BUILD YOUR MINI ECOSYSTEM

Age Group: 60–72 Months
Total Duration: 80 Minutes (40 + 40)
Setting: School Garden / Outdoor Planting Area

OBJECTIVES

- To concretize the concept of ecosystem
- To demonstrate the relationship between plant–soil–water–sun
- To develop cause–effect reasoning
- To foster responsibility and sustainable behaviour
- To strengthen outdoor experiential learning

MATERIALS

- Small planting pots
- Soil
- Bean seeds
- Water container
- Small stones (for drainage)
- Natural leaves
- Water monitoring chart
- Sustainability pledge poster

SESSION 1 (40 Minutes)

Inquiry Circle (10 min)

The teacher asks:

- “What do plants need to live?”
- “What happens if there is no sun?”
- “What happens if we give too much water?”

Children share prior knowledge and ideas.

Building the Mini Ecosystem (20 min)

Each child:

- Places small stones at the bottom of the pot (drainage layer)
- Adds soil
- Plants the bean seed
- Waters carefully

The teacher explains: “This is a small ecosystem. Soil, water, air, and sunlight work together.”

First Reflection (10 min)

Children discuss:

- “Why is soil important?”
- “What happens if we overwater?” Cause–effect thinking is encouraged.

SESSION 2 (40 Minutes)

Ecosystem Observation (10 min)

Children:

- Check soil moisture
- Observe the seed condition
- Identify sunlight exposure

Teacher asks: “What might happen in three days?” Children make predictions.

Responsibility & Care Chart (15 min)

Each child:

- Marks their watering day
- Checks soil before watering
- Learns that plants should not be overwatered

A classroom “Water Control Chart” is displayed.

SUSTAINABILITY BEHAVIOURAL CONNECTION

This activity promotes not only environmental awareness but also sustainable action.

Climate Action Extension

Children are guided with questions:

- “Why should we use water carefully?”
- “How can we collect rainwater?”

- “How can we protect our plants?”

Concrete Sustainable Actions

- Checking soil before watering
- Avoiding unnecessary water use
- Collecting rainwater in a container
- Weekly “I Care for My Plant” monitoring

Sustainability Pledge

Children create short commitment statements:

- “I will use water carefully.”
- “I will protect plants.”

The pledge is displayed in the classroom and documented.

Through this extension, the activity integrates:

- Ecosystem understanding
- Resource conservation
- Behaviour change

INCLUSION – SPECIFIC ADAPTATIONS

For Children with Sensory Sensitivities

- Option to wear gloves
- Alternative soft-texture materials
- Quiet planting area

For Children with Limited Mobility

- Table-level planting station
- Lightweight materials
- Responsibility for chart tracking instead of watering

For Children with Language Support Needs

- Visual step-by-step cards
- Acceptance of one-word responses
- Illustrated instruction cards

Enrichment for Advanced Learners

- Weekly plant growth graph
- Measuring plant height
- Discussion: “Why do some plants grow faster?”

These adaptations ensure accessibility, differentiation, and inclusion.