SEEDS

Empowering pre-primary and primary school teachers' in using and combining Eco-Art for Eco awareness, psycho-social tools and non-formal teaching methods

MODULE 4
Eco – Education
ACTIVITIES

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Topic 4 – Activity 1: *The 3 Rs posters*

1. Activity Overview

Activity Type: Group activity.

Duration: 60 minutes.

Age: 4 to 12

Number of participants: 4 to 25

2. Activity Description:

Students will learn about the 3Rs (Reduce, Reuse, Recycle) and create their own posters to promote environmental awareness (EPA, 2021; UNEP, 2016; Palmer, 1998).

3. Material and Resources

Required Materials:

- Large sheets of paper or poster board.
- Markers, crayons, or colored pencils.
- Scissors and glue.
- Old magazines or newspapers (for pictures).
- Recyclable materials (optional: bottle caps, fabric scraps, etc.).

4. Instructions for Facilitators

Preparation Steps:

1. **Gather Materials**: poster boards, paper, markers, crayons and colored pencils. As well as old magazines, newspapers and recyclable materials.
2. **Plan the discussion**: prepare a brief explanation of the 3Rs, and think of questions to ask the students about this topic ("How can we use less plastic?" Or "What items can we reuse instead of throwing away"?).

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3. **Set up the classroom**: arrange the workstations with all the necessary materials, and prepare a space to display the finished posters.
4. **Prepare a reflection activity**: plan a simple discussion or writing activity where students share what they learned.

Step-by-Step Guide

- Prepare the space and the materials for the activity.
- Divide the class in work groups.
- Introduce the 3Rs topic.
- Brainstorming before the main activity.
- Poster creation in groups.
- Presentation of the finished posters and discussion about how to apply the 3Rs to their everyday life.

Facilitator Role:

The teacher plays a guiding and facilitative role throughout the activity to ensure students understand the 3Rs (Reduce, Reuse, Recycle) and create meaningful posters.

- Preparation and setup: organize the materials and set up workstations.
- Introduction and engagement: explain the 3Rs in simple terms with real-life examples. Use questions to engage the students.
- Facilitation during brainstorming and poster creation: encourage students to think creatively, provide guidance and encouragement.
- Reflection and follow-up: lead the class discussion and then encourage students to practise the 3Rs at home and share their actions in the following class.

5. Activity Procedures

Activity Flow:

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Introduction (10 min)

- Begin with a discussion on the **3Rs**:
  - **Reduce**: Using less waste (e.g., turning off lights, using both sides of paper).
  - **Reuse**: Finding new uses for old items (e.g., using a jar as a pencil holder).
  - **Recycle**: Turning waste into new products (e.g., recycling paper, plastic, and cans).

Brainstorming (10 min)

- Ask students:
  - What can we do to help the environment?
  - What images or messages should be on a 3Rs poster?
- Write their ideas on the board.

Poster Creation (30 min)

- Students design their own 3Rs poster using drawings, magazine cutouts, and recyclable materials.
- Encourage bold colors, clear messages, and creative slogans (e.g., "Reduce Today for a Better Tomorrow!").

Presentation & Discussion (10 min)

- Each student presents their poster to the class.
- Discuss what they learned and how they can apply the **3Rs** in daily life.

Classroom Display

- Hang the posters around the classroom or school to spread awareness!

Engagement Strategies:

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To keep primary students actively involved and excited we can use the following **engagement strategies**:

- Interactive discussions and questioning.
- Show and tell.
- Hands-on poster creation.
- Gamification and friendly competition (we can organize a mini-poster contest, or a bingo-style challenge.
- Students presentations and peer feedback.

Reflection Opportunities:

We encourage reflection among students with the presentation and discussion of the posters. Moreover we can organize the **"3Rs Challenge"** where students practice the 3Rs at home and share their experiences in class.

Figure 1. *The 3Rs poster.*

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Topic 4 – Activity 2: The seasonal food art collage.

1. Activity Overview

Activity Title: The seasonal food art collage.

Activity Type: Group activity.

Duration: 45 - 60 minutes.

2. Activity Description:

Create collages or infographics on seasonal foods and their benefits for the environment (Sustainable Table, 2020; WWF, 2017; Macdiarmid, 2014). Seasonal eating helps reduce food miles, supports local farmers, and lowers the carbon footprint associated with food production and transportation.

The goal of this activity is to help students understand how choosing seasonal foods supports environmental sustainability by reducing food miles, lowering carbon emissions, and promoting local farming.

3. Material and Resources

Required Materials:

- Large sheets of paper or cardboard
- Old magazines, newspapers, or printed images of fruits & vegetables (https://www.freepik.com/free-photos-vectors/fruits-vegetables)
- Charts of seasonal vegetables and fruits (https://www.freepik.com/search?format=search&last_filter=query&last_value=charts+of+seasonal+fruits&query=charts+of+seasonal+fruits)
- Scissors and glue
- Markers, crayons or colored pencils
- Labels or sticky notes

Technology/Software:

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Computers or tablets to check the information about the food that belongs to each season.

4. Instructions for Facilitators

Preparation Steps:

To ensure a smooth and engaging experience, follow these preparation steps:

- Gather the materials: large sheets of paper or cardboard, old magazines, newspapers, printed images of fruits and vegetables, sticky notes or labels, etc.
- Prepare visual aids: print or display charts of seasonal foods for reference. Prepare tablets or computers to look up information.
- Set up the classroom: arrange tables into four workstations and place magazines, scissors, glue, markers…
- Plan the discussion and questions: prepare introductory questions and think of some simple explanations for why eating seasonal food is good (fresher, tastier, supports local farmers).

Step-by-Step Guide:

- Prepare the materials and visual aids for the activity.
- Introduction and discussion.
- Brainstorming and planning of the activity in a big group.
- Creation of the seasonal food collage.
- Presentations of the collage and discussion.

Facilitator Role:

The teacher plays a **facilitator, guide, and motivator** role, ensuring students engage with the topic of **seasonal foods and consumption** in a fun and creative way.

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5. Activity Procedures

Activity Flow:

Introduction and discussion (15 min)

- Start by asking:
  - *"What are your favorite fruits and vegetables?"*
  - *"Do we eat all foods all year round?"*
- Explain that some foods grow in certain seasons (e.g., strawberries in summer, pumpkins in autumn).
- Show pictures of seasonal foods for each season.
- Discuss why eating **seasonal foods** is better (fresher, tastier, and helps the environment!).
- Discuss why **choosing local foods supports localism**, a concept that encourages sourcing food from nearby farms and producers to strengthen community economies, reduce long-distance transportation, and lower the carbon footprint associated with food distribution.

Brainstorming & Planning (10 min)

- Divide students into **four groups**, each assigned a **season (Spring, Summer, Autumn and Winter)**.
- Ask: *"What fruits and vegetables belong to your season?"*
- Write ideas on the board for reference.

Create the Seasonal Food Collage! (30 min)

- Each group makes a **collage** using cut-out images, drawings, or stickers of foods that grow in their season.
- Encourage creativity! They can draw a tree, a farm, or a market with their seasonal foods.
- Use sticky notes or labels to name the foods.

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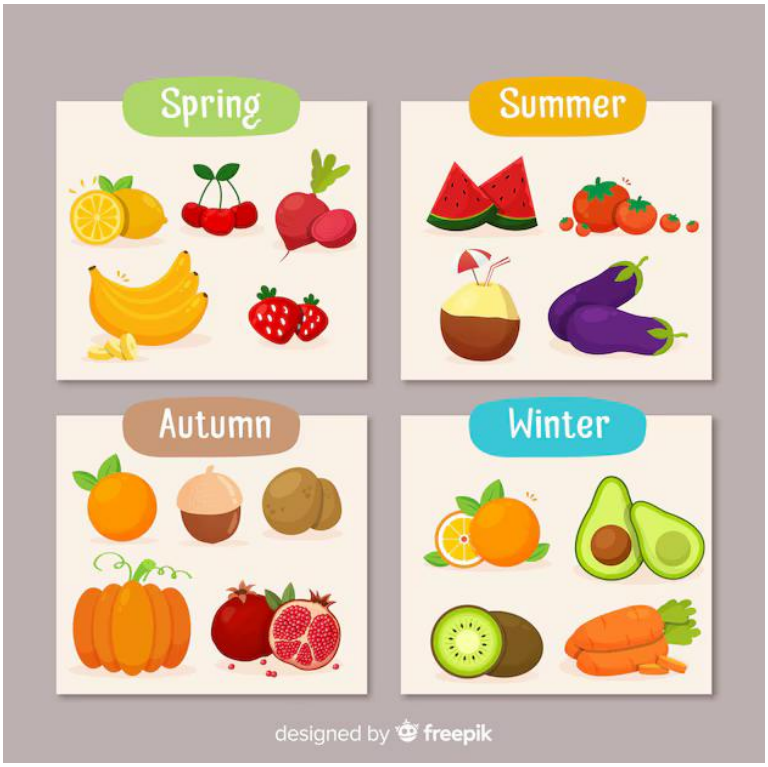

Figure 2. *Seasonal food poster.* Retrieved from: freepik.com

Presentation & Reflection (15 min)

- Each group presents their collage and explains their season.
- Ask reflection questions:
  - *"What happens when we eat out-of-season food?"*
  - *"Why is eating local and seasonal food good for the planet?"*
- Display the collages in the classroom to create a **Seasonal Food Wall.**

Engagement Strategies:

To ensure students are excited, involved, and actively learning, we use these engagement strategies:

- Interactive discussion and storytelling (you can use a short story or real-life example).
- Hands-on, creative collage making.
- Group collaboration.

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- Peer feedback.
- Real-world connection and action plan.

By combining **art, storytelling, hands-on activities, and friendly challenges**, this activity keeps students engaged while learning about **seasonality and mindful consumption.**

Reflection Opportunities:

In the "Presentation and reflection" part of the activity we provide reflection opportunities for the students.

As extra activities you can:

- Have a **"Seasonal Snack Day"** where students bring in a fruit or vegetable from the current season to share.
- Read a book about seasonal farming, like *"Before We Eat: From Farm to Table."*

This activity combines art, food education, and environmental awareness in a fun, interactive way.

Topic 4 – Activity 3: *Local Products Showcase*

1. Activity Overview

Activity Type: simulation and group activity.

Duration: 70 minutes

2. Activity Description:

Students will learn about local products in their community, understand the importance of supporting local businesses, and creatively present these products through a fun showcase event (Feenstra, 2002; Hinrichs, 2003; Tregear, 2011).

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3. Material and Resources

Required Materials:

- Pictures or real examples of **local products** (fruits, vegetables, crafts, dairy, textiles, etc.)
- Poster boards, paper, markers, and colored pencils
- Glue, scissors, and magazines for cut-outs
- Labels or sticky notes for product names

Supplementary Resources:

(Optional) A guest speaker (e.g., a local farmer, artisan, or shop owner).

4. Instructions for Facilitators

Preparation Steps:

To ensure a smooth and engaging activity, follow these preparation steps:

a. Research & Gather Information: List common local products (e.g., fruits, vegetables, handmade crafts, textiles, dairy products). Collect images or real examples of these products for students to observe. Prepare fun facts about local industries and their impact on the community.

b. Gather & Organize Materials: Large poster boards or chart paper. Markers, crayons, and colored pencils for drawing. Magazines or printed images for cut-outs. Glue, scissors, and sticky notes for labeling. (Optional) Small local product samples (e.g., a fruit, woven cloth, pottery piece).

c. Set Up the Classroom : Arrange four or five group stations, each focusing on a different local product category (Fruits & Vegetables, Food & Drinks, Handicrafts & Artwork, Textiles & Clothing). Place necessary materials at each station for easy access.

d. Plan the Discussion & Learning Goals: Prepare engaging introduction questions, such as "What local products do we see in markets?", *"How do local products help our community?*.

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Decide how students will present their posters (group presentations, a "market-style" showcase, etc.).

e. (Optional) Arrange a Guest Speaker: If possible, invite a local farmer, artisan, or shop owner to talk about their products. Prepare a few questions in advance for students to ask the guest.

f. Assign Student Roles & Group Tasks: divide students into groups and assign roles.

g. Plan for Reflection & Follow-Up: prepare reflection questions for after the showcase:

- *"What new local product did you learn about?"*
- *"How can we support local businesses?"*

- Decide where to display the posters (classroom, hallway, or school event).

Step-by-Step Guide

1. Introduction & Discussion: local products vs imported products.
2. Brainstorming and group assignment of the different categories.
3. Creating the Showcase: posters or mini-booths.
4. Presenting the Showcase to the rest of the class.
5. Reflection and display about supporting local businesses and consume local products.

Facilitator Role:

Before the Activity preparation and organization:

- Gather materials (poster boards, markers, images, glue)
- Prepare examples of local products.
- Arrange group stations with supplies for easy access.
- (Optional) Invite a guest speaker (local farmer, artisan, shop owner).
- Prepare discussion questions to introduce the topic.

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During the activity guiding and engaging students:

- Ask guiding questions like “What products do we see in local markets?”
- Encourage students to explore different products in their category.

After the activity - Presentation and Reflection:

- Guide students' presentations.
- Ask follow-up questions to deepen learning.
- Discuss why buying local is good for the environment and community.
- (Optional) organize a mini market day where students bring small local products from home.

5. Activity Procedures

Activity Flow:

Introduction & Discussion (10 min):

Ask students “What products do we grow or make in our town?”, “Where do we buy food or clothes?”, “Why is it important to buy local products?” (Fresher, supports jobs, better for the environment). Then show pictures of local products vs. imported products and compare.

Brainstorming and group assignment (5 min):

Divide students into small groups and give them different categories - fruits and vegetables, foods and drinks, handicrafts, textiles and clothing-. Have them brainstorm examples of local products from their category.

Creating the Showcase (30 minutes):

Each group makes a poster or a mini-booth if they bring real products. They should include: a title (ex: Fresh from Our Farms!), drawings, real images or local products; a few fun facts about these products (ex. Our town produces 500kg of oranges); and why supporting local producers is important.

Presenting the Showcase (15 minutes):

Each group presents their poster or mini-booth to the class, explaining their category.

Reflection and display (10 minutes):

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Ask students

- "How can we support local businesses?".

Display the posters around the school.

Engagement Strategies:

- Connects learning to real life
- Encourages creativity and teamwork
- Promotes awareness of local economy and sustainability
- Engages students with hands-on, interactive learning

Reflection Opportunities:

After the activity we have a reflection and display time to encourage students to consume locally and support local businesses,

Besides the main activity we can have further activities like having a guest speaker to share their experience, or organizing a Local Market Day to promote local economy and sustainability.

Topic 4 - Activity 4: *Water wise explorers*

1. Activity Overview

Activity Type: Cooperative stations

Duration: 60 minutes

Age: 4 to 12

Number of participants: 4 to 25

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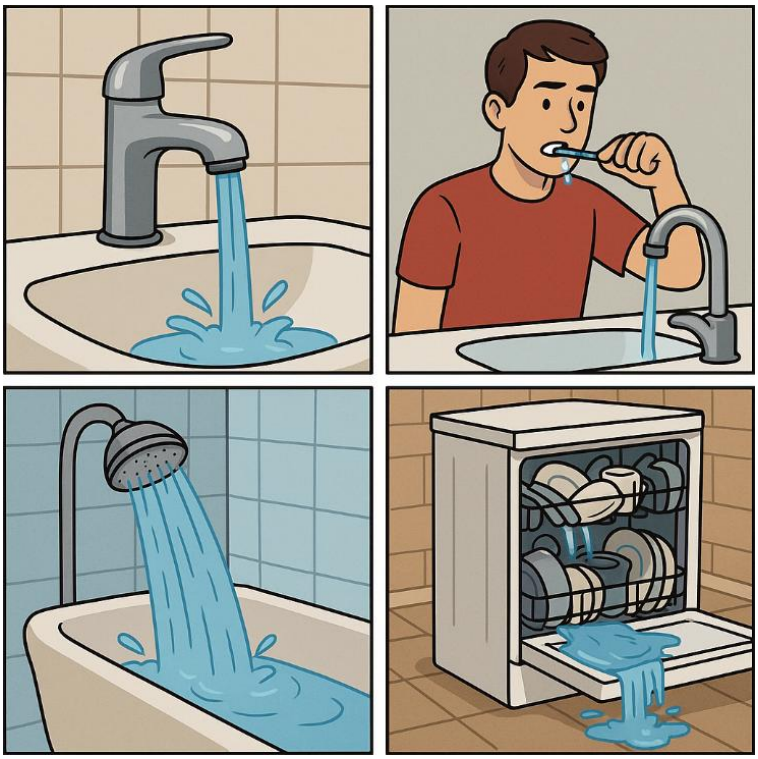
2. *Activity Description:*

Engage in discussion and visual activities to explore ways to reduce water use, linked to SDG goals. With this activity, students will understand how water is used in daily life (UNESCO, 2020), learn ways to conserve water such as turning off taps while brushing teeth or using efficient appliances (WWF, 2022), and get engaged in hands-on activities to reinforce water-saving habits. This supports **Sustainable Development Goal 6** (Clean Water and Sanitation), which emphasizes the importance of ensuring availability and sustainable management of water for all (UN, 2015). Through visual tools and collaborative discussions, students are more likely to retain and apply conservation behaviors (Cialdini, 2007; UNESCO, 2020).

2. Material and Resources

Required Materials:

- Clear glass of water
- Cup, dropper, and water for the leak test
- Pictures of water use scenarios



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- Two buckets and small sponges for the relay race
- Pencils and paper for pledges

Technology/Software:

- Timer (for “The leak test” station).

Instructions for Facilitators

Preparation Steps:

To ensure a smooth and engaging workshop, follow these preparation steps:

Gather Materials

Print & Prepare:

- Print or create picture cards showing water-saving and water-wasting scenarios.

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- Print pledge sheets or provide blank paper for students to write/draw their pledges.

Experiment & Game Materials:

- Clear glass of water for the introduction.
- Small cups, droppers, and water for the leak test.
- Two buckets and small sponges for the relay race.
- Prepare a timer or digital timer for “The leak test” activity.

Set Up Stations

Station 1: Water Detectives

- Place two labeled boxes or areas: **"Water Savers"** and **"Water Wasters."**
- Organize picture cards for students to sort.

Station 2: The Leak Test

- Fill a cup with water and place droppers nearby.
- Prepare a timer or stopwatch to track water loss.

Station 3: Water Challenge Relay

- Place two buckets at a distance from each other.
- Provide sponges for students to carry water between buckets.

Plan the Introduction & Reflection

- Prepare discussion questions about water use and conservation.
- Practice a simple demonstration with a glass of water to explain water scarcity.
- Create a large poster or board where students can stick their pledges at the end.

Safety considerations:

When doing outdoor water activities, ensure safety by having students wear non-slip footwear and walk carefully to avoid slipping on wet surfaces. Keep the area free of obstacles like buckets or hoses, use shallow containers without overfilling them, and have towels or absorbent

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mats ready to clean up spills quickly. Always provide close adult supervision to guide safe behavior and respond promptly to any accidents, helping prevent slips, spills, and injuries.

Step-by-Step Guide

1. Introduction (10 minutes)

Discussion Questions:

- Where do we use water every day? (Drinking, cooking, bathing, brushing teeth, etc.)
- Why is water important?
- What happens if we waste too much water?

Demonstration:

- Show students a clear glass of water.
- Ask: "Would you want this glass of water to last forever?"
- Pour a little out and explain: "Every time we waste water, we lose a little of what we have."

Learning Stations (30 minutes)

Station 1: Water Detectives (Identifying Waste)

- Provide pictures of different water-use scenarios (e.g., dripping tap, watering plants, washing hands, brushing teeth).
- Students sort them into two groups: **"Water Savers"** and **"Water Wasters."**

Station 2: The Leak Test (Hands-on Experiment)

- Fill a cup with water and use a dropper to mimic a leaky tap.
- Count how many drops fall in one minute.
- Multiply to estimate how much water is wasted in an hour, a day, and a week.

Station 3: Water Challenge Relay

- Split students into teams.
- Each team must transport water from one bucket to another using a small sponge.

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- Explain: "If we waste water, we lose it before we can use it!"
- Discuss ways to conserve water in daily life.

Reflection & Pledge (10 minutes)

- Students share what they learned.
- Each student writes or draws one way they will save water at home.
- End with a group pledge: **"I promise to use water wisely!"**

Facilitator Role:

Introduction – Engaging & Explaining (10 minutes):

Capture students' interest by asking thought-provoking questions about water use. Encourage students to share their thoughts and experiences with water. **Demonstrate Water Scarcity** with a clear glass of water to show how water is limited and precious.

Activity Stations – Supervising & Encouraging (30 minutes)

- Explain each activity and ensure students understand the instructions.
- Move between stations to observe and guide students as needed.
- Encourage teamwork, discussion, and problem-solving.
- Ask open-ended questions like, *"How could we save more water at home?"*

Reflection & Pledge:

Reinforcing Learning (10 minutes): Lead the Discussion. Guide the Pledge Activity and Wrap Up with a Group Pledge.

Additional Facilitator Responsibilities

- **Time Management** – Keep activities moving so all students stay engaged.
- **Behavior Management** – Ensure students are participating respectfully and staying focused.

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- **Encouragement & Positive Reinforcement** – Praise students for their ideas and teamwork.

2. Activity Procedures

Activity Flow:

1. **Introduction (10 minutes) – Outdoors setting.** Introduce the activity in a big group, and then divide it into smaller groups to start with the learning stations.
2. **Learning Stations (30 minutes) – Outdoors setting.** We change stations after ten minutes so all the students participate in every station.
3. **Reflection & Pledge (10 minutes) – Outdoors setting.** Gather all the groups together again and reflect about the activities carried out and make a group pledge.

Engagement Strategies:

This activity in itself is a very motivating activity as students like to work in groups and in learning stations, but to keep students engaged and excited about learning, we use the following strategies:

a. Make It Interactive

Ask Thought-Provoking Questions:

- Start with open-ended questions like, *"What would happen if we ran out of clean water?"*
- Encourage students to share their own water use experiences.

Hands-On Activities:

- Use physical objects (water, droppers, buckets, pictures) to make learning tangible.
- Let students touch, pour, and move water to reinforce concepts.

b. Use Gamification

Competition & Challenges:

- At the **Water Detectives** station, time students to see who sorts the pictures faster.
- In the **Leak Test**, challenge students to estimate water loss and compare results.

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- For the **Water Relay**, have teams race while discussing water conservation.

c. Encourage Teamwork & Peer Learning

Group Activities:

- Pair or group students at each station to discuss and problem-solve together.
- Encourage students to explain their ideas to peers (*"Why do you think that?"*).

Student-Led Sharing:

- After each station, have students present their findings.
- Let them teach the class one water-saving tip they learned.

d. Use Storytelling & Real-Life Connections

Tell a Short Story:

- Share a simple story about a child or animal facing water scarcity.
- Ask students how they would feel if they had to walk long distances for water.

Relate to Their Lives:

- Ask: *"Where do you think we waste the most water at home?"*
- Challenge them to count how long they leave the tap running when brushing their teeth.

e. End with a Personal Commitment

Student Pledge:

- Let each child write or draw one way they will save water at home.
- Post the pledges on a "Water Heroes" board in the classroom.

Group Promise:

- Have students say together: *"I promise to use water wisely!"*

By making the workshop **interactive, competitive, and relevant**, students will stay engaged and remember what they learned!

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Reflection Opportunities:

Reflection helps students process their learning and connect it to real life. Here are key moments for reflection in this activity:

- Group discussion after each learning station.
- Personal pledge and writing reflection.
- Whole-class reflection circle.

Ongoing Reflection

- Assign a home challenge: Ask students to observe their family's water use for a week and share their findings later.
- Revisit their Water Hero pledges after a month—have they kept their promise?

By building reflection into different parts of the workshop, students will deepen their understanding and feel more motivated to take action.

Topic 4 -Activity 5: *System thinking role play*

1. **Activity Overview**

Activity Type: Role-play

Duration: 60 minutes

2. Activity Description:

Simulate an ecosystem where each participant represents a component, illustrating how actions impact the whole (Odum & Barrett, 2005). Demonstrate how different parts of an ecosystem are connected, such as producers, consumers, and decomposers, to show the interdependence within ecological networks (Ulanowicz, 2004). Show how one change—like the removal of a

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top predator or introduction of pollution—can affect the entire system, potentially leading to cascading effects (Estes et al., 2011). This approach encourages teamwork and critical thinking as students must collaborate, adapt, and problem-solve to maintain or restore balance in the system (Hmelo-Silver et al., 2007).

3.*Material and Resources*

Required Materials:

- A ball of yarn (or string).
- Cards with ecosystem roles (printed or written on paper).
- Papers with a list of scenarios.

Software/Technology: none

4. Instructions for Facilitators

Preparation Steps:

To ensure a smooth and engaging experience, follow these steps before the activity:

1. Prepare Materials

- Ball of Yarn – A long piece of string or yarn to create the web.
- Ecosystem Role Cards – Write or print role names (e.g., Sun, Tree, Bee, River) on index cards or small papers.
- Scenario Cards (Optional) – Prepare written scenarios (e.g., "The Bees Disappear," "Pollution in the River").
- Whiteboard or Chart Paper – For reflection and discussion.

2. Set Up the Space

- Indoor or Outdoor? – Choose a place with enough room for students to form a large circle.
- Arrange Seating (Optional) – If needed, place chairs in a circle for younger students.

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- Prepare for Movement – Make sure students can stand and pass the yarn easily.

3. Assign Roles & Prepare Student Instructions

- Print or Hand Out Role Cards – Ensure each student understands their role.
- Practice a Simple Explanation – Be ready to explain how the web works in simple terms:
- "Each of you represents an important part of the ecosystem."
- "We will connect with yarn to show how we all depend on each other."

4. Plan for the Impact Scenarios

◇ Choose 2–3 impact scenarios to demonstrate how changes affect the whole ecosystem.

◇ Examples:

- *"A forest fire destroys many trees."*
- *"A factory pollutes the river."*
- *"Bees start disappearing."*
    - Plan questions to guide student reflection (e.g., *"Who is affected by this? How does this change the web?"*).

5. Reflection & Wrap-Up Preparation

Think-Pair-Share Questions:

- "How did it feel when part of the web was removed?"
- "What surprised you about the connections in the ecosystem?"
- "What can we do to protect nature?"

Pledge Activity – Prepare paper or a whiteboard where students can write or draw one way they can help the environment.

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Step-by-Step Guide:

Step 1: Assigning Ecosystem Roles (10 minutes)

Each student gets a card with a role in an ecosystem. Examples include:

- **Sun** (provides energy)
- **Rain** (helps plants grow)
- **Tree** (produces oxygen, gives shelter)
- **Grass** (food for small animals)
- **Rabbit** (eats grass, food for predators)
- **Fox** (predator, controls rabbit population)
- **Bee** (pollinates flowers)
- **Flower** (provides nectar for bees)
- **Soil** (holds nutrients for plants)
- **River** (water for animals and plants)
- **Human** (interacts with the ecosystem)

Optional: Adjust roles based on your local environment!

Step 2: Creating the Ecosystem Web (15 minutes)

1. **Form a Circle** – Students stand in a large circle.
2. **Start with the Sun** – The Sun (student) holds the yarn and explains their role.
3. **Pass the Yarn** – The Sun passes the yarn to a related component (e.g., Tree). The Tree holds part of the yarn and passes it to another role (e.g., Rabbit, who eats plants).
4. **Continue Until Everyone is Connected** – Students explain their roles as they receive the yarn, forming a web of connections.

Step 3: Impact Simulation (15 minutes)

Now, demonstrate how changes affect the ecosystem:

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Scenario 1: The Bees Disappear

- The student playing the **Bee** lets go of their string.
- Ask: *"What happens to the flowers? What happens to the animals that eat plants?"*
- Students notice that as one piece weakens, the whole web feels the impact.

Scenario 2: Pollution in the River

- The student playing the **River** drops the string.
- Ask: *"What happens if animals can't drink clean water? How does this affect plants and humans?"*

Encourage Discussion – Ask students how we can **help ecosystems stay healthy**.

Step 4: Reflection & Takeaways (10 minutes)

◇ **Think-Pair-Share:** Ask students:

- *"How did it feel when part of the web was removed?"*
- *"What surprised you about the connections in the ecosystem?"*
- *"What can we do to protect our environment?"*

◇ **Class Pledge:**

- Have each student write or draw one action they will take to help the environment.
- Examples: "Plant more flowers for bees," "Save water," "Pick up litter."

Facilitator Role:

As the **facilitator**, the teacher ensures that students actively engage, understand connections, and reflect on the impact of ecosystem changes. Here's how:

Setting the Stage: Introducing the Ecosystem (10 minutes):

introduce the concept of an ecosystem in simple terms. Hand out ecosystem role cards and explain how each part contributes to the system and check for understanding

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Guiding the Ecosystem Web Formation (15 minutes)

- Facilitate the Yarn-Passing Process
- Monitor Engagement & Participation

Leading the Impact Scenarios (15 minutes): Introduce a Disruption (e.g., "The bees disappear") and encourage critical thinking & discussion.

Facilitating Reflection & Wrap-Up (10 minutes): lead a Think-Pair-Share discussion and support the pledge activity

5. Activity Procedures

Activity Flow:

All the activity will take place in an open space where the whole group can sit in a big circle.

1. Assigning Eco-system roles (10 minutes).
2. Creating the Ecosystem Web (15 minutes)
3. Impact Simulation (15 minutes)
4. Reflection & Takeaways (10 minutes)

Engagement Strategies:

- Hands-on Learning – Students physically see how everything is connected.
- Collaboration – Encourages teamwork and discussion.
- Critical Thinking – Helps students understand real-world environmental impacts.

Reflection Opportunities:

Reflection helps students **internalize their learning** and connect it to real-world environmental issues. Here are key opportunities for reflection during and after the activity:

1. During the Web Formation – Noticing Connections

This helps students **actively think about interdependence** as they participate.

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2. After the Impact Scenarios – Understanding Consequences

3. Small Group or Think-Pair-Share Reflection

Pairing students allows them to **verbalize their thoughts** and hear new perspectives.

4. Personal Reflection & Writing Activity

This encourages **self-expression** and deeper thinking.

5. Whole-Class Reflection & Action Plan

6. Follow-Up Reflection After a Week

Revisit the Activity Later:

- Have students check if they followed their pledges.
- Discuss: *"Have you noticed connections in nature since the activity?"*

This helps **reinforce long-term learning and responsibility**.

LIST OF SCENARIOS

Natural & Human-Caused Disruptions

1 Bees Disappear

A disease wipes out many bees in the area.

- Who is affected? (Flowers, fruits, animals that eat plants)
- What happens next? (Fewer plants grow, less food for herbivores)

2 Deforestation

Many trees are cut down for farming and buildings.

- Who is affected? (Birds lose homes, soil washes away, less oxygen)
- What happens next? (More erosion, less shade, higher temperatures)

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3 Polluted River

A factory dumps waste into the river.

- Who is affected? (Fish, drinking water, animals that depend on fish)
- What happens next? (People and animals get sick, fish die, food chains break)

4 Drought

No rain falls for months.

- Who is affected? (Plants, animals, farmers, rivers)
- What happens next? (Less drinking water, food shortages, wildfires)

5 Invasive Species Arrives

A new fast-growing plant spreads and takes over.

- Who is affected? (Native plants, animals that depend on native food sources)
- What happens next? (Biodiversity decreases, some species may go extinct)

Animal Population Changes

6 Predator Disappears

Wolves are hunted, and their population declines.

- Who is affected? (Deer, rabbits—overpopulate, overeat plants)
- What happens next? (Too many herbivores, plant life decreases, food shortages)

7 Overfishing

Too many fish are caught from the ocean/lake.

- Who is affected? (Other fish, humans, birds that eat fish)
- What happens next? (Fish populations crash, economic problems for fishermen)

8 Disease Spreads Among Animals

A virus spreads in the deer population.

- Who is affected? (Predators like wolves, hunters, plants)
- What happens next? (Less food for predators, changes in food chain)

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Climate & Habitat Changes

9 Coral Reef Dies

Rising ocean temperatures cause coral reefs to die.

- Who is affected? (Fish, sea turtles, people who rely on fishing)
- What happens next? (Loss of habitat, less seafood, coastal erosion)

10 Wildfire Burns a Forest

A large wildfire destroys many trees.

- Who is affected? (Animals lose homes, air quality worsens)
- What happens next? (Soil erosion, fewer trees to clean air, rebuilding takes years)

Human Impact & Solutions

11 City Expands into Farmland

A new neighborhood is built over a field.

- Who is affected? (Wildlife, food sources, local farmers)
- What happens next? (Less green space, more pollution, habitat loss)

12 People Start Planting More Trees

A community plants new trees in a deforested area.

- Who is affected? (Birds return, soil improves, more oxygen)
- What happens next? (Biodiversity increases, climate cools slightly)

13 Plastic Waste in the Ocean

Too much plastic waste enters the ocean.

- Who is affected? (Fish, seabirds, humans who eat seafood)
- What happens next? (Animals ingest plastic, ecosystem health declines)

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