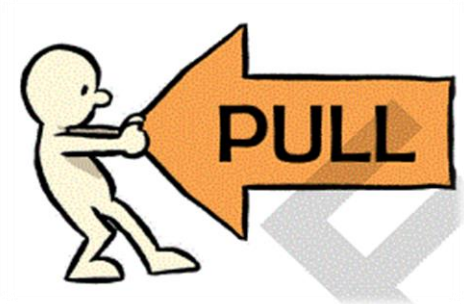
- Sometimes people can have a bad effect on the environment, beaches and streets full of litter. Dirty water comes from the pipe.
- Pollution is bad for animals and plants. Animals can eat litter or be stuck in a plastic bag.
- We have to care for our environment by planting trees. Don't throw litter. Don't waste water.
- We can recycle materials glass, paper, plastic and re-use them instead of throwing them and cause pollution.
- This sign means that we can recycle materials.

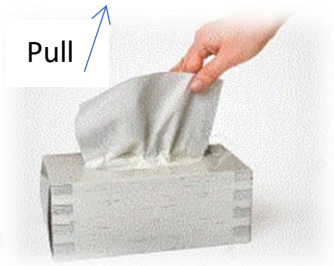
Summary Unit 2

Forces and movement



- A **push** and a **pull** are **forces**.
- **Forces** can make things **move** and make things **stop**.
- A **push** is a force away from you.
- A **pull** is a force towards you.
- We use **forces** in our lives every day. There are **small forces** and **big forces**.
- If we're **pushing** a car out of the road we use a **big force**.
- If we're **pushing** a football while playing, we use a **small force**.





- **Forces** can **change the shape** of some objects.

1. We can **bend** a metal bar to make ahook.	
2. We can **stretch** the rubber bandto make it longer.	
3. This cake has been **squashed.**	
4. The man **twisted** the cloth.	

- **Forces** can make moving objects **change speed**.
- To go **faster** on a bike you **push** on the pedals.
- To go **slower** you **pull** on the brakes.
- Going **faster** is called **speeding up**.
- Going **slower** is called **slowing down**.
- Your **speed** is how fast you are moving.

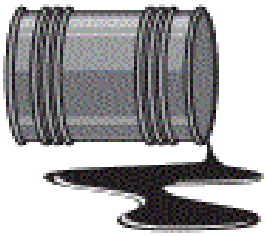
- When something **speeds up** or **slows down** it is because of a **force**.

- Forces can make things change direction.
- A **bigger push** will make an object move faster.
- A **smaller push** will make an object move slower.
- **Forces** can make moving objects change direction.
- **Pushes** and **pulls** can make moving objects **turn**.

Summary Unit 3

Getting materials right

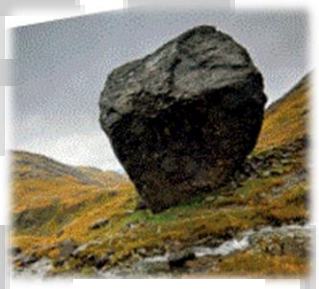
- There are many **natural materials**. They come from the world around us.
- The **materials** in these pictures are natural.



oil

This woman is getting rubber from a rubber tree. Rubber is natural.

rubber



rocks

water

wool

sand

wood

cotton

- Other **materials** have to be **made** by people.
- We send **natural materials** to special factories to be made into other materials. We call them **manufactured** or **man-made materials**.
- The **materials** in these pictures are **made**.

fabric

paper

glass

plastic

metal

- The **properties** of **materials** is describing it and tell what a **material** is like. The **properties** of a material are also called the **characteristics** of the material.
- **Materials** have many different **properties** or **characteristics**.
- Water cannot get through **plastic**. Water soaks into most fabric.
- **Plastic** is **waterproof** and **flexible**. Most **fabric** is **absorbent** and **soft**.
- The **properties** of **materials** tell us what a **material** is like.
- **Rock** is **rigid**. **Rubber** can be **flexible.**
- A **nail** is made of **Metal. Metal** is **hard**, **shiny** and **strong**.
- **Paper** is **weak, dull** and **smooth.**
- **Glass** is good for a **window** because it is **transparent**. This means we can see through it.
- A **wall** can be made of **rock** because rock is **strong.**
- A **bottle** can be made of **plastic** because plastic is **waterproof.**
- **T-shirt** can be made of **fabric** because fabric is **soft** and **flexible**.