SuDS for Schools – SECONDARY LEVEL

DRAFT 29/03/2021 – TM / TC / SS

Time	Description	Age Group
40 mins	Introduction, Part 1	TY – 6th Years
40 mins	Recap, Part 2	TY – 6th Years
80 mins	Recap, Part 3	TY – 6th Years

INTRODUCTION

Introduce the IRT, who we are and what we do. Give each pupil a pencil

What we are going to talk about today: Discuss the importance of water and having clean water. What is a catchment? What is the quality of water like in Inishowen? Rivers, lakes, sea, drinking water, wells? What do they see as the pressures on water quality? Do any of them have experience of poor water quality? E.g. Landed in the sewage outfall in Moville, poor tap water etc?

Maybe develop a list of leading questions to prompt with?

PART 1 – SuDS, NBS, Water Management

Objective: Examine how water is absorbed by different surfaces

Method: (could this be done as a demo for pupils?)

1. Pupils are split into groups
2. Groups are given different surfaces to play with – plasticine, sponge, sheet of moss, permeable paving, gravel, sand.
3. Pupils our measured amount of water onto tray
4. Pupils record the amount of water that comes through the surface and how long it takes to all come through
    a. Higher classes can make observations and also plot the amount of water versus the time

Mapping:

Look at the information that is available online from EPA, catchments.ie etc.

Task – look at their own home and check out the nearest river and check water quality. Also find out where their drinking water comes from. Check water chemistry reports available from Irish Water

PART 2 - SuDS House Demonstration

Objective: Show how water can be slowed down and stored.

Method:

1. The SuDS House is set up and the facilitator asks about flooding, pooling of water around their houses, boggy parts of the garden etc.
2. Pupils are split into 2 groups.
    a. Each group is given a jug of water and given instructions on how to pour this onto the roof.
    b. Someone in each group is designated to watch the water as it comes out of the piping and goes into the graduated cylinder. They call out the reading on the graduated cylinder to another pupil
    c. The other pupil records the time.
    d. Higher Classes - Other pupils plot the graph of time versus amount of water
3. Once experiment is finished, ask pupils why do they think the water was slower to drain out of one house and quicker in the other.
4. Ask the pupils what would happen If there was a lot of rain and the houses might get flooded. What would they do? Ask who do they think would solve this problem – architect, engineer, gardener?
5. Explain the words *Sustainable Urban Drainage Systems* is explained to the pupils.
6. Show the pupils what SuDS measures are on the SuDS side of the house. Some pupils may have already noted this.

Follow up from previous week. What results did they get, What was the overall WQ like? How many different streams, how many different drinking water sources?

Look at school grounds on aerial maps. Look at water quality and water features around the school property.

Develop a map for the school grounds (how can this be done?). Ideally to scale

Task – out into groups. Must have a good map ready for the next week.

Part 3 – School SuDS

Objective: Map movement of water around school grounds. Look at possible nature based solutions for improving water quality, managing water movement

Method: Groups go outside and map water movement. Look at possible solutions outside.

How does this lesson align with the Secondary Level Curriculum?

Under SPHE – Geography / environmental studies / science/biology

Possible nature based solutions – swales, tree boxes, water gardens, water harvesting etc

Teacher resource kit

Task – Design a NBS for the school

EQUIPMENT

Amount	Description	Part
	Tray	
	Plastic sheet	
2	Jug of water	
2	Towel	
	SuDS House	
2	Graduated cylinders	
2	Stopwatch	