Name: _____

Date: _____

Class: _____

IB ESS

3.1 Introduction to Biodiversity

Significant ideas:

Biodiversity can be identified in a variety of forms including species diversity, habitat diversity and genetic diversity.

The ability to both understand and quantify biodiversity is important to conservation efforts.

Types of Biodiversity

1. **SPECIES DIVERSITY**

a) Outline what is meant by "species diversity".

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_____

b) Look at the data comparing fish species in two ponds

	Pond A	Pond B
Fish species 1	30	54
Fish species 2	25	13
Fish species 3	36	0
Fish species 4	18	3
RICHNESS		
EVENNESS		
D		

i) Complete the boxes to state the species **richness** (a number) and species **evenness** ("more even" or "less even") for each pond.

ii) Using the Simpson's Reciprocal Index (D) to ascertain which of the ponds has a higher species diversity. SHOW YOUR WORKING.

Pond with the highest species diversity = _____

2. Habitat diversity

a) Outline what is meant by "habitat diversity"

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_____

b) Complete the spider diagram to list as many habitat types as you can think of.

canopy

**Examples
of Habitats**

3. Genetic diversity

a) Outline what is meant by "genetic diversity".

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b) With reference to **two named examples**, describe what is meant by "low genetic diversity" and "high genetic diversity".

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Biodiversity – Why Bother?

1. Outline the relevance of a diversity index.

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2. Outline why it is important to quantify biodiversity.

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3. Explain why assessing changes in biodiversity over time can be important.

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4. Biodiversity data can be used to designate an area as a biodiversity hotspot.

    a) Define "biodiversity hotspot".

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    b) List the criteria used to designate an area as a biodiversity hotspot.

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