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| Subject: Science Year: Phase 3 – Year B Rocks NC/PoS: * compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
* recognise that soils are made from rocks and organic matter
* How fossils are formed when things that have lived are trapped within rock
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| Prior Learning (what pupils already know and can do). Know rock is a natural material. Know the properties hard/soft and permeable/impermeable. Know the different types of rocks and how they are formed.  |
| End Goals (what pupils MUST know and remember* Describe in simple terms how fossils are formed when things that have lived are trapped within soft rock.
* Know that fossils are formed by a plant or animal dies in a watery environment, the plant or animal is buried in mud and silt, soft tissues quickly decompose leaving the hard bones or shells behind, over time sediment builds over the top and hardens into rock
* Know how stalactites and stalagmites are formed. Know how caves, canyons, caverns are made.
* Look at rock formations: Antelope Canyon, Grand Canyon, Giants’ Causeway, The needles, White Cliffs of Dover.
* Study and classify different gemstones such as Blue John.
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| Key Vocabulary: fossil, fossilisation, formed, decompose, sediment, replica, stalactites, stalagmites, caves, caverns, rocks, formation, crystals, formation, appearance, property, gems. |
| Session 1: Recap prior learning from phase 2.Introduce how fossils are formed and look at a variety of fossils with living things that have once lived trapped inside them. Children to match the fossil with the living thing inside. [How are fossils made? - BBC Bitesize](https://www.bbc.co.uk/bitesize/articles/z2ym2p3#:~:text=After%20an%20animal%20dies%2C%20the%20soft%20parts%20of,skeleton%20begins%20to%20compact%20and%20turn%20to%20rock.)Children to write a set of instructions on how a fossil is made. Vocabulary: fossil, fossilisation, formed, decompose, sediment,  |
| Session 2: Recap how fossils are formed. Introduce how both animals and plants can get trapped and become a fossil. Children to follow their instructions from the last science session to create their own fossil. Children to use different materials to replicate the natural materials that would create a fossil. Children to create a mix of animal and plant fossils. Identifying, classifying & groupingChoose an appropriate form of presentation, including pie charts or scatter graphs. Vocabulary: fossil, fossilisation, formed, replica  |
| Session 3: Recap how a plant fossil is made. [What is a limestone landscape? - BBC Bitesize](https://www.bbc.co.uk/bitesize/articles/zd96xbk)<https://youtu.be/Tp-AGTtmjjA>Children to learn how stalactites and stalagmites are formed and the difference between them. Potentially visit a cave to see them first hand e.g. Great Orme in Llandudno. Vocabulary: stalactites, stalagmites, caves, caverns |
| Session 4: recap: stalactites, stalagmites and the definition of them. Investigate different rock formations. Antelope Canyon, Grand Canyon, Giants’ Causeway, The needles, White Cliffs of Dover. Children to identify the different types of rocks formed in the area. Vocabulary: rocks, formation |
| Session 5: recap:Study and classify different gemstones such as Blue John.Discover what crystals are and how they are formed. How long did these gems take to form? What are they used for?Children will learn about minerals and how they change the colour and appearance of crystalsVocabulary: crystals, formation, appearance, property, gems. |
| Link to career: |
| Scientists who have helped develop understanding in this field: Mary Anning <https://www.youtube.com/watch?v=Of5sK8p2rZY> |