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BioBeo's 'Nature Detective Work in a Bioeconomy' Video: Guidance Notes

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Guidance Notes - 'Nature Detective Work in a Bioeconomy'

(Ages: 4-12, adaptable)



Nature Detective Work in a Bioeconomy



Before Viewing...

Introduction to the Bioeconomy

Begin by discussing the concept of the bioeconomy. Do the children know it? What do they know? You might then begin by explaining the concept of the bioeconomy to the children if necessary. Discuss how natural resources like plants, animals, and microorganisms are used to produce food, materials, and energy without harming the planet, in a much more sustainable way. Emphasise the importance of sustainability and circularity in these processes.

Exploring Interconnectedness

Discuss the idea that all elements of nature are interconnected. Discuss how actions in one part of the ecosystem can affect other parts. Use simple examples like how bees pollinate flowers, leading to the growth of fruits and vegetables. Build a tower of cards in groups. If one card falls, what happens to the others?

Setting the Scene

Prepare the children for the video by discussing the concept of waste. What is waste? Is waste actually waste or is it only waste when it is wasted? Have they ever gone on a tour to the forest with their class? Did they see any waste? Create a mind map using [mentimeter.com](https://www.mentimeter.com)

During Viewing...

Active Listening

Encourage children to listen carefully to the conversation between Beo and her friends and teacher in the forest.

Visual Engagement

As the video plays, point out interesting images.

Interactive Participation

Ask the children to identify the different elements mentioned in the video and to discuss. Invite them to write down key words, especially new ones they don't know! For example – circularity.

After Viewing...

Discussion and Reflection

Lead a discussion about the key concepts. Ask the children what they learned about bioeconomy and interconnectedness. Encourage them to share their thoughts and feelings about the video.

Activities

SCIENCE (Living Things, Environmental Awareness and Care)

Activity: Nature Waste Detective

Video Link: *"I've just realised, nature leaves no waste. It's humans who create waste."*

Prompt: Use this line to prompt discussion about why nature does not leave waste? How is biological decay different from human-made litter?

Outdoor Activity: In small groups, pupils explore the school grounds or a nearby green area. They collect examples of natural "waste" (e.g., leaves, twigs, fruit peel) and human-made litter (e.g., plastic, foil). They sort, record, and discuss how natural materials return to the earth through decomposition, while plastics remain.

Skills: Observation and classification, Understanding ecosystems and decomposition, Environmental stewardship

GEOGRAPHY (Environmental Awareness and Care)

Activity: Litter Mapping & Impact

Video Link: *"Aha! Found some waste. Look over here! Oh dear, that waste doesn't look like natural waste... Oh no, it's also plastic."*

Prompt: Discuss how litter appears, how it moves through landscapes (wind, water), and its impact.

Outdoor Activity: Pupils map litter hotspots on a simple sketched map of the school environs. They note type, quantity, and location, and then discuss how such litter could spread to rivers or fields or harm wildlife and possible solutions for any litter issues in the school community.

Skills: Spatial awareness (mapping), Environmental impact analysis, Data collection and reporting

VISUAL ART (Exploring and responding to the visual arts)

Activity: Nature & Litter Collage

Video Link: *"This is going to be easy. Waste is so easy to find."*

Prompt: Reflect on contrasting textures, colours, and forms in nature vs. litter.

Outdoor Activity: Pupils gather small natural items (e.g., leaves, petals) and clean, safe litter (e.g., wrappers). They create a juxtaposed collage or art piece made up of half natural, half litter content, to visually represent the video's message.

Skills: Creativity and aesthetic appreciation, Understanding environmental contrasts, Fine motor and composition skills.

HISTORY (Continuity & Change Over Time)

Activity: Human Waste Timeline

Video Link: *"All of this waste is human made."*

Prompt: Use this statement to examine how human behaviour and waste production have evolved historically (e.g., pre-industrial vs. today).

Corridor Activity: (classroom or long corridor): Pupils create a simple timeline poster (on a wall/data display board) showing key milestones in waste production from the stone age, to the agricultural age, to the industrial revolution, to the modern packaging era. They then place sample items or labelled pictures along the timeline.

Skills: Understanding change and continuity, Relating human activity to environmental context, Chronological thinking

Mathematics (2D and 3D Shapes; Spatial Awareness)

Activity: Nature's Patterns & Shapes

Video Link: *"Nature is the perfect example of circularity..."*

Prompt: Use this line to spark observation of repeating shapes and patterns in nature.

Outdoor Activity: Pupils explore outdoors, identifying and sketching natural shapes: circles in tree rings, spirals in snails, symmetry in leaves or flowers. They group them into 2D/3D categories and describe the properties.

Skills: Recognising and naming shapes in the environment, Describing properties (sides, angles, symmetry), Connecting mathematical ideas to the natural world

Assessment

Observation: Monitor children's participation during discussions and activities to assess their understanding of the concepts.

Creative Work: Evaluate the children's art projects and all other activities to gauge their comprehension and ability to apply the concepts.

Reflection: Review the children's work to assess their personal connections to the concepts of the video.

By following these guidance notes, educators can effectively use the 'Nature Detective Work in a Bioeconomy' video to teach children about the bioeconomy and the interconnectedness of nature in an engaging and enjoyable manner.