

# What traces do we leave on Earth? - building ecological awareness

<b>1</b>	<b>Overall aims:</b> <ul style="list-style-type: none"> <li>• Introducing the concept of "environmental footprint"</li> <li>• Developing the child's knowledge of human activities on Earth</li> <li>• Developing communication and classification skills</li> <li>• Making children aware of human influence on nature</li> </ul>
<b>2</b>	<b>Vocabulary - keywords</b> footprint, environmental footprint, nature, human activity in nature, artwork
<b>3</b>	<b>Sustainable abilities developed</b> <ul style="list-style-type: none"> <li>• Anticipatory competency</li> <li>• Normative competency</li> <li>• Collaboration competency</li> </ul>
<b>4</b>	<b>Pillars of sustainability included</b> <ul style="list-style-type: none"> <li>• socio-cultural</li> <li>• ecological</li> </ul>
<b>5</b>	<b>STEAM domains</b> S, A, M



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### Teaching methodologies/activity outline

#### Introduction

##### Problem:

- What traces does man leave on Earth?

The teacher prepares illustrations showing the traces that people leave on our planet, eg monuments, architectural elements, garbage dumps, factory chimneys, etc. He talks with the children about the photos, encourages children to divide (try to classify) our traces (photos) into those we can be proud of and those we should be ashamed of.

The teacher can summarize the joint work with the information that man on Earth leaves various traces. Some are delightful, while others are not so beautiful. Man does not spare the Earth, pushes his elbows on it and destroys more and more areas.

#### Main part

The teacher presents a fragment of the movie The Lion King (movie in Polish, duration: 1:21; <https://www.youtube.com/watch?v=CoimsBWhc9s>). Additionally, he can use a song from the movie The Lion King - the circle of life (movie in Polish, <https://www.youtube.com/watch?v=g71B-4oY7Ts>, duration: 4:30).

The teacher talks about the content of the films, asks questions. He explains that all organisms, except humans, take as much resources from the environment as they actually need. Everything in the natural cycle returns to Nature, becomes the building blocks of a new life (as mentioned by the Lion King). It is a closed circuit. Only we humans take much more from Nature, too much. Contrary to the wild world, our traces do not disappear. We are leaving a huge TRACE on Earth - environmental. What are we exhausting?

The teacher draws a foot on the cardboard (the footprint symbol), then, using pictograms placed around the drawing of the foot, talks together with the children about footprints of humans on Earth:

- Crop / Farmland (e.g. tractor pictogram) - Land used to produce enough food for humans and livestock.
- Pastures (e.g. sheep pictogram) - areas intended for grazing farm animals for meat, dairy products, leather and wool.
- Commercial forests (e.g. tree pictogram) - areas covered with trees used for the production of wood, paper, rubber.
- Construction and roads (e.g. the symbol of tools) - built-up areas (cities), buildings (factories - industry) and roads (communication).



	<ul style="list-style-type: none"> <li>Fishing grounds (e.g. fish symbol) - Areas of the seas and oceans that are used to catch fish and other aquatic organisms.</li> </ul> <p>The teacher prepares photos of artificial ecosystems, which children assign to appropriate pictograms. The photos can be used as the basis for conversations about human activities.</p> <p>The teacher divides the children into groups. Each group receives a cardboard box of paper and crayons. The teacher asks to draw an object known to the children in the center of the sheet (the children can invent it on their own or with the help of the teacher), e.g. a pencil, wooden blocks, a short-sleeved T-shirt, etc. Together, we think about what is needed for their production, what elements of the environment will be used. Then the children draw on the cardboard (around the chosen object) the environmental traces that these objects leave. They may consider categories that have been previously presented - farmland / farmland, pastures, commercial forests, construction and roads, fisheries.</p> <p><b>Summary:</b> Presentation of the resulting posters and their discussion.</p> <p><b>Question:</b></p> <ul style="list-style-type: none"> <li>What can I do to leave as little footprint as possible on Earth?</li> </ul>
<b>7</b>	<h2>Expected learning outcomes</h2> <p><b>The child will be able to:</b></p> <ul style="list-style-type: none"> <li>Name the "traces" that man leaves on the Earth</li> <li>Explain in his own words the concept of "environmental footprint"</li> <li>Create an artwork</li> </ul>
<b>8</b>	<h2>Assessment</h2> <ul style="list-style-type: none"> <li>Creating a mind map: What have we learned today about the footprints man leaves on Earth? How can we keep our footprints as small as possible?</li> </ul>
<b>9</b>	<h2>Equipment and materials to be used in learning unit (tools, ingredients etc)</h2> <p>Illustrations of human activities, computer and projector (for movie display); stationery: cardboard boxes, blocks, crayons, pictograms</p>



10	<b>Kind of setting - lab, kitchen, outdoor etc.</b> Classroom
11	<b>References - source:</b> <a href="https://www.youtube.com/watch?v=CoimsBWhc9s">https://www.youtube.com/watch?v=CoimsBWhc9s</a> <a href="https://www.youtube.com/watch?v=g71B-4oY7Ts">https://www.youtube.com/watch?v=g71B-4oY7Ts</a> Krämer M., Matematyka na zielono, Warszawa 2022

