District Public School & Colleges Depalpur

Subject Science

E – Learning Project

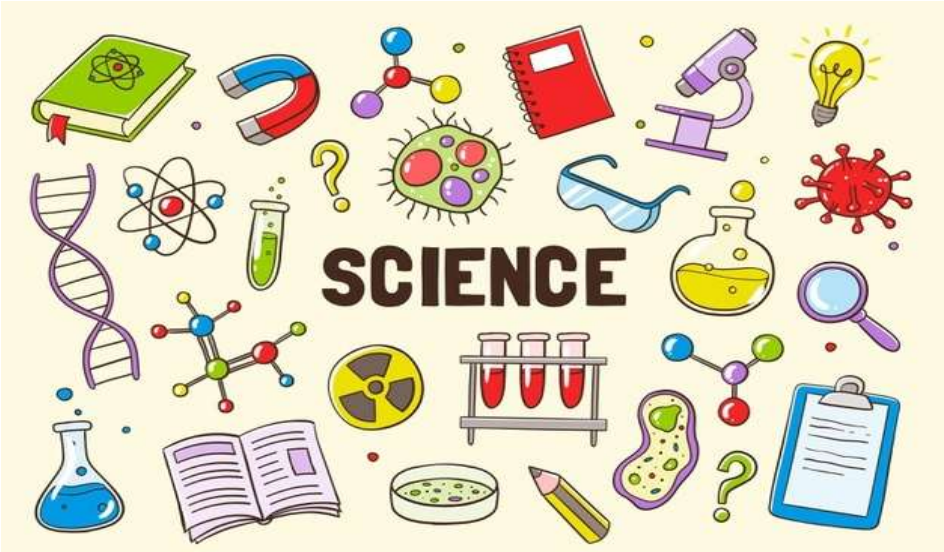
Summer Task with Tutorial Links, Home Assignments, Work sheets and Activities

(Academic Session 2020-21)

Class: Six

Student's Name: _____

Father's Name: _____



Date: 4th August, 2020 **Day: Tuesday**

Unit 03 Photosynthesis and respiration in plants

Topic: Exercise (Questions/ Answers)

Tutor web link: https://youtu.be/Y4U2AwVq8Jk

Question 1. What is the main difference between animals and plants in the way they obtain their food?

Answer: The main difference between plants and animals in the way they obtain their food is that plants make their own food from simple raw materials (carbon dioxide and water) during the process of photosynthesis. Animals need ready-made food and obtain it by eating plants, or by eating animals

Answer:_____

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Question 2. What substances must a plant take in, in order to photosynthesize? Where do these substances come from?

Answer:

The two raw materials for photosynthesis are carbon dioxide gas from the air and water from the soil.

Answer_____

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parent's sign:_____

Question 3. What is the name of the chemical process that provides a plant with the energy to carry out all its living activities? When does this process occur?

Answer: The chemical process that provides a plant with its energy is respiration. This process occurs all the time, by night and by day.

Answer:_____

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Question 4. Why is it an advantage for most leaves to be broad and thin?

Answer: It is an advantage for leaves to be broad, so that they expose the maximum area to the sunlight needed for photosynthesis. It is an advantage for leaves to be thin, so that the sunlight can penetrate into the chloroplasts and carbon dioxide and oxygen can diffuse into and out of the leaf.

Answer:_____

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Date: 5th August, 2020 **Day: Wednesday**

Unit 03 Photosynthesis and respiration in plants

Topic: Exercise (Questions/ Answers)

Tutor Web link: https://youtu.be/y6U_vESsrK0

Question 5. Why does photosynthesis usually stop at night or in very cold weather?

Answer: Photosynthesis usually stops at night, because light is necessary for it. It stops in very cold weather because the enzymes responsible for photosynthesis will only carry out their chemical reactions between certain temperatures.

Answer:_____

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Question 6. A scientist carried out some measurements on a leaf. She found that the leaf was giving out carbon dioxide and taking in oxygen. Does this prove that the leaf was not carrying out photosynthesis? Explain your answer.

Answer: The leaf in the experiment may have been photosynthesizing but at a slower rate than respiration was occurring. The temperature or amount of light may have been too low for photosynthesis to occur at a rate where the amount of oxygen given out exceeded the amount being used by the leaf for respiration.

parent's sign:_____

Answer:_____

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Question 7. Animals and plants are using up oxygen all the time. Why does the amount of oxygen in the atmosphere not go down?

Answer: The amount of oxygen in the atmosphere stays more or less constant because the oxygen produced by plants during photosynthesis balances the amount of oxygen used by animals during respiration**.**

Answer:_____

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Date: 6th August, 2020 **Day: Thursday**

Unit 3 Photosynthesis and respiration in plants

Assessment

Total marks: 20

Question 1 **Encircle the best option** **/5**

- **Many plants change the glucose produced during photosynthesis into:**

(A) Starch (B) carbon dioxide (C) fats (D) mineral salts

- **Plants take in _____.**

(A) Oxygen (B) carbon dioxide (C) nitrogen (D) hydrogen

- **The raw materials for photosynthesis are:**

(A) Nitrogen and water (B) nitrogen and carbon dioxide

(C)Carbon dioxide and water (D) carbon dioxide and oxygen

- **The products of photosynthesis are:**

(A) carbon dioxide and oxygen (B) carbon dioxide and glucose (C) glucose and oxygen

(D) starch and carbon dioxide

- **The energy for carrying out photosynthesis is obtained from:**

(A) Chlorophyll (B) oxygen (C) sunlight (D) carbon dioxide

Question 2 **Give the answer of the following questions**

- **Define the photosynthesis**

  /2

Answer:

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parent's sign:_____

- **Name the factors which effect on photosynthesis? /2**

  Answer:

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- **Define Chloroplast?** /2

Answer:

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- **Why does photosynthesis usually stop at night or in very cold weather? 2/**

Answer

_____

_____

- **Define respiration? /2**

Answer

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- **Animals and plants are using up oxygen all the time. Why does the amount of oxygen in the atmosphere not go down? /5**

Answer

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parent's sign:_____

UNIT 04 LIVING THINGS AND THE ENVIRONMENT

Table of contents:

parent's sign:_____

Date: 7th August, 2020 Day: Friday

Unit 04 Living things and the environment

Topic: Environment Book page 30-31

Objectives: To know about the components of environment

First understand this lecture from Tutor Web link given below

Tutor Web Link: https://youtu.be/SxFr3MHRG68

Understanding

Definition:

Everything around a living thing, large or small, that affect its way of life is called its environment

Component of environment:

1. Biotic **2.** Abiotic

Biotic: The living components of an ecosystem are called the biotic components

Examples:

Biotic factors include plants and animals, insects, bacteria, fungi, birds

Abiotic:

The nonliving component of an ecosystem, respectively.

For example:

Abiotic factors can be the temperature, air, water, soil sunlight, anything physical or chemical.

parent's sign:_____

Ecosystem

An ecosystem is a community of living organisms in conjunction with the nonliving components of their environment, interacting as a system

Example: Desert ecosystem, aquatic ecosystem

Community

All the plants and animals living in one place, such as a park, make up a community

Habitats

The natural home or environment of an animal, plant, or other organism

parent's sign:_____

Date: 8th August, 2020 **Day: Saturday**

Unit 04 Living things and the environment

Topic: Environment

First understand this lecture from Tutor Web link given below

Tutor Web Link: https://youtu.be/BDmyXkCML9s

Home Assignment

Question 01

- **All the plants and animals living in one place, such as a park, make up a:**

(A) Habitat (B) ecosystem (C) collection (D) community

- **Everything around a living thing that affects its way of life is called its:**

(A) Environment (B) home (C) habitat (D) community

- **Which of the following does NOT form part of the physical environment of a living thing**:

(A) climate (B) soil (C) plant life (D) light

Question 02

- **Define habitats.**

Answer: The natural home or environment of an animal, plant, or other organism

Answer:

_____

_____

- **What are components of environment?**

Answer:

1. Biotic 2. Abiotic

parent's sign:_____

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- **Define the abiotic factors.**

Answer: The nonliving component of an ecosystem are called abiotic factor

For example:

Abiotic factors can be the temperature, air, water, soil sunlight, anything physical or chemical.

Answer:

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- **Define community.**

Answer: All the plants and animals living in one place, such as a park, make up a community

Answer:

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- **Define biotic factors.**

Answer: Biotic: The living components of an ecosystem are called the biotic components

Examples: Biotic factors include plants and animals, insects, bacteria, fungi, birds

Answer:_____

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parent's sign:_____

Date: 10th August, 2020 Day: Monday

Unit 04 Living things and the environment

Topic: Physical Environment **Book page: 33**

Objectives: To explain the physical factors of environment

First understand this lecture from Tutor Web link given below

Tutor Web Link: https://youtu.be/jkYSBbNM6NA

Understanding

The part of the human environment that includes purely physical factors (as soil, climate, water supply)

Climate

Climate is very important factor of environment. Some places are hot, and some are cold. Weather condition can also change from day to day and season to season

Soil: The type of soil effects on plants .soil contain more humus

Humus: Dead and decaying plants and animals matter is called humus

Light

- Light reaches the bottom in shallow waters, which allows photosynthetic organisms to live in these habitats.
- Light is a key limiting factor in all aquatic habitats.
- Light regulates photosynthesis, which is the process that allows plants to produce organic matter from carbon dioxide.

Temperature

- Animals that gain heat from internal physiological sources-regulate amount of internal heat generated and exchanged with environment-can live at broader range of temperature.

parent's sign:_____

Date: 11th August, 2020 Day: Tuesday

Home Assignment

Topic: Physical environment

Tutor Web Link: https://youtu.be/vBTgatHRS4o

Question 1

- **What are physical factors of environment?**

Answer**:** physical factors are soil, climate, temperature and water

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- **What is the role of light in photosynthesis?**

Answer: Light regulates photosynthesis, which is the process that allows plants to produce organic matter from carbon dioxide.

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- **Explain temperature is a physical factor of environment.**

Answer: Many animals regulate their body temperature through behavior, such as seeking sun or shade or huddling together for warmth. Endotherms can alter metabolic heat production to maintain body temperature using both shivering and non-shivering thermogenesis._____

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parent's sign:_____

Date: 12th August, 2020 **Day:**

Wednesday

Unit 04 Living things and the environment

Topic: Deserts and tropical rainforest

Objective: To describe the difference between deserts and tropical rainforest

First understand this lecture from Tutor Web link given below

Tutor Web Link: https://youtu.be/_grfB1sjIcA

Understanding

Difference between deserts and tropical rainforest?

Deserts

parent's sign:_____

Tropical rainforests

Answer:

Deserts	**Tropical rainforest**
Low rain fall	High rain fall
Temperature high during day	High all the time
Few animals active in night which shelter in burrows	Animal active in day and night
Little humus in soil	Thick layer of humus in the soil
Cold blooded snakes in sun get warm during day and take shelter in burrow at night	Snake and lizard active all time

parent's sign:_____

Date: 13th August, 2020 **Day: Thursday**

Assessment

Unit 04 Living things and the environment

Question 01

Explain the difference between deserts and tropical rain forest?

Deserts	Tropical rain forest

parent's sign:_____

Date: 15th August, 2020 **Day: Saturday**

Unit 04 Living things and the environment

Topic: living thing depend upon one another **Book page 35**

Objective: To know that how living thing depend upon one another

First understand this lecture from Tutor Web link given below

Tutor Web Link: https://youtu.be/wqM96g2qdD0

https://youtu.be/Vh351IICJyA

Understanding

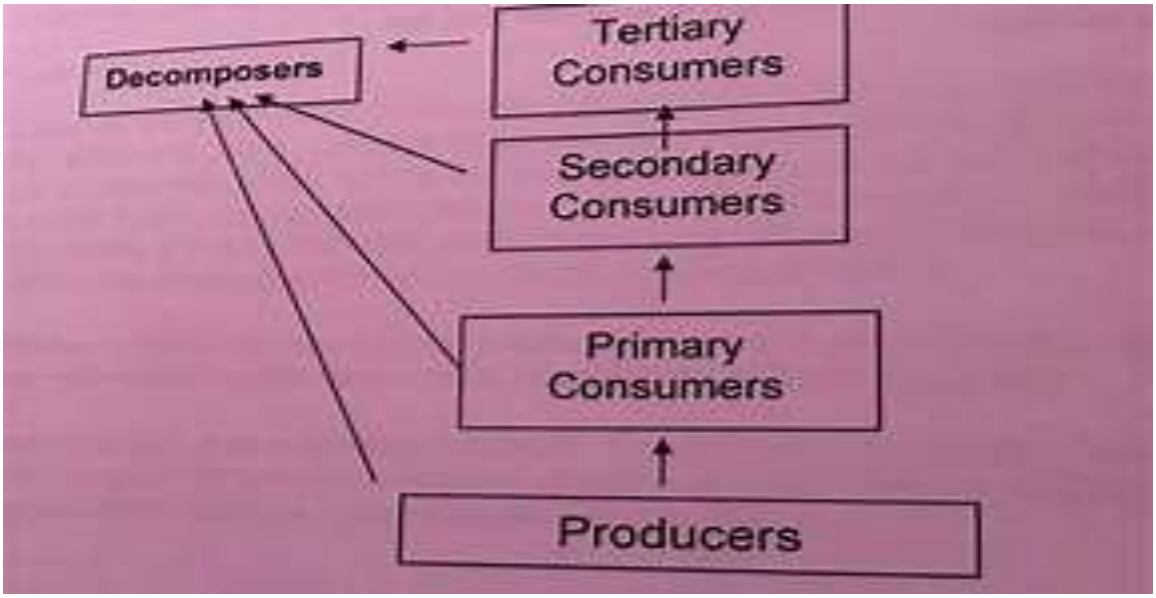
Producers : It include green plants, which produce food through photosynthesis

Scavengers: are animal that feed on dead Organisms and waste organic materials

parent's sign:_____

Consumer:

Animal that eat directly or indirectly on plant food are called consumer



- **Primary consumer**
- **Secondary Consumer**

Primary consumer

- A primary consumer is an organism that feeds on primary producers
- Examples of Primary Consumers. Such as cows, sheep, deer, giraffes.

Secondary consumers

Secondary consumers are organisms that eat primary consumers.

Example of secondary consumer are foxes, lion

Feeding Relationship

Herbivores

An herbivore is an organism that mostly feeds on plants.

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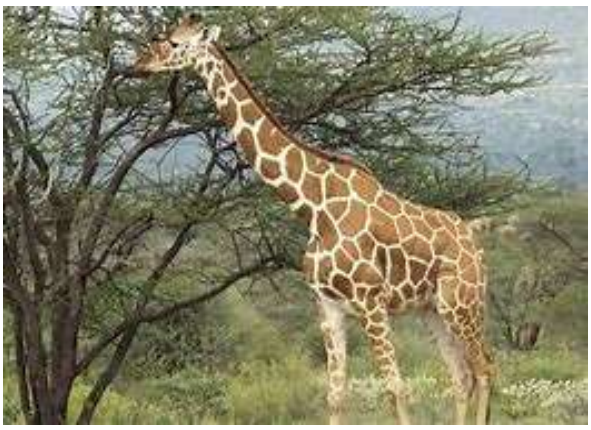


Carnivores

A carnivore is an animal that gets food from killing and eating other animals.

Carnivores generally eat herbivores, but can eat omnivores, and occasionally other carnivores

Omnivores

Omnivores they eat both animal plants

parent's sign:_____

Decomposers

A decomposer is an organism that decomposes, or breaks down, organic material such as the remains of dead organisms.

Examples

Decomposers include bacteria and fungi.

Bacteria and fungi in an ecosystem release nutrients from dead plants and animals

parent's sign:_____

Date: 17th August, 2020 **Day: Monday**

Home Assignment

Topic: living thing depend upon one another

Tutor Web Link: https://youtu.be/9mUIQeZr1KA

Question 01 Encircle the best option

- **Because plants are almost the only living things in the world which can make their own food, they are often called:**

(A) Eaters **(B)** producers (C) consumers (D) scavengers

- **Animals which eat plant food are called:**

(A) Primary consumers (B) secondary consumers (C) scavengers (D) carnivores

- **The main decomposers which bring about the decay of dead organisms are:**

(A)Green plants (B) parasites **(C)** bacteria and fungi (D) fungi and invertebrates

- **Bacteria and fungi in an ecosystem:**

(A) Return energy to the plant (B) use up the nutrients in the ecosystem (C) use up carbon dioxide **(D)** release nutrients from dead plants and animals

- **A lichen, which consists of a fungus and an alga living together for the benefit of both, is an example of:**

(A) Community living **(B)** mutualism (C) parasitism (D) decomposition

Question 2 Write the answers of the following questions

- **Define producers?**

Answer: Green plants, which produce food through photosynthesis are called producers

parent's sign:_____

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- **What are scavengers?**

Answer: Scavengers are animal that feed on dead organisms and waste organic materials

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- **Define consumers.**

Answer: Animal that eat directly or indirectly on plant food are called consumer

Answer:_____

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- **Define herbivores.**

Answer: An herbivore is an organism that mostly feeds on plants.

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- **Define carnivore.**

Answer: A carnivore is an animal that gets food from killing and eating other animals.

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parent's sign:_____

Date: 18th August, 2020 **Day: Tuesday**

Unit 04 Living things and the environment

Topic: Working together **Book page: 36**

Objectives: To explain how animals live together

First understand this lecture from Tutor Web link given below

Tutor Web Link: https://youtu.be/z4FKVx62yqE

https://youtu.be/7KUN_X2GUAA

Understanding

Mutualism:

Plants and animals can often work together in some surprising ways to help each other out. This process is called mutualism

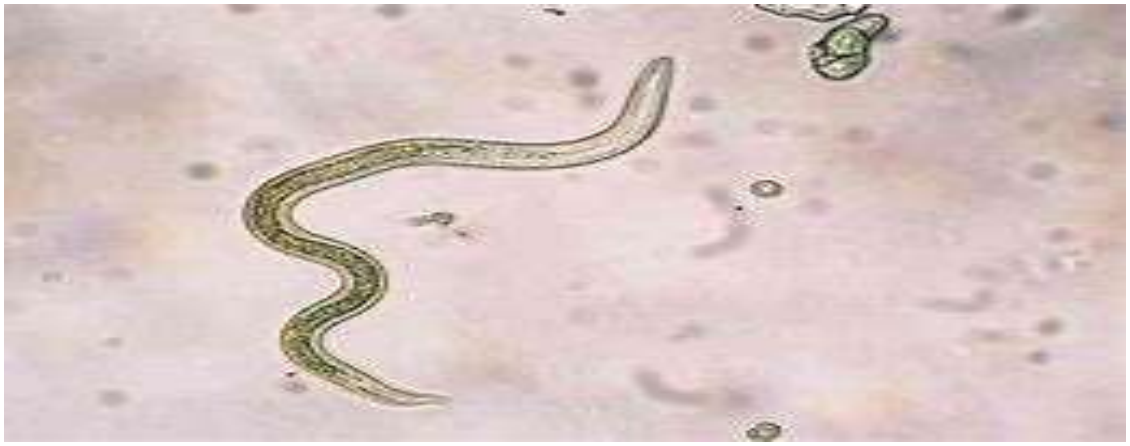
It happens when two organisms work with each other and which each benefit or is helped in some way by this cooperation. In the rainforest, there are many examples of mutualism at work.

Dear and zebra live together in a family. The family of lion is called **pride**

parent's sign:_____

- **Parasite:** A **parasite** is an organism that lives in another organism, called the host, and often harms it. It depends on its host for survival.

  Without a host, a **parasite** cannot live, grow and multiply.



Endoparasite

These live inside the host. They include heartworm, tapeworm, and flatworms. An intercellular parasite lives in the spaces within the host's body, within the host's cells.

They include bacteria and viruses

parent's sign:_____

➢ Ectoparasites

These are parasites that live on the external surface of hosts, for example, fleas and lice of various terrestrial vertebrates.

These **are parasites** that live on the external surface of hosts, for example, fleas and lice of various terrestrial vertebrates.

➢ Plant parasites

Dodder is plant parasites which feed on wild and crop plant and on acacia tree Example: Rafflesia is the largest flower in the world is also a parasites. It has no chlorophyll it grow on the roots of other green plants

parent's sign:_____

Date: 19th Aug, 2020 **Day: Wednesday**

Unit: 04 Living things and the environment

Topic Exercise (Questions/ answers)

Tutor web link: https://youtu.be/8rqSUDONfe4

Question 1. **What is the difference between a community, a habitat, and an ecosystem?**

Answer:

Community: A community is all the plants and animals living within a defined area.

Habitat: A habitat is the place in which an organism or a community of organisms lives.

Ecosystem: An ecosystem is a biological community and the physical environment associated with it

Answer:_____

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Question 2. What is the biotic environment?

Answer: The biotic environment is the living things and their activities which affect the environment in which they live

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Question 3. How might animals depend upon plants, including trees, even if they do not eat those plants? Explain your answer?

Answer: Animals that do not eat plants might depend upon trees and other plants for shelter, protection, nest sites and, of course, the oxygen they breathe

parent's sign:_____

Answer:_____

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Question 4. What kind of things make up the physical environment of a living organism?

Answer: The things which make up the abiotic or physical environment of an organism include climatic factors, such as sunlight, rainfall, temperature, water and carbon dioxide etc

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Question 5.Do human beings have the greatest effect on the physical environment or the biotic environment of organisms? Explain your answers?

Answer: Humans have the biggest effect on the biotic environment, because of hunting, the destruction of habitats, the effects of pollution, and the use of chemical pesticides to control weeds, pests, and diseases. Even when human activities affect the abiotic environment, this still has an impact on the plants, animals, and other organisms living in an ecosystem.

Answer_____

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Question 6 .A camel has long eyelashes, a hump containing fat, and large padded feet. It can go for five days without drinking. It can then drink up to 130 Litrers of water in ten minutes. A camel also produces little sweat or urine. Describe how these features help a camel to survive in the desert.

Answer:

Eyelashes: It protects the eyes from wind-blown dust and sand. Hump: It contains fat which can be used during respiration to produce energy and water.

Padded feet: its padded feet spread its weight so that it does not sink into the sand.

Sweat and urine: It produces little sweat or urine, so it does not lose much water by **Excretion.** Water consumption: The camel's rapid and large consumption of water, when available, allows it to travel long distances between drinks

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parent's sign:_____

Date: 20th Aug, 2020 **Day: Thursday**

Unit: 04 Living things and the environment

Topic: Exercise (Questions/ answers)

Tutor web link: https://youtu.be/hsroc-KTOJA

Question 7. Make a table with six columns with the following headings: producers, primary consumers, secondary consumers, parasites, scavengers, and decomposers. Write the names of these organisms in the correct column: cow, buttercup plant, lion, bread mould (a kind of fungus), lettuce, earthworm, flea, caterpillar, tapeworm, crow, mushroom, fox, leech. Choose some more organisms to add to the lists.

Answer:

producers	primary consumers	secondary consumers	parasites	scavengers	decomposers
buttercup plant lettuce	cow caterpillar	lion fox	Flea Leech	crow	Earthworm Bread Mould

parent's sign:_____

Answer:

producers	primary consumers	secondary consumers	parasites	scavengers	decomposers

Question 8. How are the teeth and other body parts of a herbivore adapted, or suited, to its diet? How is a carnivore adapted to its diet?

Herbivore

The teeth of a herbivore are adapted for eating plants especially grass.

- **Incisor Teeth:** The incisor teeth have chisel-shaped edges for cutting grass and other plants.
- Molars and Pre-molars: These have flat surfaces with ridges for grinding food. Canine: These are absent or very small. The herbivores have long digestive system for the digestions of food.

Carnivores: The teeth of carnivores are adapted to catching and eating other animals. The incisors teeth are used for cutting flesh. Canines are used to pierce the prey when it is captured. Premolars and molars are used for shearing flesh from bones. The carnivores have short digestive system for the digestions of food.

parent's sign:_____

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Question 9. In general, why would you expect a carnivore to be: a) camouflaged b) larger than a herbivores?

Answer

a. Carnivores are camouflaged so that they can approach their prey without being seen.

b. Most carnivores are larger than their prey, so that they can easily

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Question 10. Why are herbivorous animals generally poor fighters, and better at defense than attack?

Answer: Herbivorous animals are generally poor fighters because their bodies are quite large and most of them lack the sharp teeth and claws. However many herbivores are camouflaged and can run fast over short distances.

Answer:_____

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Date: 21th August, 2020 Day: Friday

Unit 04 Living things and the environment

Topic: Exercise (Questions/ answers)

Tutor web link: https://youtu.be/CxB6QzwtH7E

Question 11. Why do carnivores usually live on their own, yet herbivores live in groups such as flocks and herds?

Answer: Most carnivores live on their own so that they can use stealth to approach their prey. Many herbivores live in groups, because there are then many eyes and ears to keep alert for approaching danger.

Answer:_____

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Question 12. When a beef tapeworm is living in the human gut, how does the tapeworm benefit and how does the human suffer?

Answer: A tapeworm living in the human gut is protected from changes to its environment and it receives already-digested food. Victim of tapeworm suffer a loss of appetite, abdominal pains, loss of weight, nausea, and dizziness. The tapeworm's head may tear the wall of the intestine, causing wounds that can be infected with bacteria.

Answer:

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Q13. Suggest some ways in which the infection of humans by beef tapeworms can be stopped.

1. Dispose off sewage safely so that the eggs do not contaminate the food and drink of cattle
2. Proper cooking of beef will kill parasite.

parent's sign:_____

3. All types of tapeworm infections can be treated with a drug called quinacrine.

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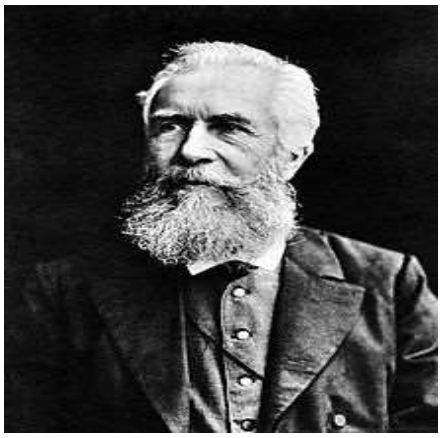
Activity:

Title: Ernst Haeckel, The Scientist as an artist

Web link: https://youtu.be/_QuH-FynCdc

https://youtu.be/KeezhAItiY4



Ernst Haeckel was born on 16 February 1834, in Potsdam Ernst Haeckel was a German zoologist, naturalist, philosopher, physician, professor, marine biologist, and artist who discovered, described and named thousands of new species. German biologist Ernst Haeckel's extremely detailed drawings blur the lines between art and science. The biogenetic law is a theory of development and evolution proposed by Ernst Haeckel in Germany in the 1860s.

Who was Ernst Haeckel?

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parent's sign:_____

Date: 22th August, 2020 Day: Saturday

Unit: 04 Living things and the environment

Topic: Exercise (Questions /answers)

Tutor web link: https://youtu.be/VM1d8oQaB4o

Question 14. Does a parasite have any special problems not usually met with by other plants and animals? Explain your answer?

Answer: The biggest problem a parasite has is in finding the correct host plant or animal. This is because most parasites have evolved to only feed on one special type of host plant or animal

Answer:_____

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Question 15. What would happen if all the bacteria on this planet suddenly died?

Answer:

1. If all the bacteria on Earth suddenly died, there would be no more bacterial diseases such as tuberculosis, leprosy, cholera, typhoid fever etc
2. Without bacteria the bodies of dead plants and animals would accumulate rapidly.
3. Bacteria also play a part in digesting food, particularly in the guts of herbivores and omnivores.
4. Bacteria can also be used to ripen cheese, produce vinegar and yoghurt. 5. Bacteria living on the roots of certain plants fix nitrogen from the air and increase soil fertility.

Answer:

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Question 16. When bees and other nectar-seeking insects visit flowers, how do the insects benefit? How do the flowers benefit?

Answer: The insects benefit by the food in the form of nectar and pollen. The flowers benefit by being cross-pollinated with the pollen from another flower of the same kind.

Answer :

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parent's sign:_____

Date: 24th August, 2020 **Day: Monday**

Unit 4 Living things and the environment

Assessment

Total marks: 20

Question 01 Encircle the best option /8

- **All the plants and animals living in one place, such as a park, make up a:**

(A) habitat (B) ecosystem (C) collection (D) community

- **Everything around a living thing that affects its way of life is called its:**

(A) environment (B) home (C) habitat (D) community

- **Which of the following does NOT form part of the physical environment of a living thing:**

(A) climate (B) soil (C) plant life (D) light

- **Because plants are almost the only living things in the world which can make their own food, they are often called:**

(A) eaters (B) producers (C) consumers (D) scavengers

- **Animals which eat plant food are called:**

(A) primary consumers (B) secondary consumers (C) scavengers (D) carnivores

- **The main decomposers which bring about the decay of dead organisms are**:

(A) green plants (B) parasites (C) bacteria and fungi (D) fungi and invertebrates

- **Bacteria and fungi in an ecosystem:**

(a) return energy to the plant (B) use up the nutrients in the ecosystem (C) use up carbon dioxide (D) release nutrients from dead plants and animals

- **A lichen, which consists of a fungus and an alga living together for the benefit of both, is an example of:**

(A) community living (B) mutualism (C) parasitism (D) decomposition

parent's sign:_____

Question 2 Write the answers of the following questions

- **How might animals depend upon plants, including trees, even if they do not eat those plants? Explain your answer.** /3

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- **When bees and other nectar-seeking insects visit flowers, how do the insects benefit? How do the flowers benefit?** **/3**

Answer:

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- **Why do carnivores usually live on their own, yet herbivores live in groups such as flocks and herds?**

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Answer:

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parent's sign:_____

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- **Define the followings** **/3**
  - Herbivores
  - Carnivores
  - Omnivores

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CHAPTER 5 ATOMS, MOLECULES, MIXTURE, AND COMPOUNDS

Table of content:

NO.	**Topic**	**Learning objectives**
1	**Atom, Elements and Symbols**	Students will be able to know about the atom, elements ,and their symbols
2	**Metal and None metals**	Students will be able to differentiate between metal sand non- metals
3	**Using elements**	To know about the uses of elements
4	**Molecules and compound**	To examine difference between molecule and compound
5	**Mixture**	To define about the mixture
6	**Uses of compound**	To know about the uses of compounds

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Date: 25th August, 2020 **Day: Tuesday**

Unit 05 Atoms, molecules, mixture, and compound

Topic Atom, Elements and Symbols

Objectives: To explain the concept of atom, Elements and symbol

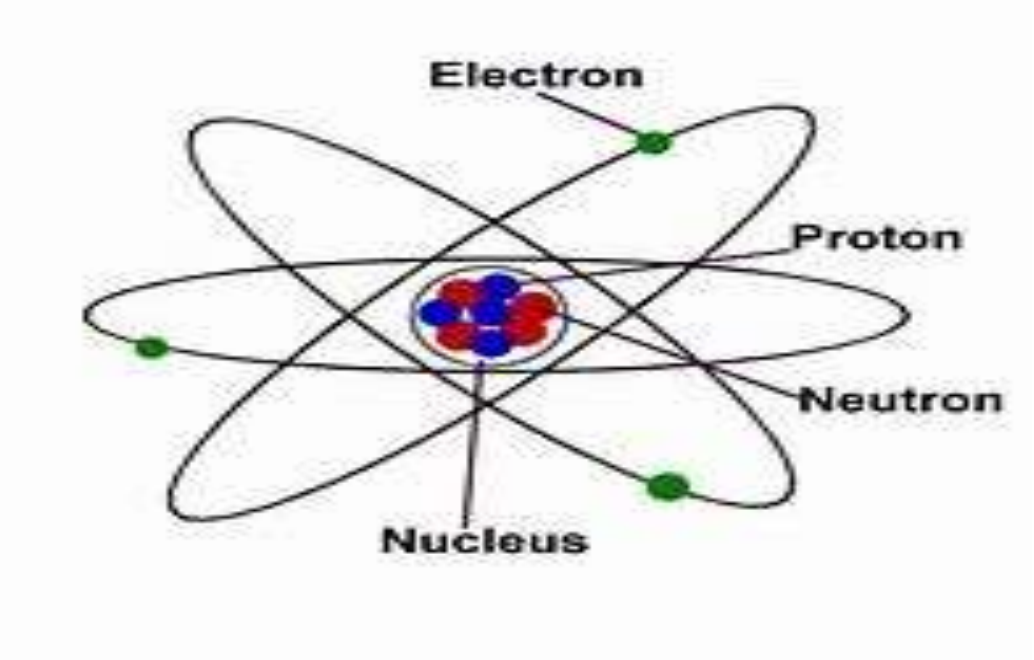
First understand this lecture from Tutor Web link given below

Tutor Web Link: https://youtu.be/2Xp5tY1t71A

Understanding

Atom: An atom is the smallest constituent unit of ordinary matter that constitutes a chemical element. The smallest particle that makes up a substance is called an **atom**

Every solid, liquid, gas, and plasma is composed of neutral or ionized atoms



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Element:

- A material that is made up of only one type of atom is called an element. So far, scientists have discovered 117 different elements.
- Atoms can combine to make a bigger particle called a **element**
- Each different type of atom is called an **elemen**t

Each element has its own **symbol.** such as Fe for iron, S for sulphur and Na for sodium

Example: Copper, sodium,

Molecule: Atoms can combine to make a bigger particle called a molecule

Symbol

Symbol is the first letter of the element's name

Several elements start with the same letter, Remember, when two letters are used the first always has a capital letter, while the second letter is small.

In a few cases, such as iron, lead, and sodium, the symbol comes from the Latin name of the element. Here are the names of some elements and their symbols

Here are the some elements and their symbol

Hydrogen	H
carbon	C
Lithium	Li
nitrogen	N
oxygen	O
Calcium	Ca

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Date: 26th August, 2020 **Wednesday**

Home Assignment

Topic: Atom, Elements and Symbols

Tutor web link: https://youtu.be/o5YcLLjDp64

Question 1 **Fill in the blanks**

- The smallest particle that makes up a substance is called an_____.
- Atoms can combine to make a bigger particle called a_____.
- Each different type of atom is called an _____.
- Each element has its own chemicals_____ such as Fe for iron, S for sulphur and Na for sodium

Question 2 Write the answers of the following questions

Define atom?

Answer: An atom is the smallest constituent unit of ordinary matter that constitutes a chemical element.

Answer:

_____

_____

Write the symbols of the following elements?

Answer:

Hydrogen	H	**Hydrogen**	
carbon	C	**carbon**	
Sodium	Na	**Sodium**	
nitrogen	N	**nitrogen**	
oxygen	O	**oxygen**	
Calcium	Ca	**Calcium**	

parent's sign:_____

Date: 27th August, 2020 Day: Thursday

Unit 05 Atoms, molecules, mixture, and compound

Topic: Metal and None metals Book page 44

Objectives: To explain difference between metals and none metals

First understand this lecture from Tutor Web link given below

Tutor Web Link: https://youtu.be/Q3c1uk1PYF4

Understanding

The main differences between metals and non-Metals

"Make up more than three-quarters of all elements"

1. They are shiny, especially when freshly cut
2. They are hard and strong
3. They are dense
4. They are good conductors of heat and electricity
5. Metals have high melting points, so that they are solids at room temperature (except for mercury, which is a liquid)
6. They can be drawn into a wire and hammered into shape
7. A few metals (e.g. iron, cobalt, and nickel) are magnetic, but most are non-magnetic.

Non-metals

1. Most non-metals are dull, because they do not reflect light very well.
2. Most non-metals are weak or brittle.
3. have low densities (are light for their size)
4. They are mostly poor conductors of heat and electricity. One exception is the non-metal graphite which is a good conductor of electricity.
5. They have low melting and boiling points.
6. All non-metals are non-magnetic.

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Date: 28th August, 2020 **Day: Friday**

Assessment

Question 01

Explain the difference between metals and none metals?

Answer

Metals	None metals

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Activity:

Scientist: J.J Thomson

Tutor web link: https://youtu.be/-7XsA5gwJn4

Electron was discovered by J. J. Thomson in 1897 when he was studying the properties of cathode ray. J. Thomson constructed a glass tube which was partially evacuated i.e. much of the air was pumped out of the tube. Then he applied a high electrical voltage between two electrodes at either end of the tube. He detected that a stream of particle (ray) was coming out from the negatively charged electrode (cathode) to positively charged electrode (anode). This ray is called cathode ray(electron).

- **How J.J.Thomson discovered electron?**

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Date: 31st August, 2020 Day: Monday

Unit 05 Atoms, molecules, mixture, and compound

Topic: Using elements Book page 45-46

First understand this lecture from Tutor Web link given below

Tutor Web Link: https://youtu.be/lO9JC4baKRc

Objectives: To explain that uses of element are related to their physical properties

Understanding

Copper

- Because it conducts electricity well, copper is used for making wires and cables.
- It also conducts heat well and is used for broilers, cooking pots, and pans.
- Many modern coins contain a lot of copper. Because copper does not react with water.

Aluminium

- Aluminium is a very light metal and is used for making aircraft, train carriages, and some car parts and sports equipment.
  It conducts electricity, it is used for long-distance power lines.
- it is useful for wrapping food and chocolate bars, and making drinks cans and window frames. It is also used for 'silvering' mirrors

Gold

- Because of its beauty and scarcity, gold is used for ornaments, jewellery
- Gold is a good conductor of electricity, and is used in many electronic devices, such as telephones and computers.
- Gold is also used in dentistry and medicine, and as a catalyst in certain chemical reactions.

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Lead:

- Lead is a heavy metal it is used as a roofing material
- Lead is also used in batteries and in nuclear power plants to shield workers from radiation.

Sulphur

- Sulphur is a yellow non-metal which is used for making gunpowder, fireworks, fertilizers, and
- certain medicines, fungicides, and insecticides. It is also used to harden the rubber used in making car tyres.

Carbon

- Carbon is a non-metal which occurs in several different forms. It is found in all living tissues and
- it is Used as a fuel (in the form of coal or charcoal), in pencil leads (in the form of graphite), and in jewellery and for cutting, drilling, grinding, and polishing (in the form of diamond)

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