

## READING ACTIVITY

### SPECIES DIVERSITY

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Professor:** Claudia Camila Coronado Rodríguez

**Purpose:** Through the video “Biodiversity: Ecosystem Diversity” students will know about ecosystems diversity, genetic diversity, species diversity.

**Content aim:** Students will be able to identify the importance of species diversity.

**Language aim:** Students will be able to discuss species diversity.

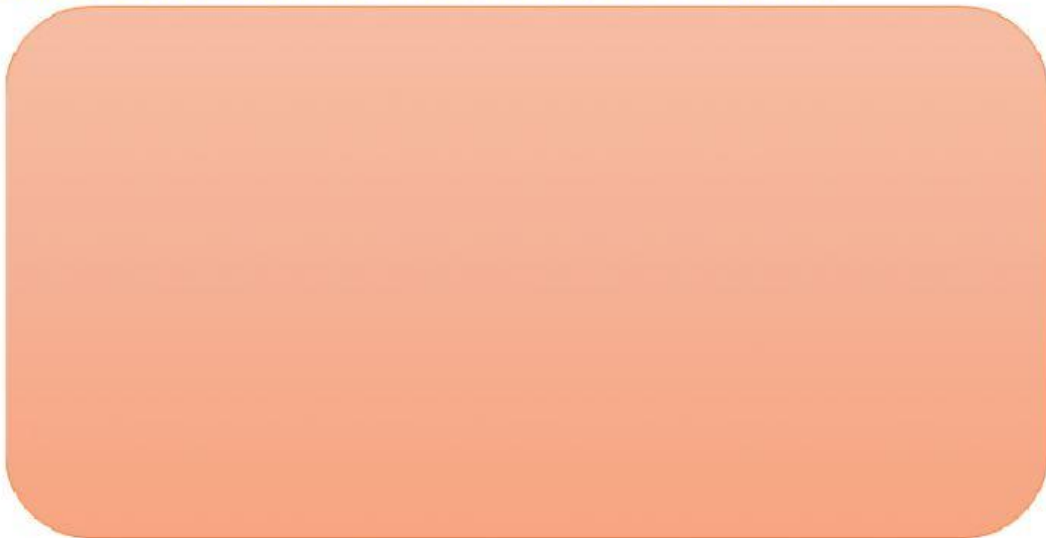
**Group:** Environmental engineering.

**Level IV**

#### PRE-READING

Watch the video

[Biodiversity: Ecosystem Diversity | Species Diversity | Genetic Diversity](#)



Biodiversity is \_\_\_\_\_

- a. a variety and variability of life on Earth.
- b. a variety of death species on Earth
- c. a variety of species on Earth.
- d. a variety of fauna and flora on Earth.

How many types of biodiversity are there?

- a. 1
- b. 2
- c. 3
- d. 4

Ecosystem diversity is \_\_\_\_\_

- a. the variation of species found in a region.
- b. the variation of ecosystems found in a region.

- c. the variation of genetics found in a region.
- d. the variation of life found in a region.

Species diversity is \_\_\_\_\_

- a. the number of different species present on Earth and the amount of species in each ecosystem
- b. the number of different fauna and flora species present in an ecosystem.
- c. the number of different species present in a region, country or continent.
- d. the number of different species present in an ecosystem and relative abundance of each of those species.

Genetic diversity is \_\_\_\_\_

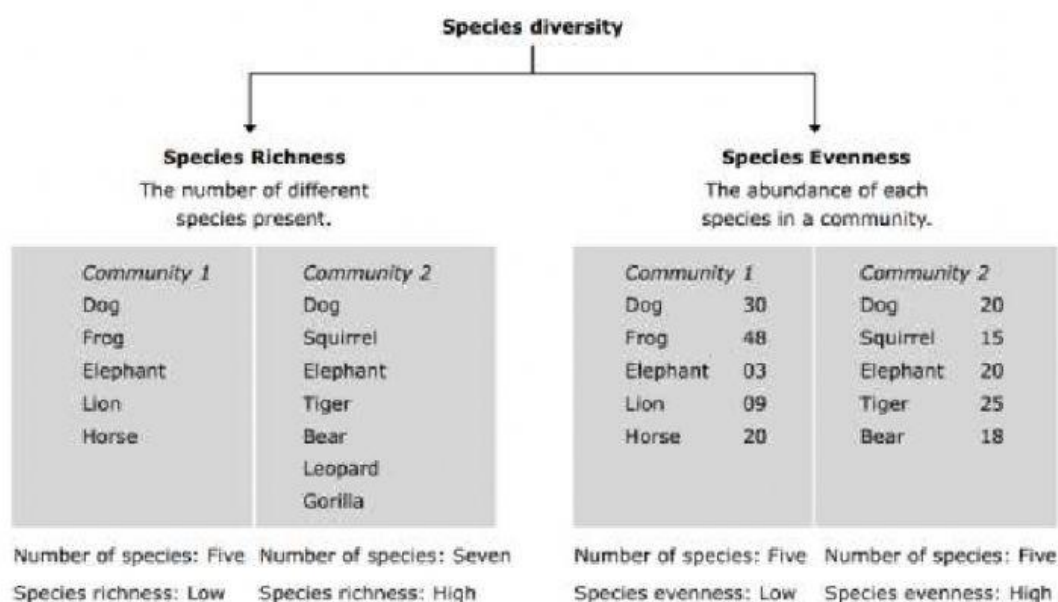
- a. the total number of genetic characters in the genetic makeup of a species.
- b. the total number of characteristics of the different species of an ecosystem.
- c. the total number of species and their physical characteristics in an ecosystem.
- d. the total number of characteristics species have.

## WHILE-READING

Read

### Species diversity

Species diversity is one of the most important and basic characteristics of a community. The number of species and their relative abundance define species diversity of a community. It includes the number of species in a community (i.e. richness) and the relative abundance of each species (i.e. evenness). Species richness is simply the number of species in a community. But, among the array of species that make up the community, not all are equally abundant. We can find the relative abundance by counting all the individuals of each species within a community and determining what percentage each species contributes to the total number of individuals of all species. Communities in which the species are all more or less equal in abundance exhibit evenness, whereas communities with one or a few abundant species (i.e. present in large numbers) show dominance. Species evenness is highest when all species in a sample have the same abundance. Abundance patterns in communities can be examined by numbers of individuals per species, biomass per species, or percent cover per species.



**Table 4.1** Comparison of species richness and species evenness

Species	Individuals per species	
	Community 1	Community 2
Dog	10	05
Frog	10	05
Elephant	10	05
Lion	10	05
Horse	10	30
Total individuals	50	50
Total number of species	05	05

Both the number of species (species richness) and their relative abundance (species evenness) define species diversity. In table 4.1, two hypothetical communities– 1 and 2 – both have 5 species and 50 individuals. Species richness is the same in both communities. But the community–2 has a different species evenness. Thus, the most abundant species is plotted first along the x-axis, with the corresponding value on the y-axis being the value of relative abundance. This process is continued until all species are plotted. The resulting graph is called a rank-abundance diagram. It is a graphical plot of numbers of individuals per species against the rank of species commonness in the community. A rank abundance diagram can be drawn for the number of individuals in a community, biomass of individuals, ground area covered by plants and other variables all plotted against rank abundance.

Taken from Fundamentals of ecology and environment Book. (p. 91-92)

Answer the following TRUE (T) of FALSE (F) questions:

Species diversity is one of the most important and basic characteristics of a community.	T	F
We can find the relative abundance by counting all the individuals of each species within a community.	T	F
Abundance patterns in communities can't be examined by numbers of individuals per species	T	F
Both the number of species (species richness) and their relative abundance (species evenness) define species diversity.	T	F
A rank abundance diagram can't be drawn for the number of individuals in a community.	T	F

## POST-READING

Discuss the following questions:

What is species?

What is diversity?

What is species diversity?

Describe species diversity with an example.

What is the importance of species diversity?

Include:

Present simple sentences

Expressions

- Speaking for myself...
- Personally...
- In my view...
- For me...
- As I see it...
- As far as I'm concerned...

If you feel very strongly about the topic in question you can use the following phrases:

- I'm sure that...
- I'm convinced that...
- I'm certain that...
- There's no way...

### Expressing agreement

- I totally agree.
- I couldn't agree with you more.
- You're absolutely right.
- No doubt about it.
- Definitely / Absolutely / Precisely

### Expressing disagreement

- I'm afraid I disagree.
- I see your point, but...
- That's not always true.
- Not necessarily.
- That's one way of looking at it.
- However...