

Octopuses

There are about 300 species of octopuses and they can be found in every ocean of the world. All species are venomous but the blue-ringed octopus is the only one that is deadly to humans.

Quick Facts

- Their name comes from the Greek word 'októpous' meaning 'eight foot.'
- Their 8 'legs' are actually arms.
- The wolfe octopus weighs less than a single paperclip!



The blue-ringed octopus

Appearance

Most octopuses are **invertebrates**. The only hard part of them is a sharp, parrot-like beak, which is found underneath them where their arms join. Being boneless allows them to squeeze into the tiny gaps in coral reefs where many octopuses make their home. Others live in caves on the ocean floor, while some build themselves dens from rocks.

Did You Know...?

Octopuses have nine brains. One central brain in their head and eight smaller brains in each arm.

Tricks up Their (Eight) Sleeves

Octopus predators include sharks, eels and dolphins and they use a range of tricks to protect themselves against them:

- Octopuses can change colour in an instant. They use this to camouflage themselves and hide.
- They can also change the texture of their skin to blend in even more.
- They shoot a dark liquid called 'ink' that creates a black 'cloud' giving the octopus time to escape.
- They can swim at speeds of up to 25mph using a **siphon**.
- Their arms grow back so if they're caught, they can lose one of their arms.

Diet

Octopuses eat clams, shrimp, lobsters and some eat birds or sharks. They usually sneak up on their prey and drop down on them, quickly grabbing them with their arms and pulling them to their venomous mouth. Their sharp beak can pierce hard shells on crabs and shrimp so they can suck out the creature inside.

Fun Facts

- Octopuses have three hearts. One pumps blood through its organs while the other two pump blood through its gills.
- Some octopuses use shells to hide or hunt.
- They have blue blood and their central brain is shaped like a doughnut.



An octopus camouflaging itself in corals.

Glossary

Invertebrates – A creature without a backbone.

Siphon – A muscular tube in their body which they push water out from. This propels them through the water.



Questions

1. Where can octopuses be found? Tick one.

- ☐ Pacific Ocean
- ☐ Indian Ocean
- ☐ All of the oceans
- ☐ Atlantic Ocean

2. Find and copy one word that means the same as 'a creature without a backbone'.

3. Draw **three** lines to complete each sentence.

Being boneless allows them
to squeeze...

while some build themselves
dens from rocks.

Other octopuses live in caves
on the ocean floor...

into tiny gaps in coral reefs.

The only hard part of them
is a sharp parrot-like beak,...

which is found underneath
them where their arms join.

4. Number the events from **1-4** to show the order they happen in when an octopus hunts a crab.

- ☐ They suck out the creature inside.
- ☐ They pierce the shell with their sharp, venomous beak.
- ☐ They sneak up on their prey and drop down on them from above.
- ☐ They grab the crab with their arms.

5. What is not a tool octopuses use to protect themselves against predators? Tick one.

- ☐ squirting ink
- ☐ changing the colour of their skin
- ☐ losing an arm
- ☐ screeching at a predator

6. Fill in the missing words.

Octopuses have three hearts. One pumps _____ through its organs while the other two pump blood through its _____ .

7. Look at the section called **Tricks up Their (Eight) Sleeves**.

Of all of the tricks an octopus uses to defend itself against predators, which one do you think is best and why?

Answers

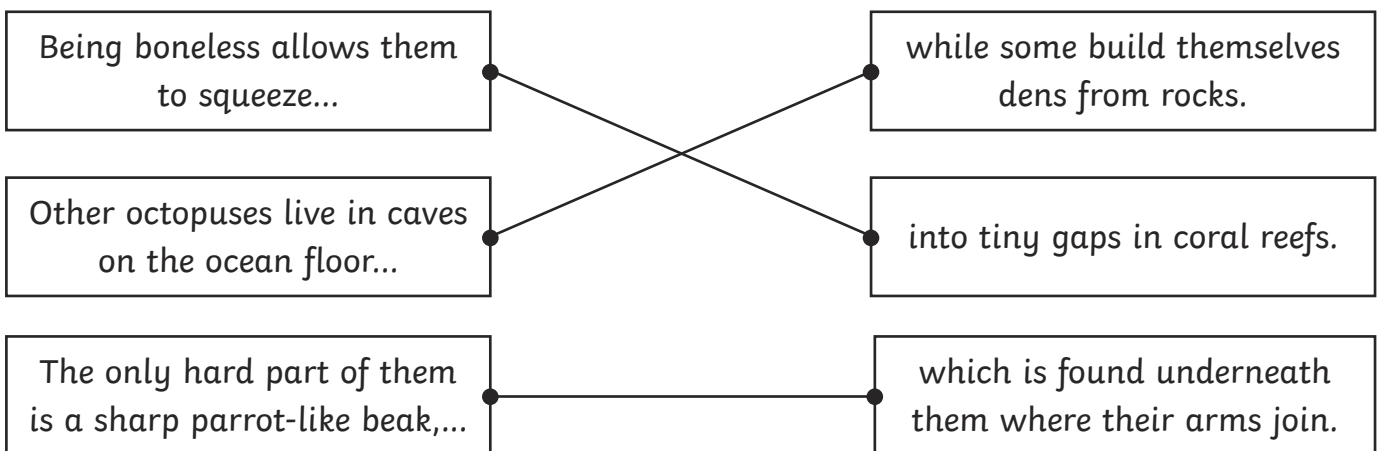
1. Where can octopuses be found? Tick one.

- ☐ Pacific Ocean
- ☐ Indian Ocean
- ☒ **All of the oceans**
- ☐ Atlantic Ocean

2. Find and copy one word that means the same as 'a creature without a backbone'.

invertebrate

3. Draw **three** lines to complete each sentence.



4. Number the events from **1-4** to show the order they happen in when an octopus hunts a crab.

- 4** They suck out the creature inside.
- 3** They pierce the shell with their sharp, venomous beak.
- 1** They sneak up on their prey and drop down on them from above.
- 2** They grab the crab with their arms.

5. What is not a tool octopuses use to protect themselves against predators? Tick one.

- ☐ squirting ink
- ☐ changing the colour of their skin
- ☐ losing an arm
- ☒ **screeching at a predator**

6. Fill in the missing words.

Octopuses have three hearts. One pumps **blood** through its organs while the other two pump blood through its **gills**.

7. Look at the section called **Tricks up Their (Eight) Sleeves**.

Of all of the tricks an octopus uses to defend itself against predators, which one do you think is best and why?

Pupils' own responses, such as: I think the 'ink' is the best trick an octopus can use to defend itself because it can confuse a predator and let them escape quickly.

Octopuses

Octopuses can be found in every ocean of the world. These fascinating creatures include around 300 species and all of them are venomous. However, it's only the blue-ringed octopus that is deadly to humans.

Quick Facts

- The name comes from the Greek word 'októpous' meaning 'eight foot.'
- Their 8 'legs' are actually arms.
- They have blue blood and their central brain is shaped like a doughnut.
- The Octopus Wolffi is less than 2.5 cm long and weighs less than a single paperclip!
- The giant Pacific octopus measures 5 metres in length. It weighs up to 50kg, which is about the weight of 10 – 12 house cats.



The blue-ringed octopus

Appearance

Most octopuses are **invertebrates**. The only hard part of them is a sharp, parrot-like beak, which is found underneath them where their arms join. Being boneless allows them to squeeze into the tiny gaps in coral reefs where many octopuses make their home. Others live in caves on the ocean floor while some build themselves dens from rocks. Some even create a rock 'door' which they can close behind them.

Did You Know...?

The mimic octopus will impersonate more dangerous predators, like the lionfish, by changing its colour and the way it swims too.

Tricks up Their (Eight) Sleeves

Octopuses can change colour in an instant due to the **chromatophores** under their skin. They use these to communicate with other octopuses and to camouflage themselves. They can even change the texture of their skin to match their surroundings.

Octopus predators include sharks, eels and dolphins and they use a range of tricks to protect themselves against them. As well as camouflage, they can also shoot

'ink', at anything that scares them. This dark liquid temporarily blinds a predator, giving the octopus time to escape. They use a muscular tube called a siphon to propel themselves through the water at speeds of up to 25 mph. If an octopus is caught, it can always lose one of its arms as they grow back.

Diet

Octopuses eat clams, shrimp, lobsters and some eat birds or sharks. They usually sneak up on their prey and drop down on them, quickly grabbing them with their arms and pulling them to their venomous mouth. Their sharp beak can pierce hard shells on crabs and shrimp so they can suck out the creature inside.



An octopus camouflaging itself in corals.

Fun Facts

- Octopuses have three hearts. One pumps blood through its organs while the other two pump blood through its gills.
- Some octopuses use shells to hide or hunt.
- The common octopus has 240 suckers on each arm.



Glossary

Invertebrates – A creature without a backbone.

Chromatophores – Special cells under an octopus's skin that allow them to change colour.

Questions

1. What is unusual about an octopus's blood? Tick one.

- ☐ it is thick
☐ it doesn't have any
☐ it is yellow
☐ it is blue

2. Find and copy **two** words that are the meaning of the Greek word 'okótopus'.

- _____
- _____

3. Draw **three** lines to complete each sentence.

The octopus wolfi...	has 240 suckers on each arm.
The common octopus...	weighs less than a paperclip.
The giant Pacific octopus...	is deadly to humans.
The blue-ringed octopus...	measures 5 metres in length.

4. Fill in the missing words.

Most octopuses are _____. The only hard part of them is a sharp, parrot-like _____, which is underneath them where their arms join.

5. Number the facts from **1-5** to show the order in which they appear in the text. The first one has been done for you.

- ☐ Octopus predators include sharks, eels and dolphins.
☐ Octopuses can change colour in an instant.
☒ **1** There are over 300 species of octopus.
☐ Some octopuses live in coral reefs.
☐ Octopuses eat clams, shrimps and lobsters.

6. Which part of an octopus is venomous? Tick one.

- ☐ arms
- ☐ mouth
- ☐ mantle
- ☐ suckers

7. Explain how octopuses camouflage themselves.

8. Summarise the paragraph titled 'Diet' using 35 words or fewer.

Answers

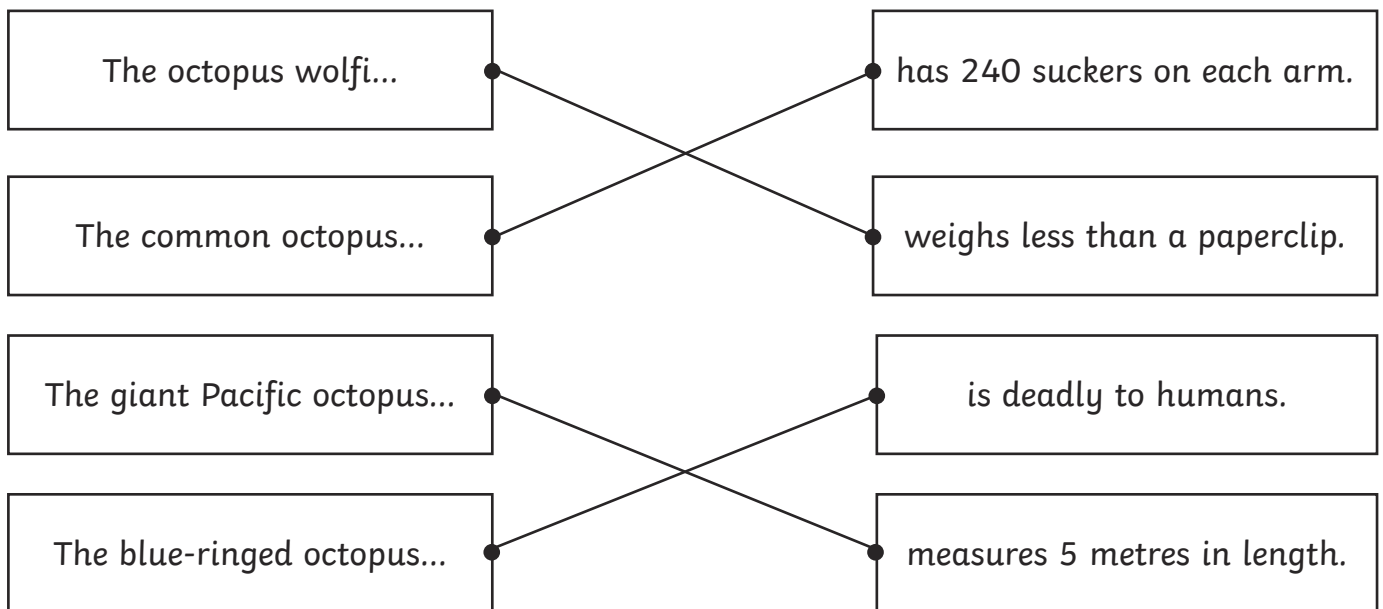
1. What is unusual about an octopus's blood? Tick one.

- ☐ it is thick
- ☐ it doesn't have any
- ☐ it is yellow
- ☒ **it is blue**

2. Find and copy **two** words that are the meaning of the Greek word 'okótopus'.

eight foot

3. Draw **three** lines to complete each sentence.



4. Fill in the missing words.

Most octopuses are **invertebraes**. The only hard part of them is a sharp, parrot-like **beak**, which is underneath them where their arms join.

5. Number the facts from **1-5** to show the order in which they appear in the text. The first one has been done for you.

- 4** Octopus predators include sharks, eels and dolphins.
- 3** Octopuses can change colour in an instant.
- 1** There are over 300 species of octopus.
- 2** Some octopuses live in coral reefs.
- 5** Octopuses eat clams, shrimps and lobsters.

6. Which part of an octopus is venomous? Tick one.

- ☐ arms
- ☒ **mouth**
- ☐ mantle
- ☐ suckers

7. Explain how octopuses camouflage themselves.

Pupils' own responses, such as: Octopuses have special cells under their skin, called chromatophores, that allow them to change colour to match their surroundings. They can also change the texture of their skin to blend in even more.

8. Summarise the paragraph titled 'Diet' using 35 words or fewer.

Pupils' own responses, such as: Octopuses eat clams, shrimp, lobsters and sometimes birds or sharks. They hunt by sneaking up on their prey, dropping on them and pulling them to their sharp, venomous beak.

Octopuses

Octopuses are easily recognisable ocean creatures due to their eight arms and large round heads. They can be found in every ocean of the world. These fascinating creatures include about 300 species and all of them are venomous. However, the blue-ringed octopus is the only one that's deadly to humans.

Appearance

Although their name comes from the Greek word 'októpous', which means 'eight foot', octopuses' limbs are actually called 'arms'. They have an excellent sense of touch due to their many suckers. Octopuses also come in many sizes - the smallest is the octopus wolffi, which is smaller than 2.5cm and weighs less than a single paperclip. In contrast, the largest species is the giant Pacific octopus. This measures 5 metres in length and weighs up to 50kg (the weight of 10 – 12 house cats).



The blue-ringed octopus

Most octopuses are **invertebrates**. In fact, the only hard part of them is a sharp, parrot-like beak, which is found on their underside where their arms join. Being boneless allows them to squeeze into the tiny gaps and crevices in coral reefs. Many octopuses make their homes in these cracks but some live in caves on the ocean floor while others build themselves dens from rocks. They have even been known to create a rock 'door' which they can close behind them for extra safety.

Tricks up Their (Eight) Sleeves

Octopuses come in a wide range of colours but can change colour in an instant due to the **chromatophores** under their skin. They use these to communicate with other octopuses and to camouflage themselves. They can even change the texture of their skin to match their surroundings by using **papilli**.

Octopus predators include sharks, eels and dolphins and they use a range of tricks to protect themselves against them. As well as camouflage, they shoot a dark liquid, known as 'ink', at anything that scares them. This temporarily blinds a predator, giving the octopus time to escape. They are also fast swimmers – they use a muscular tube called a siphon to propel themselves through the water at speeds of up to 25 mph. If none of these tricks work and an octopus is caught, it can always lose one of its arms as they grow back.

Diet

Octopuses are carnivores, eating clams, shrimp, lobsters and some species eat birds or sharks. They usually sneak up on their prey and drop down on them, quickly grabbing them with their arms and pulling them to their venomous mouth. Their sharp beak can pierce hard shells on crabs and shrimp so they can suck out the creature inside.

Fun Facts

- Octopuses have three hearts – one pumps blood through its organs while the other two pump blood through its gills.
- Their blood isn't red - it's blue.
- They have been known to use tools, such as shells, to hide or hunt.
- They have 9 brains – one in each arm and a central brain that is shaped like a doughnut, in their **mantle**.



An octopus camouflaging itself in corals.

Glossary

Invertebrates – A creature without a backbone.

Chromatophores – Special cells under an octopus's skin that allow them to change colour.

Papilli – Areas of an octopus's skin that can swell or shrink.

Mantle – The name for an octopus's head.



Questions

1. What species of octopus weighs less than a paperclip?

2. Fill in the missing words.

These fascinating creatures include about _____ species and all of them are _____.

3. How does being an invertebrate benefit an octopus?

4. Draw **four** lines and complete each sentence.

The giant Pacific octopus measures...

'eight foot'.

The only hard part of an octopus is...

a sharp, parrot-like beak on its underside.

Octopuses live in caves on the ocean floor or...

5 metres in length and weighs up to 50kg.

'Októpus' is a Greek word meaning...

in cracks and crevices in coral reefs.

5. Which of the following are octopuses' predators? Tick **two**.

- ☐ shrimp
- ☐ sharks
- ☐ crabs
- ☐ eels

6. Octopuses use a variety of tricks to protect themselves against predators. Which do you think is the most effective? Explain your answer.

7. What is the difference between chromatophores and papilli?

7. How do you think an octopus might use a shell to hunt? Explain your answer.

Answers

1. What species of octopus weighs less than a paperclip?

The octopus wolfi weighs less than a paperclip.

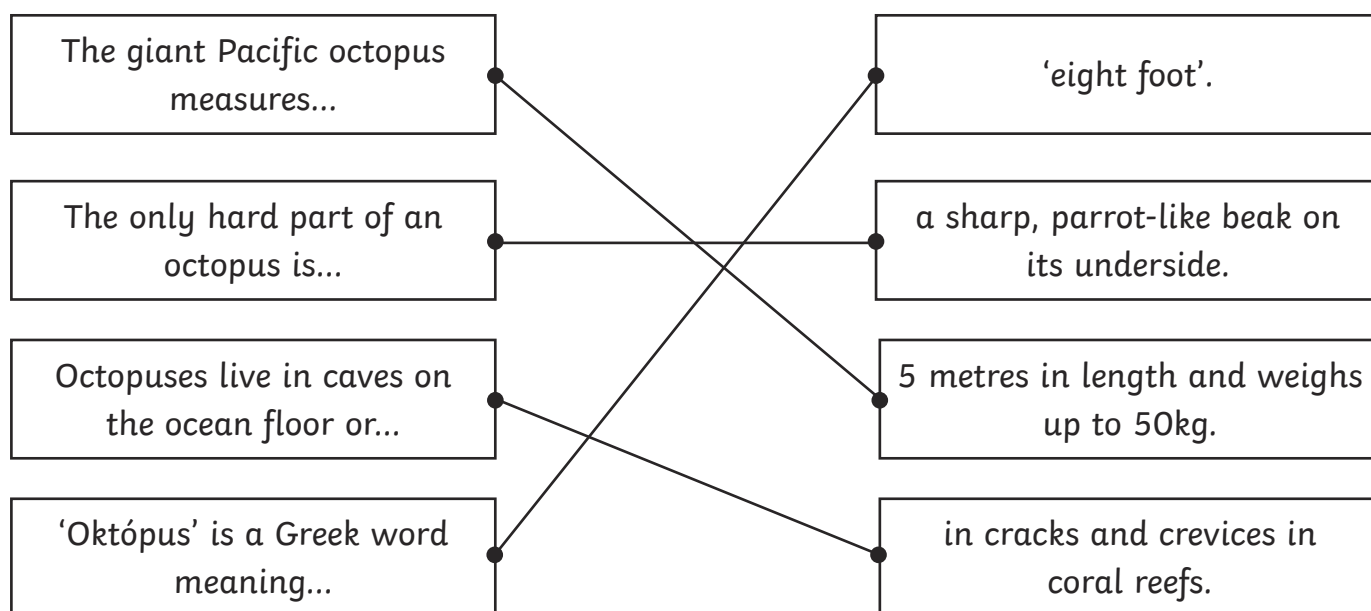
2. Fill in the missing words.

These fascinating creatures include about **300** species and all of them are **venomous**.

3. How does being an invertebrate benefit an octopus?

Pupils' own responses, such as: Being an invertebrate benefits an octopus because it allows them to squeeze into tiny cracks and crevices. Some octopuses live in these tiny gaps but it could also help them hide.

4. Draw **four** lines and complete each sentence.



5. Which of the following are octopuses' predators? Tick **two**.

- ☐ shrimp
☒ **sharks**
☐ crabs
☒ **eels**

6. Octopuses use a variety of tricks to protect themselves against predators. Which do you think is the most effective? Explain your answer.

Pupils' own responses, such as: I think the octopus's ability to camouflage is the most effective way to protect itself against predators because if the predator doesn't see the octopus, then it won't know to attack it.

7. What is the difference between chromatophores and papilli?

Pupils' own responses, such as: Chromatophores are special cells under an octopus's skin that allow it to change colour, whereas papilli are areas of skin that an octopus can swell or shrink, changing the texture of the skin.

7. How do you think an octopus might use a shell to hunt? Explain your answer.

Pupil's own responses, such as: I think an octopus might use a shell to hunt by hiding in it, waiting for prey to get close and then quickly grabbing prey to catch it. I think this because they are very clever creatures and like to sneak up on their prey.