



# Learning objectives



Worcestershire  
Wildlife Trust

## Learning context

We are learning about what makes up the ground under our feet: rocks and soils.

## Learning purpose

To understand how rocks and soils are formed, how they encourage different habitats and how we can look after those habitats.

## Learning objectives

1. What tests can we do on the properties of rocks in order to classify them?
2. What are the three rock families and how do they form?
3. How is soil made and what types of soil are there?
4. What types of soil layers are there?

## I can.....

Name a property of a rock and how to test for it

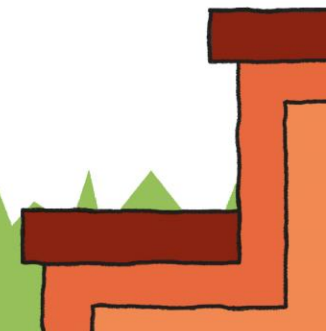
Name a rock and the rock family it belongs to

Name the three rock families and how they form

Name the two ingredients to make soil

Name a type of soil

Describe the three soil layers





# Videos and follow up activities



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## Videos

The videos have been designed to be used as introductory videos. Although key terms are explained, you may wish to use the word bank resources to support the videos and create your own glossaries before watching the videos or afterwards.

The videos replicate the activities we carry out with schools on our outdoor trip. We have tried to include alternatives in order that your pupils can carry out activities at school or in their home setting.

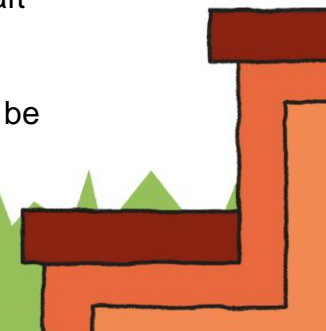
## Watching the videos

Most of the videos are between six and 10 minutes long. We recommend the class teacher watches them beforehand to know where the places are to pause the video. Some of the pauses are written into the videos but you may decide there are other points where you wish to pause in order to break up the length of time watching the video. Activities can be brought forwards and challenges don't always have to be completed at the end of the video (e.g. the soil sensory test and testing properties of rocks).

## Follow up activities

For the challenges, your pupils will be asked to complete the activities we carry out in the videos. These will need to be undertaken outside. Please ensure you have your own risk assessment for carrying out these activities. We have a draft risk assessment that you can use for informative purposes.

If your pupils are carrying out any of these tasks at home, please make parents/guardians aware that they will need to be done outside and they will need to find a safe place to do so.



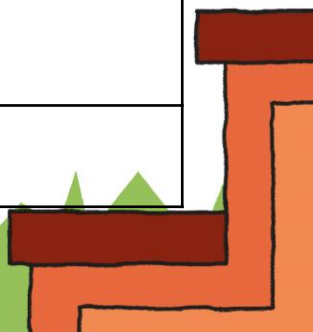


# Suggested lesson steps



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Activity	Duration	Description	Resource required
Introduction to the virtual trip	2 minutes	Introduce Lithic Liz and the challenges she would like your class to complete.	<ul style="list-style-type: none"> <li>• Introduction video</li> </ul>
Challenge 1	9 minute video  Follow up activities will vary. Estimate 30 minutes per activity.	<ol style="list-style-type: none"> <li>1. How can we classify Liz's rocks?</li> <li>2. Find out how to classify rocks by testing the properties of rocks and looking at their rock family features.</li> <li>3. Can your class find their own samples and identify them as igneous, sedimentary or metamorphic?</li> </ol> <p>You can pause the video at key points if you are watching this all together as a class. The video introduces 'training tasks' for the class to do and you may wish to introduce these yourself and talk the children through the task.</p>	<ul style="list-style-type: none"> <li>• Challenge 1 video.</li> <li>• Test crib sheet</li> <li>• Rocks teacher notes</li> <li>• Word bank</li> <li>• Starburst rock cycle activity</li> </ul>
Curriculum links		<ul style="list-style-type: none"> <li>• Working scientifically</li> <li>• Investigating properties of rocks, comparing and contrasting</li> <li>• Explanation of the rock cycle</li> </ul>	
Challenge 2	6 minute video  Follow up activities will vary. Estimate 30 minutes per activity	<ol style="list-style-type: none"> <li>1. How is soil made?</li> <li>2. Before we can find out about types of soil, how does soil even get made in the first place?</li> </ol> <p>Discover the ingredients needed to make soil and have a go at creating your own. A 'training task' of making your own soil is introduced at the end. You may wish to go through this with your class and even look at individual results altogether if your online platform allows this.</p>	<ul style="list-style-type: none"> <li>• Challenge 2 video</li> <li>• Teacher notes</li> <li>• Soil word bank</li> </ul>
		<ul style="list-style-type: none"> <li>• Recognise that soils are made from rocks and organic matter.</li> <li>• Cross curricular links – poetry and art</li> </ul>	





# Suggested lesson steps



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Activity	Duration	Description	Resource required
Challenge 3A	9 minute video  Follow up activities will vary. Estimate 30 minutes per activity.	1. What are the three different types of soil?  This video looks at the three key soil types (sandy, loam and clay) and the video follows our tutor Janice trying to work out what soil she has.  Janice undertakes two soil tests (a sensory explanation and a scientific soil test). Your children will be asked to do the same and extra resources will help to support this.	<ul style="list-style-type: none"> <li>• Challenge 3A video</li> <li>• Word bank</li> <li>• Soil test instructions</li> <li>• KS2 Garden Organic soil pack – includes soil sensory explanation result table.</li> <li>• Jam Jar soil test video</li> </ul>
Curriculum links		Non-statutory – <i>‘Pupils could explore different soils and identify similarities and differences between soils’</i>	
Challenge 3B	8 minute video  Follow up activities will vary. Estimate 30 minutes per activity	1. What soil layers are there?  We will look at the three soil layers in more detail (topsoil, subsoil and parent rock). We will contrast soil from three locations in Worcestershire.  We will examine any ‘treasures’ that we find along the way.  There are additional resources to look at what soils create different Worcestershire habitats and also actions to take to help look after our soil.	<ul style="list-style-type: none"> <li>• Challenge 3B video</li> <li>• KS2 Garden Organic soil pack – includes digging through soil layers explanation</li> <li>• Soil layers result sheet</li> <li>• Fossil activity</li> <li>• PPT about habitats</li> <li>• Activity sheets to take action for wildlife habitats</li> </ul>
Curriculum links		Non-statutory – <i>‘Linked with work in geography, pupils should explore different kinds of rocks and soils, including those in the local environment’.</i>	