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WRITTEN LESSON PLAN

AI BIODIVERSITY CHALLENGE

Grade: Grade 5
Module: Promotion of Biodiversity Outside and Inside Greenhouses
Suggested duration: 45 minutes

Lesson focus

- This lesson turns biodiversity observation into a practical investigation and makes AI identification something students must check, not simply trust.

Learning objectives

- Identify and record at least three organisms or signs of biodiversity in a greenhouse or comparable school environment.
- Use a plant-identification application to suggest a species name and verify the suggestion using visible characteristics or a reliable reference.
- Explain one benefit and one limitation of using AI to study biodiversity.

Materials and preparation

- Access to a greenhouse, school garden, or teacher-prepared photographs of plants and organisms
- Tablets or smartphones with a suitable identification app (e.g., PlantNet or iNaturalist), if available
- Printed observation sheets, pencils and a species reference guide
- Projector or board for sharing observations

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LESSON PROCEDURE

Engage | What lives here? (5 min)

- Display two contrasting greenhouse or garden photographs. Ask: ‘How many different living things can you notice?’
- Explain that biodiversity includes plants, animals and microorganisms, and that not all organisms are easy to observe.

Prepare | How to record evidence (7 min)

- Model one observation: describe leaves, flowers or other visible features before using an app.
- Demonstrate that an AI suggestion is a hypothesis to check, not proof of identity.
- Agree on fieldwork rules: do not pick plants, disturb animals or share location/personal information unnecessarily.

Investigate | AI Biodiversity Challenge (18 min)

- In small groups, observe a greenhouse, garden or a prepared photo collection.
- Record at least three organisms or observations; use an identification app for plants when appropriate.
- For each suggested identification, record the app's name and one feature that supports or questions the suggestion.

Compare | What did we discover? (10 min)

- Groups share one identification they trust and one they are uncertain about.
- Compare indoor and outdoor observations when both are available; discuss why counts may differ.
- Ask: ‘What can AI help us notice? What can it get wrong?’

Exit ticket | Evidence and reflection (5 min)

- Each student writes one species or observation, one piece of evidence and one limitation of AI identification.

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STUDENT ACTIVITY SHEET

Copy or print this page section for each group or student.

Observation 1

- Location / image: _____
- Visible features: _____
- Suggested species: _____
- Evidence / uncertainty: _____

Observation 2

- Location / image: _____
- Visible features: _____
- Suggested species: _____
- Evidence / uncertainty: _____

Observation 3

- Location / image: _____
- Visible features: _____
- Suggested species: _____
- Evidence / uncertainty: _____

Assessment / success criteria

- Observation sheet includes three records with descriptive evidence.
- Student distinguishes an app suggestion from a verified identification.
- Exit ticket names a realistic limitation of AI identification.

Differentiation

- Support: Provide three clearly photographed plants and a word bank (leaf, flower, stem, colour, shape). Allow paired recording.
- Additional challenge: Ask students to compare two app suggestions for the same plant and explain how they would resolve disagreement.

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Extension activity

- Create a class biodiversity log or compare observations across two dates.

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