



3055 BA SANGAM COLLEGE

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WORKSHEET 7

School: Ba Sangam College

Year: 12

Subject: Biology

Name: _____

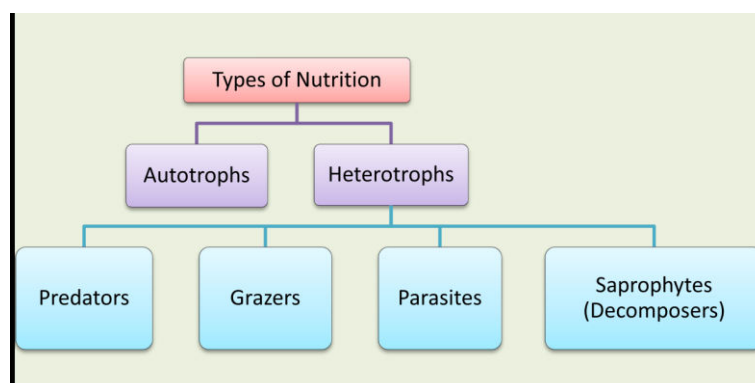
Strand	1 – Structure and Life Processes
Sub strand	1.4 – Comparative Form and Function in Plants and Animals
Content Learning Outcome	Nutrition- Describe the structures and processes associated with the manufacturing and intake of food in selected organisms.

Nutrition

- Nutrition is the process of providing food to the body cells for health and development (growth).
- Every organism needs energy (food) to survive and reproduce.

Nutrition methods

- 2 main modes of nutrition:
 1. **Autotrophic nutrition** - the process by which plants make their own food by converting Solar energy (sunlight) into chemical energy (food).
 2. **Heterotrophic nutrition** - the process whereby organisms obtain food (energy) either from plants or other organisms.



Autotrophs ('*auto*' means *self*); organisms that are capable of making their own food using the solar energy (sunlight) into chemical energy (food) . E.g. plants, some bacteria and some protists.



Heterotrophs ('*hetero*' means *different or other*) organisms that cannot make their own food and depend on plants or animals food.
E.g. animals, fungi, most bacteria and protists.



Predators: organisms that prey (hunt and kill) on other organisms. E.g. sharks prey on big or small fish, toads prey on lizards and insects, cats prey on mouse and birds, mynah bird preys on worms.



Grazers: organisms that feed on an entire population, often without killing them. E.g. cows, goats, green sea turtle, filter feeders (kai and coral), herbivorous insects and some fish.



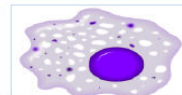
Parasites: organisms that live and feed on or in an organism of a different species and cause harm to their host. E.g. bacteria, fungi, fleas, ticks, nits, lice, tapeworms, protists etc.



Saprophytes (decomposers): organisms which get their energy by feeding on dead organic matter causing it to decay. E.g. fungi, bacteria, maggots, insects, grubs, snails, slugs, beetles, millipedes, ants etc.



Microphages: animals (mostly aquatic) that feed on very small particles suspended in water like phytoplankton and tiny organic fragments.



Fluid feeders: Are organisms that feed on liquid food from plants and animals. There are two groups of fluid feeders;

- **Wallowers** - are organisms that literally wallow (roll about relaxed in water or mud) in their foods. E.g. a gut parasite such as tapeworm.
- **Suckers** – are insects and spiders with mouthparts in the form of a proboscis for piercing and sucking. E.g. Housefly, mosquitoes.



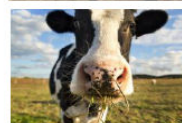
Filter feeders: Include aquatic organisms like sponges, sea squirts, bivalve mollusc and mosquitoes on land. They employ filtering systems to collect, sort and concentrate the particles from water.



Gulpers: Organisms that gulp down their food whole and swallow without chewing their food first. E.g. snakes, *hydra*, sea anemone, frogs and fish-eating birds.



Masticators: Organisms that bite, tear or chew their food into smaller pieces before swallowing. Herbivorous animals such as a cow is a very good example of a masticator which chews its food for long.



- Heterotrophs depend on the autotrophs for food- **(provide energy)**
- **Active and large organisms**- require plenty of energy and food
- **Sessile organisms**- requires small amount of energy and food.

Essay Writing

(10 marks)

1. All organisms, whether autotrophs or heterotrophs, have a nutrition method adapted to their lifestyles so that they can provide their cells with food.

With reference to the above statement, discuss the following:

- definitions of the terms **autotrophs** and **heterotrophs** (2 marks)
- **two** adaptations each, of two different heterotrophs (a herbivore and a carnivore) for nutrition; and (4 marks)
- food storage methods in autotrophs in **two** named examples. (2 marks)

2. Differentiate between wallowers and suckers.

(1 mark)

3. State the function of decomposers?

(1 mark)

4. Give two examples of decomposers?

(1 mark)

5. State the importance of decomposers?

(1 mark)

6. What will happen if there will be no decomposers?

(1 mark)