

Biodiversity

Name:

Date:

INQUIRY

The Korean DMZ has been empty of humans for 70 years. It's now one of the most biodiverse places in East Asia. What does this tell us?

Discuss with your partner. Write your initial ideas below:

Key Vocabulary

Term	Definition
Biodiversity	The variety of different species in an ecosystem.
Species richness	The number of different species in an area.
Abundance	The number of individuals of each species.
Quadrat	A square frame used to sample organisms in a habitat.

Part A — Understanding Biodiversity

1. Explain why higher biodiversity makes an ecosystem MORE stable and resilient. Use an example. [3 marks]

2. Why does a wheat field have LOW biodiversity while a rainforest has HIGH biodiversity? [2 marks]

Part B — Measuring & Comparing

3. A student places a 1 m x 1 m quadrat in two areas of the NIS garden. Area A has 3 species (15 dandelions, 2 worms, 1 beetle). Area B has 6 species (4 dandelions, 3 worms, 2 beetles, 2 ants, 3 moss patches, 1 spider). (a) Which area has higher species richness? (b) Which area has higher total abundance? (c) Which area is more biodiverse? Explain. [4 marks]
4. The Korean DMZ has 5,000+ species. China's Yangtze River once had unique species (paddlefish, baiji dolphin) but many are now extinct. Compare the biodiversity of these two areas and explain the main reason for the difference. [4 marks]

Part C — Inquiry Extension

5. Design a simple investigation to compare biodiversity between two areas of the NIS campus (e.g. garden vs. car park edge). Include: (a) hypothesis (b) equipment needed (c) method (d) how you would record data (e) how you would calculate biodiversity. [6 marks]