Ecosystems and population factors

Teacher / technician

YEAR 11 / LESSON 103 / BIOLOGY + SCIENCE (DOUBLE AWARD)

Staff preparation and answer guidance. Keep separate from student sheets. Original learning tasks; no supplied numerical example represents class measurements.

Coverage and delivery

Shared Biology / Double Award: 4.1 and 4.5. Ecological terms and population influences.

Allow about 60 minutes. Follow the student sequence and use the answers to check reasoning.

Requisition • class of 30, working in 15 pairs

Item	Per pair / setup	Class total
Student booklets	1 per learner	30
Labelled habitat photographs and factor cards	1 set per pair	15 sets
Rulers	1 per pair	15

Immediate safety

Paper, modelling and written reasoning only. No chemicals or biological samples are handled.

Preparation and delivery

Read alongside the student method

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1. Provide 30 booklets, 15 rulers and 15 sets of labelled habitat photographs and factor cards.

2. Keep answers separate until learners have attempted the tasks; discuss the reasons for corrections.

3. Choose photographs of two familiar habitats and label the location. Provide cards for light, soil moisture, temperature, competition and predation. This lesson plans a survey on paper; it does not include an outdoor survey or animal handling.

Close of lesson

• Return models and keep the corrected work.

Check before teaching

Check the cards, reference data and quantities against this requisition. Keep the staff answer guide separate until the checking stage. Supplied numerical practice datasets are labelled examples; they are not class measurements.

Answers and teaching notes

Expected explanations • do not give as experimental observations

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- Members of one species in a defined area.
- Populations of different species in an area.
- For example light or soil moisture.
- For example competition or predation.
- Distribution concerns location; abundance concerns quantity.
- Moisture, soil, disturbance and other factors may also differ.

References and provenance

Pearson Biology specification

Prepared 22 November 2026. Original wording, tables and questions. Sources inform the concepts and technique; the lesson scope and classroom quantities are explicitly described here. No laboratory trial or final school risk approval is claimed.