

# Adaptations

Name:

Date:

## INQUIRY

**Giant pandas only eat bamboo, but bamboo has almost no nutritional value. How have pandas adapted to survive on such a poor diet?**

Discuss with your partner. Write your initial ideas below:

## Key Vocabulary

Term	Definition
<b>Adaptation</b>	A feature helping an organism survive in its habitat.
<b>Structural</b>	Physical features (e.g. thick fur, long beak).
<b>Behavioural</b>	Actions (e.g. migration, nocturnal hunting).
<b>Functional</b>	Internal processes (e.g. producing venom).

## Part A — Classifying Adaptations

- Classify each as structural, behavioural, or functional: (a) Polar bear thick fur (b) Birds migrating south for winter (c) Cactus storing water in stems (d) Chameleon changing colour (e) Snake producing venom (f) Giant panda's 'pseudo-thumb' for gripping bamboo. [3 marks]

## Part B — Regional Adaptations

2. Korean water deer have no antlers but have long fangs. Explain how this could be an advantage in their forest habitat compared to open grassland deer with antlers. [3 marks]
3. The European mole (found in Germany) has shovel-like paws, tiny eyes, and very sensitive whiskers. Explain how EACH feature helps it survive underground. [3 marks]
4. Nanjing's Xuanwu Lake birds survive despite urban noise, pollution, and human disturbance. Suggest two ways they may have adapted behaviourally to city life. [2 marks]

### **Part C — Inquiry Extension**

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5. A new island forms in the East China Sea after a volcanic eruption. It has no life. Predict what types of organisms would arrive first, second, and third over 100 years. Explain what adaptations each would need. [5 marks]