





Learning Scientific Skills Outside the Classroom

Scientific Skills

Identifying and Classifying Specific skill – comparing materials	Predicting	Observing
Country of Origin	Suggested Age Range	Suggested Theme
 Sweden	3 – 5	Materials
Location outside the classroom	Benefits of using this location	
Woods	The materials need to be left in an outdoor environment	
Learning Objectives – Scientific Skills	Learning Objectives – Knowledge	
To make comparisons between different materials To make predictions based on their previous knowledge and experiences To make observations of materials over time in the outdoor environment	To know that materials break down (degrade/decompose/rot) in the outdoor environment To know that some materials do not break down quickly in the outdoor environment	
Key Vocabulary		
Scientific skills vocabulary – compare, same, different, predict, think, observe, see, time Knowledge vocabulary – fruit, plastic, metal, paper, plaster, environment, rot, decay, survive, material		
Resources / Equipment		
<ul style="list-style-type: none"> Equipment for exploring materials – samples of material e.g., fruit, plastic, metal, paper and plaster (not objects made of the material) Equipment for exploring degradation of materials – samples of materials explored; nails, hammers and a plank of wood in the outdoor environment 		
Teaching Activities		
	<p>Discuss – Show children a piece of fruit, some plastic, paper, plaster and some metal and discuss what materials they are. <i>To prevent any confusion between an object and the material it is made from, make sure the children are shown a piece of material that has not been made into an object e.g., show them a piece of plastic, not a plastic spoon.</i></p> <p>Activity – Children explore the sample of materials. While exploring the materials, adults should encourage the children to describe the materials using simple scientific language. Which material is the hardest? Which material is the softest? Which material is the smoothest? Which material is the roughest? Children go on a material hunt outside and find some items which are made out of these materials.</p> <p>Explain – They are going to leave some materials outside for a few weeks and observe what happens to them over time. They are going to see which material survives the best in the outside environment and which material rots the quickest.</p>	
<p>Predict– What do they think will happen to the materials if they are left outside? What material do they think will rot the most if it is left outside? Children to verbally complete the sentence: I think the will rot the most because</p>		



Encourage the children to think about items made of these materials that they have just found on their material hunt or they have previous experience of in real-life and consider what happens to these when they are outside e.g., a seesaw is made out of metal and is outside in the playground or the playhouse which is made of plastic in the outdoor area.

Activity – Children go into the woods/outside space and find somewhere they can leave the materials. They work together to hammer the materials into a plank of wood which is dug into the ground.

Activity – Over the next few days and weeks, go back to the materials, take photographs and observe what has happened to them over time. Discuss what has happened and compare how the materials have survived in the outdoor environment.



Examples of children's work and teacher comments from country of origin



This activity allows the children to look at how materials decay in the outdoor environment in the short term (over a few days) and also in the long term (over a period of a few weeks or more). The materials can be left outside for as long as the adults feel it will still benefit the children and their learning.

Photographs were taken of the materials when we went back to revisit them. This helped the children to see how the materials changed over time.