

All About Beaches

Beach Facts

- Most beaches are found on the coast where water continuously¹ reshapes the sand. As a result, the beach changes after every tide.
- In many countries, clean beaches are awarded a Blue Flag status, meaning they are clean and safe.
- The longest beach in the world is probably Casino Beach in Brazil. It is approximately 212km long. That's about the distance from London to Birmingham!



How Are Beaches Made?

A beach is made when waves leave tiny grains of sand and gravel along the shoreline². The grains are made from rocks that are worn down by the action of the water crashing them together until they break up. The tide moves the beach every time it covers the grains; it never looks exactly the same after the water recedes³.

Why Do Beaches Look Different?

Every beach looks different depending on what it is made from. Over the page are some things that make beaches look different:

Rocks and pebbles	These are usually worn away by the sea to look round and smooth.
Sand	The colour of the sand depends on the colour of the rocks that are worn into tiny grains. In New Zealand, there are black sand beaches and in the Falkland Islands, there is red sand on some of the beaches.
Shells and coral	In some parts of the world, there are lots of shells and pieces of coral amongst the sand. People like to collect unusual shells from these beaches.
Sea glass	Some beaches have worn glass amongst the grains of sand. People like to collect these colourful pieces.
Rubbish	Some beaches are covered in rubbish after each high tide. This isn't good for wildlife and it doesn't look attractive.



Photo courtesy of reginaspics, hhach, Fiona, TimHill, paulbr75 and Walkerssk (@pixelbay.com) - granted under creative commons licence - attribution

Beach Poem Extract

“I had a castle made of gold,
It stood up straight and strong and bold,
With towers tall and square,
Its windows shone with pearly shell,
And in it, by a fairy spell,
I put a princess fair.

- Author unknown

Glossary

1. Without stopping
2. The land where a sea meets the shore
3. Moves back

Questions

1. What colour is the flag awarded to places with clean, safe beaches?

2. How long is the longest beach in the world?

3. What do the waves leave on the shoreline to make a beach? Find two materials.

4. The facts in this table have been muddled up. Can you sort the features, description and pictures correctly? Draw lines to match accurately.

Sea glass	These are usually worn away by the sea to look round and smooth.
Shells and coral	The colour of the sand depends on the colour of the rocks that are worn into tiny grains. In New Zealand, there are black sand beaches and in the Falkland Islands, there is red sand on some of the beaches.
Rocks and pebbles	In some parts of the world, there are lots of shells and pieces of coral amongst the sand. People like to collect unusual shells from these beaches.
Rubbish	Some beaches have worn glass amongst the grains of sand. People like to collect these colourful pieces.
Sand	Some beaches are covered in rubbish after each high tide. This isn't good for wildlife and it doesn't look attractive.



5. Why do you think people want to collect shells and sea glass from the beach?

6. What could you do with some seashells if you found them on a beach?

7. Find and copy a word that means **part of** a poem.

8. What is the **gold** that the castle is made of?

9. What made the 'windows shine'? How did this happen?

10. If you made something on the beach, what would you use to make it and what would it be? Give as much detail as you can.

Answers

1. What colour is the flag awarded to places with clean, safe beaches?
A blue Flag is awarded to safe, clean beaches.
2. How long is the longest beach in the world?
The longest beach in the world is about 212km long.
3. What do the waves leave on the shoreline to make a beach? Find two materials.
The waves leave sand and gravel on the shore to make a beach.
4. Answers on the other page.
5. Why do you think people want to collect shells and sea glass from the beach?
People collect shells and glass because they look pretty and make a good display. Also, people collect things from beaches as a reminder of their visit.
6. What could you do with some seashells if you found them on a beach?
You could make a necklace from shells if you found some on a beach. (Or any other plausible response.)
7. Find and copy a word that means **part of** a poem.
The word that means part of a poem is 'extract'.
8. What is the **gold** that the castle is made of?
The 'gold' in the poem is sand.
9. What made the 'windows shine'? How did this happen?
The shells make the 'windows shine' by reflecting the sunlight with their pearly (shiny) surface.
10. If you made something on the beach, what would you use to make it and what would it be? Give as much detail as you can.
Any plausible answer here, such as sandcastles or other buildings, seaweed constructions, rock pools or driftwood creations.

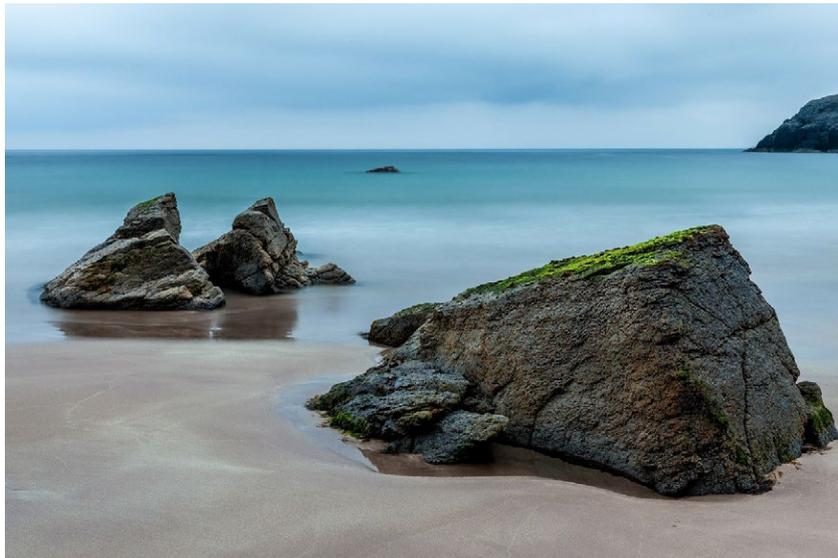
<p>Rocks and pebbles</p>	<p>These are usually worn away by the sea to look round and smooth.</p>
<p>Sand</p>	<p>The colour of the sand depends on the colour of the rocks that are worn into tiny grains. In New Zealand, there are black sand beaches and in the Falkland Islands, there is red sand on some of the beaches.</p>
<p>Shells and coral</p>	<p>In some parts of the world, there are lots of shells and pieces of coral amongst the sand. People like to collect unusual shells from these beaches.</p>
<p>Sea glass</p>	<p>Some beaches have worn glass amongst the grains of sand. People like to collect these colourful pieces.</p>
<p>Rubbish</p>	<p>Some beaches are covered in rubbish after each high tide. This isn't good for wildlife and it doesn't look attractive.</p>



All About Beaches

Beach Facts

- Beaches are found along the shorelines of oceans, seas, lakes and rivers. They are made up of loose pieces of rock, sand, gravel, shingle, pebbles or sometimes shells and coral.
- Depending on the type of particles that makes up the sand, beaches can appear white, grey, gold-yellow, brown, red or even black!
- Fraser Island off the coast of Queensland, Australia, is the largest sand island¹ in the world and it has a beach 120km long.



How Are Beaches Made?

Beaches are made when waves deposit sand and other sediment² onto the shore and wind pushes these materials inland. This creates an area of sand particles, sometimes with dunes³ behind it. The size and shape of a beach can change throughout its lifetime, as tides, weather, winds, and man-made objects nearby can affect its shape and size. Changes are monitored carefully to record how and where the biggest variations take place, as any alteration can affect homes and businesses.

Why Do Beaches Look Different?

Every beach looks different depending on what it is made from and the weather and tides that affect it. Over the page are some things that make beaches look different.

Rocks and pebbles	These are usually worn away by the sea to look round and smooth. Pebble beaches are steeper than sandy beaches.
Sand	The colour of the sand depends on the colour of the rocks that are worn into tiny grains. In New Zealand, there are black sand beaches and in the Falkland Islands, there is red sand on some beaches.
Shells and coral	In some parts of the world, there are lots of shells and pieces of coral amongst the sand. People like to collect unusual shells from these beaches.
Sea glass	Some beaches have worn glass amongst the grains of sand. People like to collect these colourful pieces.
Rubbish	Some beaches are covered in rubbish after each high tide. This isn't good for wildlife and it doesn't look attractive.
Sand patterns	Depending on tides, wind and other factors, the sand can appear in patterns, ridges and channels.
Spring tides	Spring tides occur when the sun and moon are directly in line with the earth and their gravitational pulls reinforce each other. This can result in very high and damaging tides. They happen all year round - not just in springtime.



Beach Poem

“I had a castle made of gold,
It stood up straight and strong and bold,
With towers tall and square,
Its windows shone with pearly shell,
And in it, by a fairy spell,
I put a princess fair.
I was the giant, grim and tall,
That sat upon the castle wall
And watched the foeman strong.
Then, riding on a white sea-horse
With flag of seaweed shining bright,
A sea prince came along!
He brought an army clad in green,
The biggest wave I’ve ever seen,
All topped with curling spray!
They battered at my castle door
And I fought them; hundreds more came rushing to the fray!
And now, alas!
My castle grand is just a bit of crumbling sand hidden by the sea.
The prince had saved the maiden fair,
I’m quite defeated – I don’t care,
I’m going home to tea.”

Author unknown

Glossary

1. A land mass made of sand, not rock
2. Remains
3. Sand hills

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Questions

1. List as many materials as you can find that make up beaches.

2. Where could you find the largest sand island in the world? What makes it different to a more usual island?

3. Find and copy a word that means tiny pieces of something.

4. How could the changing shape of a beach affect homes and businesses? Give as much detail as you can in your answer.

5. Some of the facts from the table are missing. Locate and copy the correct information to complete the table accurately.

	Depending on tides, wind and other factors, the sand can appear in patterns, ridges and channels.
Spring tides	
	The colour of the sand depends on the colour of the rocks that are worn into tiny grains. In New Zealand there are black sand beaches and in the Falkland Island there is red sand on some beaches.
Rubbish	
	In some parts of the world, there are lots of shells and pieces of coral amongst the sand. People like to collect unusual shells from these beaches.
Sea glass	
	These are usually worn away by the sea to look round and smooth. Pebble beaches are steeper than sandy beaches.



6. Find and copy a phrase that describes the force that creates the spring tide.

7. Why does the author describe the child in the poem like a '**giant, grim and tall**'?

8. What natural event destroyed the sandcastle?

9. Why do you think the child wasn't upset after his sandcastle was destroyed?

10. If you made something on the beach, what would you use to make it and what would it be? Give as much detail as you can.

Answers

1. List as many materials as you can find that make up beaches.
Beaches are made of loose pieces of rock, sand, gravel, shingle, pebbles or sometimes shells and coral.
2. Where could you find the largest sand island in the world? What makes it different to a more usual island?
Fraser Island off the coast of Queensland, Australia, is the largest sand island in the world. It is made of sand, not rock and soil like most islands.
3. Find and copy a word that means **tiny pieces of something**.
The word 'particle' means a tiny piece of something.
4. How could the changing shape of a beach affect homes and businesses? Give as much detail as you can in your answer.
If the beach changes shape, the high tides or storms may flood houses or businesses close to the shore. Also, the sea may wash buildings away altogether.
5. Answers on other page
6. Find and copy a phrase that describes the force that creates the spring tide.
'Gravitational pulls' are the forces that create the spring tide.
7. Why does the author describe the child in the poem like a **'giant, grim and tall'**?
As a sandcastle is small, a child would seem like a giant compared to it. He may be described as 'grim' because he was pretending to defend the castle and keep the princess for himself.
8. What natural event destroyed the sandcastle?
The tide coming in destroyed the sandcastle.
9. Why do you think the child wasn't upset after his sandcastle was destroyed?
The child didn't seem upset when the sandcastle was destroyed because he could always build another one and he seemed to be looking forward to having his tea.
10. If you made something on the beach, what would you use to make it and what would it be? Give as much detail as you can.
Any plausible answer here, such as sandcastles or other buildings, seaweed constructions, rock pools or driftwood creations.

<p>Sand patterns</p>	<p>Depending on tides, wind and other factors, the sand can appear in patterns, ridges and channels.</p>
<p>Spring tides</p>	<p>Spring tides occur when the sun and moon are directly in line with the earth and their gravitational pulls reinforce each other. This can result in very high and damaging tides. They happen all year round - not just in springtime.</p>
<p>Sand</p>	<p>The colour of the sand depends on the colour of the rocks that are worn into tiny grains. In New Zealand, there are black sand beaches and in the Falkland Islands, there is red sand on some beaches.</p>
<p>Rubbish</p>	<p>Some beaches are covered in rubbish after each high tide. This isn't good for wildlife and it doesn't look attractive.</p>
<p>Shells and coral</p>	<p>In some parts of the world, there are lots of shells and pieces of coral amongst the sand. People like to collect unusual shells from these beaches.</p>
<p>Sea glass</p>	<p>Some beaches have worn glass amongst the grains of sand. People like to collect these colourful pieces.</p>
<p>Rocks and Pebbles</p>	<p>These are usually worn away by the sea to look round and smooth. Pebble beaches are steeper than sandy beaches.</p>



All About Beaches

Beach Facts

- Beaches became popular as tourist attractions during the 18th century. Today, seaside towns and beach resort areas are a lure for tourists who come to sunbathe, swim, stroll on the beach, build sandcastles, surf and bodyboard.
- A beach is not a suitable habitat for many animals due to its constantly changing environment. However, crabs and insects can live in the sand while sea turtles bury their eggs on some warm, sandy beaches.
- Sandy beaches are mostly made of silica (SiO_2) in the form of the mineral quartz. This gives them their distinctive 'golden' colour.
- The tallest sandcastle was built in India in 2017 and stood 14.84m tall - that is about as tall as nine adult humans!



How Are Beaches Made?

Beaches are made when waves deposit sand and other sediment onto the shore and wind pushes these materials inland. This creates an area of sand particles, sometimes with dunes behind it. The size and shape of a beach can change throughout its lifetime, as tides, weather, winds, and man-made objects nearby can affect its shape and size. Changes are monitored carefully to record how and where the biggest variations take place, as any alteration can affect homes and businesses.

Why Do Beaches Look Different?

Every beach looks different depending on the material it is made from and the weather and tides that affect it. Here are some things that can make a beach look unique:

Rocks and pebbles	These are usually worn away by the sea to look round and smooth.
Sand	The colour of the sand depends on the colour of the rocks that are worn into tiny grains. In New Zealand, there are black sand beaches and in the Falkland Islands, there is red sand on some of the beaches.
Shells and coral	In some parts of the world, there are lots of shells and pieces of coral amongst the sand. People like to collect unusual shells from these beaches.
Sea glass	Some beaches have worn glass amongst the grains of sand. People like to collect these colourful pieces.
Rubbish	Some beaches are covered in rubbish after each high tide. This isn't good for wildlife and it doesn't look attractive.
Sand patterns	Depending on tides, wind and other factors, the sand can appear in patterns, ridges and channels.
Spring tides	Spring tides occur when the sun and moon are directly in line with the earth and their gravitational pulls reinforce each other. This can result in very high and damaging tides. They happen all year round - not just in springtime.



Pollution Problems

Scientists estimate that about eight million tonnes of plastic debris such as food packaging and plastic bottles are being dumped into the oceans each year, and the quantity of waste will have increased to ten times this by 2020.

As it washes up on beaches, it looks unsightly and is dangerous to sea and shore creatures, killing thousands every year. The most recent environmental problem is with microbeads. These are minute particles of plastic that are found in beauty products and the worn down waste plastic from packaging that find their way into the sea. Sea animals are poisoned if they eat it and it doesn't decompose safely. It will stay in the water and on beaches for thousands of years unless it is cleared up. A good message to remember when visiting the seaside is,

'Leave nothing behind but your footprints.'

Beach Poem

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It stood up straight and strong and bold,
With towers tall and square,
Its windows shone with pearly shell,
And in it, by a fairy spell,
I put a princess fair.
I was the giant, grim and tall,
That sat upon the castle wall
And watched the foeman strong.
Then, riding on a white sea-horse
With flag of seaweed shinning bright,
A sea prince came along!
He brought an army clad in green,
The biggest wave I’ve ever seen,
All topped with curling spray!
They battered at my castle door
And I fought them; hundreds more came rushing to the fray!
And now, alas!
My castle grand is just a bit of crumbling sand hidden by the sea.
The prince had saved the maiden fair,
I’m quite defeated – I don’t care,
I’m going home to tea.”

Author unknown

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Questions

1. During which century did beaches become popular for tourists?

2. Find and copy a word that means 'attract'.

3. Find and copy the chemical symbol for the material most beaches are made from.

4. In which country was the tallest sandcastle built?

5. Why does monitoring the shape and size of beaches help to protect homes and businesses?

6. Some of the information from the table has been missed out. Find the correct definitions and facts and write them in correctly. See next page.

Sand	<hr/> <hr/> <hr/> <hr/>
<hr/>	<hr/> <hr/> <hr/> <hr/>
Sand Patterns	<hr/> <hr/> <hr/> <hr/>
<hr/>	<hr/> <hr/> <hr/> <hr/>
Shells and coral	<hr/> <hr/> <hr/> <hr/>
Sea glass	<hr/> <hr/> <hr/> <hr/>
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7. Find and copy words that mean the same as;

fragments of remains	conservation	rot

8. Think of your own slogan that would help visitors think about looking after beaches more carefully. Record it here.

9. What image does the author of the poem create when they describe the sea prince as 'riding on a white sea-horse with flag of seaweed shinning bright,'?

10. What natural event destroyed the sandcastle?

Challenge: If you made something on the beach, what would you use to make it and what would it be? Give as much detail as you can.

Answers

1. During which century did beaches become popular for tourists?
Beaches became popular with tourists during the 18th century.
2. Find and copy a word that means 'attract'.
The word that means attract is lure.
3. Find and copy the chemical symbol for the material most beaches are made from.
The chemical symbol for beach material is SiO₂ (quartz).
4. In which country was the tallest sandcastle built?
The tallest sandcastle was built in India.
5. Why does monitoring the shape and size of beaches help to protect homes and businesses?
If the shape and sizes of beaches change, it may mean that buildings and homes are in danger from storms or floods. If they are monitored, people could be saved from danger and buildings could be protected from floods if needed.
6. Answers on the other page.
- 7.

fragments of remains	conservation	rot
debris	environmental	decay

8. Think of your own slogan that would help visitors think about looking after beaches more carefully. Record it here.
Any plausible response here, reflecting on environmental or responsible enjoyment of the location.
9. What image does the author of the poem create when they describe the sea prince as 'riding on a white sea-horse with flag of seaweed shining bright,'?
The author creates an image of a knight riding on a big horse with his banner blowing in the wind, charging on his way to rescue the captive princess
10. What natural event destroyed the sandcastle?
The tide destroyed the sandcastle.

Challenge: If you made something on the beach, what would you use to make it and what would it be? Give as much detail as you can.

Any plausible answer here, such as sandcastles or other buildings, seaweed constructions, rock pools or driftwood creations.

Sand patterns	Depending on tides, wind and other factors, the sand can appear in patterns, ridges and channels.
Spring tides	Spring tides occur when the sun and moon are directly in line with the earth and their gravitational pulls reinforce each other. This can result in very high and damaging tides. They happen all year round - not just in springtime.
Sand	The colour of the sand depends on the colour of the rocks that are worn into tiny grains. In New Zealand, there are black sand beaches and in the Falkland Islands, there is red sand on some beaches
Rubbish	Some beaches are covered in rubbish after each high tide. This isn't good for wildlife and it doesn't look attractive.
Shells and coral	In some parts of the world, there are lots of shells and pieces of coral amongst the sand. People like to collect unusual shells from these beaches.
Sea glass	Some beaches have worn glass amongst the grains of sand. People like to collect these colourful pieces.
Rocks and Pebbles	These are usually worn away by the sea to look round and smooth. Pebble beaches are steeper than sandy beaches.

