

Taking Learning Outdoors

Learning experience and season	
STEM – Autumn	
CfE Level	
Second	
Experiences and Outcomes and associated benchmarks	
E&Os I can apply my knowledge of how water changes state to help me understand the processes involved in the water cycle in nature over time. SCN 2-05a I have collaborated in activities which safely demonstrate simple chemical reactions using everyday chemicals. I can show an appreciation of a chemical reaction as being a change in which different materials are made. SCN 2-19a I can explain how different methods can be used to find the perimeter and area of a simple 2D shape or volume of a simple 3D object. MNU 2-11c	Benchmarks Demonstrates understanding of the processes involved in the water cycle. Uses prior knowledge to identify when a chemical reaction has occurred to produce a new substance. Calculates the perimeter of simple straight sided 2D shapes in millimetres (mm), centimetres (cm) and metres (m).
Overview of learning experience	
How long does it take for a puddle to evaporate?	
Outline of learning	
LI/SC	Resources • A cup

Using my understanding of the water cycle, I can demonstrate a chemical reaction in action using water	• Water (or other liquids) • Chalk • A timer • A measuring tape • String
Description of learning experience and assessment opportunities In this experiences learners could explore the change in state of water on a sunny day. Using the cup and water a puddle would be created on a flat part of the playground. (in a sunny spot!) Learners could draw a chalk circle around the starting perimeter and measure it. String could also be used. Over the course of a day, at regular intervals, the learners would head back outside and record the change in size of the puddle. They could relate this to their understanding of the water cycle and how this is affected by changes in temperature. A repeat experiment could be carried out on a windy day for comparison. Discuss why they think the puddle has evaporated and which liquids evaporate most quickly. There is also an opportunity to consider the starting volume of water in the puddle and an investigation into altering the volume of water and the effect on the perimeter of the puddle (does less water evaporate more quickly?). Other liquids could also be compared. Finally, averages could be calculated across groups in the class. An experimental write up could be completed and used to demonstrate report writing skills alongside numeracy links.	
Consideration of risk	
A pre-site visit would be important to assess the learning space. Ensure that any obstacles have been removed. Conduct an on-site safety briefing with the learners to ensure that they know where to work and the perimeter of their learning zone. Hand washing when learners return to the classroom.	
Taking it further – what else could you do?	