Taking Learning Outdoors

Learning experience and season
Winter: 'Offline' Coding: Building a Snowman

CfE Level: Early

Experiences and Outcomes and associated benchmarks	
I can explore computational thinking processes involved in a variety of everyday tasks and can identify patterns in objects or information. **TCH 0-13a** I understand that sequences of instructions are used to control computing technology. **TCH 0-14a** In movement, games and using technology I can use simple directions and describe positions. **MTH 0-17a**	**TCH 0-13a** ● Identifies and sequences the main steps in an everyday task to create instructions/ an algorithm. **TCH 1-14a** ● Demonstrates an understanding of how symbols can represent processes and information. ● Predicts what a device or person will do when presented with a sequence of instructions. For example, arrows drawn on paper. **MNU 0-17a** ● Understands and correctly uses the language of position and direction, including front, behind, above, below, left, right, forwards and backwards, to solve simple problems in movement games.

Overview of learning experience
Pupils follow a set of instructions to collect items or perform actions.

Outline of learning	
LI/SC To create/follow instructions. ● I can create a set of instructions to complete a task. ● I can follow a set of instructions to complete a task.	**Resources** ● Icon print outs (see pptx) ● Chalk

Description of learning experience and assessment opportunities

Discussion:
What are instructions? Why are they important?
Use a simple procedure that the pupils will be familiar with such as washing hands, making toast, getting dressed. Discuss the steps involved and the importance of them taking place in the correct order e.g. What would happen if the butter was put on the bread before putting it on the toaster, soap was used after drying hands, socks were put on after shoes? Images of these procedures could be given to the pupils to put into the correct sequence.

Activity 1:
Outdoors, explain to the pupils they are going to play a game involving a sequence of instructions (algorithm). In this game the pupils will have to follow the arrows to collect the symbols (real items could be used instead) required to be able to build a snowman. Once the symbols have been collected the pupils must place the symbols in the correct order. Alternatively, the pupils must follow the arrows and collect the items in the correct order. Pupils can work in pairs/groups to tell each other the correct sequence of instructions to follow. The sequences can be made more or less complicated depending on the needs of the pupils.

Activity 2:
Using the action / repetition cards – pupils create their own fun algorithms for others to follow. When the pupils land on an action card they must complete the action. Introduce the repetition cards to tell the pupils how many times they must complete each action before moving on. For example, landing on the frog symbol with the number 5 next to it means they must jump like a frog five times. The star symbol with a number 3 next to it means 3 star jumps etc.

Consideration of risk
Take care in wet or icy conditions.
Be careful not to slip on laminated cards.
Taking it further – what else could you do?
Using the idea of sequence and repetition the pupils can use Scratch Jr., Daisy Dinosaur, BeeBots (or similar hardware) to create simple algorithms.