



BIODIVERSITY AND US



A Climate Collective Action Project



Session 1: Discovering Biodiversity Around Us

Objective:

Introduce students to plant types (trees, shrubs, herbs, climbers) and the animals they support (insects, birds, caterpillars, spiders).

1. Introduction: What is Biodiversity? (Indoor – 15 min)

Instructions for the teacher:

- Begin by asking: "What living things do we see around our school every day?"

Write down students' answers (e.g., ants, trees, birds, lizards).

- Introduce the term **Biodiversity**:

"Biodiversity" means the variety of life — all the different plants, animals, insects, fungi, and even tiny microbes that live around us. They each play a role in making the environment healthy, balanced, and alive.

- Use a **visual aid**: Show pictures of diverse species from India — a neem tree, banyan, sunbird, squirrel, peepal leaf, butterfly, and mushroom.

Ask students to observe:

- Shape of leaves
- Colors of insects
- Size of birds
- Movement of ants or caterpillars

Teaching Tip:

You don't need to name everything! Focus on observing differences — small vs. large, slow vs. fast, many-legged vs. winged.

2. Grouping into Flora and Fauna Teams (Indoor – 5 min)



Instructions for the teacher:

- Split students into two groups:
 - *Flora Explorers*: Observe and record all types of **plants** — trees, shrubs, herbs, climbers, grasses.
 - *Fauna Detectives*: Look for **animals** — insects, caterpillars, birds, spiders, earthworms, butterflies, even signs like chewed leaves or nests.

Each student gets a small journal and pencil. They will draw or write their findings.

3. The Biodiversity Walk (Outdoor – 20 to 30 min)

Instructions for the teacher:

- Choose a safe time (morning or evening when it's not too hot).
- Walk slowly around the school campus.
- Ask students to be silent and attentive to **movement, color, sound, and textures**.

Observation Prompts for Flora Explorers:

- What is the size of the plant?
- What shape are its leaves?
- Does it have flowers or fruits?
- Are there insects on it?

Observation Prompts for Fauna Detectives:

- Where did you see the insect?



- What was it doing? (e.g., crawling, flying, hiding)
- Did it leave a mark? (e.g., hole in the leaf, nest)

Students may also take photos (if allowed) or draw sketches.

Safety tip: Ask students to not touch unknown insects or plants without permission.

4. Sharing Discoveries (Indoor – 15 min)

Instructions for the teacher:

- After the walk, gather students in a circle.
- Ask each group to present:
 - What did they observe the most?
 - Where did you see the most life?
 - Was there a quiet or “empty” area?
 - Did they see animals and plants together?
 - Why do you think that is?
 - What surprised them?

Encourage empathy: “How do you think that butterfly feels when it loses its flower?”

Ask them to:

- Sketch one memorable moment in their journal.
- Write or share a story: “I saw a spider building its web...”

Resources:

- [SeasonWatch Tree Identification Posters](#)
- [WWF India Biodiversity Explorer Kit](#)
- [iNaturalist School Projects](#)



Session 2: Mapping Schoolyard Biodiversity

Objective:

Help students map and understand where biodiversity thrives on their campus.

1. Create a Base Map (Indoor – 10 to 15 min)

- On a large sheet of chart or graph paper, help students sketch a rough outline of the school grounds.
- Include classrooms, the playground, trees, gardens, walls, open areas, and water points.
- Label areas clearly (e.g. “Under the big neem tree”, “Near tap”, “Behind the canteen”).

☐ Facilitator tip: You can pre-print a satellite map of the school from Google Maps and trace over it.

2. Add Observations from Session 1 (Indoor – 15 min)

- Ask students to recall where they observed flora and fauna during the walk.
- Use symbols:
 - ☐ for trees
 - ☐ for butterflies
 - ☐ for birds
 - ☐ for caterpillars
 - ☐ for spider webs
- Color-code or annotate zones with numbers of sightings.
Optional: Provide stickers or cutouts for younger students to paste.

3. Identify Biodiversity Hotspots (Indoor – 10 min)



- Use the annotated map to ask:
 - “Which areas had the most life?”
 - “What is common about these zones? (shade, native trees, fewer people?)”
- Highlight or circle “hotspots” with green or red pens.

Key learning: Biodiversity tends to be richer where plants are varied and there is minimal disturbance.

4. Reflection Discussion (Indoor – 10 min)

Ask the class:

- “Why do you think some areas had fewer animals?”
- “What can we change to help biodiversity spread to more places?”

Ask students to write or draw:

- “One thing I noticed about plant and animal relationships.”

Resources:

- [CCE Biodiversity Handbook – SeasonWatch](#)
- [Education Nature Park – Mapping Case Studies](#)
- [National Geographic Mapmaker](#)

Session 3: Making Ecological Connections

Objective:

Understand the dependence of fauna on flora—why biodiversity needs a home.



1. Gather Around the Map (Indoor – 10 min)

- Use the biodiversity map from Session 2.
- Ask students to observe: “Where do we see the most insects or birds?”
- Mark or circle these “biodiversity hotspots.”

2. Ask Why: Begin Guided Discussion (10 min)

- Use prompts:
 - “What kinds of plants are in those areas?”
 - “Are they shady or sunny? Moist or dry?”
 - “Do they have flowers or fruits?”
- Students begin to realize: More diverse plants = more diverse animals.

3. Introduce Ecological Concepts (10 min)

- Explain simply: Animals depend on plants for shelter, food, water.
- Link it to their lives: “We like to live where there’s water, food, and clean air. So do birds and insects.”

4. Drawing Activity (Optional – 10 min)

- Ask students to draw two pictures:
 1. A place where they saw many living things.
 2. A place where they saw very few.

Resources:

- Biodiversity Booklet – Wipro Earthian
- Citizen Science – Natural History Museum LA



- iNaturalist Field Guide Tutorial

Session 4: Interviewing the Community

Objective:

Explore local ecological memory and compare past biodiversity with the present.

1. Prepare Questions (10 min)

Examples:

- What birds or animals did you see when you were younger?
- Were there more or fewer trees then?
- What were your favorite plants? Are they still around?

2. Conduct Interviews (Home Activity)

- Assign students to interview a parent, grandparent, or older neighbor.
- Record answers in journals or voice recordings (if possible).
- Ask them to collect a story — e.g., “There used to be a koel every summer...”

3. Share in Class (30 min)

- Invite volunteers to read or share what they found.
- Put common themes on a board:
 - “More sparrows before”
 - “Used to be a peepal tree here”
 - “Now we see less butterflies”

4. Reflect and Discuss



- Why do they think biodiversity changed?
- What does this mean for their future?

Resources:

- [Youth4Environment.org – Healthy Biodiversity](https://youth4environment.org/healthy-biodiversity)
- [Natural History Museum: Why Community Science Matters](https://naturalhistorymuseum.org/why-community-science-matters)
- [Citizen Science India Projects](https://citizen-science-india.org/projects)

Session 5: Designing a School Biodiversity Garden

Objective:

Use findings from previous sessions to design a garden or green zone that supports local biodiversity.

1. Revisit the Map and Observations (10 min)

- Highlight empty zones or walls with potential for greening.
- Ask: “Where would birds or butterflies feel welcome?”

2. List Needs and Features (10 min)

Brainstorm features like:

- Native flowering plants
- Herbs in recycled pots
- Butterfly puddling trays
- Birdbath or feeder
- Bug hotel

3. Decide the Kind of Garden (5 min)



- Ask students: *“What kind of garden do you want to create? Herb garden, butterfly-friendly, bird-friendly, or a mix?”*
- Write down the garden type to guide plant and material choices.

4. Source Plants from Home & Community (15 min)

- Create a **Plant Sourcing Table** listing:

Plant Name	Type (Seed, Stem, Sapling)	Who Has It at Home?	Notes (e.g., how to collect seeds or stems)
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- Circulate this table among students and their families to find who already has these plants or can share seeds/stems for grafting.

5. Decide on Pots and Materials Needed (10 min)

- Estimate the number of pots and containers required based on garden design.
- Brainstorm and list materials needed for garden setup, e.g.:
 - Pots (plastic, clay, recycled containers like old buckets, tins, bottles)
 - Soil and compost
 - Tools (small trowels, watering cans)
 - Supports (sticks, wire, strings)
 - Materials for butterfly puddling trays (shallow trays or plates)
 - Birdbath or feeders (old bowls, plates)
 - Bug hotel materials (wood scraps, dry leaves, hollow stems)
- Circulate among students for contributions, encouraging use of household/recycled materials.



6. Design the Garden Layout (20–30 min)

- Provide chart paper or design templates.
- In groups, students draw their garden plan, including:
 - Plant types and placement
 - Pot locations
 - Features like puddling trays, birdbaths, bug hotels

Resources:

- [Wipro Earthian Biodiversity Planning Toolkit](#)
- [SeasonWatch Phenology Tools](#)

Session 6: Implementation & Installation

Objective:

Bring the plan to life through planting and installation.

Step-by-step:

1. Assign Roles

- Designers → Sketch layout
- Gardeners → Dig and plant
- Artists → Make signs and posters
- Maintenance team → Plan watering schedule

2. Gather Tools and Materials

- Collect pots, compost, saplings, watering cans



- Try to use recycled items (paint cans, bottles)

3. Plant and Decorate (30–60 min)

- Help students follow the plan
- Support with tasks and ensure safety
- Let them paint signs like: “Pollinator Corner”, “Butterfly Spot”

4. Reflection Circle

- Ask: “What did you enjoy most?” “What would you do differently next time?”

Resources:

- [WWF One Planet Academy – Biodiversity Projects](#)

Session 7: Monitoring, Sharing, and Reflection

Objective:

Observe the outcomes and reflect on the biodiversity project’s impact.

1. Weekly Observation (20 min/week)

- Students take notes on:
 - New birds or insects
 - Flowering stages
 - Plant height/growth
- Use printed or digital observation logs

2. Photography or Nature Journals



- Ask them to draw or take a photo every week.
- Make a timeline wall with these pictures.

3. Group Reflection Session (30 min)

Ask:

- “What changed since we planted the garden?”
- “Have we seen any new animals?”
- “What do you want to do next?”

4. Showcase

- Make a poster or presentation for school assembly.

Resources:

- [SeasonWatch Tree Tracking App](#)
- [iNaturalist Observation Guide](#)

Activity Sheet :

https://docs.google.com/document/d/1uGEpgLpgo9IMp1i7vFuOS_2lAwQbwcPX/edit?usp=sharing&ouid=10278653774637285390&rtpof=true&sd=true