

## GEOGRAPHY

Location knowledge. Name and locate counties and cities Y3, local geographical regions and the characteristics that identify them Y4, identify key topological features of regions of UK and land use patterns Y5 Explain how aspects of the region have changed over time Y6.

**-Name and locate Nidderdale and local counties & cities on a topographical map of the UK**, colour in topological features relating to height of landscape and label with a key. **Smartboard and task** is in 'Nidderdale Rocks' section of the website. Children to discuss the impact of the land heights on water i.e. it flows downhill due to gravity. Can they tell What river / water features do we think are human which sea the water from the Nidd will flow into by looking at the topographical map?

**-Recreate a watershed in a sand box.** In groups, build high hills at one end. Pour water gently onto the mountain range and watch the 'river' channel or channels created. Use laminated labels for watershed, tributaries, meanders, estuary, flood plain, gorge. Observe the change in water speed. Relate to ch'ns speed on a tall playground slide.

**-Use correct vocabulary to describe different river phases of the Nidd**

Use **Smartboard presentation 'Describe Stages of the River Nidd'** as a class. Children sketch and label different river phases/courses with the correct vocabulary using **River journey vocab task sheet**. This vocabulary could be used in English work for poetry / explanation / report writing.

-Use maps and plans to locate villages and towns on the **Journey of the River Nidd Smartboard Sketch Map** as a class and then children independently locate and label villages and towns on the Nidd on the **Label Villages and Towns Resource sheet**.

Geography skills and fieldwork.

Use maps at a range of scales and six figure grid references Y5/6 and KS3

Children learn about contour lines on a map and use them to find out more about physical features of the valley and how it has changed over time Y5/6. Show **Nidd Valley Co-Ordinates & Contours Smartboard Presentation**. Model working out land heights and plot contours together.

**-Children split into four groups to read contour heights at four different points of the Nidd Valley and plot these to show change in valley shape.** Use **valley co-ordinates and contours resource sheet and maps** (preferably use actual OS maps). Compare results as a class. What have we found out about the shape of the Nidd Valley? Why does the valley change shape in this way?

## HISTORY

Ask and answer questions about the past by selecting and organising relevant information from sources carefully.

**K-W-L What do we know about Scar House / The Reservoirs / Water in Upper Nidderdale?** –Talk partners brainstorm what we know. Feedback. Record ideas in group (5 mins). Brainstorm what we'd like to find out. Record ideas (5 mins). Watch the British Pathe silent movie 'The Super Dam' **Ask questions and construct informed, relevant responses. Understand the past can be explained in different ways.** Add further questions and anything we have found out from the movie onto **Water and the Valley KWL charts**.

Understand the different ways we find out about the past and the way it is presented. Use sources to answer questions and gather information. Look at different versions of events, give reasons why people might view things in different ways.

**-Look at and annotate the artists impressions** of Scar House Dam construction and the 'Stockyard / Rail station' (**Image Resources 2&3**)

-Look at and annotate the pictures in '**Was there a Railway in Upper Nidderdale?**' resource. Children spot the similarities, differences and evidence in the pictures.

-Split the class to read **Reservoirs information sheet** (slice into sections for a 'speed read'). Obtain more detailed booklets on Scar House Reservoir and Village from Nidderdale Museum. Children make notes and feed back the things they have found out

**-HA children could study, trace and annotate Scar House aerial maps and OS maps for the time before and after the building of the dam.** What changes do they notice? Compare information. Which do they think is the most reliable source of information and why?

**-Visit Nidderdale Museum /** ask oral History Expert or a local person to come to school and talk about family memories the building of the dam.

-Read / watch on Youtube extracts of 'The Dam Play' by Nevin Ward.

## ENGLISH

Using the **smartboard resource 'Label and Explain the Water Cycle'**, children write a story entitled 'The life of a water droplet in Nidderdale'.

Write an advertisement or a poster encouraging people to come and work at Scar House Reservoir in the 1920s. Use comparison of current living conditions in normal worker housing with the sort they can find at Scar to persuade.

## SCIENCE

Plants: Y3&5 Explore requirements of plants for life and growth and understand seeds and their role in the life cycle of plants.

Children **plant a variety of seeds and observe how they grow** in different growing conditions. Reproduce a river valley. Plant cress or grass seeds all over. Where do the seeds grow best? Near water? On rocks?

Rocks: Y3 Recognise that soil is made from rocks and organic matter.

**-Children devise a fair test** for permeability of rocks in Nidderdale (see Nidderdale rocks for rock types and locations)

Materials: Y5/6 Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Demonstrate that dissolving, mixing and changes of state are reversible changes

**-Children learn about waste treatment** and visit the Yorkshire Water website to learn about water filtration.

**-Children separate a mixture of materials** e.g. sand, gravel, floating and metal objects. They experiment in groups using different sized sieves, grids, scoops, magnets and containers. Who can end up with clear water as well? Can we separate salt from the water? (evaporation experiment)

**-Children observe** the teacher condensing steam on a mirror or metal object **and draw their observations**.

**-Children complete class smartboard resource 'The Water Cycle'**.

**-Children complete the water cycle task resource sheet.** (see also English – story of a water droplet in the River Nidd)

Evolution and inheritance: Y6 Identify how animals and plants are adapted to suit their environment in different ways & adaptation may lead to evolution. Recognise that living things have changed over time

**-Children compare features of Wader birds found at Gouthwaite 'estuary' versus woodland birds.** How are Nidderdale water birds adapted for their environment?

### Geographical skills and field work contd...

**-Observational walk at Scar House.** In advance, use aerial maps and Google Earth to locate sites of past human activity in Nidderdale. Visit Scar House Reservoir to **observe and record evidence on site of pre-existing villages** (Scar House temporary village and the settlement of Lodge).

Describe the physical and human features of an area and understand how they interact and make an area distinctive using place-based examples. Show understanding of key physical processes.

**-Children learn about the 'Physical features of the Nidd River Valley' and the changes in the landscape on the Nidd's route to the sea** using smartboard resource with class. Children use books / internet to research and make notes about a physical feature each e.g. watershed, gorge, meander, estuary. Children locate the Nidderdale feature on Google earth and find where on the journey of the Nidd this feature is...upper, middle, lower course of river.

-As a class, children complete the smartboard activity, **'Locate and Label physical features'** matching the type of physical feature with the correct river stage on the picture. -i) Independently, they label and explain as many different river features of Nidderdale as they can annotating the *label and physical features handout resource* (referring to the *smartboard presentation* pictures if necessary). -ii) Children could add thumbnail photos of the physical features of the Nidderdale landscape to their annotated pictures.

**-Children learn about the 'Human features of the Nidd River Valley' landscape on the Nidd's route to the sea** using smartboard resource. In groups, children use books / internet to research and make notes about a human feature using water each e.g. dams, mills, fish farms, sewerage plants, aqueducts. Children locate the Nidderdale feature on Google earth and find where on the journey of the Nidd this feature is....

-As a class, children complete the smartboard activity, *Locate and label human features on the Nidd* and complete independent *human features handout task*.

**-Children observe, discuss and circle landscape changes between two time periods.** Working in pairs or small groups, children use the *Image resources of Nidderdale in the 1850s (Victorians section)* and *in the 1920s* and circle, number and note differences. Discuss findings. Plenary: Are the changes to this landscape mostly physical or human? Together make two lists as a class. What do they think had the biggest impact on landscape in that time?

## WATER AND THE VALLEY

### HISTORY continued...

Place events in chronological order, use a timeline and historical vocabulary, placing specific events on that timeline.

**-Children order events from Reservoirs in Nidderdale Timeline.** Children suggest ideas as to why the reservoirs were built in the order they were.

Recognise similarities and differences between life in different periods and explain how something in the past affects our lives. Describe different societies and periods in history and start to make links between features and across time.

**-Children research life of 'navvies' / working family life and houses in 1920s Yorkshire** (see, for example, information at the British Railway Museum <http://www.nrm.org.uk/RailwayStories/railwayarticles/navvies>) and compare this to the *information* we have about workers at Scar House Reservoir.

**-Children make a poster advertising work and accommodation at Scar House.**

### MATHS

Read timetables and use 24 hour clock notation

**-Children read Nidd Valley Light Railway timetable and answer word questions.** (Use *Nidd Valley Light Railway Timetable Task*)

Use coordinates, record results in table, plot line graphs

**-Children plot a line graph using the contour heights on a map** (see *Valley Co-ordinates and Contours Task*)

### SCIENCE continued...

#### Sc1: Thinking scientifically

**-Children ask and answer their own questions, track weather patterns....rain gauge etc.**

Are raindrops always the same size?

What types of clouds make what type of weather?

Does it rain more in May or June?

Visit teacher pages on <http://www.metlink.org/> for general experiments and ideas.

#### DT

Use creativity and imagination to design and make products that solve real and relevant problems.

**-Children investigate water poser and make a waterwheel from rubbish**

**-Children make their own rain gauge**

#### MUSIC & DRAMA

**-Children write and perform a 'voice-over' for the British Pathe Newsreel about the building of Scar Dam.** (see *British Pathe News task*).

**-Use range of un-tuned and tuned instruments to create a piece about the life of a river.** Use pitch, tempo and dynamics to show its different stages e.g. fast, turbulent, the dam, gorge, meandering, slow.

**-Relate music to WW1 era of Angram and Scar House Reservoir by using BBC's 'Archie Dobson's War' resource** which also explores pitch, tempo and dynamics.

#### ICT

-Children follow the link to *Fly along the River Nidd on Google Earth*. Research how to add place labels and photos to the Google Journey to create an annotated and illustrated journey along the Nidd, calling in at places of interest.

#### ART & DESIGN

Increase awareness of different kinds of art, craft and design. Use range of materials. Learn about great artists.

**-Use watercolours to interpret physical / human features in the Nidderdale landscape which rely on water.**

**Research and paint these in the style of Monet. Display on a large classroom wall source to sea river journey.**

## Water & The Valley Topic Web Notes

- This topic web contains some suggested activities and cross-curriculum links.
- It is designed to be printed on two A4 sheets of paper and then put together and photocopied to form one A3 sheet.
- The text in red denotes a resource which is available to download free from the Upper Nidderdale Landscape Partnership Education Resources pages.
- Text in other colours denotes a Curriculum objective.
- The text in bold denotes an activity that the children will be doing.
- 'PP' is short for PowerPoint Presentation.