BIOLOGY GRADE 10
SUMMARY

BY: ADDIS ABABA EDUCATION BUREAU

MAY 2020

- This environment includes stream, rivers, seas and oceans.
- We can also classify aquatic habitats into two as marine water and fresh water . Marine water is water body contain high amount of salt and a fresh water is a water body which is contain less amount of salt .

POPULATION AND COMMUNITY

.

POPULATION :-is a group of living organisms of the same species that live in a particular area . Examples :-population of walia ibex ,population of human beings ,population of dog and etc..
COMMUNITY :- is all different population that are found in a particular area .
Example :-community of domestic animals ,community of wild animals ,school community etc…

• POPULATION

POPULATION AND COMMUNITY

- POPULATIO:-is a group of organisms of the same species that live in a Particular area at the same time .
- POPULATION :- consist only the same species Organisms

✓ The group of the same species organisms that live on land called terrestrial population and that lives in water are called Aquatic population

✓ Some examples of Aquatic population .

- ➢ Population of fish
- ➢ Population of blue whale
- ➢ Population of algae etc..

➢ Some example's of terrestrial population

- ➢ Population of wail ibex
- ➢ Population of birds
- ➢ Population of ants
- ➢ Population of army worn

Population of honey bee and etc

6.1 Activity

1. which one of the following is Aquatic habitat ?
   A, lake tana B, bale mountain park C, California forest D. All
2. which one of the following is marine water ?
   A. river B, red sea C. Indian ocean D. lake lengano E. b and c
3. Among the following one is show population.
   A. group of fish in lake B, group of domestic animals
   C. group of wild animals D. group of insects.

Community :-is a group of organisms of different species that live in a particular Particular place or habit the same time.

- Community is a group of different population that live in a particular place.
- Community is larger than population b/c it consist different population.
  - Examples of aquatic community
    - Ocean community ;- It may include fish, algae , dolphin , whale etc..
    - School community ;-it includes everything in school compound . -human, plant and different ins ects
    - Community of domestic animals;-it includes dogs , cats, goats, sheep and etc.
    - Community of wild animals;-include lions, tiger, beers and etc..

6.2 Activity

1. which of the following aquatic habitat is smallest in size ?

A, ocean B, pond C, sea D. lake

2. which of the following statement is correct?

A. Population consist of both living things and non-living things in area.

B. community consist of organisms of the same species.

C. Community consist of organisms of different species in a given area.

D. population contain many community ,

Factory that determine the existence and survival of a populations.

1. Temperature 2. Light 3. Food 4. Humidity

5. nature of soil 6.competition (predation and parasitism

Factors responsible for interaction b/n organism in the same species .

1. for reproduction (mating)
2. for finding shelter
3. for finding & gathering food

6.3 activity

1. which one of the following is not parts of marine water?

A. ocean B. sea C. lake D. none

2. the group of different population that live together are called .

A. species B . ecosystem C . community D biosphere.

Studying habitat

Dear student why we study habitat ?

- I hope you have got the answer .
  - Studying habitat is quite necessary in various forms. Some of the

1. To know diversity of organisms.
2. To know estimate the population of each species.
3. To know the relationship between organisms and the impact of their environment.

- We can use two method to study habitat

Direct counting method ;-it is a method of counting all the individuals in a population.

THE CRITERIA OF USING THIS METHOD IS

- When sufficient financial res ources and time are allocated .
- Enough and capable man power is assigned .
- Where the study area is smaller .
- Organisms are large enough for counting (with respect size)
- eg human population (we can use direct counting methods)

2.Sampling method ;-is method of using representative(samples) to estimate the numbers of individuals in population .

- This method is applied :
- When habitat is too large and difficult to manage,
- Organisms are too small in size.to be count.
- People want to save time and money .

Some instruments used during studying habitats are

1. Quadrate;-is best suited for counting plants . square or rectangular frame made of wood or metal suitable for sampling vegetables .

2. sweep net ;- is a can vans bag used for collecting grass hopper and other invertebrates in the grass.

3. butterfly net is a can vans bag -used for collecting flying insects.

Example butterfly and other flying insects .

4. potter (aspirator);- used for collecting small insects from tree trunks ,rock walls

And leaf.

5. small fish trap ; -for collecting small fish and small fish sized organisms from pond.

6. tullgren funnel ;- for collecting soil insects by attracting through a light bulb .

7. planktons: used for collect small drifting pond life like algae and diatoms.

8. terrarium ;-is enclosed container housing a collection of amphibians and insect in their natural plant habitat

9. Aquarium;-is an artificial pond / container used for keeping and studying aquatic

Animals and plants .

10.bulb pipette ;-used to transfer small aquatic animals into container.

6.4 Activity

1,which one is used for take a samples of pond life ?

A, sweep net .B, butter fly net C, tullgren funnel D, plankton net

2,which on is suitable for take a sample of vegetables?

A, quadrat B, aquarium C, small fish trap D, plankton net .

3,which one is used for catch flying insects?

A, sweep net B, butterfly net C, terrarium

D, aquarium.

4,which one is used for collecting soil insects?

A, tullgren funnel B, butterfly net C, sweep net D,all.

SUMMARY OF THE TODAY LESSON.

- population is a group of organisms of the same species in a given area at the same time .
- population consist only the same type organisms.
- Community is a group of different population in a given area .
- Community consist different species .
- Habitat study is quite necessary in various forms.
- Direct counting method is a method of counting all individuals in population.
- Sampling method is a method of using representatives of populations which is used to estimate a total populations.
- We use different instrument during habitat study. some of them are
- Sweep net :for collecting insects from large grasses.
- Butter fly net for catch flying insects like butterfly .
- Plankton net :for collect small drifting organisms from pond.
- Quadrat :used for take sample of vegetables.
- Tullgren funnel :used for collect soil insects and invertebrates.
- Bulb pipettes :used for transfer soft body animals into container.