Stream Study - KS4

Stream Study (investigating downstream changes) – whole day activity
Students will study the changes in characteristics (width, depth, velocity, discharge and gradient) of a river and its valley from its source as the river flows downstream.
Students will be introduced to and given the opportunity to measure some or all of the following:

- Stream Ordering & local geology
- Stream channel forms
- Movement of water in channel
- Fluvial erosion & deposition (sediment analysis)
- Hydraulic geometry of channel : hydraulic radius
- Meandering channel : plan / cross-section
- Discharge (normal and bankfull)

Students will gain knowledge about the river as a case study and the data can be collected to follow the route to enquiry, to prepare them for the 'write up' of the controlled assessment.

Learning Objectives

- To understand that river systems develop characteristic landforms and channel shapes along their long profile, from source to mouth.
- To understand how and why channel shape and characteristics change along a long profile for a named river using the terms, erosion, transportation, deposition and relating this to the local geology.
- To collect primary data using a range of equipment and techniques and to build up a case study of the river studied.

Students should have covered the content of the unit so that the focus can be on the case study and collection of results.

Some suggestions for visit follow-up:

1. Complete the cross-sectional drawings for each site surveyed and calculations.
2. Analyse and interpret all data collected.
3. Complete the controlled assessment.

The outline of the course will be adapted to meet the needs of the specification followed and the controlled assessment:

AQA Geography A	Unit 1 (Physical Geography) Section B - Water on the Land Unit 3 (Controlled Assessment) – Water on the Land task
Edexcel Geography A	Section A (The Physical World) Unit 2 (The Natural Environment) Topic 2 (River Landscapes) Controlled Assessment
WJEC Geography A	Unit 1 Core Geography (Water) River processes and landforms Unit 3 Geographical Enquiry - Controlled Assessment
WJEC Geography B	Unit 1 - Theme 2 (Physical processes and relationships between people and environments) River processes / landforms Controlled Assessment
Cambridge IGCSE	Theme 2 (The Natural Environment) 2.2 Landforms and landscape processes 2.2.2 River Processes Coursework
OCR B Geography	Theme 1 (Rivers and Coasts)

EVENT SPECIFIC RISK ASSESSMENT

Visit details: **Stream study KS4** Carried out by Suntrap Forest Education Centre Date: February 2013

ISSUE List significant hazards which may result in serious harm or affect several people.	**HOW TO MANAGE IT** What procedures will we have? (Control measures)	**Who to inform**
Getting lost & stranger danger	Working in groups of 3 or more at all times	Pu
	Stay within area designated by Suntrap staff	Pu, S, Pa
Water-borne diseases	Wear gloves when immersing hands into water	Pu, S, Pa
	Those with skin conditions, cuts or allergies wear appropriate protection	Pu, S, Pa
	Wash hands at the end of the activity	Pu. S. Pa
Inclement weather	Wear appropriate clothing & footwear	Pu, S, Pa
Trip/slip/fall/injury	Do not run	Pu
	All Suntrap staff to carry first aid kit	S
Road safety	Walk along road in single file	Pu, S
	Cross road using a "Suntrap line"	Pu, S
Falling into water	Care needed upon leaving & entering water bodies	Pu, S, Pa
	Carry a throw line	Suntrap Staff
	Avoid bank full & flood conditions	Suntrap staff
Medical Conditions	All adults to be aware of particular conditions, e.g. asthma, allergies	S, Pa
	Student to carry medication at all times	Pu, S

You must also ensure that appropriate persons are aware of any Generic procedures, but the4se do not need to be repeated here. **S-Staff Pu-Pupils Pa-Parent**
The activity must only take place if the residual risk following implementation of control measures is deemed to be "low".