



# The South Downs National Park: fact sheet



## National parks

- Britain's 15 National Parks are large areas of spectacular landscape that include mountains, meadows, moorlands, woods, coasts and wetlands.
  - Known as 'Britain's breathing spaces', National Parks are areas of countryside that are protected by law so that everyone can visit and enjoy.
  - National Parks are not owned by the nation or managed only for their wildlife; they are mostly farmed landscapes where people live, work and shape the landscape.
- 
- The South Downs became a National Park on the 31 March 2010 making it the newest National Park and the tenth in England to be designated.
  - Covering an area of over 1600 square kilometres, and stretching from Hampshire to East Sussex, the South Downs National Park is the sixth largest National Park in the UK. Those larger include Cairngorms, Lake District, Loch Lomond and the Trossachs, Snowdonia and the Yorkshire Dales
  - South Downs National Park is the only National Park which contains a complete National Trail within the Park boundaries. The famous South Downs Way stretches the entire 160km length of the Park, from Winchester in Hampshire to the white cliffs of Beachy Head near Eastbourne.
  - The South Downs National Park differs greatly from all the other UK National Parks in that it has the largest population living within it, with over 108,000 residents.
- 
- The Park includes the towns of Petersfield, Midhurst and Lewes. Many people visit the area from the nearby coastal towns and cities such as Brighton, Chichester and Eastbourne. London is less than an hour away.
  - Approximately 85% of the land within the South Downs National Park is agricultural, 14% is non-agricultural and 1% is urban.
  - The Park's geology combines the greensands and clays of the Weald with the chalk of the downlands.
  - The geology provides the foundation for large tracts of internationally important ancient woodlands, open heathland and the famous rolling downlands that lead to the iconic, sheer cliffs at Seven Sisters and Beachy Head.
  - The South Downs National Park contains over 3000km of footpaths and bridleways.
  - The highest point in the South Downs National Park is Blackdown. At 280m it is also the highest hill in county of Sussex.

## Activity sheet 2: Mastering your map

Name \_\_\_\_\_

To answer these questions you will need to use the **key** and the **scale** on your map.

### Scale and distance

What is the scale of your map? \_\_\_\_\_

This means that 1km on the ground is represented by \_\_\_\_\_ cm on the map.

Find the area your map shows on the large wall map. How is the scale different? \_\_\_\_\_

Find two churches on your map extract. What type of churches are they? Draw a sketch to show what the symbols look like. Use the scale to work out the distance between the two churches in a straight line.

Distance: \_\_\_\_\_

### Height and relief

What is the highest point on your map above sea level? \_\_\_\_\_

What sign tells you this? \_\_\_\_\_

Find the steepest slope in your map. How can you tell it is steep? \_\_\_\_\_

### Settlement

Give the name of a settlement on your map

\_\_\_\_\_

Is it a town or village? \_\_\_\_\_

What facilities does it have? For example, does it have a post office, church, pub? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Give the four figure grid reference of the settlement \_\_\_\_\_

What is the most important road that leads to the settlement? What colour is it? Has it got a number?

\_\_\_\_\_

\_\_\_\_\_

Is there another way to get to the settlement?

\_\_\_\_\_

\_\_\_\_\_

### Land use and tourism

What are the different ways that land is used on your map? For example, woodland, farmland, marsh

\_\_\_\_\_

\_\_\_\_\_

What activities are there for tourists to do on your map?

\_\_\_\_\_

\_\_\_\_\_

Swap your sheet with someone else in your class using the same map extract as you and get them to mark your answers.

# Activity sheet 3: Walk this way



Name \_\_\_\_\_

Name of walk:

\_\_\_\_\_  
\_\_\_\_\_

This walk is suitable for

\_\_\_\_\_  
\_\_\_\_\_

Name of starting point:

\_\_\_\_\_  
\_\_\_\_\_

People would enjoy this walk because

\_\_\_\_\_  
\_\_\_\_\_

Starting point grid reference:

\_\_\_\_\_  
\_\_\_\_\_

You could spot, touch or collect these things during this walk:

\_\_\_\_\_  
\_\_\_\_\_

Length of walk: \_\_\_\_\_ km

Time needed to complete walk: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Points of interest on the walk

1. Name: \_\_\_\_\_

Grid reference: \_\_\_\_\_

2. Name: \_\_\_\_\_

Grid reference: \_\_\_\_\_

3. Name: \_\_\_\_\_

Grid reference: \_\_\_\_\_

You could hear these sounds during the walk:

\_\_\_\_\_  
\_\_\_\_\_

You would need to take the following items with you on this walk:

Facilities passed: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Activity sheet 4: Landscape detectives!

Name \_\_\_\_\_

**Key question:** How do the rocks beneath our feet shape the South Downs National Park?

---



---

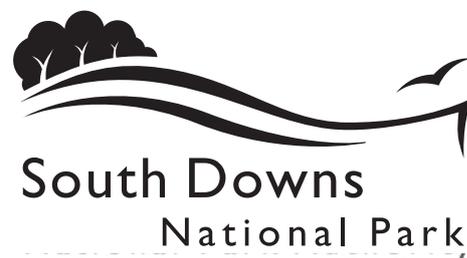


---

**Evidence for examination:** Ten key images, geology map, OS wall map, rock samples.

- |  |   |
|--|---|
| <p>1. Look at the geology map. What are the three types of rock found in the South Downs National Park?</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p>  | <p>5. Study the samples of the three types of rock found in the South Downs National Park. Describe how they look and feel.</p> <hr/> <hr/> <hr/> <hr/>                       |
| <p>2. Describe where the different types of rock are found in the South Downs National Park. Give directions (north, south, east, west) and place names. Which rock covers the largest area?</p> <hr/> <hr/> <hr/> <hr/> <hr/>                                       | <hr/> <hr/> <hr/>   |
| <p>3. Which rock makes up the South Downs themselves?</p> <hr/>  | <p>6. Look at the geological timeline of the South Downs and give the age of the three main types of rock that make up the South Downs National Park.</p> <hr/> <hr/> <hr/>   |
| <p>4. Sometimes rocks are exposed, but more often they are hidden below soil, vegetation, buildings and roads. Look at the ten key images. Which images give you a clue as to the rock type in that place? What rocks can you see evidence of?</p> <hr/> <hr/> <hr/> | <p>7. What other evidence would you like to see to help you find out more about the rocks of the South Downs National Park and how they shape the land?</p> <hr/> <hr/> <hr/> |

# Geological timeline for the South Downs area



Geological time	Millions of years ago	Rock types	Events
Quaternary Era	4		Erosion of the rocks by rivers
Tertiary Era	20		Mountain building and the rocks uplifted and folded to form a dome
	50		Some uplift and erosion
	65		
Cretaceous Period	75	Chalk	Rock formation
	97	Upper Greensand	
	100	Gault Clay	
		Lower Greensand	
	115	Weald Clay	
	125		

## Activity sheet 5: Shaping the South Downs National Park

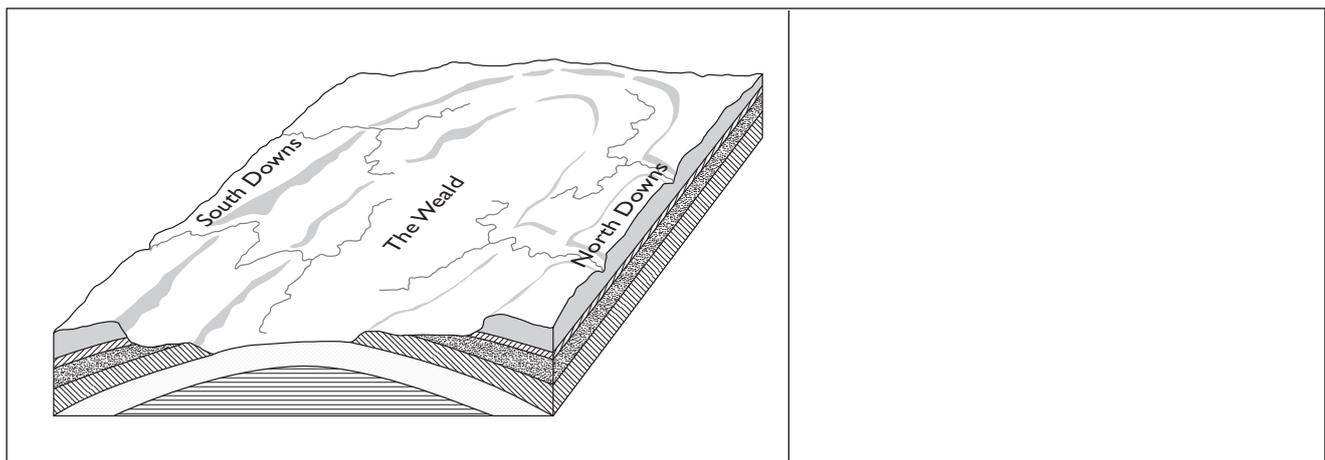
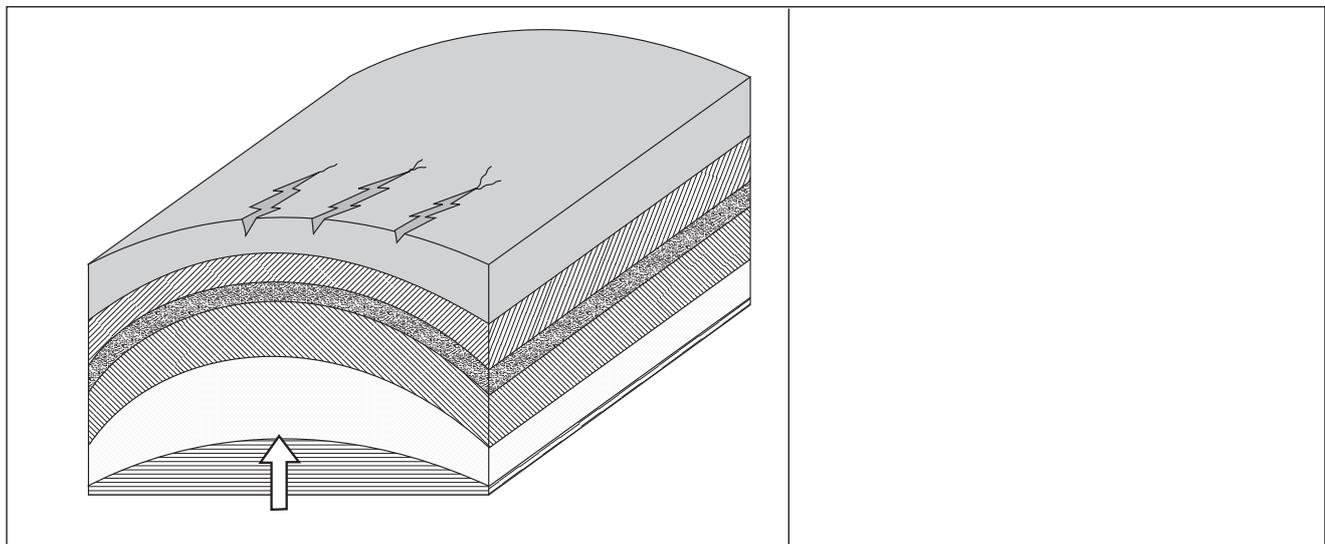
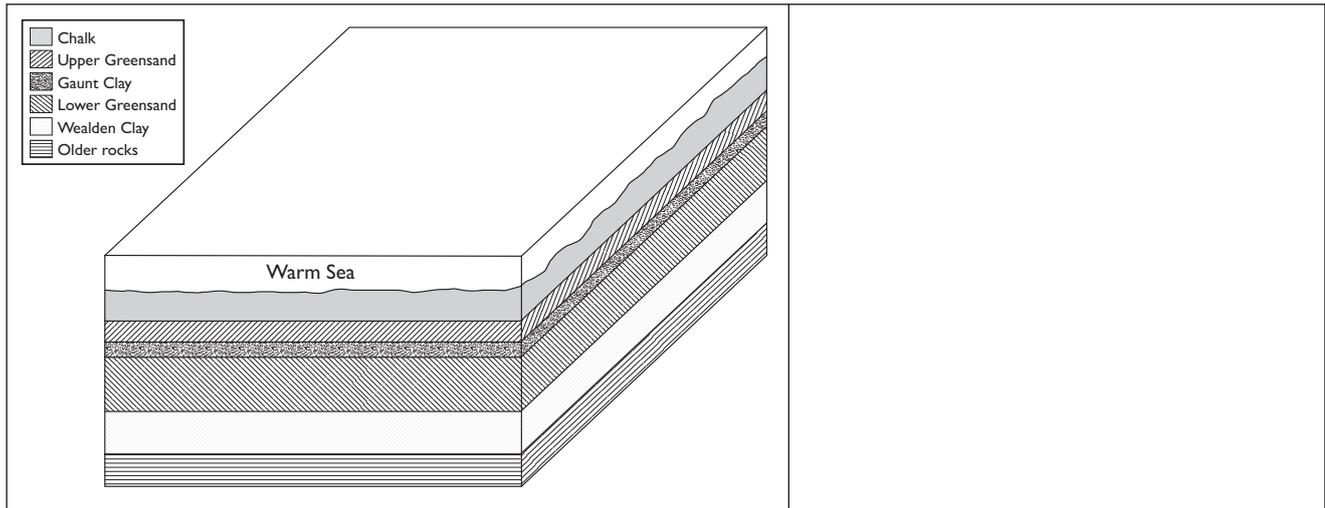
Cut out the cards and sort them into time order.

<p>125 million years ago the south of England was covered with a shallow freshwater lake. Rivers flowing into the lake carried vast amounts of clay or mud which built up on the lake bed.</p>	<p>The low flat valley floors are where the soft clay has been worn away.</p>
<p>Over millions of years the layers of clay built up to form the soft Weald clay.</p>	<p>20 million years ago the African and European tectonic plates moved towards each other and collided. As the rocks were pushed up they created mountain ranges including the Himalayas and the Alps.</p>
<p>110 million years ago the land sank and was covered by sea. Thick layers of sand were deposited. During periods when the sea currents were calmer, clay and mud were deposited.</p>	<p>The dome now looks like a boiled egg that has had its top removed. The North and South Downs are all that remains of the chalk layer that once covered the whole area.</p>
<p>The layers of sand formed the hard greensand (sandstone), with thin layers of Gault clay in the middle.</p>	<p>The rocks of south-east England were pushed up into a huge dome by the earth movements.</p>
<p>97 million years ago the sea became tropical and shallow, supporting corals and sea creatures.</p>	<p>The combination of the three rocks has created the very special landscape of the South Downs.</p>
<p>Soft rocks such as clay wear away much faster than harder rocks like chalk and greensand.</p>	<p>The top of the rock dome was cracked by earthquakes.</p>
<p>Skeletons of sea creatures were deposited on the seabed. Chalk was formed as they were squeezed and eventually fossilised.</p>	<p>The dome's chalk top became very weak where it was cracked, and was worn away by the work of rivers to reveal the older sandstone and clay.</p>

# Activity sheet 6: Time travelling in the South Downs National Park

Name \_\_\_\_\_

Use the information you have gathered from the cards and your work as a landscape detective to tell the geological story of the South Downs National Park, explaining what each diagram shows.



## Activity sheet 7: Knowledge cards

### Chalk downland

Chalk downland is the name for the area of **chalk hills**. There are three different habitats found on the chalk hills: chalk grassland, chalk heath and scrub land.

**Chalk grassland** is covered in short, springy grass. Lots of different animals and plants are found here such as orchids and wildflowers which attract insects such as rare blue butterflies. The chalky soil is thin. Farmers graze their animals on this land to keep the grass short and to stop other unwanted plants taking over.

**Chalk heath** has heather growing on it. This is because the soil is more acidic and not so good for growing other plants on.

**Scrub land** has bushes such as hawthorn, blackthorn and gorse growing on it. Lots of different plants and animals live here. Farmers have to look after these areas to make sure the bushes do not spread too much.

### Heathland

Heathland is the name for areas where heather is the main type of plant. Heather is a slow-growing, evergreen, woody plant that grows on acidic sandy or peaty soils. Other plants found on heathland include gorses, fine grasses and mosses.

Heathland develops on sandy soil but not on chalk. The rock below heathland is Greensand, which is sandstone.

Heathland is very special. Lots of different plants, insects, birds and reptiles live here. Many of these are very rare, so it is important to look after heathlands to ensure these creatures don't become extinct.

### Woodlands

Woodlands are areas where trees are the main type of plant found there. There are a few different types of woodland on the South Downs. Woodland grows on all types of soil. Different species of trees are found on different soils.

**Mixed woodlands** are where there is a mix of trees, such as oak and ash. Oak trees like deep soils, while ash trees are often found on thinner chalky soil.

**Coniferous woodlands** may have one type of coniferous tree (such as in yew, pine or spruce) or be mixed coniferous forests. Coniferous trees are evergreen, and most have been specially planted for their wood. Since they have been planted they can be found on many different soils.

Some trees, such as hazel and chesnut, grow new stems from the stump or roots if they are cut down at the bottom. This is called coppicing, and woods where this is done are called coppices. After the older trees have been cut down, lots of new stems grow up that can be used for making charcoal, firewood and fences.

**Ancient woodland** are woods that are at least 400 years old. Half of the woodland on the South Downs is ancient woodland. Because the woodland is so old it is at risk of dying out so in some places ancient woodlands are being increased by cutting down the conifers that were planted previously and replacing them with trees that grow naturally in the area.

## Activity sheet 7: Knowledge cards

### Wetlands

Wetlands are places that are wet for most of the year. This includes ponds, lakes and water meadows. They are found on low-lying ground, usually with clay soils.

**Water meadows** are wet grasslands. These are either formed naturally by regular winter flooding of land in a river valley or are flooded on purpose by farmers. In the spring and summer, the meadows are grazed on by animals such as sheep and cattle, or mown for hay. In the winter the meadows are flooded to protect the grass. When the water dries up in the spring, the grass grows well and is good food for the farmer's animals.

**Carr** is the name for wet woodlands. Alder trees are the main plants found here, but they can also contain willow and birch.

### Coastal and marine habitats

Coastal and marine habitats include cliff tops and edges, wave-cut platforms, beaches and salt marshes. These provide homes for a variety of plants and animals that can tolerate the salty conditions.

The chalk rock and the sea are very important in coastal and marine habitats, as the sea wears away the bottom of the chalk hills, forming cliffs. In some places the cliffs are wearing away quickly. Cliff faces are full of ledges that birds love. Kittiwakes and other seagulls have very noisy colonies in the spring.

The rocky beach areas below the cliffs are called wave-cut platforms. This is where the cliffs used to be but have been worn away by the sea. The wave-cut platform is often covered at high tide and uncovered at low tide. Limpets are found in rock pools. When the tide is in they graze on the green algae on the boulders. Sea anemones and shrimps are other animals that can be found in the rock pools.

Pebble beaches are made up of a rock called flint. The pebbles are often called shingle.

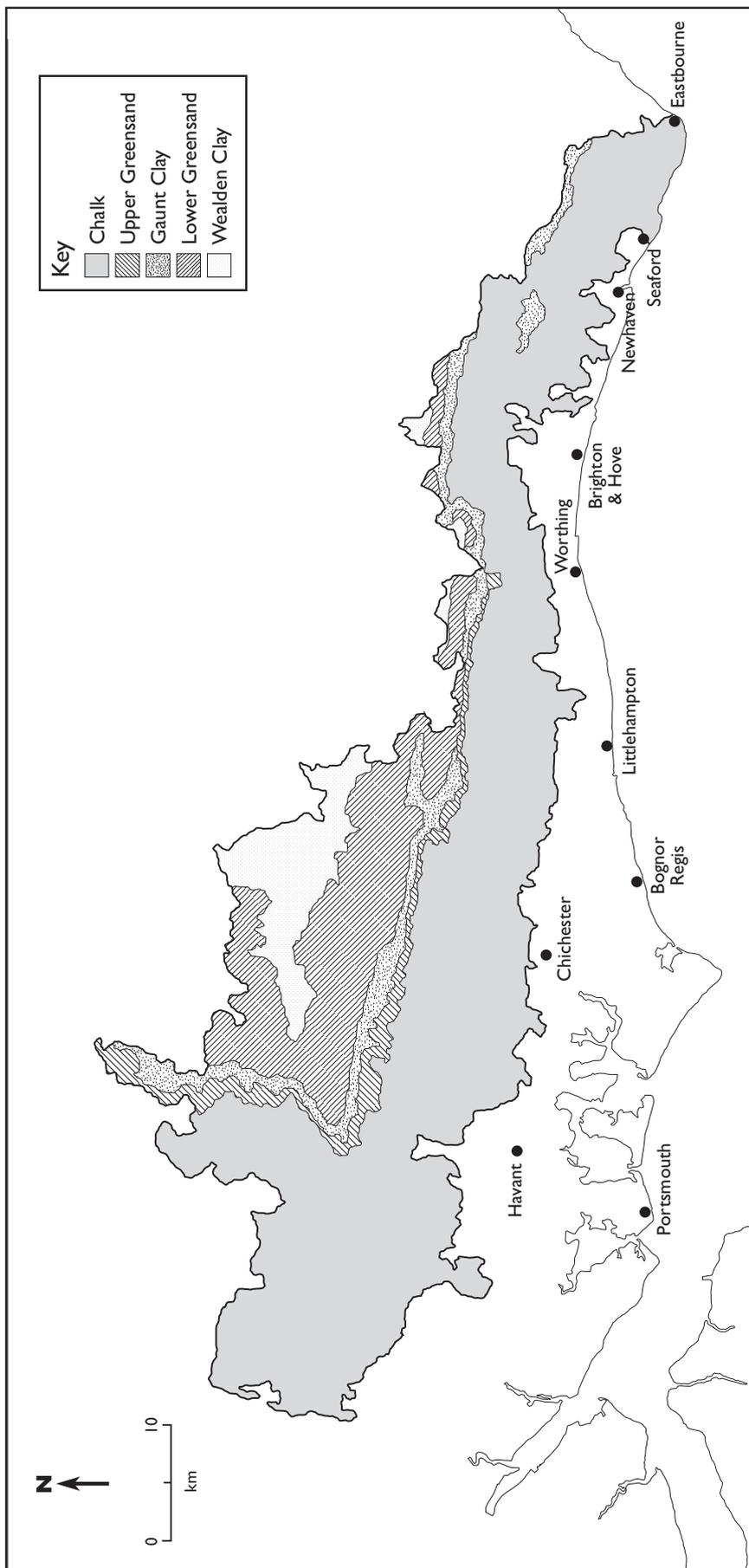
### Arable farmland

Arable farmland is the name for areas that are used by farmers to grow crops. Fields are planted once a year with crops such as wheat, barley or oilseed rape.

**Wheat and barley** are types of grasses. We can make foods such as bread from them. **Oilseed rape** has bright yellow flowers which are usually seen from late April onwards. Oilseed rape is grown to produce oil for cooking.

Arable farmland is very common across the South Downs, especially on the flatter areas. This is because the flatter areas are more easily and safely worked with modern farm machinery. The soils on the South Downs are usually described as being very 'light'. This means that the soil is easy to plough, so planting crops is easy. The chalk rock below the soil lets water soak away so crops aren't flooded very often.

# Geology map of the South Downs National Park



South Downs National Park logo



# South Downs National Park