

YEAR 3 ROCKS PLANNING

Class:

Term: Summer 1

Subject: Science

Unit: Rocks

<p>Differentiation and support (Detailed differentiation in weekly plans.)</p> <p>SEN: write up investigations on writing frames. Support from more able partners in mixed ability work. Additional adult support.</p> <p>GT: provide headings for experiment sections. Send off to experiment sooner than rest of group. Provide with equipment, but provide less scaffolding on how to conduct the experiment. Encourage conclusions that draw on scientific knowledge and enquiry skills.</p>	<p>English: writing up experiments in sequence using technical language, using dictionaries, storyboard</p> <p>Maths: measuring length and volume, drawing result tables and charts</p> <p>ICT: explanatory videos</p> <p>History: thinking about geological time, fossils</p> <p>D&T: drawing and annotating diagrams</p>
--	--

For this unit a range of rocks (ideally granite, sandstone, pumice, marble, chalk and clay) and soils (ideally peat, sandy and clay) are needed. Check that these are in school, and if not, then order them

W	Learning Objective	Skills/knowledge/activities	Resources	Assessment: Success criteria	Evaluation
1a	Self-assess knowledge of rocks and soils (15 mins)	Children complete a mind map on what they already know about rocks and soils.	Mind maps	Formative assessment exercise	
1b	To know that there are different types of rock To know that different rocks have different uses (45 mins)	<p>Intro: Ask children to think, pair, share the names of rocks that they know and any words they know to describe them. Take ideas as a class Explain that rocks are natural (people do not create them) Explain independent work Split children up into teams</p> <p>Main: Sheet with two columns – one has the names and images of rocks and key vocabulary associated with rocks. The other column has definitions. The two columns do not match up. The children need to cut them up in their teams and rearrange them so that they match. Give children the actual rocks as well if have them.</p> <p>Plenary: Go through correct answers Discuss how some items from the lesson are natural e.g. pumice, sandstone etc and some items are man-made e.g. concrete and bricks</p>	<p>Sheets (jumbled up)</p> <p>Sheets (correct)</p> <p>Scissors</p> <p>Glue</p> <p>A3 paper</p> <p>Rock samples</p>	<p>MUST: realise that there are different types of rock</p> <p>SHOULD: realise that different types of rock have different uses</p> <p>COULD: learn the characteristics of several types of rock and make the link between these characteristics and their uses</p>	

2	<p>To know the 3 main types of rock, their origins and some examples of each type of rock</p> <p>(1 hour)</p>	<p>In small groups, ask a Teaching Assistant to complete the following activities using chocolate to help children understand the types of rocks: https://www.geolsoc.org.uk/LessonPlanChocolateRock/ https://www.earthsciweek.org/classroom-activities/chocolate-rock-cycle https://www.youtube.com/watch?v=-lrCog8yjIE/ https://www.youtube.com/watch?v=4PQ2XP6mcDw</p> <p>Intro: Revise how rocks are natural (people do not create them) Ask children to think. pair, share from the previous lesson:</p> <ul style="list-style-type: none"> • the names of as many types of rocks and man-made rock-like materials as they can • the properties of these and what they were used for <p>Explain that we are going to be learning more about the three main types of rock: igneous, sedimentary and metamorphic Explain that rocks are classified into these groups based on their origin / how they were formed Watch the following videos on types of rocks: https://www.youtube.com/watch?v=CeuYx-AbZdo (if the link does not work, Google 'Types Of Rocks The Dr. Binocs Show Learn Videos For Kids') – watch from 46 secs to 3 mins 5 secs https://www.youtube.com/watch?v=o8heA8e9_zk (if the link does not work, Google 'video ROCKS - Formation, Classification and Uses - Science for Kids') – watch up to 2 mins 7 secs https://www.youtube.com/watch?v=xsHPA2GNF9Q (if the link does not work, Google 'video Rocks for Kids Learn all about geology and rocks') – watch up to 6 mins 44 secs Pause the videos when needed to clarify and explain further e.g. what 'pressure' means</p> <p>Main: Children to complete 'fill in the blanks' worksheets to go with the videos (given answers to choose from in a box) Lower ability children given the first letter of each missing word Extension: children to make additional notes from the videos</p> <p>Plenary: Children to compare their answers with a partner, discussing any differences Ask children who got on to the extension to share any additional information that they found out Listen to the song about different types of rock at https://www.youtube.com/watch?v=jPgE74Vltdc (if the link does not work, Google 'video 3 Types of Rock- a science song')</p>	<p>Videos open and ready to play with ads skipped and / or closed</p> <p>Worksheets</p>	<p>MUST: know the 3 main types of rock</p> <p>SHOULD: be able to explain how each type of rock is formed and know some examples of each type of rock</p> <p>COULD: learn some additional information independently</p>	
---	---	---	---	--	--

3	<p>Investigate the hardness of different rocks (Moh's test)</p>	<p>Experiment: Children will be given various types of rocks and some sugar / sand paper. Children rub each rock against the paper to see how much of the rock comes off on to the paper</p> <p>Aim and prediction Discuss what investigation we could carry out using this equipment and how we could do it. Think, pair, share (explaining what we will be doing if children don't suggest it in a timely way) Revise different types of rock and how they are formed Think, pair, share what might affect the hardness of the rocks? (how they were formed e.g. sedimentary rock will be the softest)</p> <p>Method Think, pair, share what we would need to do to make a 'fair test' Plan a fair test fair, with these conditions being the same.</p> <ul style="list-style-type: none"> • Force with which you rub the rock • Timing (how long you rub for) • If you use a sharp or a flat part of each rock • What surface the paper is on when you rub the rock against it <p>Model how changing these things would be unfair and explain why this is the case.</p> <p>Emphasise need to be careful with sharp edges and with heavy rocks</p> <p>Children write aim, prediction and method, then carry out the investigation by rubbing each rock against the paper</p> <p>10 minute break</p> <p>Results Model how to draw a results table. What will it need to include? (create a scale e.g. 6 being a heavy mark and 0 being no mark at all left on paper) Model recording of investigation in a bar chart and explain how to use tick list on investigation frame</p> <p>Conclusion Think about:</p> <ul style="list-style-type: none"> • Did our predictions match our results? Why / why not? • What scientific language could we use? • Evaluation – how could we have made a better 'fair test' / how could the investigation be improved? • Reliability – did other people get the same results as us? Why / why not? 	<p>Rock</p> <p>Sugar or sand paper</p> <p>Investigation frames</p> <p>Bar graph frame</p>	<p>MUST: plan and carry out an experiment by using an investigation frame, with adult support</p> <p>SHOULD: plan and carry out an experiment by using an investigation frame, without adult support</p> <p>COULD: link predictions and conclusions to scientific knowledge and use scientific language</p>	
---	---	--	---	---	--

To access the complete version of this [Year 3 Rocks planning](#), and all of the resources to go with it, visit

<http://www.saveteacherssundays.com/science/year-3/328/>



Save
Teachers'
Sundays
.com

© www.SaveTeachersSundays.com 2022