DISTRICT PUBLIC SCHOOL & COLLEGE, KASUR

NOTES/HOME TASK/WORK SHEET FOR

CLASS: **6th**

SUBJECT: **G. SCIENCE**

1ST TERM SYLLABUS: **UNIT (1, 2, 3, 4)**

PREPARE BY: **Dr. Muhammad Arif Saleemi**

SUPERVISION: **MR. JAVED AKBAR**
(HM. Boys Wing)

Unit # 1

Learning to be a scientist

Answers to Exercises in Unit 1:

1. (a) What is science?

Ans. Science is the study of things and events that take place around us.

(b) What does a scientist do?

Ans. A scientist is a person who studies science.

(c) How does a scientist find answers to questions?

Ans. A scientist uses scientific methods to solve problems.

(d) What is a laboratory?

Ans. A special kind of room where a scientist works is called a laboratory.

Unit # 2

Living organisms

Answers to Exercises in Unit 2:

1. (a) Define the following: cell, tissue, organ, organ system.

Ans. Cells: They are the building blocks of all living things.
Tissue: They are a group of similar cells which are specialized to perform a particular function.Organ: Different types of tissues group together to form an organ.Organ systems: Systems are made up of many organs which work together.

(b) Describe how the transport of materials takes place in plants.

Ans. In multi-cellular plants, materials are circulated in a system of tubes called the vascular system.The vascular system of plants is composed of specialized tissues called xylem and phloem.Xylem is made up of long, dead cells called vessels. Vessels have thick walls. They carry waterfrom the roots, through the stem to the veins in the leaves. Phloem is made up of long thinwalled tubes called sieve tubes. Sieve tubes are made of living cells whose horizontal walls havetiny holes. Food flows from the leaves to other parts of the plant through the sieve tubes.

(c) What is transpiration? Why is transpiration important for a plant?

Ans. Plants lose water vapour into the atmosphere by evaporation. The water passes through tinyholes called stomata which are found mainly on the lower side of leaves. This process is calledtranspiration. It is important because it helps in the transportation of water in plants and it alsohelps plants to keep cool in summer.

(d) What is respiration? Name the parts of the human respiratory system.

Ans. Respiration is the process by which food is oxidized in the body cells to produce energy. The partsof the respiratory system of a mammal are nose, windpipe, bronchi, bronchioles, and air sacs.

(e) Describe the structured of the human heart.

Ans. The heart is a muscular organ found in the centre of the chest. It has four chambers. The uppertwo chambers or atria are thin walled and the lower two chambers or ventricles are thick walled.

(f) What is digestion? Where does digestion of food take place in humans?

Ans. The process by which insoluble food is broken down by the action of enzymes into solublesubstances, is called digestion. Food is completely digested in the small intestine.

(g) Name the parts of the nervous system.

Ans. Brain, spinal cord, and nerves

(h) What is a reflex action?

Ans. A reflex action is an involuntary response to a stimulus such as sneezing.

(I) Identify which of the following are voluntary actions. Writing, reading, coughing, sneezing, sweating, shivering, speaking.

Ans. Writing, reading, speaking.

Unit # 3

Sensitivity in living organisms

Answers to Exercises in Unit 3:

1. (a) How do single-celled organisms respond to changes in their environment?

Ans. In single-celled organisms, the whole cytoplasm is sensitive to changes in the environment.

(b) What is sensitivity?

Ans. The ability of an organism to respond to a stimulus is called sensitivity.

(c) What are tropic movements?

Ans. The movement of plants towards light and gravity are called tropic movements.

(d) How does auxin control tropic responses in plants?

Ans. Auxin is a chemical substance which is made in the cells at the tips of the roots and shoots.
Auxin speeds up the growth in stems, and slows down the growth in roots.

(e) How do higher animals respond to changes in their environment?

Ans. Higher animals respond to changes in their environment by taking appropriate action.

(f) What is coordination? How is it brought about in our bodies?

Ans. The working together of all the organs and systems of the body is called coordination.Coordination in the body is brought about by two systems:
The nervous system,the endocrine system.

Unit # 4

Photosynthesis and respiration in plants

Answers to Exercises in Unit 4:

1. a) What is photosynthesis?

Ans. The process by which green plants make their food in the presence of sunlight and chlorophyllis called photosynthesis.

b) Where does photosynthesis occur?

Ans. Photosynthesis occurs in the green leaves of plants.

c) What substances does a green plant use to make food by photosynthesis?

Ans. A green plant needs four things for photosynthesis to take place. These are: carbon dioxide,water, sunlight, and chlorophyll.

d) What food does the plant make by photosynthesis?

Ans. The plant makes glucose by the process of photosynthesis. This glucose is converted into starchand stored in the leaves.

e) What are stomata and where are they found on a plant?

Ans. Stomata are small holes found on the under surface of leaves.

f) Which gas enters and which gas passes out of the stomata during photosynthesis?

Ans. Carbon dioxide, a raw material for photosynthesis, enters the stomata. Oxygen, which is aby-product of photosynthesis, passes out of the stomata.

g) What happens to the food that is made by the plant during photosynthesis?

Ans. Glucose that is made during photosynthesis is used by the plant for producing energy and forgrowth. It is also changed into starch or oil and stored in the stems, roots, fruits, and seeds.Some of it is used in making cellulose for new cell walls. Some of it is combined with mineralsand used to make proteins and other things which plants need for growth.

h) What is respiration?

Ans. Respiration is the process leading to the chemical breakdown (oxidation) of food materials toprovide energy for living things.

i) Where does respiration in a plant take place?

Ans. Respiration occurs inside the living cells of plants and animals.

j) What are the products of respiration?

Ans. Oxygen from the air enters the stomata and diffuses into the tissues and cells of plants aftergetting dissolved in the film of water present around the cells. Inside the cells this oxygenoxidizes the carbohydrates and other organic compounds into carbon dioxide and water toproduce energy.

Class 6th G. Science

Unit # 1 MCQs

(a) The study of things and events that take place around us is called .
science news environment [***science***]
(b) A person who studies science is called .
an artist a scientist a scholar [***a scientist***]
(c) A scientist works in a special kind of classroom called a .
library study room laboratory [***laboratory***]
(d) have been invented to help scientists in making accurate measurements and calculations for the experiments they perform.
Instruments Tools Models [***Instruments***]
(e) A balance is an instrument used for measuring the of a body.
temperature weight height [***weight***]
(f) Volume is measured in .
metres kilograms litres [***litres***]
(g) The instrument used to measure the temperature of a body is .
Thermometer altimeter ammeter [***thermometer***]
(h) A laboratory must be equipped with a fire extinguisher to .
put out fires keep the laboratory cool heat the laboratory [***put out fires***]
(i) Chemicals in a laboratory are kept in .
plastic bottles reagent bottles thermos flasks [***reagent bottles***]
(j) A first aid box contains .
Tools medicines and bandages machines [***medicines and bandages***]

Unit # 2 MCQs

(a) All plants, animals, and other living things are made up of .
cells water air [***cells***]
(b) A group of similar cells which are specialized to perform a particular function are called
cells tissues organs [***tissues***]
(c) Different types of tissues are grouped together to form .
cells tissues organs [***organs***]
(d) systems are made up of many organs which work together.
Cell Tissue Organ [***Organ***]
(e) They system in plants is composed of specialized tissue called xylem and phloem.
vascular digestive respiratory [***vascular***]
(f) Loss of water from the leaves through the stomata is called .
Respiration circulation transpiration [***transpiration***]
(g) is a process by which food is oxidized in the body cells to produce energy.
Respiration Transpiration Digestion [***Respiration***]
(h) The muscular organ found in the centre of the chest is .
liver heart kidney [***heart***]
(i) The process by which insoluble food is broken down by the action of enzymes into simple soluble
substances is called .
digestion respiration excretion [***digestion***]
(j) Nerves are bundles of which are covered by a tough sheath.
Tendons neurons nephrons [***neurons***]

Unit # 3

MCQs

(a) Some unicellular organisms such as euglena have an eyespot which helps them to detect changes in
intensity.
Light sound heat [***light***]
(b) The ability of an organism to respond to a stimulus is called .
reactivity sensitivity creativity [***sensitivity***]
(c) The bending of the shoot towards light is called .
phototropism geotropism hydrotropism [***phototropism***]
(d) The responses of the root and shoot are controlled by chemicals called .
medicines auxins fertilizers [***auxins***]
(e) The working together of all the organs and systems of the body is called .
synthesis coordination reactions [***coordination***]
(f) The endocrine system is made up of a number of .
cells glands nerves [***glands***]
(g) Bundles of form a nerve.
Axons cells glands [***axons***]
(h) Certain parts of the body which respond to hormones are called .
target organs sensory organs organ systems [***target organs***]
(i) The is the largest sensory organ of the body.
nose eye skin [***skin***]
(j) Sense organs are made up of cells.
small sensory body [***sensory***]

Unit # 4

MCQs

(a) Sugar and starch are .
proteins fats carbohydrates [***carbohydrates***]
(b) The three elements needed by plants to make glucose are .
carbon, hydrogen, oxygen carbon, oxygen, nitrogen carbon,hydrogen, nitrogen
[***carbon, hydrogen, oxygen***]
(c) Plant roots take in water by their .
root caps root hairs root systems [***root hairs***]
(d) Water is transported in plants by .
xylem phloem xylem and phloem [***xylem***]
(e) Food is transported in plants by .
xylem phloem xylem and phloem [***phloem***]
(f) Stomata are usually present on the surface of leaves.
Upper lower both [***lower***]
(g) which is made in the leaves is used for producing energy and for growth.
Glucose Proteins Fats [***Glucose***]
(h) The process of the oxidation of food materials to provide energy for living things is called
digestion excretion respiration [***respiration***]
(i) The green material found in leaves is called .
Chlorophyll xanthophyll's mesophyll [***chlorophyll***]
(j) Photosynthesis takes place during the .
day time at night all the time [***day time***]

Worksheet 1

Unit 1: **Learning to be a scientist**

Name:_____ Date: _____

1. Arrange the following steps, used in studying a scientific problem, in the correct order:

reach a conclusion

analyze the results

collect information

record the results

perform an experiment

study the problem

i. _____ ii. _____

iii. _____ iv. _____

v. _____ vi. _____

2. List five things that you should not do in a laboratory.

i. _____

ii. _____

iii. _____

iv. _____

v. _____

Worksheet 2

Unit 1: **Learning to be a scientist**

Name:_____ Date: _____

1. Fill in the table:

Name of the instrument	**What it is used for**	**Unit of measurement**
Balance		
measuring cylinder		
stopwatch		
metre rule		
thermometer		

2. a. Arrange the following steps that you would use in separating salt and sand from a mixture, in the correct order.

evaporate the filtrate to dryness

salt is left in the evaporating dish

filter the mixture with filter paper

put the mixture in water and stir gently

i. _____

ii. _____

iii. _____

iv. _____

b. Give three reasons why you followed this procedure.

_____

_____

_____

_____

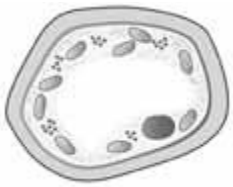
Worksheet 1

Unit 2: Living organisms

Name:_____ Date:_____

1. a. Label the cells diagrams.

A



B

b. Which cell is a plant cell? _____

c. Give 3 reasons for your answer:

i. _____

_____

ii. _____

_____

iii. _____

_____

2. Arrange the following in order from the smallest to the largest:

organ	organ system	cell	tissue
_____	_____	_____	_____

Unit 2: Living organisms Worksheet 2

Name:…… Date:……..

1. Draw a line to match each part to its function:

Part	Function
xylem	gaseous exchange in leaves
phloem	absorbs water
root hair	transports food in plants
stomata	gaseous exchange in the lungs
alveoli	carry oxygenated blood
red blood cells	transports water in the plant
artery	returns deoxygenated blood to the heart
vein	absorb oxygen
capillary	forms a connection between an artery and a vein

2. Fill in the blanks to complete the description of the process of excretion in human beings.

Blood containing waste substances enters the kidney, through the ----------

arteries. Blood is filtered by ---------- and waste substances, along

with excess ---------- , pass down the ---------- into

the ---------- where it is stored in the form of -- ----------

for sometime. When the bladder is full, urine is passed out of the body through the ----------

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Unit 3: Sensitivity in living organisms Worksheet 1

Name:…… Date:……

1. Give the scientific names for the following parts of the sensory organs of the human body.

Part of the body Scientific name

a. The coloured part of the eye _____

b. The nerve which connects the eye to the brain _____

c. The outermost layer of the skin _____

d. The layer of the skin which contains nerves and hair follicles _____

e. A thin membrane in the ear which vibrates when soundwaves strike it _____

f. Help to maintain the balance of the body _____

g. Helps to adjust air pressure in the middle ear _____

h. Controls the amount of light entering the eye _____

i. Is sensitive to taste _____

j. Nerve that connects the nose to the brain _____

2. Which part of the following organisms responds to changes in their surroundings?

a. euglena _____

b. chlamydomonas _____

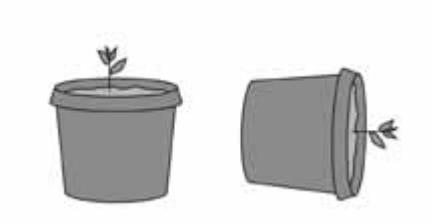
c. amoeba _____

d. green plant _____

e. human body _____

Unit 3: Sensitivity in living organisms Worksheet 2

Name:…….. Date: ……

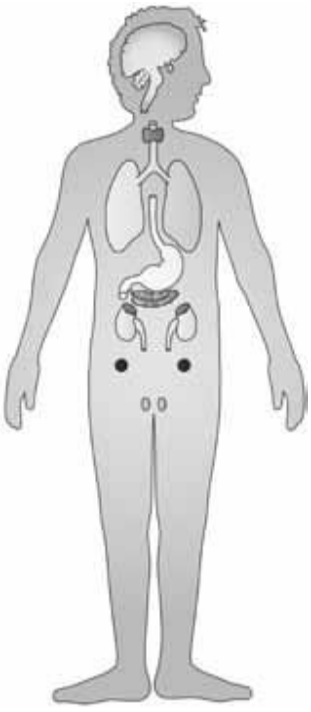


A B

1. Extend the shoots in flowerpots A and B to show how plants respond to light. (The two flowerpots

are placed in sunlight.)

2. Label the organs of the endocrine system



Unit 4: Photosynthesis and respiration in plants Worksheet 1

Name: …….. Date:…….

1. The diagram shows an experiment of how plants and animals interact.

Plastic plant **plastic plant** **pond weed** **pond weed**




water **water** **fish** **water** **fish**

A B C D

a. Which flask would contain the most oxygen after one hour?

……..

……..

Explain your answer.

……..

……..

b. Which flask would contain the most carbon dioxide after one hour?

……..

……..

Explain your answer. ……

……..

c. In which flask would the fish survive the longest? ……

……..

Explain your answer. ……

Worksheet 2

Unit 4: Photosynthesis and respiration in plants

Name: …… Date: ……

B A

E

C.and D

1. Name the parts labeled A to E.

2. Explain the functions of the parts of the leaf:

chloroplasts ……

……

xylem ……

……

phloem

……

……

midrib ……

……

air spaces ……

……

stomata ……

……

Home workfor class 6th

Unit # 1

Write down first three parts of exercise question no. 01

Activities

Draw and label the diagram of vernier calipers and screw gauge on page 3

Unit #2

Write down first three parts of exercise question no. 01

Activities

Draw and label the diagram of animal cell and plant cell page # 8 and 9

Unit # 3

Write down first three parts of exercise question no. 01

Activities

Draw and label the diagram of eye page 30

Unit # 4

Write down first three parts of exercise question no. 01

Activities

Experiment to test whether heat is produced by respiration in plants

Note: Complete the work sheets

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