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| Year 9 Scheme of work: Restless Earth  Autumn 2 (7 weeks):  **Why are we studying this unit of work?**  This unit builds on pupils’ locational knowledge that they have developed throughout KS3. It brings current news into the classroom and is intended to stimulate a sense of awe and wonder at the magnitude of our restless Earth. It provides an understanding of the elements in which affect our Earth and it’s structure.  **How does this unit build on students’ prior learning?** This unit builds on the foundations that have been introduced throughout KS3 in terms of recognising physical processes, which can change and shape our world. It builds on prior knowledge of the earth’s crust from the Rocky World unit studied at the end of Year 7 and builds on prior knowledge developed in KS3 of hazards experienced across the work from the People and Places unit.  **How does this unit provide a foundation for future learning?** It provides a bridging unit to prepare pupils for beginning their GCSE’s in Year 10. It allows pupils to understand the foundation knowledge relating to tectonics, which will aid their learning when beginning the Natural Hazards unit in September.  **SMSC/Careers:** Earth’s structure and movement - Science. Careers – Scientist, Journalist, Emergency services.Skills builder: Problem solving: create solutions for complex problems by evaluating the positive and negative effects of a range of options, Team work: Improve the team by resolving unhelpful conflicts, and Aim higher: Create plans that are informed by my skill set and that of others  **Summative assessment:** Examination covering this unit – Year 9 AP2 final assessment based on prior KS3 learning.  End points:  **Lower ability:** Students know: the Earth’s structure and movement of the Earth’s crust. The impact tectonics can have on the crust and elements of the Earth’s surface.  **Middle ability:** In addition to the basic response students can explain: Definition of a natural hazard. Types of natural hazard. Plate tectonics theory. Global distribution of earthquakes, volcanic eruptions, and their relationship to plate margins.  **Higher ability:** In addition to the clear response student make links and apply learning to: Factors affecting hazards. Physical processes taking place at different types of plate margin that lead to tectonic activity.  Literacy Focus:   * SPaG focus – Punctuation * Vocabulary – Frayer / PUSH * Oracy – Structured talk / Class discussion * Writing – Paragraph structure * Reading – Skimming and scanning | | | | | |
| Time | Non negotiables | | | Adapt to the needs of the class | |
| Key Idea | Content | Key Vocabulary / Case Study | Suggested approaches to learning and resources | Assessment/Homework/Cross-curricular links |
| 1 | What are natural hazards?  (1 lesson) | Know more:  What is a hazard?  Do more:  Describe the different types of natural hazards that occur.  Go further:  Use problem solving to match up the type of hazard to the definition. | AV: FRAYER MODEL: Hazard  Root meaning: from the Old French word hasart meaning ‘game of chance’ | Connect: Knowledge, skills and vocab retrieval.  Content:  Frayer model – Hazard. Root meaning: from the Old French word hasart meaning ‘game of chance’  Define the key terms in their books Natural hazard and Hazard Risk.  Match up task for the different types of hazard.  Checkpoint: What is a hazard?  Concentration: Enquiry questions to answer in full sentences.  Green pen answers (self-assess)  Consolidation: Exit ticket  **Challenge:**  **Support:**  **Notes:** | Self-assess |
| 2 | What is plate tectonic theory?  (1 lesson) | Know more:  What is the evidence for plate tectonic theory?  Do more:  Assess the evidence for plate tectonic theory.  Go further:  Aim high to assess evidence for plate tectonic theory. |  | Connect: Knowledge, skills and vocab retrieval.  Content:  Structure of the earth  Convection currents  Pangea  Smart reader on the evidence for pate tectonic theory  Checkpoint: What is the evidence for plate tectonic theory?  Concentration: Written task assess which evidence is most substantial and which is not – give own opinion on whether there is enough evidence.  Consolidation: Mini Quiz (5 questions)  **Challenge:**  **Support:**  **Notes:** |  |
| 3. | How do plates move?  (1 lesson) | Know more: Which physical processes occur at different types of plate margins that lead to earthquakes and volcanic activity?  Do more: Explain the processes, which lead to tectonic activity.  Go further: Problem solving – discovering processes, which cause tectonic activity. |  | Connect: Knowledge, skills and vocab retrieval  Content:  Share image of different plate margins and discuss these as a class.  Carousel activity for the 4 plate margins – reading task – scan/skim and gather information in time limit.  Describe the global distribution of earthquakes and volcanoes and the relationships to plate margins. Link to an example of earthquake – Nepal 2015 (future link to Year 10 learning).  Check point: Which of the following statements are true about plate margins?  Concentration: Extended writing – model answer after to help improve work.  Consolidation: Quiz  **Challenge:**  **Support:**  **Notes:** | Whole class feedback |
| 4 | Do volcanoes cause hazards?  (1 lesson) | Know more: What are the different types of volcanoes?  Do more: Explain why people live near tectonic hazards. Evaluate the impacts of volcanic eruptions.  Go further: Team work – peer teach. |  | Connect: Knowledge, skills and vocab retrieval  Content: Types of volcanoes – teacher to share. Peer teach – volcano creation at different plate boundaries – pupils to draw and annotate each type. Reading task – scan/skim and gather information on impacts of volcanoes in time limit.  Class discussion – Do all volcanoes cause hazards?  Checkpoint: Why do people live near volcanoes?  Concentration: Exam question – Explain the advantages and disadvantages of living near a volcano.  Consolidation: Exit ticket  **Challenge:**  **Support:**  **Notes:** | Live |
| 5 | Do volcanoes cause hazards?  (1 lesson) | Know more: How do eruptions impact people and the environment?  Do more: Evaluate the impacts of volcanic eruptions.  Go further: Use the skill evaluate to assess the impacts of a volcanic eruption. | Push model: Global dimming (CCL – Science) | Connect: Knowledge, skills and vocab retrieval  Content: Push model – Global dimming. What is a super volcano? Think pair share. Impacts of eruptions – use images to predict.  Example – Icelandic volcano – 2010. Smart reader task.  Class discussion – What are the social, economic and environmental impacts of volcanic eruptions?  Checkpoint: Which statements describes the primary effects of the volcanic eruption in Iceland.  Concentration: Extended writing task – Evaluate the impacts of the Icelandic eruption.  Consolidation: Exit ticket  **Challenge:**  **Support:**  **Notes:** | Cross-curricular links with Science – Chemistry – Volcanic ash – cause of global dimming.  Homework – complete Teams Quiz on prior learning |
| 6 | Does the UK suffer from tectonic hazards?  (1 lessons) | Know more: Where do tectonic hazards occur?  Do more: Explain the distribution of tectonic activity.  Go further: Aim higher – justification skills. | AV: FRAYER MODEL: Distribution  Root meaning: from the Latin word “distributes” meaning ‘to divide’. | Connect: Knowledge, skills and vocab retrieval  Content: FRAYER: Define the term distribution.  Class discussion – Does the UK suffer major tectonic activity?  Map of tectonic hazards – introduce the Ring of Fire. Pupils to plot volcanoes and earthquakes on blank map. Link to plate tectonic theory and Earth structure.  Checkpoint: Where are earthquakes and volcanoes located?    Concentration: Explain why the UK does not suffer from major tectonic hazards.  Consolidation: Exit ticket  **Challenge:**  **Support:**  **Notes:** | Peer assess |
| 7 | Will the Earth’s crust ever stop moving?  (2 lessons) | Know more: Can tectonic hazards ever be stopped? Pupils to present linking to all learning from this bridging topic.  Do more: Evaluate the extent in which plate tectonic theory is the cause of tectonic hazards.  Go further: Team work: group assessment |  | Connect: Knowledge, skills and vocab retrieval  Content: Pupils will work in groups of 3 for their final assessment of the year. They will be given a headline to produce a presentation on – all will link into whether tectonic hazards can be stopped. Pupils must link into the learning from this unit – earth’s structure, plate tectonic theory, volcanic eruptions and distribution of tectonic activity. They will have one lesson to prepare a 5 minutes presentation.  Checkpoint: How can the impacts of tectonic hazards be reduced?  Concentration: Group assessment – presentation, those watching will peer assess.  Consolidation: Self-evaluation of presentation.  **Challenge:**  **Support:**  **Notes:** | Group assessed work |