#WEAREGEOGRAPHERS

UNIT OF LEARNING | YEAR 5 | SPRING | RIVERS AND THE WATER CYCLE

Overview:
Rivers and the water cycle
Grid references

National Curriculum Objectives:

Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time

Describe and understand key aspects of: ♣ physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle ♣ human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water

Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied ♣ use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world ♣ use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.

Human and Physical Geography:
Know a river's place in the water cycle (HPG)
To know the features of a river including: mouth, source, meander, floodplain, channel, (HPG)
Know and have an understanding of river processes and patterns (HPG)

Locational Knowledge:
To know key rivers in the United Kingdom and identify local rivers: Tees, Tyne, Wear, Ouse (GSF) (LK)

Geographical Skills and Fieldwork:

To know key rivers in the United Kingdom and identify local rivers: Tees, Tyne, Wear, Ouse (GSF) (LK)
Know the source and mouth, as well journey of the River Wear from Wear Head to Wearmouth (GSF) PK)

Revisiting:

8 points of a compass
UK rivers
The water cycle
Features of a river

Disciplinary and Procedural Knowledge:

- Know the features of a river including: mouth, source, meander, floodplain, channel,
- Know key rivers in the United Kingdom and identify local rivers: Tees, Tyne, Wear, Ouse
- Know the source and mouth, as well journey of the River Wear from Wear Head to Wearmouth



- Know and have an understanding of river processes and patterns.
- Know a river's place in the water cycle
- Know what makes a river and compare it to other bodies of water
- Know the importance of Rivers in the NE, specifically Wear for Industry (Human Geography element)

Skills to be lifelong geographers:

Direction/Location: Use 4 compass points well: Begin to use 8 compass points; Use letter/no. co-ordinates to locate features on a map confidently.
Style of map: Identify features on arial/oblique photographs Use map sites on internet.

Fieldwork Opportunities:

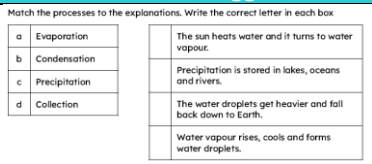
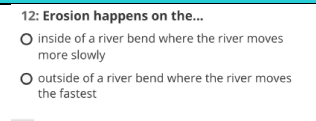
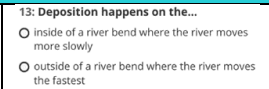
On the school grounds

- Infiltration rates- make your own instrument.

Website links/Texts:

Local river (visiting one or more sites along its course) • Draw and annotate a sketch. • Measure the speed (use Pooh Sticks) to compare the other sites along the course. • Take pictures of any signs or "human interaction" with the river in question. • Create an emotional map at each site along the course. • Teesmouth visitor centre (fieldwork around river speed, erosion, debris)	https://www.oddizzi.com/teachers/explore-the-world/physical-features/rivers/the-water-cycle-2/ https://www.oddizzi.com/teachers/explore-the-world/physical-features/rivers/stages-features/ https://www.thenational.academy/teachers/programmes/geography-primary-ks2-l/units/rivers-4772/lessons?sid-cd0841=bUIgXc7V8K&sm=0&src=3#slide-deck https://www.bbc.co.uk/programmes/p00xq904
Key Knowledge – End Points: • To know the features of a river including: mouth, source, meander, floodplain, channel, (HPG) • To know key rivers in the United Kingdom and identify local rivers: Tees, Tyne, Wear, Ouse (GSF) (LK) • Know the source and mouth, as well journey of the River Wear from Wear Head to Wearmouth (GSF) PK) • Know and have an understanding of river processes and patterns (HPG) • Know a river's place in the water cycle (HPG)	**Unit Vocabulary** water cycle atmosphere evaporation precipitation condensation river mouth source erosion transportation delta waterfall stream / tributary meander flood plain

Lesson sequence					
To know key rivers in the UK and identify local rivers:	**Know a river's place in the water cycle**	**Know the features of a river including mouth, source, meander, floodplain, channel**	**Know and have an understanding of river processes and patterns**	**Know the source and mouth, as well as the journey of the River**	**Know the importance of rivers in the North East (particularly for**

Tees, Tyne, Wear, Ouse				**Wear from Wear Head to Wearmouth**	**industry- human geography)**
Suggested retrieval task					
8 points of a compass.	Fill in the blanks: The main river running through central London is _____. The main river running through Sunderland is _____. The main river running through Newcastle is _____. (Thames, Wear, Tyne).		Join feature to definition Meander Channel Floodplain		
Activity					
What is a river? What makes it different from other bodies of water? Explain to children that a river is a moving body of water - usually freshwater - that flows from its source on high ground, across land, and then into another body of water, which could be a lake, the sea, an ocean	Explain to children that our water on Earth is in a constant cycle, called the Water Cycle. The sun shines on our seas and rivers and heats up the water. As water warms up it starts to evaporate. This means the liquid water is turned into water vapour. The water vapour rises into the sky. As it gets higher, it gets colder and begins to turn back into liquid water in the form of droplets. This is called condensation. The water droplets form clouds and as the drops get too big and heavy they fall as rain (precipitation).	Show children a flight along the River Thames (Oddizzi) Show children a variety of aerial images of a mouth, source, meander, floodplain and channel. Use subject knowledge organiser to identify vocabulary definitions. Show children video again- can they spot any of these features? Children to label features of a river in books and define. Meander – a winding curve/ bend in a river	Think about how the rivers shape the land around us. Get children to think, pair, share. Explain to children that we are going to look at erosion and deposition. These are processes. Explain that erosion is when land is worn down by the river. Rocks break up, wear away each other and the river bed and banks and the force of the water breaks the land and riverbeds down.	Using an ordnance survey map, children to locate the River Wear. Children to locate the source of the River at Wear Head and follow the river to the mouth at Wearmouth. Which places can they locate on the journey? Can they direct using 4 or 8 figure grid references? Explore lesson using OS maps.	Ask, is a river a human or physical geographical feature? (physical) How might rivers link to human geography? (think, pair, share) Children to note why might rivers be important to people? (share ideas) Transport Drinking water Food source Agriculture Tourism and leisure

or even another river. Children to use a junior atlas to locate main rivers in the UK. Can they identify whether these rivers are NSEW? Or NE, NW, SE, SW? Children to sketch their own map of the UK and draw rivers on with labels.	In colder weather they can fall as snow, hail or sleet. When they reach the earth the water flows into rivers, lakes and the sea and the cycle starts again. Children to sketch an diagram explaining the water cycle and using key vocabulary (evaporation, condensation, water vapour, precipitation). Ensure they label a river, sea to demonstrate understanding of their role within the water cycle.	Mouth- where the river flows into a larger body of water Floodplain- an area of low-lying ground adjacent to a river, formed mainly of river sediments and subject to flooding. Channel- where the main flow of water can be found Source- where the river begins. Stream- a small, narrow river Tributary- a river or stream flowing into a larger river or lake	Transportation is when large rocks are rolled along the river bed, pebbles bounce along the river bed, small sediment is carried along in the flow of the river and dissolved into the water. Show children a clip (BBC see in website links). Children to explain the process of erosion and deposition in books and the affect this can have on the land surrounding rivers.		Look at example of the Volga River in Russia and the Amazon River in South America. Now, get children to consider why rivers have played such an important role in the North East? Ship building (trade) Transport for trade Fishing Get children to design a poster explaining how rivers affect human geography.
Assessment					
Have children accurately identified and labelled key rivers in the UK on their map?	Order the four processes of the water cycle. Use numbers to show the correct order Condensation Evaporation Collection Precipitation	Have children accurately identified features and can they explain the process verbally?	9: What word will complete this sentence? When a river is travelling fast it has ____ energy. less more 10: What word will complete this sentence? When a river has more energy, it can do ____ erosion. less more 11: Deposition means... drop off carry	The mouth of the River Wear is _____. The source of the River Wear is _____.	Exit ticket- name three ways in which a river impacts on human geography of an area.