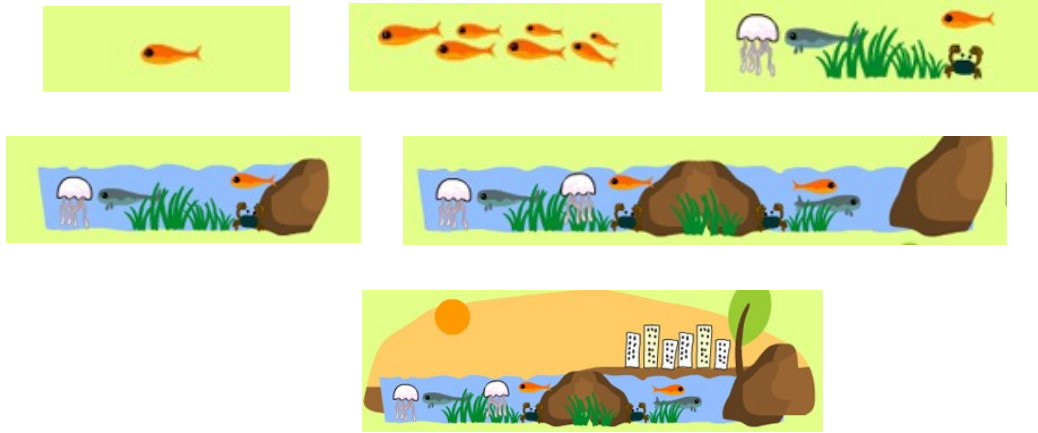


# 10 ENVIRONMENTAL SCIENCE

1. You are going to listen to a one-minute introduction to environmental science. 1.05 – 2.05

Before listening, describe the pictures: <https://www.youtube.com/watch?v=FhaldPmkoNE&t=245s>



Now describe how life is organized:

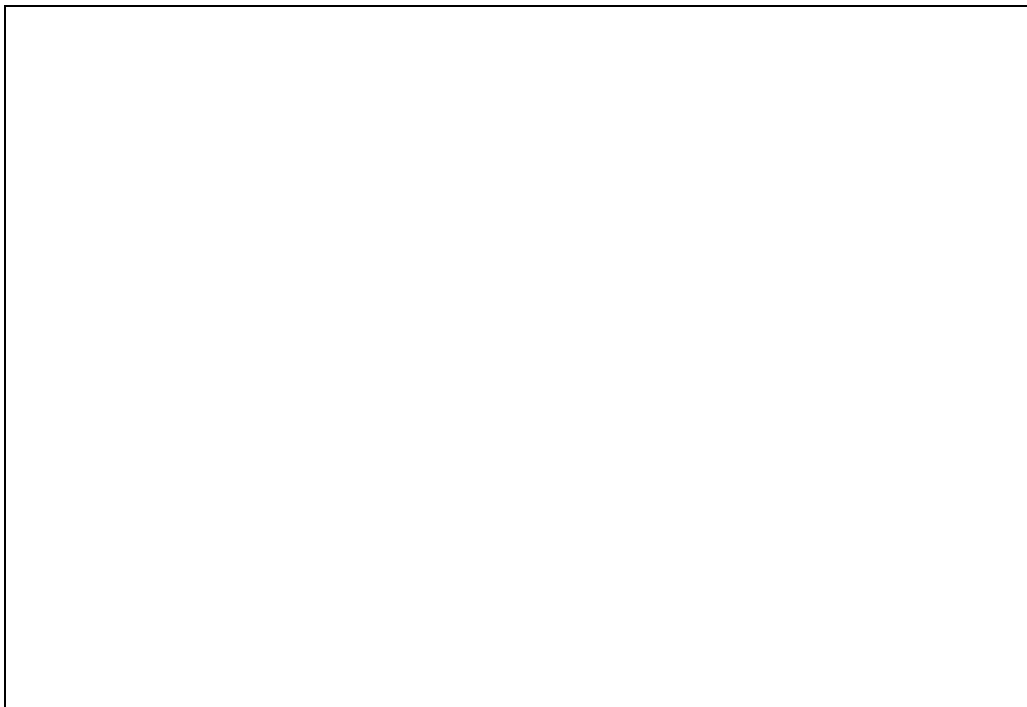
- a) listen and supply a term for each picture
- b) explain the differences between the successive levels

2. BIOMES: Which factors do you think determine the types of biomes?



Select the terrestrial biomes and design a graph which shows their relationship to the two factors:

- salt marshes    boreal forest    grassland    mangroves    temperate seasonal forest*
- coral reefs    shrubland    rainforests    savanna    tundra*



Compare with the graph in the video <https://www.youtube.com/watch?v=FhaldPmkoNE&t=245s> 2.06- 4.08

## EXPLAINING DIFFERENCES

### 3. Read the text about how a biome differs from an ecosystem and find examples of comparing language.

A biome differs from an ecosystem in focusing on different aspects of the way of life of organisms. While an ecosystem means the interaction of living and non-living things at a specific place, a biome, on the other hand, is a specific geographic area characterized by the species living there. A biome can be made up of many ecosystems. For example, an aquatic biome can contain ecosystems such as coral reefs and kelp forests.



Kelp forest

### 4. Read about two disciplines. What are the disciplines and how do they differ / overlap?

Ecology and biogeography are closely related, interdependent and are easily confused because of the overlap regarding subject matter. There are, nevertheless, some distinctions that can be drawn. While biogeography is concerned with distributional patterns and their explanations, ecology is more concerned with factors controlling abundance. Biogeography deals with a range of taxonomic groups, from species to phyla, whereas ecology is more generally focused on the species level and developed through a consideration of interactions between individuals within a population and between populations of different species within a community and their environmental relations.

Geographical considerations of biogeography tend to adopt a wider range of contexts. For example, geographers consider the analysis of the multiple functional roles of the many components of the biosphere to be biogeography. Geographers are also more concerned with applied aspects of the discipline, for example the impact of people on biodiversity.

<http://www.eolss.net/Sample-Chapters/C01/E6-14-02-04.pdf>

### 5. Choose examples of two biomes. Prepare a speech showing their similarities and differences.

<http://www.ucmp.berkeley.edu/glossary/gloss5/biome>

*Arctic tundra – northern hemisphere - encircling the north pole, cold, desert-like conditions, growing season 50/60 days, subsoil permafrost exists, water saturates the top layer, low shrubs, mosses, grasses - plants are short and group together, caribou, hares, foxes, bear*

*Alpine tundra – on mountains at high altitudes, throughout the world, growing season 180 days, night-time temperatures below zero, soil is well drained (no permafrost layer), plants are similar to arctic ones, marmot, goats, elk*

*Steppes - interiors of North America, Asia and Europe, dry areas of grassland, hot summers and cold winters, fauna: badgers, hawks, snakes. Grazing livestock + growing wheat → overgrazing, salts left from irrigation waters, loose soil (after ploughing) – strong winds, drought – dust storms.*

*Savanna – Africa, Australia, South America, grassland with scattered trees, Deciduous trees and shrubs, warm or hot climates, both a dry and a rainy season. Zebras, buffaloes, kangaroos, mice, moles, snakes. Environmental concerns → poaching, overgrazing, and clearing of the land for crops.*

*Savannah (GB)*

DESCRIBING DIFFERENCES	DESCRIBING SIMILARITIES
Compared to ..., In comparison to ...,	both ... and ...
Unlike ..., In contrast to ...,	Like ..., Similarly to ...,
is different from...	is similar to ..., is comparable with ...
differs from ... in	resembles ... in

whereas / while

... are equal / identical