




Learning Scientific Skills Outside the Classroom

Scientific Skills

Measuring		Concluding Specific skill – communicate what they have found out using simple scientific language	
Country of Origin	Suggested Age Range		Suggested Theme
 Sweden	4 – 6		Earth and Space
Location outside the classroom		Benefits of using this location	
On the football field		They need a large space to carry out the activity and spread out the planets of the solar system	
Learning Objectives – Scientific Skills		Learning Objectives – Knowledge	
To measure distance using a metre stick To say what they have found out using simple scientific language		To know the planets in our solar system To develop an understanding of distance in space	
Key Vocabulary			
Scientific skills vocabulary – measure, measuring, conclude, concluding, communicate, tell, find out, metre, metre stick, Knowledge vocabulary – Solar System, space, Sun, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune			
Resources / Equipment			
<ul style="list-style-type: none"> • Equipment to identify planets - inflatable planets of the solar system, images of the planets • Equipment to measure the distance of planets from the Sun – inflatable planets of the solar system, metre stick, distances of the planets 			
Teaching Activities			
<p>Discuss– What is the Solar System? Where is it? What do they know about the planets in the Solar System? What order are the planets?</p> <p>Activity – Children identify the different inflatable planets using images of the planets to help them. Children work together to put the inflatable planets in the correct order from the Sun with reference to a chart.</p> <p>Discuss – Can they think of a way to remember the order of the planets? Create a list or poem or song.</p> <p>Explain – The planets are not the same distance apart and the inflatable planets need to be positioned to show how far they are from each other and from the Sun. Show children the distance of the planets from the Sun in metres and demonstrate how to use a metre stick to measure 1 metre, 2 metres etc. <i>N.B. To make this activity accessible for children of this age, the distances have been converted to the nearest metre (except for Mercury) so the children can measure the distance between them using a metre stick.</i></p> <p>Activity – Children work together, with adult support, to measure the distance of each planet from the Sun using the following measurements:</p> <ul style="list-style-type: none"> Mercury: 57.9 million km = 0.5m Venus: 108.2 million km = 1m Earth: 149.6 million km = 1.5m Mars: 227.9 million km = 3m Jupiter: 778.3 million km = 8m Saturn: 1,784 million km = 18m Uranus: 2,871 million km = 29m Neptune: 5,913 million km = 59m 			





Discuss – Which planets are close together? Which planets are far apart?

Conclude – What have you found out about the planets? What is the order of the planets? Adults ask children questions about the model of the solar system they have created. This provides an opportunity for the children to verbally communicate their findings.



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



This activity requires a large space so a football pitch or a large meadow would be ideal. It was a very good activity to work across subjects because they were working on discussion (language), measurement (mathematics) and science. The children could see a clear diagram of the distances and, with the help of adults, they could convert the numbers together. It was an excellent activity for the children to work collaboratively.

If possible, it would be a good idea to paint the planets on the ground so that the children could continue to talk about the solar system whenever they are outside.