

**Eco-Elves' Assistants**

<b>Grade:</b>	3rd grade of primary school (9-10 years old)
<b>Relation to the curriculum:</b>	Integralny program nauczania z elementami edukacji Ekologicznej w klasach I – III, Sarnowska M., wyd. Harmonia, Gdańsk 1999 // <i>Integrative teaching programme with elements of ecological education in classes I-III</i>
<b>Duration:</b>	5 – 6 hours
<b>Keywords:</b>	energy, renewable and non-renewable energy sources, energy – possibility of carrying out particular actions, water resources, water saving, recycling, waste-to-energy, labels: warnings, green labels, and recycling labels

**Content and theoretical background:**

The great wizard, whose name is „Destruction”, has kidnapped all the eco-elves who were the guards of ecological order.

From that moment bad things started to happen on earth. Nobody could control people's actions and their wrong habits.

Without the eco-elves, the nature is vulnerable to destruction. However, there still is a chance – children can help the nature!

**Educational objective:**

Pupils shall realise what energy is and where can we receive it from. They also know what the purposes for energy use are. They do realise, that some sources of energy end irretrievably, therefore it is very important to change behaviours, to use energy responsibly and to restrict its usage.

Symbolically they present the resources of fresh water in nature; they strengthen the rules of waste sorting. They become familiar with the basic types of labels which are available on products.

**Cognitive objectives:**

Usage of ecological terms and concepts, knowledge of the negative influence of civilisation on the life on earth, ability to ask questions, defining problems.

**Training objectives – skills:**

Individual information use, ability of its critical application, linking the previously mastered contents with the new ones, self-activity in many different life domains, individual formularization of conclusions which derive from experiments, work in groups, diagnosis of the causes of environmental problems.

**Learning ambiance:**

The activity shall be conducted in a forest or a park, on an uneven terrain. The person who leads the activity and the assistants shall wear eco-elves clothes.

It is important for the participants to identify with their roles.

The stages are tests, which the participants have to pass. While explaining the rules of tasks, it is important to refer to the general story, in which it is interlaced. At the stages where assistants are not needed, the rules are attached to the panels which are placed in visible places. Because children have been divided into three groups, it is important to pay attention to them to walk separately. One may determine the three routes in different colours, depending on the group's symbol.

**Materials:**

- Announcement
- Invitations
- Elements of jigsaw
- Pictures with different sources of energy
- Articles and pictures in a box
- Containers with water
- spoons
- cards with keywords
- Orange rind
- newspaper
- empty yoghurt box
- plastic bottle
- jar
- can
- battery
- black plastic bag
- colorful circle that shows the percentage of sort of waste throwing to the waste dump
- Puzzle „Energy from Waste”
- Pictures showing labels that occur on products.
- Symbol of Nature Protectors (to be cut for as many pieces as participants)

**Preparation:**

- To examine the terrain, where the particular stages of the game will be conducted.
- To prepare the particular stages of the game
- To mark routes for each stage with a big pointers
- To instruct and equip assistants



	<p><b>Exploitation of resources</b>          There are many treasures hidden in the Earth. For example petroleum, coal, ore. You can use it to make fuel, produce energy and other things which are necessary to human. Unfortunately, there are more and more people in the Earth and the treasures which have been arising for years are gradually depleting.</p> <p><b>Station 2 Saving Energy in house</b>          Think in group: what can you do, to save energy?          You can find the articles in the box useful.</p> <ul style="list-style-type: none"> <li>- energy saving and standard bulbs</li> <li>- pictures of TV, computer, printer with “off” button</li> <li>- mobile chargers</li> <li>- different clothes, for cold and warm weather</li> <li>- two types of alarm clock – electronic and winding</li> </ul> <p><b>Station 3 Water resources</b>          Plastic containers filled with water demonstrate the whole resource of water in our planet.</p> <p>Can all the water be used as a drinking water? Yours task is to illustrate the proportions between different sources of water supply by pouring the water to glasses:</p> <p>Rivers – 1 spoon          Freshwater lakes – 1 spoon          Water in the atmosphere – 1 spoon          Groundwaters– 6 spoons          Glacial waters – 20 spoons          Saltwater lakes– 1 spoon          The rest of the water is ocean.          On the basis of the gathered information answer the following questions:</p> <ul style="list-style-type: none"> <li>- What should we do at home to save water?</li> </ul> <p>Jigsaws that are composed of keywords with different ideas of water management. Division into economical and uneconomical ideas.</p> <p>Keywords: turn off the tap when brushing your teeth, long bath, leaky tap, water-saving toilet cistern, tightening taps up, washing in filled washing machine, leaky pipes, water meters, fixing the leaky pipes, saving rainwater for flower watering, washing dishes under running water.</p> <p><b>Storing waste</b></p> <p><b>Station 4</b>          We all like shopping. We think, that we need many things therefore factories produce everything that we want to buy. Some of these things are deliberately made in a way that makes them to run out more quickly, or simply to break easily.</p>	<p>Articles and pictures in a box – enclosure 3</p> <p>Containers with water, spoons, cards with keywords – jigsaw, enclosure 4</p>
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	<p>This is why there are so many wastes. They are being transported to the waste dump. There are such a huge amount of wastes, that there is simply no place for the storage.</p> <p><u>Waste Sorting</u></p> <p>There are many different articles in the box. Try to find out their names just by touching them.</p> <p>After guessing the names, articles are being places into the ring. Participants try to name them and describe their features. They try to classify them to one of the groups which are marked in a colorful circle, which shows the percentage of sort of waste throwing to the waste dump: paper, natural waste, glass, plastic, other (clothes, toys, batteries etc.)</p> <p>Think together: what can you do to make less waste to be thrown to the waste dump. (The leading person moderates pupils' statements in a way that brings them all to the same conclusion: that the articles gathered are rubbish.)</p> <p><u>Energy from Waste/ puzzle</u></p> <p>There are puzzle in envelopes. Try to match them together and say what you can see in the picture. Consider its content.</p> <p><b>Labels on products</b></p> <p><b>Station 5</b></p> <p>Look at the pictures which show the labels that occur on products and fit it to the proper type:</p> <ul style="list-style-type: none"> <li>- producers' labels</li> <li>- information labels</li> <li>- warning labels</li> <li>- labels that guarantee, that the product is environmentally friendly.</li> </ul> <p><b>Station 6</b> In envelopes you can find some labels and their description and names. Match the labels with equivalent names and descriptions. Next, write how those labels can help in protecting the environment.</p> <p><b>Stations should intertwine with different games, depending on the terrain in which the activity takes place.</b></p> <p><b>Example:</b> Climbing a rope – participants climb a rope in order to get to the place where the activity starts.</p> <p>Spider's Web– to go further, they have to overcome the difficulty – Spider's Web. Each participant has to pass through a different hole in the web, without touching it.</p>	<p>Orange rind, newspaper, empty yoghurt box, plastic bottle, jar, can, battery, etc. black plastic bag, colorful circle that shows the percentage of sort of waste throwing to the waste dump</p> <p>Puzzle „Energy from Waste” Enclosure 5</p> <p>Pictures showing labels that occur on products enclosures 6 and 8</p> <p>Enclosure 8</p>
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	<p>Kitchen – we prepare fruit cocktail without using any electric appliances.</p> <p>Entanglement – there are obstacles on the way, you have to overcome them by crawling, jumping etc.</p> <p>Wild animals– The elves have left some food for their assistants. As they were afraid that it will be eaten by animals in the forest, they have left bags with food on the tree branches. To it, you must first get to the branches.</p> <p>Constructing the energy saving vehicle – use the available material to construct the energy-saving vehicle, this will let you to get to the next station faster.</p> <p><b>The end of the game</b></p> <p>When the participants get to the place where the mission ends, all the groups match in one.</p> <p>Congratulations, presenting the honor symbols of Nature Protectors.</p>	Enclosure 9
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**Literature:**

Sarnowska M., „Integralny program nauczania z elementami edukacji ekologicznej w klasach I – III”, wyd. Harmonia, Gdańsk 1999

Fritz J., „Wyścigi w dzień i w nocy. Pomysły zabaw dla dzieci i młodzieży.”, wyd. Jedność, Kielce 2004

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Oszczędzanie energii w domu przez użytkowanie energooszczędnych urządzeń, Materiały edukacyjne dla szkół podstawowych, gimnazjów oraz szkół ponadgimnazjalnych. [www.Energooszczedneagd.kape.gov.pl](http://www.Energooszczedneagd.kape.gov.pl)