

BIOLOGY CLASS FORM 2 TERM 1
TRANSPORT IN PLANTS
Introduction

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Define the term transport
 - * List substances transported in plants and animals
 - * Link surface area to volume ratio of organisms to the transport system of the organism
 - * Explain the necessity of
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TRANSPORT IN PLANTS

- * Defining the term transport
 - * Listing substances transported in organisms
 - * Relating surface area to volume ratio of organisms to transport systems
 - * Large and small cubes
 - * Surface area
 - * Surface area to volume ratio of different cubes
 - Comprehensive secondary Biology students Bk. 2 page 1-2
 - Teachers bk. 2 pages 1-13
 - KLB secondary Biology
 - Students book 2 Page 1
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 1
 - Golden tips biology pages 54-58
 - Gateway secondary Biology pages 84
 - Longman biology page 52 3
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TRANSPORT IN PLANTS

Structure of roots and root hairs

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Draw the structure of roots and root hairs
- * Relate the structure of the root to their functions
- * Discussing the structure of root and root hairs
- * Drawing the root and root hair
- * Relating the structure to functions
- * Chart of root and root hair
- Comprehensive secondary Biology students Bk. 2 page 2-4
- * Teachers bk. 2 pages 1-13
- KLB secondary Biology
- Students book 2 Page 2
- KLB teachers book 2 pages 15-34
- Longhorn secondary biology: students book 2 page 1

- Golden tips biology pages 55-56
 - Gateway secondary Biology pages 84
 - Longman biology page 4
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TRANSPORT IN PLANTS

Structure of roots and root hairs (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Observe prepared slides of roots and root hairs
 - * Compare monocotyledons and dicotyledonous root sections
 - * Observe charts and drawings of root sections
 - * Observing and comparing prepared slides of monocotyledonous and dicotyledonous roots and root hairs under a light microscope
 - * Observing charts and drawings of root section
 - * Microscopes prepared slides of root sections and root hairs
 - * Charts on root sections of monocotyledonous and dicotyledonous roots
 - Comprehensive secondary Biology students Bk. 2 page 2-4
 - Teachers bk. 2 pages 1-13
 - KLB secondary Biology
 - Students book 2 Page 1-2
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 2-5
 - Golden tips biology pages 56
 - Gateway secondary Biology pages 84
 - Longman biology page 2 1
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TRANSPORT IN PLANTS

Xylem Vessels

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Draw and label the structure of the Xylem Vessel
- * Define Xylem Vessel
- * Relate the structure of the Xylem Vessel to its function
- * Defining the term Xylem Vessel
- * Drawing and labeling the structure of the Xylem Vessel
- * Relating the structure of the Xylem Vessel to its function
- * Photographs of Xylem Vessels
- * Chart on Xylem Vessels
- Comprehensive secondary Biology students Bk. 2 page 8-9
- Teachers bk. 2 pages 1-13
- KLB secondary Biology
- Students book 2 Page 2-10
- KLB teachers book 2 pages 15-34
- Longhorn secondary biology: students book 2 page 17-20
- Golden tips biology pages 58

- Gateway secondary Biology pages 84-85
 - Longman biology page 2
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TRANSPORT IN PLANTS

Tracheid elements

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Define Tracheid elements
 - * Relate the structure of the Tracheid elements to their functions
 - * Distinguish between xylem vessels and Tracheid elements
 - * Defining Tracheid elements
 - * Distinguishing between vessels and tracheids
 - * Discussion on the structure of Tracheid elements
 - * Relating the structure of the Tracheid elements to their functions
 - * Photographs of Tracheid elements
 - * Chart on Tracheid elements
 - Comprehensive secondary Biology students Bk. 2 page 8-9
 - Teachers bk. 2 pages 1-13
 - KLB secondary Biology
 - Students book 2 Page 10-11
 - KLB teachers book 2 pages 5-34
 - Longhorn secondary biology: students book 2 page 19-20
 - Golden tips biology pages 58
 - Gateway secondary Biology pages 84-85
 - Longman biology page 53-54 3
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TRANSPORT IN PLANTS

Absorption water and mineral salts

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Describe water and salt uptake by roots from the soil
- * Explain the physiological process involved in the uptake of water and mineral salts
- * Explaining water absorption and mineral salt uptake by roots in plants
- * Discussion of water absorption and uptake of mineral salts in plants
- * Photographs of monocotyledonous and dicotyledonous stem sections showing the xylem
- * Chart on the stem sections
- * Chart on roots, roots hairs and section of roots
- Photographs of roots and root hairs
- Comprehensive secondary Biology students Bk. 2 page 2-5
- Teachers bk. 2 pages 1-13
- KLB secondary Biology
- Students book 2 Page 7-9
- KLB teachers book 2 pages 15-34
- Longhorn secondary biology: students book 2 page 2-8
- Golden tips biology pages 54-56

- Gateway secondary Biology pages 84-85
 - Longman biology page 54 3 1
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TRANSPORT IN PLANTS

Internal tissues of the stem

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Draw the monocotyledonous and dicotyledonous stem sections
 - * Define the term transpiration and relate the structure of xylem to its role in transpiration
 - * Defining transpiration
 - * Discussion on the structure of the xylem to its function
 - * Drawing the stem section
 - * Photographs of monocotyledonous and dicotyledonous stem sections showing the xylem
 - * Chart on the stem sections
 - Comprehensive secondary Biology students Bk. 2 page 6-7
 - Teachers bk. 2 pages 1-13
 - KLB secondary Biology
 - Students book 2 Page 5-7
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 4-10
 - Golden tips biology pages 59
 - Gateway secondary Biology pages 86-87
 - Longman biology page 2
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TRANSPORT IN PLANTS

The role of the leaf in transpiration

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Draw and label the internal and the external structure of a leaf
- * Describe the functions of the leaf
- * Relate the parts of a leaf to their functions
- * Drawing and labeling the structure of a leaf
- * Discussion on the parts of a leaf and how they relate to their functions
- * Sample leaves of various plants
- * Charts on the section of a leaf
- Comprehensive secondary Biology students Bk. 2 page 7
- Teachers bk. 2 pages 1-13
- KLB secondary Biology
- Students book 2 Page 9-10
- KLB teachers book 2 pages 15-34

- Longhorn secondary biology: students book 2 page 10-12
 - Golden tips biology pages 57-58
 - Gateway secondary Biology pages 84
 - Longman biology page 54 3-4
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TRANSPORT IN PLANTS

Transport of water and mineral salts in plants (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Demonstrate the movement of water in plants
 - * Observe prepared leaf sections to identify vascular tissues
 - * Carrying out an experiment to demonstrate the movement of water in plants
 - * Observing prepared leaf section under a light microscope
 - * Identifying vascular tissues in leaves
 - * Sample leaves of various plants
 - * Charts on the section of a leaf sections
 - * Microscopes
 - Comprehensive secondary Biology students Bk. 2 page 14
 - Teachers bk. 2 pages 1-13
 - KLB secondary Biology
 - Students book 2 Page 14-16
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 7 4 1
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TRANSPORT IN PLANTS

Movement of water in plants

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Discuss the forces involved in movement of water in plants such as transpiration, pull, cohesion and adhesion capillarity and root pressures
- * Demonstrate the forces involved in movement of water in plants
- * Describing the forces involved in movement of water in plants
- * Discussion on forces involved in movement of water in plants
- * Carrying out experiments to show the forces involved
- * Tubes of different diameters
- * Beakers containing colored water
- * Fresh plant stump with fluid oozing
- Comprehensive secondary Biology students Bk. 2 page 11-12

- Teachers bk. 2 pages 1-13
 - KLB secondary Biology
 - Students book 2 Page 11-12
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 5-6
 - Golden tips biology pages 59-60
 - Gateway secondary Biology pages 86-87
 - Longman biology page 2
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TRANSPORT IN PLANTS

Importance of transpiration

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Identify the importance of transpiration in plants
 - * Discuss the importance of transpiration in plants
 - * Discussion on the significance of transpiration in plants
 - * Wilted potted plants
 - * Potted plants growing normally
 - Comprehensive secondary Biology students Bk. 2 page 12
 - Teachers bk. 2 pages 1-13
 - KLB secondary Biology
 - Students book 2 Page 12
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 12
 - Golden tips biology pages 54
 - Gateway secondary Biology pages 84
 - Longman biology page 3-4
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TRANSPORT IN PLANTS

The phloem

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Explain what the phloem is
- * Draw the structure of the phloem and relate its structure to its function
- * List down materials translocated in the phloem
- * Drawing the structure of the phloem
- * Discussing the functions of phloem in relation to its structure

- * Listing down the materials translocated in plants
 - * Chart on structure of the phloem
 - * Photographs of the phloem
 - Comprehensive secondary Biology students Bk. 2 page 12-14
 - Teachers bk. 2 pages 1-13
 - KLB secondary Biology
 - Students book 2 Page 1-13
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 24-26
 - Golden tips biology pages 61-62
 - Gateway secondary Biology pages 86
 - Longman biology page 6 1
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TRANSPORT IN PLANTS

The phloem

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Draw the structure of the phloem
 - * Relate the parts of the phloem to its functions
 - * Drawing the phloem
 - * Discussion on the functions of the parts of the phloem
 - * Chart of the phloem structure
 - * Drawings of the phloem structure
 - Comprehensive secondary Biology students Bk. 2 page 12
 - Teachers bk. 2 pages 1-13
 - KLB secondary Biology
 - Students book 2 Page 17-18
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 24-25
 - Golden tips biology pages 62
 - Gateway secondary Biology pages 86-87
 - Longman biology page 55 2
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TRANSPORT IN PLANTS

Function of phloem

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Discuss the function of the phloem
 - * List down materials translocated and the sites of storage in the phloem
 - * Discussion on the functions of the phloem
 - * Listing down materials translocated and storage sites in the phloem
 - * Chart of the phloem structure
 - * Photographs of the phloem
 - Comprehensive secondary Biology students Bk. 2 page 12-14
 - Teachers bk. 2 pages 1-13
 - KLB secondary Biology
 - Students book 2 Page 17-18
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 24-26
 - Golden tips biology pages 61-62
 - Gateway secondary Biology pages 86-87
 - Longman biology page 55 3-4
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TRANSPORT IN PLANTS

Function of phloem (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Set up an experiment to investigate translocation of food substances in dicotyledonous plants
- * Set up an experiment to investigate translocation of food substances in a monocotyledonous plant
- * Explain the processes involved in the translocation of food in plants
- * Setting up an experiment to investigate translocation
- * Explaining the processes involved in the translocation of food in plants
- * Discussion on the result of the experiment
- * A young plant
- * Sharp knife
- * Saplings
- Comprehensive secondary Biology students Bk. 2 page 14
- Teachers bk. 2 pages 1-13
- KLB secondary Biology
- Students book 2 Page 12-14
- KLB teachers book 2 pages 15-34
- Longhorn secondary biology: students book 2 page 25-26
- Golden tips biology pages 62
- Gateway secondary Biology pages 86-87
- Longman biology page 7 1-2

TRANSPORT IN ANIMALS

Introduction Transport in unicellular animals

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Identify unicellular organisms such as amoeba
 - * Describe transport of substances in unicellular organisms
 - * Explain the necessity of an elaborate transport system in most animals
 - * Identify some unicellular organisms such as amoeba
 - * Explaining transport in unicellular organisms
 - * Explaining the need for an elaborate transport system in most animals
 - * Chart showing movement of gasses in and out of an amoeba by diffusion
 - Comprehensive secondary Biology students Bk. 2 page 21
 - Teachers bk. 2 pages 1-13
 - KLB secondary Biology
 - Students book 2 Page 18
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 26
 - Golden tips biology pages 63
 - Gateway secondary Biology pages 88
 - Longman biology page 55-56 3-4
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TRANSPORT IN ANIMALS

Open circulatory system

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Define an open circulatory system
- * Discuss the open circulatory system
- * Draw the open circulatory system of an insect
- * Explaining open circulatory system in insects
- * Discussing the open circulatory system
- * Drawing the open circulatory system of an insect
- * Labeling the open circulatory system
- * Chart showing the circulatory system of a cockroach
- Comprehensive secondary Biology students Bk. 2 page 21
- Teachers bk. 2 pages 14-25
- KLB secondary Biology
- Students book 2 Page 18-20
- KLB teachers book 2 pages 15-34
- Longhorn secondary biology: students book 2 page 26-27
- Golden tips biology pages 63-64

- Gateway secondary Biology pages 88
 - Longman biology page 8 1
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TRANSPORT IN ANIMALS

Closed circulatory system

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Define an closed transport system
 - * Identify animals with the open circulatory system
 - * Distinguish between closed and open circulatory systems
 - * Defining closed circulatory systems
 - * Stating organisms with closed circulatory systems such as human beings
 - * Distinguishing between closed and open circulatory systems
 - * Chart showing closed circulatory system
 - * Chart showing the difference between closed circulatory system and open circulatory system
 - Comprehensive secondary Biology students Bk. 2 page 22-23
 - Teachers bk. 2 pages 14-25
 - KLB secondary Biology
 - Students book 2 Page 19-20
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 26-27
 - Golden tips biology pages 64-65
 - Gateway secondary Biology pages 88-89
 - Longman biology page 55-56 2-3
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TRANSPORT IN ANIMALS

Double circulatory system

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Define an Double circulatory system
- * Draw and label circulatory systems in mammals
- * Dissect a rabbit and observe its transport system
- * Discussing the Double circulatory system
- * Observing the transport system in a rabbit
- * Drawing the double circulatory system of a mammal
- * Chart showing the circulatory system of a mammal
- * Dissected rabbit displaying the circulatory system
- Comprehensive secondary Biology students Bk. 2 page 24-42-44
- Teachers bk. 2 pages 14-25
- KLB secondary Biology

- Students book 2 Page 19-20
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 28-34
 - Golden tips biology pages 64-65
 - Gateway secondary Biology pages 88-89
 - Longman biology page 56
 - High flyer series pages 30-32 4
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CONTINUOUS ASSESMENT TEST

Topics covered so far

OBJECTIVES:

By the end of the lesson, the learner should be able to answer the given questions in the test

- * Learner to answer questions
 - * Teacher to supervise the test
 - Question paper
 - Marking scheme 9 1
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TRANSPORT IN ANIMALS

The mammalian heart

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Draw and label the external parts of the mammalian heart
 - * Draw and label the internal structure of the mammalian heart
 - * Explain the functions of the heart
 - * Relate the structure of the heart to its functions
 - * Drawing and labeling the mammalian heart and relating its structure to its functions
 - * Discussing the structure of the mammalian heart
 - * Chart showing the structure of a mammalian heart
 - * Model of a heart
 - Comprehensive secondary Biology students Bk. 2 page 24-25
 - Teachers bk. 2 pages 14-25
 - KLB secondary Biology
 - Students book 2 Page 21-23
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 28-32
 - Golden tips biology pages 65-66
 - Gateway secondary Biology pages 89
 - Longman biology page
 - High flyer series pages 2
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TRANSPORT IN ANIMALS

Blood flow in the circulatory system of mammals

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Trace the path taken by blood from the heart to the body parts and back to the heart
 - * State the substances supported by the blood of mammals
 - * Describe the flow of oxygenated blood in and out of the body through the heart
 - * Discussing the blood flow in mammals
 - * Tracing the path taken by blood from the heart to all body parts and back to the heart
 - * Chart showing the path of blood flow in the circulatory system of a mammal
 - Comprehensive secondary Biology students Bk. 2 page 25-26
 - Teachers bk. 2 pages 14-25
 - KLB secondary Biology
 - Students book 2 Page 19-20
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 31-32
 - Golden tips biology pages 65-67
 - Gateway secondary Biology pages 88-90
 - Longman biology page 56
 - High flyer series pages 3-4
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TRANSPORT IN ANIMALS

Blood vessels

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Explain the structure of arteries, veins and capillaries
 - * Relate the structure of the arteries, veins and capillaries to their function
 - * Explaining and relating the structure to their functions
 - * Drawing the arteries, veins and capillaries
 - * Making models of blood vessels
 - * Chart showing arteries, veins, and capillaries
 - * Modes of blood vessels
 - * Different colours of Plasticine
 - Comprehensive secondary Biology students Bk. 2 page 29-31
 - Teachers bk. 2 pages 14-25
 - KLB secondary Biology
 - Students book 2 Page 25-30
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 33-43
 - Golden tips biology pages 67-68
 - Gateway secondary Biology pages 88-90
 - Longman biology page 56
 - High flyer series pages 10 1
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TRANSPORT IN ANIMALS

Diseases and defects of the circulatory system

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Name the common diseases of circulatory system such as thrombosis, varicose veins

- * Suggest methods of control/prevention for the diseases.
 - * Name the diseases of the circulatory system
 - * Suggest methods of control/prevention
 - * Resource person such as the school nurse
 - * Photographs of people suffering from diseases of the circulatory system
 - Comprehensive secondary Biology students Bk. 2 page 32-33
 - Teachers bk. 2 pages 14-15
 - KLB secondary Biology
 - Students book 2 Page 31-32
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 43-45
 - Golden tips biology pages 73-74
 - Gateway secondary Biology pages 92-93
 - Longman biology page 57
 - High flyer series pages 2
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TRANSPORT IN ANIMALS

The structure and function of the blood

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * List the components of the blood
 - * State the functions of each of the blood components
 - * Listing components of blood
 - * Relating blood components to their functions
 - * Modeling red blood cells (RBC)
 - * Resource person such as the school nurse
 - * Model RBCs using Plasticine
 - Comprehensive secondary Biology students Bk. 2 page 33-37
 - Teachers bk. 2 pages 14-25
 - KLB secondary Biology
 - Students book 2 Page 32-35
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 45-50
 - Golden tips biology pages 69-71
 - Gateway secondary Biology pages 90
 - Longman biology page 58-59
 - High flyer series pages 3-4
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TRANSPORT IN ANIMALS

The structure and function of the blood

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Explain how oxygen and carbon dioxide are transported in the blood
- * Describe the mechanisms of blood clotting and its importance
- * Explaining how oxygen and carbon dioxide are transported in the blood
- * Describing the mechanisms of blood clotting and its importance
- * Resource person such as the school nurse

- * Chart showing blood clotting mechanism
 - Comprehensive secondary Biology students Bk. 2 page 34-35
 - Teachers bk. 2 pages 14-25
 - KLB secondary Biology
 - Students book 2 Page 36-38
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 45-51
 - Golden tips biology pages 70-71
 - Gateway secondary Biology pages 90
 - Longman biology page
 - High flyer series pages 11 1
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TRANSPORT IN ANIMALS

Blood grouping and blood transfusion

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Describe the human blood group system
- * State the importance of blood groups in blood transfusion
- * Describing blood groups
- * Stating the importance of human blood groups in blood transfusion
- * Playing cards/bottle tops in pairs
- *
- * Resource person such as the school nurse
- * Chart showing blood groups and possible transfusions
- * Prepared cards/bottle tops
- * Comprehensive secondary Biology students Bk. 2 page 37-38
- * Teachers bk. 2 pages 14-25
- * KLB secondary Biology
- * Students book 2 Page 36-38
- * KLB teachers book 2 pages 15-34
- * Longhorn secondary biology: students book 2 page 51-54
- * Golden tips biology pages 72-73
- * Gateway secondary Biology pages 90-91
- * Longman biology page 56
- * High flyer series pages 2

TRANSPORT IN ANIMALS

Blood grouping and blood transfusion

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Discuss the rhesus factor
- * State the role of the rhesus factor in blood transfusion
- * Discussing the rhesus factor and its role in blood transfusion
- *

- * Resource person such as the school nurse
 - * Blood transfusion personnel
 - * Comprehensive secondary Biology students Bk. 2 page 38-39
 - * Teachers bk. 2 pages 14-25
 - * KLB secondary Biology
 - * Students book 2 Page 37-39
 - * KLB teachers book 2 pages 15-34
 - * Longhorn secondary biology: students book 2 page 52-55
 - * Golden tips biology pages 72-73
 - * Gateway secondary Biology pages 92
 - * Longman biology page 59
 - * High flyer series pages 3-4
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TRANSPORT IN ANIMALS

The structure of the heart (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Examine the external and internal structure of a cows heart
- * Investigate pulse rate at the wrist
- * Examining a mammalian heart structure and identifying various parts
- * Working in pairs to examine pulse rate before and after vigorous activities
- *

- * Fresh heart of a mammal such as a cow
- * Dissecting kit
- * Hand lens
- * Stop watch

- Comprehensive secondary Biology students Bk. 2 page 44-45
 - Teachers bk. 2 pages 14-25
 - KLB secondary Biology
 - Students book 2 Page 30-31
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 28
 - Golden tips biology pages 66
 - Gateway secondary Biology pages 89
 - Longman biology page 59
 - High flyer series pages 12 1
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TRANSPORT IN ANIMALS

Immune responses

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Defining immunity
- * Describe immune response
- * Differentiate between natural and artificial immunity
- * Defining immunity
- * Describing immune responses
- * Distinguishing between natural and artificial immunity

- * Chart showing types of immunity
 - Comprehensive secondary Biology students Bk. 2 page 39-41
 - Teachers bk. 2 pages 14-25
 - KLB secondary Biology
 - Students book 2 Page 40-41
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 56-58
 - Golden tips biology pages 74-75
 - Gateway secondary Biology pages 93
 - Longman biology page
 - High flyer series pages 2
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TRANSPORT IN ANIMALS

Vaccination

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Define vaccination
 - * Describe importance of vaccination against diseases such as tuberculosis, poliomyelitis, measles, diphtheria, whooping cough
 - * Defining vaccination
 - * Describing the importance of vaccination
 - * Drawing the vaccination table
 - * Chart showing the vaccination table
 - Comprehensive secondary Biology students Bk. 2 page 40-41
 - Teachers bk. 2 pages 14-25
 - KLB secondary Biology
 - Students book 2 Page 41-43
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 58-59
 - Golden tips biology pages 75-76
 - Gateway secondary Biology pages 93-94
 - Longman biology page
 - High flyer series pages 3-4
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TRANSPORT IN ANIMALS

Allergic reactions

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Define allergic reactions and explain their causes
- * Carry out an experiment to demonstrate the unidirectional flow of blood in the cutaneous veins of the forearm
- * Defining allergic reactions and explaining their causes
- * Carrying out an experiment to demonstrate the unidirectional flow of blood in the cutaneous veins
- * School nurse

- * Rubber bands
 - * Bandages or handkerchiefs
 - Comprehensive secondary Biology students Bk. 2 page 41-42-45
 - Teachers bk. 2 pages 14-25
 - KLB secondary Biology
 - Students book 2 Page 43
 - KLB teachers book 2 pages 15-34
 - Longhorn secondary biology: students book 2 page 58
 - Golden tips biology pages 76-77
 - Gateway secondary Biology pages 93-94
 - Longman biology page 59-60
 - High flyer series pages 13
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REVISION AND END OF TERM EXAMINATIONS BIOLOGY FORM 2 SCHEMES OF WORK ? TERM 2 1 1

GASEOUS EXCHANGE IN PLANTS

Definition and importance of gaseous exchange

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Define gaseous exchange
 - * Identify the gases that are exchanged in the living organism
 - * Explain the importance of gaseous exchange in organisms
 - * Defining gaseous exchange
 - * state the gases that are exchanged in the living organisms such as oxygen and carbon dioxide
 - * Discussion on the importance of gaseous exchange in organisms
 - * Charts on the importance of gaseous exchange in organisms
 - Comprehensive secondary Biology students Bk. 2 page 48
 - Teachers bk. 2 pages 26-33
 - KLB secondary Biology
 - Students book 2 Page 48-50
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 70
 - Golden tips biology pages 79
 - Gateway secondary Biology pages 113
 - Longman biology page 62
 - High flyer series pages 36 2
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GASEOUS EXCHANGE IN PLANTS

Gaseous exchange in the stomata

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Describe the stomata
- * Draw and label open and closed stomata
- * Explain stomata and gaseous exchange

- * Describing the parts of the stomata
 - * Drawing and labeling of open and closed stoma
 - * Discussion on stomatal gaseous exchange
 - * Chart showing open and closed stomata
 - Comprehensive secondary Biology students Bk. 2 page 48-49
 - Teachers bk. 2 pages
 - KLB secondary Biology
 - Students book 2 Page 48-51
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 70-74
 - Golden tips biology pages 79-80
 - Gateway secondary Biology pages 114
 - Longman biology page 62
 - High flyer series pages 3-4
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GASEOUS EXCHANGE IN PLANTS

Stomata (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Investigate the presence of stomata on leaves
 - * Investigate the shape of guard cells and the distribution of stomata on leaves
 - * Investigating the presence of stomata on leaves in groups
 - * Investigating the shape of guard cells
 - * Discussion on the distribution of stomata on leaves of various plants
 - * Water in a beaker
 - * Leaves of various leaves
 - * Means of heating
 - * Clear nail varnish
 - * Light microscope
 - * Cover slip
 - * Forceps
 - * Microscope slide
 - * Leaves of various plants
 - Comprehensive secondary Biology students Bk. 2 page 54
 - Teachers bk. 2 pages 26-33
 - KLB secondary Biology
 - Students book 2 Page 48-50
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 76
 - Golden tips biology pages
 - Gateway secondary Biology pages 114
 - Longman biology page
 - High flyer series pages 2 1
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GASEOUS EXCHANGE IN PLANTS

Mechanism of opening and closing stomata

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Explain the mechanism of opening and closing of stomata
 - * Describe photosynthetic/glucose accumulation theory of opening and closing stomata
 - * Explaining the mechanism of opening and closing of stomata
 - * Discussion on the photosynthetic/glucose accumulation theory of opening and closing stomata
 - * Chart showing open and closed stomata
 - Comprehensive secondary Biology students Bk. 2 page 49-50
 - Teachers bk. 2 pages 26-33
 - KLB secondary Biology
 - Students book 2 Page 50-51
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 71-74
 - Golden tips biology pages 79-80
 - Gateway secondary Biology pages 114
 - Longman biology page 62
 - High flyer series pages 2
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GASEOUS EXCHANGE IN PLANTS

Mechanism of opening and closing stomata

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Describe inter-conversion of starch and glucose and ion accumulation theories
 - * Discussion on the inter-conversion of starch and glucose and ion accumulation theories
 - * Chart showing open and closed stomata
 - Comprehensive secondary Biology students Bk. 2 page 50
 - Teachers bk. 2 pages 26-33
 - KLB secondary Biology
 - Students book 2 Page 50-51
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 76
 - Golden tips biology pages 79-80
 - Gateway secondary Biology pages 114
 - Longman biology page
 - High flyer series pages 3-4
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GASEOUS EXCHANGE IN PLANTS

Internal structure of stems and leaves (practical lessons)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Investigate the internal structure of stems and leaf stalk in aerial and aquatic plants
- * Investigate tissue distribution in aerial leaves and stems
- * Investigation of the structure of stems and leaf stalks in aerial and aquatic plants
- * Microscope
- * Prepared permanent slides of aerial leaves and stems

- * Water lily leaf stalk
 - * Bougainvillea twig
 - * Beaker containing water
 - * Scalpel
 - Comprehensive secondary Biology students Bk. 2 page 55
 - Teachers bk. 2 pages 26-33
 - KLB secondary Biology
 - Students book 2 Page 50-52
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 75-76
 - Golden tips biology pages
 - Gateway secondary Biology pages
 - Longman biology page 62
 - High flyer series pages 3 1
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GASEOUS EXCHANGE IN PLANTS

Cuticular and lenticular gaseous exchange

OBJECTIVES:

By the end of the lesson, the learner should be able to describe Cuticular and lenticular gaseous exchange

- * Discussion on lenticular gaseous exchange
 - * Discussion on Cuticular gaseous exchange
 - * Chart showing internal leaf structure and lenticels
 - Comprehensive secondary Biology students Bk. 2 page 52
 - Teachers bk. 2 pages 26-33
 - KLB secondary Biology
 - Students book 2 Page 51-53
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 75
 - Golden tips biology pages 81
 - Gateway secondary Biology pages 114-115
 - Longman biology page 62-64
 - High flyer series pages 36-37 2
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GASEOUS EXCHANGE IN PLANTS

Gaseous exchange through the roots

OBJECTIVES:

By the end of the lesson, the learner should be able to;

- * Draw the structure of the root
- * Describe how gaseous exchange takes place through the epidermis of the roots
- * Drawing the structure of the root
- * Discussion on gaseous exchange through the roots
- * Photograph of pneumatophic
- * Chart showing breathing roots
- Comprehensive secondary Biology students Bk. 2 page 52-54
- Teachers bk. 2 pages 26-33
- KLB secondary Biology
- Students book 2 Page 48-52
- KLB teachers book 2 pages 35-44
- Longhorn secondary biology: students book 2 page 74-75

- Golden tips biology pages 81-82
 - Gateway secondary Biology pages 113-114
 - Longman biology page
 - High flyer series pages 3-4
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GASEOUS EXCHANGE IN PLANTS

Gaseous exchange structures

OBJECTIVES:

By the end of the lesson, the learner should be able to;

- * Examine various types of gaseous exchange structure in different organisms
- * Relate the various types of gaseous exchange structure to their functions in different organisms
- * Examining various types of gaseous exchange structures
- * Relating the various types of gaseous exchange structure to their functions in different organisms
- * Tadpoles
- * Insects (alive)
- * Fish
- * Frog
- * Earthworm

- Comprehensive secondary Biology students Bk. 2 page 57
 - Teachers bk. 2 pages 34-48
 - KLB secondary Biology
 - Students book 2 Page 58-61
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 80-81
 - Golden tips biology pages 82
 - Gateway secondary Biology pages 115
 - Longman biology page
 - High flyer series pages 4 1
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GASEOUS EXCHANGE IN ANIMALS

Gaseous exchange types and characteristics of respiratory surfaces in animals

OBJECTIVES;

By the end of the lesson, the learner should be able to;

- * State the characteristics of gaseous exchange surfaces in different organisms
- * Discussion on characteristics of gaseous exchange surfaces
- * Discussion on mechanism of gaseous exchange surfaces
- * Discussion on mechanism of gaseous exchange in amoeba
- * Chart showing diagrams of different gaseous exchange surfaces such as insects fish, frogs and earth worms
- * Chart showing diagram on gaseous exchange in amoeba
- Comprehensive secondary Biology students Bk. 2 page 57-58
- Teachers bk. 2 pages 34-48
- KLB secondary Biology
- Students book 2 Page 53
- KLB teachers book 2 pages 35-44
- Longhorn secondary biology: students book 2 page 80

- Golden tips biology pages 82-83
 - Gateway secondary Biology pages 115
 - Longman biology page 65
 - High flyer series pages 2-3
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GASEOUS EXCHANGE IN ANIMALS

Gaseous exchange in an insect

OBJECTIVES:

By the end of the lesson, the learner should be able to;

- * Examine the gaseous exchange structures of a grasshopper or a locust
- * Draw the gaseous exchange structure of an insect
- * Examining the gaseous exchange structures in insects
- * Drawing the gaseous exchange structure of an insect
- * Chart on tracheal system in insects
- * Live grasshoppers
- * Dissecting board
- * Pins
- * Hand lens
- * Dissecting kit
- * Chloroform
- * Cotton wool

- Comprehensive secondary Biology students Bk. 2 page 58
- Teachers bk. 2 pages 34-48
- KLB secondary Biology
- Students book 2 Page 54-56
- KLB teachers book 2 pages 35-44
- Longhorn secondary biology: students book 2 page 81-84
- Golden tips biology pages 83
- Gateway secondary Biology pages 115-116
- Longman biology page 64
- High flyer series pages 37-38 4

GASEOUS EXCHANGE IN ANIMALS & PLANTS

Continuous assessment test

OBJECTIVES:

By the end of the lesson, the learner should be able to answer all questions asked in the test

- * Learner to write down the answers
 - * Teacher to supervise test
 - Question papers
 - Marking scheme
-

GASEOUS EXCHANGE IN ANIMALS

Gaseous exchange in bony fish

OBJECTIVES:

By the end of the lesson, the learner should be able to;

- * Draw and label the structure of gaseous exchange in bony fish
- * Relate the gills to their function
- * Discussion on gills of a bony fish
- * Drawing and labeling the gill chamber and gills of bony fish
- * Discussion on functions of parts of the gills
- * Chart showing diagram of gill chamber of bony fish

-Comprehensive secondary Biology students Bk. 2 page 59-60

-Teachers bk. 2 pages 34-48

-KLB secondary Biology

-Students book 2 Page 56-58

-KLB teachers book 2 pages 35-44

-Longhorn secondary biology: students book 2 page 84-88

-Golden tips biology pages 84

-Gateway secondary Biology pages 116-117

-Longman biology page

-High flyer series pages 2

GASEOUS EXCHANGE IN ANIMALS

Gaseous exchange in bony fish

OBJECTIVES:

By the end of the lesson, the learner should be able to describe the mechanism of gaseous exchange in bony fish

- * Discussion on the mechanism of gaseous exchange in bony fish
- * Chart showing diagram of gill chamber of bony fish

-Comprehensive secondary Biology students Bk. 2 page 60-61

-Teachers bk. 2 pages 34-48

-KLB secondary Biology

-Students book 2 Page 57-58

-KLB teachers book 2 pages 35-44

-Longhorn secondary biology: students book 2 page 84

-Golden tips biology pages 84

-Gateway secondary Biology pages 116-117

-Longman biology page

-High flyer series pages 38 3-4

GASEOUS EXCHANGE IN ANIMALS

Gaseous exchange in bony fish (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Examine the location and number of gills in gill chambers of bony fish
- * Examine, draw and label the gill of a bony fish
- * Examining the location and number of gills in gill chambers of bony fish
- * Examining, drawing and labeling isolated gills in bony fish
- * Tilapia fish
- * Hand lens
- * Gills of a bony fish
- * Dissecting kit
- * Pins

- * Dissecting board
 - Comprehensive secondary Biology students Bk. 2 page 69
 - Teachers bk. 2 pages 34-48
 - KLB secondary Biology
 - Students book 2 Page 58
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 84-85
 - Golden tips biology pages 84
 - Gateway secondary Biology pages 116
 - Longman biology page
 - High flyer series pages 6 1
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GASEOUS EXCHANGE IN ANIMALS

Gaseous exchange in frogs

OBJECTIVES:

By the end of the lesson, the learner should be able to describe the gaseous exchange in a frog through its gills, skin, mouth and lungs.

- * Discussion on gaseous exchange in a frog
 - * Chart showing position of mouth cavity, lungs and nostrils in a frog
 - Comprehensive secondary Biology students Bk. 2 page 61-62
 - Teachers bk. 2 pages 34-48
 - KLB secondary Biology
 - Students book 2 Page 58-59
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 88-90
 - Golden tips biology pages 84-85
 - Gateway secondary Biology pages 117
 - Longman biology page 65-66
 - High flyer series pages 2
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GASEOUS EXCHANGE IN ANIMALS

Gaseous exchange in human beings

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * State the structure involved in gaseous exchange in human beings
- * Explain the features of the structures involved in gaseous exchange in human beings
- * Draw and label the structures involved in gaseous exchange in human beings
- * Stating the structures involved in gaseous exchange in human beings
- * Explaining the features of the structures involved in gaseous exchange in human beings
- * Drawing and labeling the structures involved in gaseous exchange in humans
- * Chart showing the lungs and rib cage in human beings
- Comprehensive secondary Biology students Bk. 2 page 63-65
- Teachers bk. 2 pages 34-48
- KLB secondary Biology
- Students book 2 Page 59-64
- KLB teachers book 2 pages 35-44
- Longhorn secondary biology: students book 2 page 90-94
- Golden tips biology pages 85-86
- Gateway secondary Biology pages 117-118

- Longman biology page 66
 - High flyer series pages 38-39 6 3-4
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GASEOUS EXCHANGE IN ANIMALS

Gaseous exchange in human beings

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Examine a dissected mammal to locate the gaseous exchange structures
 - * Describe the mechanism of breathing in human beings
 - * Identifying the structures of gaseous exchange in a dissected rabbit (mammal)
 - * Discussion on mechanism of breathing in human beings
 - * Chart showing the lungs and rib cage in human beings
 - * Dissected rabbit displaying the gaseous exchange system
 - Comprehensive secondary Biology students Bk. 2 page 64
 - Teachers bk. 2 pages 34-48
 - KLB secondary Biology
 - Students book 2 Page 59-64
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 94-97
 - Golden tips biology pages 86
 - Gateway secondary Biology pages 119
 - Longman biology page
 - High flyer series pages 38-39 7 1-2
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GASEOUS EXCHANGE IN ANIMALS

Breathing mechanisms in human beings

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Draw and label the alveoli where gaseous exchange occur in human beings
 - * Describe how gaseous exchange occurs in alveoli
 - * Drawing and labeling the alveoli where gaseous exchange occur in human beings
 - * Describing how gaseous exchange occurs in alveoli
 - * Discussion on gaseous exchange at the alveoli
 - * Chart showing the exchange of gases in alveoli of human beings
 - Comprehensive secondary Biology students Bk. 2 page 66
 - Teachers bk. 2 pages 34-48
 - KLB secondary Biology
 - Students book 2 Page 61-65
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 96-99
 - Golden tips biology pages 86-87
 - Gateway secondary Biology pages 119-120
 - Longman biology page 67
 - High flyer series pages 38-39 3-4
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GASEOUS EXCHANGE IN ANIMALS AND PLANTS

Continuous assessment test

OBJECTIVES:

By the end of the lesson, the learner should be able to

- * Answer all questions asked in the test
 - * Learners to write down the answers to the questions
 - * Teacher to supervise the students
 - Question papers
 - Marking scheme
-

GASEOUS EXCHANGE IN ANIMALS

Gaseous exchange in human beings

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Explain how human beings are adapted to their functions
 - * Able to examine the mammalian lung
 - * Explaining how human beings are adapted to their functions
 - * Discussion on the adaptations of lungs in humans and examination of mammalian lung
 - * Lungs from a mammal eg. goat, sheep and cow
 - Comprehensive secondary Biology students Bk. 2 page 66
 - Teachers bk. 2 pages 34-48
 - KLB secondary Biology
 - Students book 2 Page 59-65
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page
 - Golden tips biology pages 86-87
 - Gateway secondary Biology pages 120
 - Longman biology page 66-67
 - High flyer series pages 38-39 3-4
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GASEOUS EXCHANGE IN ANIMALS

Gaseous exchange in mammals (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Demonstrate the breathing mechanism of the lungs and diaphragm in a model thoracic cavity
- * Demonstrate the breathing movement of ribs and muscles by using a model
- * Carrying out a demonstration of breathing mechanism in human beings using a model
- * A bell jar
- * Two balloons
- * Rubber stopper with a hole
- * Y-shape glass tube

- * Rubber sheet
 - * String
 - * Petroleum jelly
 - Comprehensive secondary Biology students Bk. 2 page 71
 - Teachers bk. 2 pages 34-48
 - KLB secondary Biology
 - Students book 2 Page 63
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 96-99
 - Golden tips biology pages 86-87
 - Gateway secondary Biology pages 117-119
 - Longman biology page
 - High flyer series pages 9 1
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GASEOUS EXCHANGE IN ANIMALS

Factors affecting the rate of breathing

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Examine the factors affecting the rate of breathing in human beings
 - * Explain the factors which control the rate of breathing in human beings
 - * Examining the factors affecting the rate of breathing in human beings
 - * Discussion on factors affecting the rate of breathing in human beings
 - * Chart with table showing factors affecting breathing
 - Comprehensive secondary Biology students Bk. 2 page 66-67
 - Teachers bk. 2 pages 34-48
 - KLB secondary Biology
 - Students book 2 Page 65-66
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 101-102
 - Golden tips biology pages 87
 - Gateway secondary Biology pages 119
 - Longman biology page 67-68
 - High flyer series pages 2
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GASEOUS EXCHANGE IN ANIMALS

Respiratory diseases

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * State the causes of respiratory diseases
- * Discuss the symptoms of respiratory disease
- * explain the prevention measures of respiratory diseases
- * Discussion on causes, symptoms and prevention measures of respiratory diseases
- * Chart on respiratory diseases
- Comprehensive secondary Biology students Bk. 2 page 71
- Teachers bk. 2 pages 34-48

- KLB secondary Biology
 - Students book 2 Page 67-70
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 104-107
 - Golden tips biology pages 87-88
 - Gateway secondary Biology pages 121
 - Longman biology page 68
 - High flyer series pages 3-4
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GASEOUS EXCHANGE IN ANIMALS

Gaseous exchange in animals (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to demonstrate the effect of exercise on the rate of breathing

* Carrying out experiment to show the effect of exercise on rate of breathing

* Chair

* Stop watch

* Skipping rope

-Comprehensive secondary Biology students Bk. 2 page 74

-Teachers bk. 2 pages 34-48

-KLB secondary Biology

-Students book 2 Page 66-67

-KLB teachers book 2 pages 35-44

-Longhorn secondary biology: students book 2 page 101-104

-Golden tips biology pages

-Gateway secondary Biology pages

-Longman biology page

-High flyer series pages 10 1

RESPIRATION

Introduction Tissue respiration

OBJECTIVES:

By the end of the lesson, the learner should be able to:

* Define respiration

* State the significance of respiration

* Draw and label mitochondria

* Discussion on definition and significance of respiration

* Drawing and labeling mitochondria

* Chart showing diagram of mitochondria

-Comprehensive secondary Biology students Bk. 2 page 74

-Teachers bk. 2 pages 49-57

-KLB secondary Biology

-Students book 2 Page 73-74

-KLB teachers book 2 pages 45-48

-Longhorn secondary biology: students book 2 page 112-113

-Golden tips biology pages 91

- Gateway secondary Biology pages 130
 - Longman biology page 71
 - High flyer series pages 2
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RESPIRATION

Anaerobic respiration

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Define Anaerobic respiration
 - * Describe Anaerobic respiration in plants
 - * Describe Anaerobic respiration in animals
 - * Defining Anaerobic respiration
 - * Discussion on Anaerobic respiration in plants and animals
 - * Chart showing diagram of mitochondria
 - Comprehensive secondary Biology students Bk. 2 page 76-77
 - Teachers bk. 2 pages 49-57
 - KLB secondary Biology
 - Students book 2 Page 77-78
 - KLB teachers book 2 pages 45-48
 - Longhorn secondary biology: students book 2 page 116-119
 - Golden tips biology pages 92-93
 - Gateway secondary Biology pages 131
 - Longman biology page 72
 - High flyer series pages 41-42 3-4
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RESPIRATION

Respiration (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Identify the gas given off when food is burnt
- * Investigate the gas produced during fermentation
- * Carrying out experiments to investigate the gas produced when food is burnt
- * Discussion on the gas produced when food is burnt
- * Retort stand
- * Maize flour
- * Test-tubes
- * Source of heat
- * Boiling tubes
- * Delivery tube
- * Rubber stopper
- * Lime water
- * clump
- Comprehensive secondary Biology students Bk. 2 page 80-81

- Teachers bk. 2 pages 49-57
 - KLB secondary Biology
 - Students book 2 Page 75-74
 - KLB teachers book 2 pages 45-48
 - Longhorn secondary biology: students book 2 page 116-118, 120-121
 - Golden tips biology pages
 - Gateway secondary Biology pages
 - Longman biology page
 - High flyer series pages 11 1-2
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RESPIRATION

Economic importance of anaerobic respiration

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * State the economic importance of anaerobic respiration
 - * Discuss the economic importance of anaerobic respiration in both plants and animals
 - * Discussion on economic importance of anaerobic respiration
 - * Chart on the economic importance of anaerobic respiration
 - Comprehensive secondary Biology students Bk. 2 page 77
 - Teachers bk. 2 pages 49-57
 - KLB secondary Biology
 - Students book 2 Page 77-78
 - KLB teachers book 2 pages 45-48
 - Longhorn secondary biology: students book 2 page 119-120
 - Golden tips biology pages 92-93
 - Gateway secondary Biology pages 130
 - Longman biology page 71
 - High flyer series pages 41 3-4
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RESPIRATION

Aerobic respiration

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Explain anaerobic respiration
- * Distinguish between anaerobic and aerobic respiration
- * Compare energy production in anaerobic and aerobic respiration
- * explain aerobic respiration
- * Distinguishing between aerobic respiration and anaerobic respiration
- * Discussion on energy formation and energy output in aerobic and anaerobic respiration
- * Chart on the economic importance of aerobic respiration
- Comprehensive secondary Biology students Bk. 2 page 74-76
- Teachers bk. 2 pages 49-57
- KLB secondary Biology
- Students book 2 Page 74-76
- KLB teachers book 2 pages 45-48

- Longhorn secondary biology: students book 2 page 113-115
 - Golden tips biology pages 91-92
 - Gateway secondary Biology pages 130-131
 - Longman biology page 72-73
 - High flyer series pages 41 12 1-2
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RESPIRATION

Tissue respiration (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Investigate the production of heat by germinating seeds
 - * Demonstrate that respiration takes place in plants
 - * Carrying out the various experiments in groups
 - * Discussion on the observation or results observed
 - * Two vacuum flasks
 - * Two thermometers
 - * Beans and cotton wool
 - * Sterilizer such as formalin
 - * Bell jar
 - * Soda lime
 - * Two conical flasks
 - * Black cloth
 - * Lime water
 - * Potted plant
 - * Delivery tube
 - * Filter pump
 - * Corks
 - * Petroleum jelly
 - Comprehensive secondary Biology students Bk. 2 page 81-82
 - Teachers bk. 2 pages 49-57
 - KLB secondary Biology
 - Students book 2 Page 76-77
 - KLB teachers book 2 pages 45-48
 - Longhorn secondary biology: students book 2 page 115
 - Golden tips biology pages 94
 - Gateway secondary Biology pages
 - Longman biology page
 - High flyer series pages 3-4
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RESPIRATION

Tissue respiration (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Show aerobic respiration in animals
- * Show the aerobic respiration takes place in animals
- * Carrying out the experiments
- * Discussion on the results observed
- * Grasshopper

- * Two pieces of insulin cloth or wire net
 - * Bicarbonate indicator
 - * Two conical flasks
 - * Measuring cylinder
 - * Two rubber bands
 - * Two labels
 - * Bell jar
 - * Lime water
 - * Delivery tubes
 - * Soda lime
 - * Rat
 - * Filter pump
 - * Petroleum jelly
 - Comprehensive secondary Biology students Bk. 2 page 83-84
 - Teachers bk. 2 pages 49-57
 - KLB secondary Biology
 - Students book 2 Page 78
 - KLB teachers book 2 pages 45-48
 - Longhorn secondary biology: students book 2 page 117
 - Golden tips biology pages 94
 - Gateway secondary Biology pages
 - Longman biology page
 - * High flyer series pages 13
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REVISION AND END OF TERM EXAMINATION BIOLOGY FORM 2 SCHEMES OF WORK ? TERM 3 1 1

EXCRETION AND HOMEOSTASIS

Definition of terms

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Define terms stated
 - * Distinguish between excretion and egestion
 - * Explain the necessity of excretion in plants and animals
 - * Defining excretion, homeostasis and secretion
 - * Distinguishing between excretion and egestion
 - * Explaining the necessity of excretion in plants and animals
 - * Chart showing major terms and their definitions
 - Comprehensive secondary Biology students Bk. 2 page 86
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology
 - Students book 2 Page 83-84
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 124
 - Golden tips biology pages 96
 - Gateway secondary Biology pages 141
 - Longman biology page 75
 - High flyer series pages 44 2
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EXCRETION AND HOMEOSTASIS

Excretion in plants

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Describe the methods of excretion in plants
 - * List down useful and harmful excretory products in plants
 - * Describing the methods of excretion in plants
 - * Listing excretory products in plants
 - * Chart showing excretory products in plants and methods of excretion in plants
 - Comprehensive secondary Biology students Bk. 2 page 86-87
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology
 - Students book 2 Page 83-84
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 124-125
 - Golden tips biology pages 96-97
 - Gateway secondary Biology pages 141
 - Longman biology page 75-76
 - High flyer series pages 44 3-4
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EXCRETION AND HOMEOSTASIS

Excretion in plants

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Identify the uses of excretory products in plants
 - * Describe the uses of excretory products in plants
 - * Identifying the uses of excretory products in plants
 - * Describing the uses of excretory products in plants
 - * Chart showing excretory products , sources and their economic importance in plants
 - Comprehensive secondary Biology students Bk. 2 page 88
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology
 - Students book 2 Page 84
 - KLB teachers book 2 pages
 - Longhorn secondary biology: students book 2 page 125-127
 - Golden tips biology pages 96-97
 - Gateway secondary Biology pages 141
 - Longman biology page 76
 - High flyer series pages 44 2 1
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EXCRETION AND HOMEOSTASIS

Excretion and homeostasis in Animals

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Describe excretion and homeostasis in unicellular animals such as amoeba
 - * Draw an amoeba
 - * Describe excretion in fresh water amoeba
 - * Describing excretion and homeostasis in unicellular organism such as amoeba
 - * Drawing of amoeba
 - * Describing the excretion of water and nitrogenous wastes in amoeba
 - * Chart showing an amoeba in stages of excreting water and wastes
 - Comprehensive secondary Biology students Bk. 2 page 88
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology
 - Students book 2 Page 84-85
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 127-128
 - Golden tips biology pages 97-98
 - Gateway secondary Biology pages 142
 - Longman biology page 77
 - High flyer series pages 44 2
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EXCRETION AND HOMEOSTASIS

Excretion and homeostasis in Animals

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Explain the need for complex animals for excretion
 - * List down organs involved In excretion in animals
 - * List down waste products released by various organs
 - * Explaining the need for complex excretory organs
 - * Listing the excretory organs and substances released
 - * Chart showing the specialized organs and the main excretory products
 - Comprehensive secondary Biology students Bk. 2 page 88
 - Teachers bk. 2 pages
 - KLB secondary Biology
 - Students book 2 Page 84-87
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 128-131
 - Golden tips biology pages 98
 - Gateway secondary Biology pages 142
 - Longman biology page 77
 - High flyer series pages 44-45 3-4
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EXCRETION AND HOMEOSTASIS

The human kidney

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Examine the kidney of a mammal
 - * Draw and label the external structure of a kidney
 - * Make a vertical section through the kidney
 - * Identify the internal parts of the kidney
 - * Examining the kidney
 - * Making a vertical section and identifying the parts of the kidney
 - * Drawing the internal structure of the kidney
 - * Kidney of a mammal
 - * Sharp knife
 - * Chart showing section of a kidney
 - Comprehensive secondary Biology students Bk. 2 page 91, 105
 - Teachers bk. 2 pages
 - KLB secondary Biology 58-68
 - Students book 2 Page 88-92
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 132-135
 - Golden tips biology pages 100-101
 - Gateway secondary Biology pages 144
 - Longman biology page 77
 - High flyer series pages 3 1
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EXCRETION AND HOMEOSTASIS

Functions of the nephron

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Draw and label parts of the nephron
- * Relate its structure to its role in urine formation
- * Drawing and labeling the nephron
- * Discussion on the structure of the nephron in relation to its function
- * Chart showing the structure of the nephron
- Comprehensive secondary Biology students Bk. 2 page 92-94
- Teachers bk. 2 pages
- KLB secondary Biology 58-68
- Students book 2 Page 90-92
- KLB teachers book 2 pages 49-54
- Longhorn secondary biology: students book 2 page 135-137
- Golden tips biology pages 101-102

- Gateway secondary Biology pages 145
 - Longman biology page 77
 - High flyer series pages 47 2
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EXCRETION AND HOMEOSTASIS

Neuro-endocrine system and homeostasis

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Identify the hormones involved in Neuro-endocrine system and homeostasis eg insulin
 - * Explain the process of urine formation in the kidney
 - * Describe the role of various hormones in urine formation
 - * Identifying the hormones involved in Neuro-endocrine system and homeostasis such as insulin, ADH and aldosterone I urine formation
 - * Describing the role of insulin, ADH and aldosterone in urine formation
 - * Diagram of the nephron showing the movement of sodium ions and water
 - Comprehensive secondary Biology students Bk. 2 page 93-94
 - Teachers bk. 2 pages
 - KLB secondary Biology 58-68
 - Students book 2 Page 97-100
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 139-142
 - Golden tips biology pages 103-104
 - Gateway secondary Biology pages 145
 - Longman biology page 78
 - High flyer series pages 45-47 3-4
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EXCRETION AND HOMEOSTASIS

Neuro-endocrine system and homeostasis

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Describe the components and role of Neuro-endocrine systems
- * Distinguish between internal and external environments
- * Explain the general working of the homeostatic mechanism
- * Describing the components and role of the Neuro-endocrine system
- * Distinguishing between internal and external environment
- * explaining the general working of the homeostatic mechanism
- * Flow chart showing homeostatic mechanism, positive and negative feedback

- Comprehensive secondary Biology students Bk. 2 page 94-95
 - Teachers bk. 2 pages
 - KLB secondary Biology 58-68
 - Students book 2 Page 97-100
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 139-142
 - Golden tips biology pages 103-104
 - Gateway secondary Biology pages 145-146
 - Longman biology page 78-79
 - High flyer series pages 49-51 4 1
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EXCRETION AND HOMEOSTASIS

Osmoregulation

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Define osmoregulation
- * Describe the role of the kidney in osmoregulation
- * Explain the role of hypothalamus in osmoregulation
- * Defining Osmoregulation
- * Describing the role of the kidney in osmoregulation
- * Flow chart showing the homeostatic mechanism in regulating osmotic pressure by the kidney

- Comprehensive secondary Biology students Bk. 2 page 95-97
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 100-101
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 140-142
 - Golden tips biology pages 105
 - Gateway secondary Biology pages 145-146
 - Longman biology page 78
 - High flyer series pages 45-47 2-3
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EXCRETION AND HOMEOSTASIS

Diabetes insipidus and other common kidney diseases

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Explain Diabetes insipidus and other common kidney diseases
- * Describe the causes of Diabetes insipidus and other common kidney diseases

- * State possible control/prevention methods of Diabetes insipidus
 - * Explaining Diabetes insipidus and other common kidney diseases
 - * Describing the causes of Diabetes insipidus and other common kidney diseases
 - * Chart showing the diseases, causes, symptoms and control/ prevention methods
 - Comprehensive secondary Biology students Bk. 2 page 96, 101-102
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 49-54
 - KLB teachers book 2 pages 101, 93-94
 - Longhorn secondary biology: students book 2 page 142, 138-140
 - Golden tips biology pages 105, 102-103
 - Gateway secondary Biology pages 147
 - Longman biology page 77
 - High flyer series pages 47 4
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EXCRETION AND HOMEOSTASIS

Continuous assessment test

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Answer all the questions asked in the test
 - * Learner to answer all the questions
 - * Teacher to prepare and give the test
 - * Teacher to supervise the students
 - Question paper
 - Marking schemes 5 1
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EXCRETION AND HOMEOSTASIS

Excretion and homeostasis in animals

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Draw and label parts of the skin
 - * Relate the parts of the skin to their functions
 - * Discussion on the parts of the skin and their functions
 - * Drawing and labeling parts of the skin and relating parts to their functions
 - * Chart showing the section of the skin
 - Comprehensive secondary Biology students Bk. 2 page 89-90
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 85-87
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 129-132
 - Golden tips biology pages 98-100
 - Gateway secondary Biology pages 142
 - Longman biology page 78
 - High flyer series pages 45 2
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EXCRETION AND HOMEOSTASIS

The role of the skin in homeostasis

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Distinguish between osmoregulation and thermoregulation
 - * Describe the role of the skin in osmoregulation
 - * Describe the role of the skin in thermoregulation
 - * Distinguishing between osmoregulation and thermoregulation
 - * Describing the role of the skin in osmoregulation
 - * Describing the role of the skin in thermoregulation
 - * Chart showing diagram of the skin
 - * Photograph of a section of the skin
 - Comprehensive secondary Biology students Bk. 2 page 98-99
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 98-101
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 131-132
 - Golden tips biology pages 98-100
 - Gateway secondary Biology pages 142-143
 - Longman biology page 78
 - High flyer series pages 45-47 3-4
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EXCRETION AND HOMEOSTASIS

Thermoregulation in human beings

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Identify behavioral and physiological means of thermoregulation in animals
 - * Describe behavioral and physiological means of thermoregulation in animals
 - * Identifying behavioral and physiological means of thermoregulation in animals
 - * Describing behavioral and physiological means of thermoregulation in animals
 - * Photographs of warmly dressed people during cold weather
 - * Photograph of people with light cloth during hot weather
 - Comprehensive secondary Biology students Bk. 2 page 99-100
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 98-100
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page
 - Golden tips biology pages 106-108
 - Gateway secondary Biology pages 147-148
 - Longman biology page 78
 - High flyer series pages 6 1
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EXCRETION AND HOMEOSTASIS

Heat loss and heat gain

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Explain Heat loss and heat gain
 - * Describe the various methods of Heat loss and heat gain in mammals
 - * Explaining Heat loss and heat gain
 - * Discussion on methods of Heat loss and heat gain in mammals
 - * Resource person e.g. physics teacher to describe methods of heat loss and heat gain
 - Comprehensive secondary Biology students Bk. 2 page 99-100
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 98-100
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 149-153
 - Golden tips biology pages 106-108
 - Gateway secondary Biology pages 148
 - Longman biology page 78-79
 - High flyer series pages 49-50 2
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EXCRETION AND HOMEOSTASIS

Surface area to volume ratio in relation to thermoregulation

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Explain the terms Surface area to volume ratio in relation
- * Relate the body size of mammals to heat loss and heat gain
- * Explaining the terms Surface area to volume ratio in relation
- * Discussion on the relationship between the body size of mammals to heat loss and heat gain
- * Pictures of large sized mammals and small sized mammals
- Comprehensive secondary Biology students Bk. 2 page 99
- Teachers bk. 2 pages 58-68
- KLB secondary Biology Students book 2 Page 100-101
- KLB teachers book 2 pages 49-54
- Longhorn secondary biology: students book 2 page 152
- Golden tips biology pages 106-108
- Gateway secondary Biology pages 148
- Longman biology page 78-79
- High flyer series pages 49-50 3-4

EXCRETION AND HOMEOSTASIS

The role of the liver in homeostasis

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Draw and label the liver and its associated parts
 - * Describe the liver and its role in homeostasis
 - * Drawing and labeling the liver and its associated parts
 - * Describing the liver and its role in homeostasis
 - * Chart showing the external structure of the liver in relation to the gut, gall bladder and blood vessels
 - Comprehensive secondary Biology students Bk. 2 page 102-104
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 93-96
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 153-156
 - Golden tips biology pages 108
 - Gateway secondary Biology pages 148-149
 - Longman biology page
 - =High flyer series pages 7 1-2
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EXCRETION AND HOMEOSTASIS

Functions of the liver

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * List down some of the functions of the liver
 - * Describe the functions of the liver
 - * Listing down some of the functions of the liver
 - * Describing the functions of the liver
 - * Chart showing the functions of the liver
 - Comprehensive secondary Biology students Bk. 2 page 103-104
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 95-96
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page
 - Golden tips biology pages 108
 - Gateway secondary Biology pages 149-150
 - Longman biology page 79
 - High flyer series pages 48 3-4
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EXCRETION AND HOMEOSTASIS

Diseases of the liver

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Identify all the diseases of the liver
- * Describe the symptoms and possible control of diabetes mellitus and other liver diseases
- * Explain the causes symptoms and diseases of the liver
- * Identifying all the diseases of the liver
- * Describing the symptoms and possible control of diabetes mellitus and other liver diseases

- * Explaining the causes symptoms and diseases of the liver
 - * Chart showing diseases of liver cause and control/treatment
 - .Comprehensive secondary Biology students Bk. 2 page 103-104
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 96-97
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 156-158
 - Golden tips biology pages 109-110
 - Gateway secondary Biology pages 149
 - Longman biology page 79-80
 - High flyer series pages 48-49 8 1-2
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EXCRETION AND HOMEOSTASIS

Excretion and homeostasis in animals (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * explain catalase enzyme and hydrogen peroxide
 - * describe the role of catalase enzyme in breaking down hydrogen peroxide
 - * use liver and kidney to investigate the reaction
 - * explaining catalase enzyme and hydrogen peroxide
 - * carrying out the experiment to investigate the effect of catalase enzyme in breaking down hydrogen peroxide
 - * Discussion on results obtained in the experiment
 - * Hydrogen peroxide
 - * Two beakers
 - * measuring cylinder
 - * Piece of liver and kidney
 - * Splint
 - * Ruler
 - Comprehensive secondary Biology students Bk. 2 page 86-105
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 96
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 155-156
 - Golden tips biology pages 110
 - Gateway secondary Biology pages
 - Longman biology page
 - High flyer series pages 3-4
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EXCRETION AND HOMEOSTASIS

Continuous assessment test

OBJECTIVES:

By the end of the lesson, the learner should be able to

- * Answer all the questions asked in the test
- * Learner to answer all the questions
- * Teacher to supervise students

- Question paper
- Marking scheme 9 1-2

EXCRETION AND HOMEOSTASIS

Role of the liver in the regulation of blood glucose

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Describe the role of the liver in blood sugar control
- * Describe the role of insulin hormone
- * Describing the role of the liver in blood sugar control
- * Describing the role of insulin hormone
- * Chart showing steps in controlling blood sugar levels
- Comprehensive secondary Biology students Bk. 2 page 97
- Teachers bk. 2 pages 58-68
- KLB secondary Biology Students book 2 Page 102-103
- KLB teachers book 2 pages
- Longhorn secondary biology: students book 2 page 153-156
- Golden tips biology pages 105-106
- Gateway secondary Biology pages 149
- Longman biology page 79
- High flyer series pages 3-4

EXCRETION AND HOMEOSTASIS

Regulation of blood sugar

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Explain the regulation of blood sugar
- * Describe a flow chart showing the regulation of blood sugar
- * Explaining the regulation of blood sugar
- * Describing a flow chart showing the regulation of blood sugar
- * Flow chart showing regulation of blood sugar
- Comprehensive secondary Biology students Bk. 2 page 98
- Teachers bk. 2 pages 58-68
- KLB secondary Biology Students book 2 Page 102-103
- KLB teachers book 2 pages 49-54
- Longhorn secondary biology: students book 2 page 153-156
- Golden tips biology pages 105-106
- Gateway secondary Biology pages 146
- Longman biology page 78-79
- High flyer series pages 10 1-2

EXCRETION AND HOMEOSTASIS

Thermal regulation in other animals

OBJECTIVES:

By the end of the lesson, the learner should be able to

- * Describe temperature regulation in other animals
 - * Describing temperature regulation in other animals
 - * Photographs of birds, reptiles and camels showing behavior of temperature regulation
 - Comprehensive secondary Biology students Bk. 2 page 100
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 98-100
 - KLB teachers book 2 pages 49-54
 - Longhorn secondary biology: students book 2 page 146-152
 - Golden tips biology pages 106-108
 - Gateway secondary Biology pages 148
 - Longman biology page
 - High flyer series pages 3-4
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EXCRETION AND HOMEOSTASIS

Continuous assessment test

OBJECTIVES:

By the end of the lesson, the learner should be able to

- * Answer all the questions asked in the test
 - * Learner to be able to answer questions in the test
 - * Teacher to supervise students as they do the test
 - Question paper
 - Marking scheme 11 1-2
-

REVISION

Gaseous exchange in animals

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Relate parts of the lungs to its functions
- * Draw and label parts of the lungs
- * Describing the parts of the lungs and relating the to its functions
- * Drawing and labeling parts of the lungs
- * Chart showing parts of the lungs
- Comprehensive secondary Biology students Bk. 2 page 63-64,66
- Teachers bk. 2 pages 58-68
- KLB secondary Biology Students book 2 Page 59-64
- KLB teachers book 2 pages 35-44
- Longhorn secondary biology: students book 2 page 91-94
- Golden tips biology pages 86
- Gateway secondary Biology pages 117
- Longman biology page 66-67
- High flyer series pages 3-4

REVISION

Gaseous exchange in animals

OBJECTIVES:

By the end of the lesson, the learner should be able to describe the functions of the lungs as discussed during gaseous exchange

- * Reviewing gaseous exchange and functions of lungs
 - * Reading notes on gaseous exchange
 - * Notes on gaseous exchange
 - * Charts showing lungs
 - Comprehensive secondary Biology students Bk. 2 page 63-65
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 59-62
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 91-94
 - Golden tips biology pages 85-87
 - Gateway secondary Biology pages 117-118
 - Longman biology page 65-67
 - High flyer series pages 12 1-4
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REVISION

Gaseous exchange in animals (practical lesson)

OBJECTIVES:

By the end of the lesson, the learner should be able to:

- * Identify a mammals lungs
 - * Observe and describe structures of lungs in relation to functions
 - * Identifying fresh lungs of a mammal
 - * Observing and describing the structure of a mammals lungs in relation to their functions
 - * Fresh lungs of a cow
 - * Livestock officer
 - Comprehensive secondary Biology students Bk. 2 page 63-65
 - Teachers bk. 2 pages 58-68
 - KLB secondary Biology Students book 2 Page 63
 - KLB teachers book 2 pages 35-44
 - Longhorn secondary biology: students book 2 page 91-94
 - Golden tips biology pages
 - Gateway secondary Biology pages
 - Longman biology page 66-67
 - High flyer series pages 13
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REVISION AND EXAMINATIONS

EDITED BY WILLIE