



Co-funded by
the European Union

BioBeo's Bioeconomy in Fabulous Forests Video: Guidance Notes

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‘Bioeconomy in Fabulous Forests’ Video

(Ages: 6–12, adaptable)



Bioeconomy in Fabulous Forests



Before Viewing...

1. How trees talk to each other | Suzanne Simard

Watch the following TED Talk which has amassed an enormous number of viewers. It will illustrate how trees communicate and mind each other in family groups.

<https://youtu.be/Un2yBgIAxYs?si=W2lgC1AVVhVkeazQ>

2. Forest Sorting Game

Activity: On a walk to your nearest wooded area, children gather real-life samples (leaves, pinecones, twigs) to classify into categories (size, type, use). They discuss their findings and try to label them with support from the www.biodiversityireland.ie website and the www.treecouncil.ie website. They can report their findings too on the first website and work as citizen scientists!

Maths Concepts: Sorting, categorising, data handling.

During Viewing...

1. STEM Spotter Chart (STEM Integration)

Activity: Create a chart with STEM-related items/ideas for pairs (e.g., “biomaterial,” “recycling,” “renewable energy”). Ask students in pairs, to think-pair-share and to tick each one when they hear/see it.

STEM Concepts: Renewable resources, sustainability, technology in forest management.

2. Estimate and Count Challenge (Maths)

Activity: Pause at points of interest. Ask children to estimate how many of a certain living thing they see, then count to check.

Maths Concepts: Estimation, counting, comparing quantities.

After Viewing...

1. Build a Sustainable Village (STEM Project)

Activity: Using recycled materials, children design and build a mini eco-village that uses forest-based bioeconomy products (wooden houses, paper wind turbines, etc.).

STEM Concepts: Engineering, sustainable materials, energy use.

2. Forest Fractions (Maths)

Activity: Create a “forest pie chart” showing how forests are used: estimate - paper (1/4), timber (1/2), medicine (1/8), other (1/8). Children can use paper plates or draw their own with their own estimates and findings after research.

Maths Concepts: Fractions, percentages, data representation.

3. Eco-Forest Obstacle Course (PE)

Activity: Create a nature-themed obstacle course: crawl under “branches” (ropes), leap over “logs” (cones), balance on a “log” (beam).

PE Focus: Balance, agility, coordination, and nature connection.

Optional twist: Include a “bioproduct” relay - carry paper, wood, etc., through the course to “build” a forest hut at the end.

4. Forest Drama Freeze Frames (Drama)

Activity: In small groups, children act out forest roles (tree, logger, animal, scientist) and freeze-frame a scene showing a problem or solution (e.g. illegal logging, sustainable planting).

Drama Focus: Body language, empathy, storytelling, environmental ethics.

5. Bioeconomy Budget Challenge (Maths)

Activity: Give each group a fictional budget (e.g., £1000) to run a sustainable forest business. They “purchase” eco-tools, seeds, and forest products from a pretend shop.

Maths Concepts: Budgeting, addition, subtraction, decision-making.

6. The Life of a Log (Drama & Science)

Activity: In groups, children act out the journey of a tree becoming a product (e.g., tree → log → sawmill → paper → school notebook). Create a short sketch in groups of 4 to dramatise the natural life cycle of a tree vs the life cycle of a tree in a working forest. Talk and discussion after performances.

Learning Focus: Life cycles, supply chains, transformation processes.

7. Forest Diorama Construction (STEM & Visual Art)

Activity: Using shoeboxes and natural materials, children create a 3D model of a forest ecosystem.

8. Make Your Own Rainforest Terrarium (STEM & Geography)

Activity: Invite the children to bring in a clean jam jar. In the small glass jars, children create mini “rainforests” using soil, small plants, moss, and stones. Spray a light mist of warm water from a small watering can on them and seal with a lid to simulate humidity and water recycling.

Learning Focus: Living things, habitats, geography of hot regions.

9. Rainforest Animal Movements (PE)

Activity: Discuss the Amazon rainforest compared to an Irish native forest. What would you see, hear, smell, taste there? Using their senses, play this drama/PE game: Invite the children to move like rainforest animals in the outdoors:

- ★ Sloth crawl (slow crawl)
- ★ Monkey jump (leap between cones)
- ★ Jaguar sprint (short fast run)
- ★ Tree frog hop (two-footed hops)

Reflect and discuss. Repeat the game but set it in an Irish native forest.

- ★ Pine marten (scurry)
- ★ Fox (skulk along)
- ★ Frog (jump)
- ★ Sparrowhawk (in flight above the trees)

Learning Focus: Living things, habitats, geography of contrasting regions.

Assessment:

Assessment in this unit is both formative and summative, focusing on children's ability to engage actively with the theme of forests and the bioeconomy across a range of subjects. Teachers assess through observation, project work, practical tasks, and creative outputs. Children are also encouraged to reflect on their learning through self and peer assessment. Key skills assessed include collaboration, critical thinking, creativity, environmental awareness, and subject-specific outcomes in Maths, STEM, drama, and PE.

Assessment Methods:

- **Observation checklists** - during PE, STEM builds, and group tasks
- **Worksheets and graphical work** - forest sorting, pie charts, budgeting tasks
- **Project rubrics** - for dioramas, eco-villages, and terrariums
- **Performance assessment** - freeze frames and drama sketches
- **Self/peer reflection** - short reflection sheets or verbal feedback after activities