



Right Science

1

***Teacher's
Resource Book***

For Order : 0320-5899031

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Chapter 1: Living and Non-living things

Get to Know Living and Non-Living Things 1.1

Learning objectives:

- In this lesson we will learn about living and non-living things.
- We will learn that all living things can breathe, eat, move, grow and change.
- We will also learn that all non-living things do not grow and change and non-living things do not need any kind of food and water to live.

Teacher Starters:

Start by asking children about living and non-living things. Also ask them what they can see in class, whether the thing is living or non-living. You can tell them some examples of living and non-living things.

Teaching:

Get the lesson read in class, emphasizing more on living things and non-living things. Point to the picture of the living and non-living things given in the unit.

Extended Teaching

Resources at www.learningwell.pk

Log on to your personal account at www.learningwell.pk to view electronic print of this lesson and a full-length video lecture or animation pertaining to the lesson. You will also find extended exercises or MCQ-based tests based on the lesson to help your students improve their learning. Additional teaching resources are also available at www.TeachingWell.pk

Web Resources:

For further information visit these sites and links:

1. www.giftofcuriosity.com
2. <https://www.youtube.com/watch?v=cPiNTkCmmv0>
3. <https://educationwithfun.com/course/view.php?id=9§ion=5>

Test Your Knowledge

A. Circle the things which are living with blue.

Circle the things which are non-living with red.

- Turtle, bug, tiger, tree, girl, bird, plant, fish and worm are living things so circle them with blue colour.
- Car, airplane, ball, drum, tea mug, telephone, chair are non-living things so circle them with red colour.

B. Make a list of five living and non-living things each from your daily life.**Living things:**

Boy
 Girl
 Rose flower
 Cat
 Ant

Non-living things:

bag
 book
 pant
 car
 shoe

C. Write the correct answer.

1. Birds are living thing.
2. Plane is a non- living
3. Children are living thing
4. Plants are living things.

Think and Write

1. Reasons:

- A chair cannot take breath.
- A chair cannot move itself.
- A chair cannot eat or drink.

2. Plant does not move and eat like us, but they are living things because they grow.

Learning New Words:-**Words****Meanings**

Living things	a living (or once living) entity
Non-living things	not having life or not alive
Breathe	to inhale and exhale air using the lungs
Grow	to increase in size by a natural process
Change	to cause to be different
Move	to change in position from one point to another

Chapter 2: Humans**Our Body 2.1****Learning Objectives:-**

- We will learn in this chapter that all humans have the same body parts.
- We will learn about main parts of the body.
- After learning this chapter, we will be able to understand that different body parts perform different functions.

Teacher Starters:

Begin by asking students about their body parts. Ask them to tell body parts names one by one. As they name them, tell them about further body parts which they don't know before.

Teaching:

Get the lesson read in class, focus more on 'The Body' and its basic parts with their functions. Point to the picture of the body parts given in the unit.

Extended Teaching

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Web Resources:

For further information visit these sites and links:

1. <https://www.theschoolrun.com/homework-help/parts-body>
2. <https://study.com/academy/lesson/human-body-parts-lesson-for-kids.html>
3. <https://www.kidsworldfun.com/learn-science/the-human-body.php>

Test Your Knowledge**A. Do you know the name of the name of these body parts?**

Take help from the list given below.

Do as mentioned in Chapter.

B. Trace, name and write function of the given body part.

Name of the body Parts	Functions of the body Parts
Eye	Eye is use for Seeing
Teeth	Teeth is use for Chewing
Ear	Ear is use for Hearing

Think and Write

1. What is our body made of?

Answer. Our body made of many parts. For example: Head, Neck, Limbs, and Torso.

2. What body part do you use when writing?

Answer. We use our hands when writing.

3. What body part do you use when walking?

Answer. We use our Legs when walking.

4. What is head use for?

Answer. Head is use to carry load.

5. Write the functions of these body parts. Nose, hands, feet.

Answer. **Functions:**

Nose:

Nose is use for breathing and smelling.

Hands:

Hands are use to paint, to write, to make things and to do all types of work.

Feet:

Feet are use to play, to walk and run and to operate things.

Learning New Words:-**Words**

Torso

Limbs

Skull

Load

Meanings

the human body excluding the head and limbs; trunk

an arm or leg of a person or four legged animal, or a bird's wing.

the part of the skeleton that forms the framework of the head.

something that is carried, as by a vehicle, person or animal.

Chapter 2: Humans**Our Senses 2.2****Learning Objectives:-**

- In this lesson we will learn about five senses and these are: see, hear, smell, taste and feel.
- We will learn that, the senses help us to work and know the world around us.
- We will learn that we should do take care of our sense organs.

Teacher Starters:

Start by asking them about different sense organs. As they name them, tell them that every sense organ has some work to do. Tell them about every organs function, so they can understand the concept.

Teaching:

Get the lesson read in class, emphasize on the topic. Point the picture of the senses given in the unit. Try to clear their vision on this topic by given them easy examples.

Extended Teaching**Resources at www.learningwell.pk**

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Web Resources:

For further information visit these sites and links:

1. <https://educationwithfun.com/course/view.php?id=9§ion=10>

2. https://www.youtube.com/watch?v=Lpev_Raequo

3. <https://study.com/academy/lesson/the-five-senses-lesson-for-kids.html>

Test Your Knowledge

A. There are things around you which you see, smell, taste, hear and feel. Write two things for each question.

(Note: There are so many different answers of student's choice. Here is an example)

- What do you see in your classroom?
 1. Desk, 2. Board
- What do you like to eat in lunch break?
 1. Sandwich, 2. Biscuit
- Which words do you hear the most?
 1. Thank You, 2. Please
- Which flowers have very good smell?
 1. Rose, 2. Tulip
- Which things do you feel with your hands?
 1. Book, 2. Pencil

B. Imagine yourself doing the following tasks. Name the senses that are involved.

1. seeing
2. feeling
3. smelling
4. hearing
5. tasting

C. Walk around your school. Go to different places like the canteen, play area, office and the labs. Pay close attention to what you see, hear, and smell. After returning to the class, fill up this chart.

(Note: There are so many different answers of student's choice. Here is an example)

I see	I hear	I smell	I taste	I feel
Classroom	Bell	Samosa	Samosa	Desk
Playground	Lecture	Flower	Biscuit	Air
Teachers	Birds voice	Perfume	Chips	Water
Students	Fan noise		Burger	Computer
Canteen	Kids voice		Toffee	Sunshine

Think and Write

1. We need more than one sense when we eat. Give an example.

Ans. Yes! This statement is true because before eating, first we see food and then smell it, if it looks good and smell goods then we will eat that food.

2. There is stationery in you pencil box. Describe them using your touch senses.

Ans. Student can do this activity by himself easily. (Pencil, Ruler or scale, Eraser, Cutter, Colours, and Crayons etc)

3. Some sounds are irritating. Write any five sounds you do not want to hear.

Ans. I do not want to hear the sound of:
Dog, Donkey, Lion, Crow, Eagle

Learning New Words:-

Words

Meanings

Sense

physical abilities of sight, smell, hearing, touch and taste.

Organs

parts of the body of humans, an animal or plant that performs a particular job.

Tickle

lightly touch or prod (a person or a part of the body) in a way that causes mild discomfort or itching and often laughter.

Ability

talent, skill, or proficiency in a particular area.

Activities

the conditions in which things are happening or being done.

Chapter 2: Humans

Healthy Habits 2.3

Learning Objectives:-

- In this lesson we will learn about the healthy habits.
- We will learn that healthy eating, regular exercises and staying clean are basic healthy habits.
- We will also learn that we should not skip any meal.

Teacher Starters:

Begin by asking them about their habits. Also ask them whether their habits are healthy or unhealthy, which foods they like to eat, how they take care of themselves, and which kind of physical activity they do in daily routine.

Teaching:

Get the lesson read in class; focus on the topic 'Healthy Habits'. Tell them an importance of healthy habits. Give them some example of healthy food and unhealthy food. Tell them that how should they take care of hygiene and how should they develop healthy habits.

Extended Teaching

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Web Resources:

For further information visit these sites and links:

1. <https://www.youtube.com/watch?v=QA63yDctJ-c>
2. https://www.momjunction.com/articles/healthy-habits-teach-kids_002855/
3. http://www.clocc.net/wp-content/uploads/Healthy_Habits_Healthy_Kids.pdf

Test Your Knowledge

A. Make at least five words from the alphabets in “Healthy Habits”. Example: bad, sit, heat

- | | |
|----------|-----------|
| 1. Bits | 4. Health |
| 2. Heal. | 5. Hit |
| 3. Eat | |

B. My healthy habits: Make a list of your healthy habits and show it to you friends.

• List of healthy habits:-

1. I clean my teeth twice a day.
2. I drink milk every day.
3. I take bath every day.
4. I eat lots of vegetables.
5. I play with my friends.

C. True or False

- | | |
|----------|-----------|
| 1. True | 6. True |
| 2. False | 7. True |
| 3. True | 8. False |
| 4. True | 9. False |
| 5. False | 10. False |

Think and Write

1. Junk foods may make us overweight. Discuss and find out reasons.

Ans. Junk foods may make us overweight because junk food has starch and excessive sugar so Junk food weakens our bones and make us fat.

2. How many serving of fruits or vegetables should you eat each day?

Ans. We should eat one serving of fruits and one serving of vegetables each day.

3. What will keep your bones strong and healthy?

Ans. Milk makes our bones strong and healthy.

4. List two good sources of protein.

Ans. 1. Meat 2. Pulses and beans

5. List three times when should you wash your hands.

Ans. 1. Before eating 2. After eating 3. After using the bathroom

6. What are some things you can do to stay healthy?



Ans. To stay healthy I do many things for example:

- I wake up and sleep on time.
- I eat lots of fruits and vegetables.
- I drink lots of water.
- I try to avoid junk food.

Learning New Words:

Words

Meanings

Healthy habits	any behavior that benefits your physical, mental, and emotional health
Healthy eating	eat a variety of foods that give you the nutrients you need to maintain your health, feel good, and have energy
Junk food	pre-prepared or packaged food that has low nutritional value
Overeating	eat too much, eat like a horse
Exercise	activity requiring physical effort, or an activity carried out for a specific purpose
Unhealthy	harmful to health

Chapter 3: Animals

Animals of the World 3.1

Learning Objectives:-

- In this lesson we will learn about pet animals and wild animals.
- We will learn about categories of animal.
- We will learn about vertebrates and invertebrates.

Teacher Starters:

Begin by asking them about different animal names. Ask them did they know body parts of an animal. As they name them, tell them about backbone which is the main part of humans and animals. Then give them proper understanding of vertebrates and invertebrates.

Teaching:

Get the lesson read in class, focus on the topic. Give them examples of Vertebrates and invertebrates. Point to the pictures of animals given in the lesson.

Extended Teaching

Resources at www.learningwell.pk

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Web Resources:

For further information visit these sites and links:

1. <https://educationwithfun.com/course/view.php?id=9§ion=4>
2. https://www.youtube.com/watch?v=Srijpl_gGpo

Test Your Knowledge**A. Answer the following**

Choose five animals from the list below. Write the name of the animal, whether it is a vertebrate or invertebrate and two important traits in the spread sheet.

Animal	Vertebrate or invertebrate	Two important traits
Fish	Vertebrate	1. Fish can swim easily. 2. Fish are cold blooded.
Snail	Vertebrate	1. snail can hide his head. 2. Snail move slowly.
Jellyfish	invertebrate	1. Jellyfish has transparent body. 2. Jellyfish re-growth its arms.
Spider	invertebrate	1. Spider can make web. 2. Spider has many legs.
Deer	vertebrate	1. Deer can run very fast. 2. Deer has beautiful horns.

B. Where do you find these animals?

Fish	in the water
Elephant	on land
Duck	in the water and on land (both)
Goat	on land
Snake	in the water and on land (both)
Rabbit	on land
Whale	in the water
Shark	in the water
Crocodile	in the water and on land (both)
Frog	in the water and on land (both)

Think and Write

1. Which animals do you see around your house?

Ans. I can see cat, dog, crows, pigeons sparrows, parrots and eagle around my house.

2. What features in an animal decides whether it is a vertebrates or invertebrates?

Ans. Having backbones or lacking of backbones will decide whether it is a vertebrates or invertebrates.

3. What is a backbone?

Ans. Backbone is a spinal column

Or

Backbone is the line of bones down the centre of the back that provides support for the body.

4. Do you have a backbone?

Ans. Yes! I do have a backbone.

5. Which animals come are invertebrates? Give some examples.

Ans. Animals that do not have backbones are called invertebrates. For example. Insects, sea animals like jellyfish, starfish, octopus and squid.

Learning New Words:-

Words

Meanings

Aquarium	a tank, bowl or other water-filled enclosure in which living Fish or other aquatic animals and plants are kept.
Larger	of greater than average size, extent, quantity or amount; big
Variety	the quality or condition of being various or varied; diversity
Crocodile	a large aquatic reptile; an alligator
Despite	in spite of; without being affected by
Backbone	the vertebrate spine or spinal column
Nape	the back of the neck
Vertebrates	having a backbone or spinal column
Invertebrates	any animal lacking a backbone

Chapter 3: Animals

Man and the Animals 3.2

Learning Objectives:-

- In this lesson we will learn about kinds of animals in the world.
- We will learn about categories of an animal.
- Further we will learn about wild and domestic animals with their uses.

Teacher Starters:

Start by asking them about different kinds of animals in the world. Also ask them do they know about wild and domestic animals? If, not so tell them that there are two categories in which animals can be divided: Wild and Domestic. Ask them about the uses of these animals. Tell them uses of animals in different fields.

Teaching:

Get the lesson read in class, emphasize on the topic. Tell them different animals names with their uses in different ways. Give them an example of wild and domestic animals, so then they can understand the topic easily.

Extended Teaching

Resources at www.learningwell.pk



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Web Resources:

For further information visit these sites and links:

1. <https://www.first-learn.com/uses-of-animals.html>
2. <https://www.studyread.com/importance-of-animals/>
3. https://en.wikipedia.org/wiki/Human_uses_of_animals

Test your Knowledge

A. Can you find out who I am?

1. I have four legs. I am a pet. I hate cats. I bark.

Ans. I am a Dog.

2. I eat vegetables. I can run fast. I can be a pet. I have long ears.

Ans. I am a Rabbit.

3. I have four legs. You can ride me. I have tusks. I have a long nose.

Ans. I am an Elephant.

4. I can swim and dive. I have two legs. I have wings. I quack.

Ans. I am a Duck.

5. I live in Africa. I am yellow and brown. I eat leaves. I have a long neck.

Ans. I am a Giraffe.

B. Write the names of the animals in the correct column.

Pet animals	Farm animals	Wild animals
Hen	Cow	Crocodile
Cat	Horse	lion
Dog	Duck	spider
Fish	Goat	Elephant
Parrot		Zebra
Rabbit		snake
		hippo
		giraffe
		bear

Think and Write

1. How are animals useful to us?

Ans. Animals are useful for us: horses and camels are used for riding, a dog protects our homes and our flocks, we also use animals to get milk, meat, leather etc.

2. What are wild animals? Give some examples.

Ans. The animals that live in the wild; that in jungles, grasslands, deserts, mountains, oceans etc are called wild animals. For example; lion, jaguar and elephant.

3. Write the names of some animals which meat we can eat.

Ans. We can eat the meat of cattle, goats, sheep, fish and birds.

4. What does chicken provide us?

Ans. Chicken provides us eggs and meat.

5. What is meant by domesticated animals? Write their names.

Ans. The animals; whom we breed, who work for us, are in any way useful to us are called domestic animals.

Learning New Words:-

Words	Meanings
Backbone	the vertebrate spine or spinal column
Wild	not dot domesticated, not inhabited or farmed
Domestic	fond of home life and household affairs
Bamboo	a giant woody grass which is grown chiefly in the tropics
Breed	to produce (off spring), give birth to a hatch
Poultry	domestic fowl, such as chickens, ducks and geese
Cattle	large ruminant animals with horns and cloven hoofs, domesticated for meat or milk, or as beasts of burden, cows and oxen
Leather goods	a material made from the skin of an animal by tanning or a similar process

Chapter 4: Plants

Plants are living 4.1

Learning Objectives:-

- In this lesson you will learn that plant and animals are alike and different in some ways.
- We will learn that plants need water and sunlight to grow. Plant can reproduce and make their own food.
- We will learn about parts of plant in detail.

Teacher Starters:

Begin by asking them about plant and trees parts. Also ask them whether the plants are living or non-living. Tell them main parts of plants with the help of a diagram.

Teaching:

Get the lesson read in class, focus on the plant and its main parts. Tell them that plants are living thing. Point to the picture of the plant given in the lesson. Tell them to draw a plant in their notebook and label it.

Extended Teaching

Resources at www.learningwell.pk

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Web Resources:

For further information visit these sites and links:

1. <https://educationwithfun.com/course/view.php?id=9§ion=3>
2. <https://www.youtube.com/watch?v=18amLZ9vfG8>
3. <https://www.slideshare.net/theeducationdesk/environmental-science-ivs-plants-and-trees-class-i>
4. <https://www.mindmeister.com/931364128/plant-parts-and-functions>

Test Your Knowledge**A. Connect parts of the plants with their picture.**

(do as directed)

B. Label the diagram.

1. leaf
2. stem
3. root
4. seed

C. Colour the leaves green, stem and roots brown.

(Do as directed)

Think and Write:-

1. If you want to grow a plant what will you need first?
Ans. If I want to grow a plant, first I will need a seed.
2. There are many differences between animals and plants. Write these which are not given in the book.
Ans. Animal absorbs oxygen, while plant absorbs carbon dioxide.
Animal can see while plant cannot see.
3. What are the three main parts through which plants make their food?
Ans. The three main parts are: the **roots**, the **leaves**, and the **stem**. through which plants make their food.
4. Animals take food from plants. Where do the plants take food from?
Ans. Plants make their own food with the help of sunlight, water and air.
5. Name the part of a plant that acts as a lift. Give reasons for this role.
Ans. Stem is the part of plant that acts as a lift. Through stem water transports to all plant.



Learning New Words:-

Words	Meanings
Cracks	a line on the surface of something along which it has split breaking apart
Cemented	fix with cement, settle or establish firmly
Root	the part of a plant which attaches it to the ground or to a support, typically underground.
Supplies	make (something needed or wanted) available to someone
Sunlight	light from the sun
Atmosphere	the envelope of gasses surrounding the earth or another planet

Chapter 4: Plants**Plant for Us 4.2****Learning Objectives:-**

- In this lesson we will learn about uses of plants in our daily life.
- We will learn that plants are the vital source of food.
- We eat fruit, root, leaves, stem and seed of plants.

Teacher Starters:

Begin by asking them how plants are useful for us. Ask them to give daily life examples in which we are using plants. Tell them different uses of plants so they can understand the topic.

Teaching:

Get the lesson read in class, emphasizing more on the uses of plants. Tell them about different kind of plants with their uses. Give them some example. Point to the picture of the kinds of plants given in the lesson.

Extended Teaching**Resources at www.learningwell.pk**

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Web Resources:

For further information visit these sites and links:

1. <https://byjus.com/biology/uses-of-plants-for-class-2/>
2. <https://www.studyread.com/importance-plants-life-earth/>
3. <https://www.youtube.com/watch?v=Czoyzw2G3xo>



Test Your Knowledge**A. Look at these images and circle if they are made of plant's material.**

Table, house, board and chair are made of a plant's so (circle these objects)

B. What am I?

- Below is a list of edible plants. Place them in their group.

Flowers:	broccoli, cauliflower,
Fruits:	apple, mango
Seeds:	corn, rice, beans
Leaves:	lettuce, spinach, aloe vera
Stems:	asparagus, sugarcane
Roots:	carrot, turnip

A. Answer the following questions.

- Name two roots that we eat as vegetables.

Ans. 1. Carrot 2. Turnip

- Name two leaves that we eat as vegetables.

Ans. 1. Spinach 2. Lettuce

- Name two flowers that we eat as vegetables.

Ans. 1. Broccoli 2. cauliflower

- Name two stems that we eat as vegetables.

Ans. 1. Asparagus 2. Sugarcane

- Write any five uses of plants other than food.

Ans. Uses of plants other than food are:

- Plants give us shelter.
- Plants give us Clothes.
- Plants give us fuel.
- Plants give us medicines.
- Plants give us wood to make furniture.

B. Fill in the blanks.

- Pulses
- Root
- Stem
- Cabbage
- Broccoli

Think and Write

- We can use plants for making furniture. Give examples.

Ans. We can get wood from plants to make furniture. For example: sugarcane pulp is used to make artificial wood, called Lasani.

2. All parts of plants are useful for us. Give a few reasons for it.

Ans. All parts of plant are useful for us because:

- We eat roots of some plants like carrot, turnip
- We eat leaves of some plants like lettuce, spinach, aloe vera
- We eat flowers of some plants like broccoli, cauliflower.
- We eat seeds of some plants like corn, rice, beans.
- We eat stems of some plants like asparagus, sugarcane.

Learning New Words:-

Words

Shelter

Farmers

Vital

Source

Artificial

Lasani

Cosmetic

Ethanol

Meanings

a place giving temporary protection from bad weather or danger

a person who owns or manages a farm

absolutely necessary, essential

a place, person or thing from which something originates

made by humans, especially in imitation of something natural

a kind of artificial wood

something superficial that is used to cover a deficiency or defect.

a colourless volatile flammable liquid which is produced by the natural fermentation of sugars; alcohol

Chapter 5: Materials

Materials and their Uses 5.1

Learning Objectives:-

- In this lesson you will learn that materials are used to make objects.
- We will learn about different characteristics of material. Like strength, softness, and toughness.
- Further we will learn that objects with different characteristics require different materials.

Teacher Starters:

Start by asking them about materials, if they don't know so tell them about it with their uses. Tell them that materials are things that are used to make objects. Ask them about some objects which is in classroom. Clear their concept of this topic.

Teaching:

Get the lesson read in class, emphasize on the topic materials and their uses. Give them some examples of materials which they are using in daily life. Point to the picture of the materials given in the lesson.

Extended Teaching

Resources at www.learningwell.pk

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Web Resources:

For further information visit these sites and links:

1. <https://www.theschoolrun.com/what-are-materials>
2. <https://mrs genuasclass.weebly.com/objects-and-materials.html>
3. <https://www.science-sparks.com/introducing-materials/>

Test Your Knowledge

A. Let's observe materials

Write 'S' on soft materials and 'H' on hard material.

- In this picture
Soft materials are: teddy bear, mouse, balloon, plant, and bag
Hard materials are: sofa, chair, table, wall, and ball

B. Below are objectives made of different materials. Sort the group according to properties given.

- **Shiny:** water cane
- **Hard:** shovel
- **Rough:** sand
- **Heavy:** tractor
- **Smooth:** flower
- **Light:** hat
- **Soft:** fur

C. Compare Material

Can you define each of the following material in a single word? Circle the correct word.
 (From left to right) correct options are:

1st row:	red	scaly	rectangular	sweet
2nd row:	spicy	tall	hairy	smooth
3rd row:	plastic	magnetic	warm	liquid and hot

D. Look at your window and sort out the materials used in it.

1. Aluminum
2. Wood
3. Glass
4. Iron
5. Plastic
6. Rubber

E. Let's discuss

- (students will perform)

Think and Write

1. Write some properties of materials.

Ans. Properties of materials are:

- Steel has a characteristic of strength.
- Wood has a characteristic of toughness.
- The fabric has a characteristic of softness.
- Plastic has characteristic of light weight.
- Rubber has a characteristic of flexibility.

2. Pillow is made of fiber. It should not be made of wood. Give reasons.

Ans. Pillow is made of fiber. It should not be made of wood because fiber is soft and wood is hard.

3. The cloth is not a good material for an umbrella. Give reason.

Ans. Because cloth got wet easily.

4. We need to have transparent window for cars. Give reasons.

Ans. Because through transparent window we can see across.

Learning New Words:-**Words**

Materials

Qualities

Lightweight

Flexible

Strength

Characteristics

Toughness

Hard

Absorbent

Comfortable

Meanings

the matter from which a thing is or can be made

a distinctive attribute or characteristic possessed by someone or something.

a person or thing that is lightly built or constructed

capable of bending easily without breaking

the quality or state of being physically strong

a feature or quality belonging typically to a person, place, or thing and serving to identify them

the state of being strong enough

solid, firm, and rigid; not easily broken, bent or pierced

a substance that soaks up liquid easily

providing physical comfort, free from stress or anxiety

Chapter 6: Energy and Forces**Energy to do things 6.1****Learning Objectives:-**

- In this lesson we will learn about energy.
- We will learn that no work can be done by anything without energy.
- We will learn that Sun is the greatest source of energy.

Teacher Starters:

Start by asking students about things around us which are in action. As they tell examples, tell them that every action needs energy to do things. Tell them about sources of energy.

Teaching:

Get the lesson read in class, emphasizing more on energy. Give them general examples. Try to clear their concept of this topic. Point to the pictures given in the lesson so they can understand.

Extended Teaching

Resources at www.learningwell.pk

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Web Resources:

For further information visit these sites and links:

1. <https://www.youtube.com/watch?v=fjuvatloSzY>
2. <https://vlc.ucdsb.ca/c.php?g=183781&p=1212012>
3. <https://www.turtlediary.com/lesson/what-is-energy.html>

Test Your Knowledge**A. Answer the following questions.**

1. What is energy?

Ans. Energy is the power that humans, animals, plants and machines use to do things.

2. What is a source of energy?

Ans. Source of energy

- For Earth: Sunlight provides the energy to earth.
- For Humans and Animals: Food provides the energy to Humans and Animals.
- For Plants: Sunlight provides the energy to Plants.
- For Non-Living Things: Oil and Gas, Coal, Water, Sunlight, and Wind provides the energy to non-living things.

B. Write four uses of energy.

1. Energy runs our vehicles.
2. Energy runs machines
3. Energy gives us power.
4. Energy helps plant to grow.
5. Energy provides light.

Think and Write

1. Why is energy important for us?

Ans. Energy is important for us because we use energy to heat and cool our homes, schools and businesses. All living thing need energy.

2. From where we get energy?

Ans. We get energy from sunlight, food, oil, gas, coal, water, wind and etc.

Learning New Words:-**Words****Meanings**

Coal

a natural dark brown to black graphite like material used as a fuel

Energy

the strength and vitality required for sustained physical or mental activity

Energy sources

a source from which useful energy can be extracted

Electricity

electric current used or regarded as a source of power

Chapter 6: Energy and Forces**Force Moves Things 6.2****Learning objectives:-**

- In this lesson we will learn about Push and Pull forces.
- We will learn that if we push an object. It moves away from us.
- We will learn that if we pull an object. It moves towards us.

Teacher Starters:

Begin by ask them about how things can move from one place to another. Which thing is needed to move? Tell them about force. Give them examples. Tell them about types of forces: Push and Pull.

Teaching:

Get the lesson read in class, emphasizing more on the force. Show them in practical that how a thing moves. Point out the example pictures given in the lesson so they can understand the concept of force.

Extended Teaching

Resources at www.learningwell.pk

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Web Resources:

For further information visit these sites and links:

1. <https://www.youtube.com/watch?v=rfeVINL7d9U>
2. <https://www.science-sparks.com/ideas-for-learning-about-forces/>
3. <https://study.com/academy/lesson/push-pull-forces-lesson-for-kids-definition-examples.html>

Test Your Knowledge**A. Name these actions are either push or pull.**

- Pull Push Pull
- Push Pull Pull
- Push Pull Pull

B. Act and observe whether you are using a push or pull in the following actions. Record your result.

1. Squeezing a sponge
Push
2. Playing a musical keyboard
Push
3. Dragging along a toy cart
Pull

Think and Write

1. What happens when we push something?
Ans. When we push an object, it moves away from us.
2. A trolley cannot move on its own. Why?
Ans. Because it needs pull force. When we pulls trolley it moves towards us.

Learning New Words**Words**

Push
Pull
Towards
Away
Heavy
Light

Meanings

move forward by using force to pass people or cause them to move aside.
move steadily in a specified direction or manner
in the direction of
to or at a distance from a particular place or person
a great weight, difficult to lift or move
a person or thing that is lightly built or constructed

Chapter 6: Energy and Forces

Sound and its Sources 6.3

Learning Objectives:-

- In this lesson you will learn about sound and its sources.
- You will learn that Sound comes from its source.
- You will learn that whatever we hear with our ears is sound.

Teacher Starters:

Start by asking them what they hear all the time. Is this sound or something else, as they answer, telling them that whatever they hear with their ears is sound. Give them some daily routine examples of sounds. Also tell them about its sources.

Teaching:

Get the lesson read in class, emphasizing more on Sound. Tell them about sound source. Point to the pictures given in the lesson so they can understand the topic easily.

Extended Teaching

Resources at www.learningwell.pk

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Web Resources:

For further information visit these sites and links:

1. <https://www.youtube.com/watch?v=3-xKZKxXuu0>
2. <http://www.scienceforkidsclub.com/sound.html>
3. <https://study.com/academy/lesson/how-does-sound-travel-lesson-for-kids.html>

Test Your Knowledge

A. Below are some sounds. Match them with the animals.

- Neigh-neigh horse
- Quack-quack duck
- Woof-woof dog
- Meow-meow cat
- Moo-moo cow
- Baa-baa sheep

B. Close your eyes and focus on what you hear. Make a list of sounds you hear and identify their sources.

- | Sounds | Source |
|-------------------|---------------|
| Chirping of birds | bird |
| Mobile tone | mobile |
| Fan | fan |
| Azan | loud speaker |
| Music | T.V. |

C. Which sound is loud and which is soft? Tick in the boxes.

Sound	Loud	Soft
Barking dog	Loud	
Cat's meow		Soft
Bus horn	Loud	
Telephone ring		Soft
Playing Guitar	Loud	

Think and Write

1. Give five examples of machine sound.

Ans. Sound of fan, T.V, washing machine, refrigerator and motor are examples of machine

2. Give five examples of natural sound.

Ans. Sound of bird, cat, dog, bee, air and human are example of natural sound.

3. What is a sound source?

Ans. Anything that makes sound is called sound source.

4. Write any five sound sources other than given in this book.

Ans. A mosquito makes a sound.

Bus makes a sound.

Helicopter makes a sound.

Fan makes a sound.

Donkey makes a sound.

Learning New Words:-

Words

Meanings

Sound

a distinctive noise, sound produces by continuous and regular vibrations, as opposed to noise

Blare

a loud, harsh sound

Source

a person or thing from which something comes into being or is derived or obtained

Noise

sound or a sound that is loud, unpleasant or undesired

Chapter 6: Energy and Forces

Light and Dark 6.4

Learning Objectives:-

- In this lesson we will learn about light and dark.
- We will learn that light is the type of energy.
- We will learn that days are bright due to the Sun.
- We will learn that if there is no light everything becomes dark.

Teacher Starters:

Begin by asking them what is light and dark. Also ask them whether they can see in dark or in light. As they answer, tell them that it is easy to see in light and difficult to see in dark.

Teaching:

Get the lesson read in class; focus on the topic light and dark. Point out the pictures given in the lesson. Clear the concept of students.

Extended Teaching

Resources at www.learningwell.pk

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Web Resources:

For further information visit these sites and links:

1. <https://study.com/academy/lesson/light-and-dark-lesson-for-kids.html>
2. <https://www.kindergarten-lessons.com/science-activities-for-kids/>
3. <http://www.lovemyscience.com/facts-light.html>

Test Your Knowledge

A. Look at these two pictures and answer.

Find the things in list A in picture 1? Tick () if you find.

(Student can find: window and flowers only in this picture)

Find the things in list B in picture 2? Tick if you find.

(student can find: sofa, plant, books, bookshelf, window and table easily in this picture)

B. Why is it easy to see things in picture 2?

It is easy because: high light and brightness.

C. Why is it difficult to see things in picture 1?

It is difficult because: low light and darkness.

D. Day and Night

- Practical work, do as directed.

E. Nocturnal and Diurnal Animals.

Some animals are diurnal (active during the day), and some are nocturnal (active at night).

Write 'D' for diurnal and 'N' for nocturnal animals.

- Answer:

Sheep	D
Dog	D
Bat	N
Owl	N
Fox	N
Cow	D
Cock	D

Think and Write

1. We can eliminate the darkness. How?

Ans. We can eliminate the darkness through light sources. A light source includes; bulbs, candles, torches etc.

2. Diamond shines, but it is not a source. What makes it shine then?

Ans. When light enter the diamond and strikes one face of the stone, and then another, before exiting. This reflective activity is what gives a diamond its shine.

3. We should not see directly into the Sun. Give reasons.

Ans. The sunlight can damage our eyes. We will feel discomfort looking at bright lights, our eyes will get soreness.

Learning New Words**Words****Meanings**

Light	the natural agent that stimulates sight and makes things visible
Dark	with little or no light
Source	a body or process by which energy or a particular component enters a system
Reflect	to throw or bend back (light or sound) from a surface
Bounces	to rebound after having struck an object or a surface

Chapter 6: Energy and Forces

The Wonders of Electricity 6.5

Learning Objectives:-

- In this lesson we will learn about the wonders of electricity. From where electricity comes from.
- We will learn the use of electricity.
- We will further learn about the batteries, and kinds of batteries.

Teacher Starters:

Begin by asking them names of some machines, which can be run by electricity. Ask them from where it comes from. Also ask them the uses of electricity. Tell them further about batteries and their uses.

Teaching:

Get the lesson read in class, emphasize on the topic which is 'The wonders of Electricity'. Give them some examples of electrical machines. Point out the pictures which are given in the lesson.

Extended Teaching

Resources at www.learningwell.pk

Log on to your personal account at www.learningwell.pk to view electronic print of this lesson and a full-length video lecture or animation pertaining to the lesson. You will also find extended exercises or MCQ-based tests based on the lesson to help your students improve their learning. Additional teaching resources are also available at www.TeachingWell.pk

Web Resources:

For further information visit these sites and links:

1. <https://www.youtube.com/watch?v=Uf76pThNXZc>
2. <https://www.explainthatstuff.com/electricity.html>
3. <https://study.com/academy/lesson/what-is-electricity-lesson-for-kids.html>
4. <https://kids.kiddle.co/Electricity>

Test Your Knowledge

A. Circle the items that cannot be used without electricity.

- Circle the refrigerator, LCD, Washing Machine, egg beater, and iron.

B. Which of the following need normal electricity and which can work with batteries?

Required normal electricity	Work with batteries
Hair dryer	Remote
Washing machine	Toy car
Microwave oven	Cell phone

Think and Write

1. What is electricity?
Ans. Electricity is a form of energy, like fire.
2. Where the electricity come from?
Ans. Electricity comes from different sources for example: from power stations, from small generators, and from batteries.
3. How this electricity reach our house?
Ans. The electricity is supplied through wires to our house.
4. What are batteries?
Ans. Batteries are the source of electricity.
5. How many types of batteries are there? Name them.
Ans. There are two types of batteries.
 - Rechargeable battery
 - Non- rechargeable battery
6. What do you use in some of your toys to make them work? Write the name of some toys.
Ans. We use batteries in toys to make them work. Name of some toys are:
Toy car, speaking doll, remote helicopter.

Learning New Words:-

Words	Meanings
Saver bulb	it is a source of artificial light, it reduce the amount of electricity use to generate light
Remote control	a device control a machine apparatus from a distance
Devices	a thing made or adapted for a particular purpose
Electricity	a form of energy resulting from the existence of charged particles.
Power stations	an installation where electrical power is generated for distribution
Generators	a person or thing that generates something
Stoppage	an instance of movement, activity or supply stopping or being stopped
Supply	make available for someone, provide
Emergency	a serious, or dangerous situation requiring immediate action
Batteries	a device that produces electricity to provide power
Rechargeable	to charge again, especially to reenergize a storage battery
Non- rechargeable	not recharged with electricity
Chemicals	a distinct compound or substance one which has been artificially prepared or purified