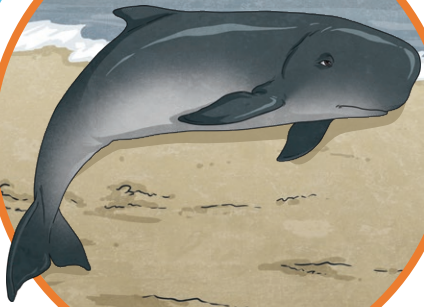


Why Do Whales Strand?



What Are Strandings?

Strandings are mysterious events where whales and dolphins become stuck on land and can't return to the ocean. These most commonly occur on beaches.

When a whale or dolphin strands they can often overheat and become unwell if humans aren't able to help.

Strandings in New Zealand

While whales and dolphins get stranded all over the world, New Zealand has one of the highest number of strandings globally. On average, about 300 whales or dolphins strand each year. Most of the time, only one or two animals become stranded but sometimes hundreds of animals are found stuck on the shore. This is called a **mass stranding**.

Farewell Spit

At the top of the South Island is the longest sand spit in the country, called Farewell Spit. Mass strandings happen quite often here because the spit reaches far out into the ocean, making it difficult for whales to navigate around. Echolocation works by a whale using sound waves to bounce off objects in the ocean. When water gradually becomes shallower, echolocation doesn't work as well, and whales can find themselves stuck. The tide also goes out a long way at Farewell Spit, which means that the whales don't have much of a chance to free themselves.

Common Species That Get Stranded

Common dolphins, orca, pygmy sperm whales and beaked whales are the most common species that strand alone. The most common species to mass strand are long-finned pilot whales.

Why Do Whales Strand?

Most of the time, it's hard to know the exact reason why a whale or dolphin strands. There are lots of reasons why they may become stranded, and it can be any one of these or a mix of them.

Natural Reasons

Strandings are natural events that have been happening for hundreds of years, even before the arrival of humans in New Zealand! Just like humans, when a whale is sick, it becomes weaker and finds normal activities more challenging. They often move slower and find it difficult to keep up with the pod. Old age has a similar effect.

How Can We Help?

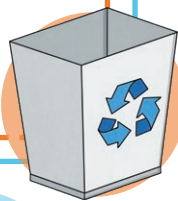
There are organisations that work to protect the wellbeing of marine mammals as well as responding to stranding events and showing people how to help. Anyone can help at a stranding, as long as they can move around, carry things and follow the instructions of the team in charge.

Project Jonah

This charity exists to help marine mammals, both at stranding events and protecting them from the many threats present in their ocean environment. Volunteers make up most of the people in this organisation. Project Jonah also offers Marine Mammal Medic courses as well as school and kindergarten visits.

Rubbish and Plastics

Using less plastic and putting it into the correct bin keeps rubbish out of the oceans and helps protect the marine environment for whales. This helps them stay healthy and strong as they eat their food to nourish them.



Some other common reasons for natural strandings include:

- Birthing whales coming too close to shore;
- Hunting or escaping from predators;
- Echolocation not working so well because of a gradually decreasing seafloor level;
- Weather and unfamiliar coastlines;
- Very close relationships within the pod could cause mass strandings.

Human Reasons

The presence of humans has added to the reasons that whales might become stranded. Overfishing decreases the food supply for whales, which means they often have to hunt for food in unfamiliar and risky places. Sadly, microplastics and rubbish have been found in some stranded whales' stomachs which shows that they might not have been able to find enough food to eat or mistaken the rubbish for prey.

Other common reasons for strandings are:

- Entanglement in fishing nets or lines and boat strikes causing serious injuries;
- Underwater explosions affecting their hearing;
- Pollution and toxins making whales sick and weak.

Why Do Whales Strand? Questions

1. Which of the following are natural reasons for whales and dolphins to strand? Tick **all that apply**.

- Old age
- Seafloor becoming gradually shallower
- Getting caught in fishing nets
- Hunting for prey

2. Explain what a stranding is.

3. On average, how many whales get stranded in New Zealand each year? Tick **one**.

- 50
- 700
- 300

4. What is echolocation and why is it important?

5. Fill in the missing words.

At the top of the South Island is the longest _____ in the country, called _____. _____ strandings happen quite often here because the spit _____ far out into the ocean, making it difficult for whales to _____ around.

6. Put ticks in the table to show which sentences are true and which sentences are false.

| Sentence | True | False |
|--|------|-------|
| Overfishing decreases the food supply for whales, which means they often have to hunt for food in unfamiliar and risky places. | | |
| The most common species to mass strand are long-finned pilot whales. | | |
| Whales and dolphins don't often get stranded around New Zealand. | | |

Why Do Whales Strand? Answers

1. Which of the following are natural reasons for whales and dolphins to strand? Tick **all** that apply.

Old age

Seafloor becoming gradually shallower

Getting caught in fishing nets

Hunting for prey

2. Explain what a stranding is.

A stranding is when a whale or dolphin becomes stuck on land and can't return to the ocean.

3. On average, how many whales get stranded in New Zealand each year? Tick **one**.

50

700

300

4. What is echolocation and why is it important?

Answers will vary, possible answers include: Echolocation is when an animal uses sound waves to find out where something is.

It is important in helping whales navigate around the ocean without getting stuck.

5. Fill in the missing words.

At the top of the South Island is the longest **sand spit** in the country, called **Farewell Spit**. **Mass** strandings happen quite often here because the spit **reaches** far out into the ocean, making it difficult for whales to **navigate** around.

6. Put ticks in the table to show which sentences are true and which sentences are false.

| Sentence | True | False |
|--|------|-------|
| Overfishing decreases the food supply for whales, which means they often have to hunt for food in unfamiliar and risky places. | ✓ | |
| The most common species to mass strand are long-finned pilot whales. | ✓ | |
| Whales and dolphins don't often get stranded around New Zealand. | | ✓ |

Why Do Whales Strand?



What Are Strandings?

Strandings are mysterious events where whales and dolphins become stuck on land, most commonly on beaches, for a number of reasons. When a whale becomes stranded or beached, it becomes stressed and at risk of overheating. Volunteer response time is crucial as it increases the chances of the whale surviving.

Strandings in New Zealand

New Zealand has one of the highest stranding rates in the world, with an average of around 300 whales and dolphins stranding per year. Most of the time, only one or two animals become stranded, but sometimes hundreds of animals are found stuck on a beach. This is called a mass stranding. In 1918, over 1000 pilot whales were stranded on the Chatham Islands – this was the biggest mass stranding to happen in New Zealand.

Farewell Spit

At the top of the South Island is the longest sand spit in the country, called Farewell Spit. Mass strandings are quite common here because the spit reaches 25km into the ocean, making it challenging for whales to navigate around. Whales use noise that bounces off objects in the ocean to help them make a mind map of what is around them. This is called echolocation and works best when there are sudden rises in the ocean floor, meaning that when water gradually becomes shallower, the sound waves don't bounce off objects as well. This also makes it difficult for a whale to navigate effectively. With the tide receding up to 10kms at times, there is a low chance of whales freeing themselves once stuck.

Common Species That Get Stranded

Common dolphins, orca, pygmy sperm whales and beaked whales are the most common species that strand alone. The most common species to mass strand are long-finned pilot whales.

Why Do Whales Strand?

Most of the time, the exact reason for stranding is unknown. There are many reasons why whales become stranded, and it can be any one of these or a combination of them.

Strandings are natural events that have been happening for hundreds of years, even before the arrival of humans in New Zealand. A whale can become sick for many reasons, making them weak and slow and unable to keep up with the pod. Daily activities like hunting can also be more challenging. Old age has a similar effect. Sometimes, healthy whales can

How Can We Help?

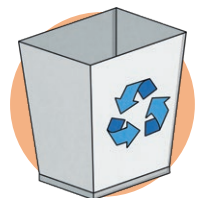
There are organisations that work to protect the wellbeing of marine mammals as well as responding to stranding events and showing people how to help. Anyone can help at a stranding, as long as they can move around, carry things and follow the instructions of the team in charge.

Project Jonah

This charity exists to help marine mammals, both at stranding events and protecting them from the many threats present in their ocean environment. Most of the people in this organisation are volunteers. Project Jonah also offers Marine Mammal Medic courses as well as school and kindergarten visits. Their school visits often involve bringing an inflatable whale to show children how to look after stranded animals!

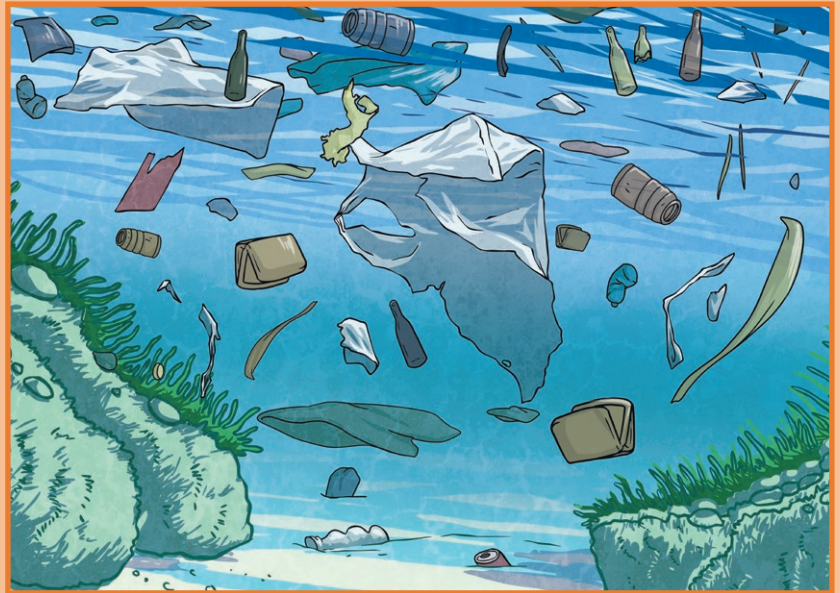
Rubbish and Plastics

Taking care of the marine environment starts in our homes and our lunchboxes. Wrapping your food in wax paper instead of plastic wrap is a great way to reduce the amount of plastic you use. You could try to find food at the supermarket that is wrapped in paper or, best of all, has no packaging! If you use plastic, make sure to put it in the correct rubbish bin. When it ends up on the ground, rubbish can be swept into the waterways and then out to the ocean.



accidentally get trapped in shallow water or on the beach. This can occur while hunting prey or escaping predators, or even when female whales look for calm bays to give birth in. Other natural reasons include navigational mistakes, weather or an unfamiliar sea area.

Whales might also become stranded due to some human activity. Rubbish in the ocean is sometimes eaten by whales, either because microplastics are present in the food they eat or they mistake rubbish for prey. Eating this makes them sick and weak. Injuries caused by underwater explosions, boat strikes and entanglement in fishing lines and nets can affect a whale's ability to function properly and hunt.



Why Do Whales Strand? Questions

1. What are the reasons whales might strand due to some human activities?

Tick **all that apply**.

- Injuries due to boat strikes
- Seafloor becoming gradually shallower
- Getting caught in fishing nets
- Pollution making whales sick

2. Explain what a stranding is.

3. What is the biggest number of stranded whales recorded in New Zealand? Tick **one**.

- Up to 450
- Over 1000
- Up to 700

4. How does echolocation help whales to navigate? What happens when they aren't able to echolocate properly?

5. What is Farewell Spit and why is it a common place for whales to become stranded?

6. List three species of marine mammal that commonly get stranded.

- _____
- _____
- _____

7. 'Anyone can help at a stranding, as long as they can move around, carry things and follow the instructions of the team in charge.' Why do you think those three things are important?

8. Draw three lines to match each word to its meaning.

echolocation

stranding

overfishing

When whales and other marine mammals become trapped on the beach or in shallow water.

A way that marine mammals find the location of things by sending out sound waves and then listening for them bouncing off objects.

When so many fish are caught by humans and there are not enough left for marine mammals to eat.

Why Do Whales Strand? Answers

1. What are the reasons whales might strand due to some human activities?

Tick all that apply.

- Injuries due to boat strikes
- Seafloor becoming gradually shallower
- Getting caught in fishing nets
- Pollution making whales sick

2. Explain what a stranding is.

A stranding is when whales and dolphins become stuck on land, most commonly on a beach.

3. What is the biggest number of stranded whales recorded in New Zealand? Tick one.

- Up to 450
- Over 1000
- Up to 700

4. How does echolocation help whales to navigate? What happens when they aren't able to echolocate properly?

Answers may vary, but could include the following information:

- The sound made by whales bounces off objects in the ocean and creates an echo, telling the whale how big an object is or how far away it is.
- By knowing where objects in the ocean are, whales can navigate around landmarks and stay in deep water.
- When whales can't echolocate properly, a whale could accidentally become stranded in shallow water or on the beach.

5. What is Farewell Spit and why is it a common place for whales to become stranded?

Farewell Spit is the longest sand spit in New Zealand. It is a common place for whales to become stranded because navigation is difficult and the tide recedes so far that there is a low chance for the whales to free themselves once stuck.

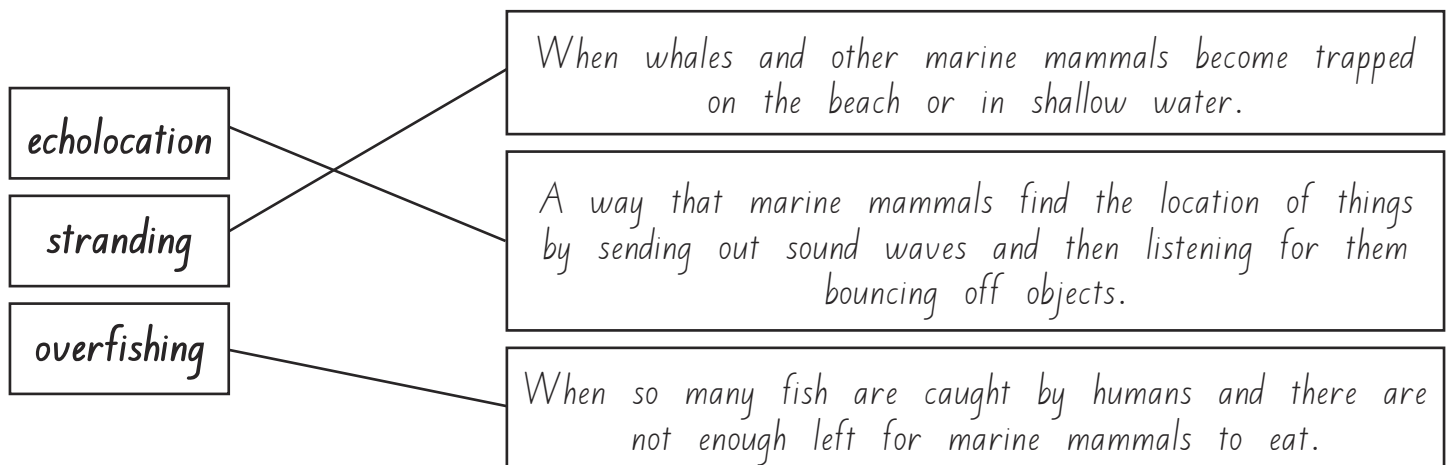
6. List three species of marine mammal that commonly get stranded.

Any of the following: common dolphins, beaked whales, orca, pygmy sperm whales and long-finned pilot whales.

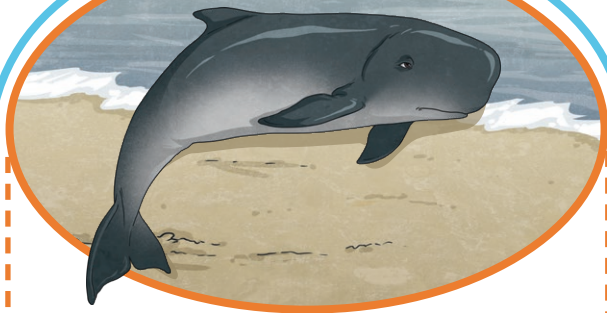
7. 'Anyone can help at a stranding, as long as they can move around, carry things and follow the instructions of the team in charge.' Why do you think those three things are important?

Answers will vary.

8. Draw three lines to match each word to its meaning.



Why Do Whales Strand?



What Are Strandings?

Strandings are mysterious events where whales and dolphins become stuck on land, which can happen for a number of reasons. Strandings most commonly occur on beaches, and the likelihood of the animal surviving decreases significantly with the amount of time it remains out of the water. When a whale becomes stranded or beached, it becomes stressed, causing its heartbeat to increase and making it at risk of overheating. Volunteers helping keep the animals cool are extremely important for this reason.

Strandings in New Zealand

New Zealand has one of the highest stranding rates globally, with an average of around 300 whales and dolphins stranding per year. Some of the time, strandings are limited to one animal. Mass strandings consist of two or more animals, with sometimes hundreds found stuck onshore. In 1918, over 1000 pilot whales were stranded on the Chatham Islands – this was the biggest stranding to occur in New Zealand.

Farewell Spit

At the top of New Zealand's South Island is Farewell Spit, the longest sand spit in the country measuring 25km long. The gradual shallowing of the water affects a whale's ability to effectively navigate because echolocation works best against sudden changes in seafloor level. Echolocation is when a whale makes a series of rapid clicks and uses the echos, which bounce off objects in the ocean, to build a mental map of what is around them. By the time the whales realise the water is too shallow for them to swim in, it's usually too late to escape, and they become trapped. Mass strandings are common at Farewell Spit, particularly in the summer months.

Common Species That Get Stranded

Common dolphins, orca, pygmy sperm whales and beaked whales are the most common species that strand alone. When mass strandings happen, most of these are by long-finned pilot whales.

Why Do Whales Strand?

Most of the time, the exact reason for a stranding is unknown, although several factors are usually involved. While strandings are natural events that have occurred since before the arrival of humans, our presence has impacted the ocean environment and created new reasons for why whales become stranded.

Sickness or injury can be caused by old age, escaping a predator, boat strikes, entanglement in fishing lines or

How Can We Help?

There are organisations in place to protect the wellbeing of marine mammals and lead the way in stranding events, showing people what to do to help. Anyone can help at a stranding, as long as they are mobile, can carry things and follow the instructions of the team in charge.

Project Jonah

This is a charity with the purpose of helping marine mammals by attending stranding events, training volunteers and protecting whales, dolphins and seals from a variety of threats. Their work includes picking up rubbish at the beach, developing the 1978 Marine Mammal Protection Act, campaigning to keep marine mammals out of captivity and designing the world's first rescue floatation device for whales. Project Jonah has also led the way in rescue techniques, and these are being used worldwide. Volunteers make up most of the people in this organisation, and Project Jonah provides all of them with proper training. Project Jonah also offers Marine Mammal Medic courses as well as school and kindergarten visits. Their school visits often involve bringing an inflatable whale to show children how to look after stranded whales.

Rubbish and Plastics

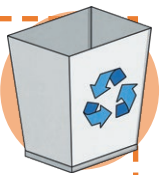
Taking care of the marine environment starts with the choices we make every day. For example, try wrapping your food in wax paper instead of plastic wrap to reduce the amount of plastic you use. You could also try to find food at the supermarket that is wrapped in paper or, best of all, has no packaging! If you use plastic, make sure to put it in the correct rubbish bin. When it ends up on the ground, rubbish can be swept into the waterways and then out to the ocean.

the presence of pollution and toxins in the water. These events can cause whales to become weak, which makes daily activities more demanding. It can also make it difficult to keep up with the pod. To help them rest, the whales might look for calm bays and accidentally come too close to shore. This may also happen to birthing whales, causing the mother or calf to become stranded.

Whales can get disoriented while hunting prey, escaping predators, during large weather events or when travelling along unfamiliar coastlines. If the whale swims into shallower waters, an outgoing tide or waves can also push them further into the shore. Echolocation also becomes challenging, and the whale might not realise how shallow the water is.

The presence of plastic and rubbish in the ocean environment, as well as overfishing, are two examples of the impact of human activities. Sadly, stranded whales have been found with microplastic and rubbish inside their stomachs, indicating that they might not have found enough food to eat, or mistaken the waste for prey. Overfishing affects the amount of food available to whales, not only making them weak but also sick from then eating things like plastic bags or fishing line.

Close bonds within a pod can cause mass strandings. This happens when one whale strands and calls for help from the rest of the pod who respond and strand as well.



Why Do Whales Strand? Questions

1. What are the reasons whales might strand due to some human activities?

2. What are some common species that become stranded? Tick **all that apply**.

- Common dolphins
- Pygmy sperm whales
- Blue whales
- Beaked whales

3. Draw three lines to match each word to its meaning.

mass stranding

echolocation

overfishing

When whales and other marine mammals become trapped on the beach or in shallow water.

When so many fish are caught by humans and there are not enough left for marine mammals to eat.

A way that marine mammals find the location of things by sending out sound waves and then listening for the echo.

4. How does echolocation help whales to navigate? What happens when echolocation doesn't work well?

5. What is Farewell Spit and why is it a common place for whales to become stranded?

6. How could being careless with plastic and rubbish result in strandings?

7. 'Anyone can help at a stranding, as long as they can move around, carry things and follow the instructions of the team in charge.' Why do you think those three things are important?

8. Name some ways Project Jonah help marine mammals:

- _____
- _____
- _____
- _____

9. Why do you think volunteers receive training to attend and help at stranding events?

Why Do Whales Strand? Answers

1. What are the reasons whales might strand due to some human activities?

Answers should include any of the following: boat strikes, entanglement in fishing lines, pollution and toxins in the water, plastic, rubbish, overfishing.

2. What are some common species that become stranded? Tick all that apply.

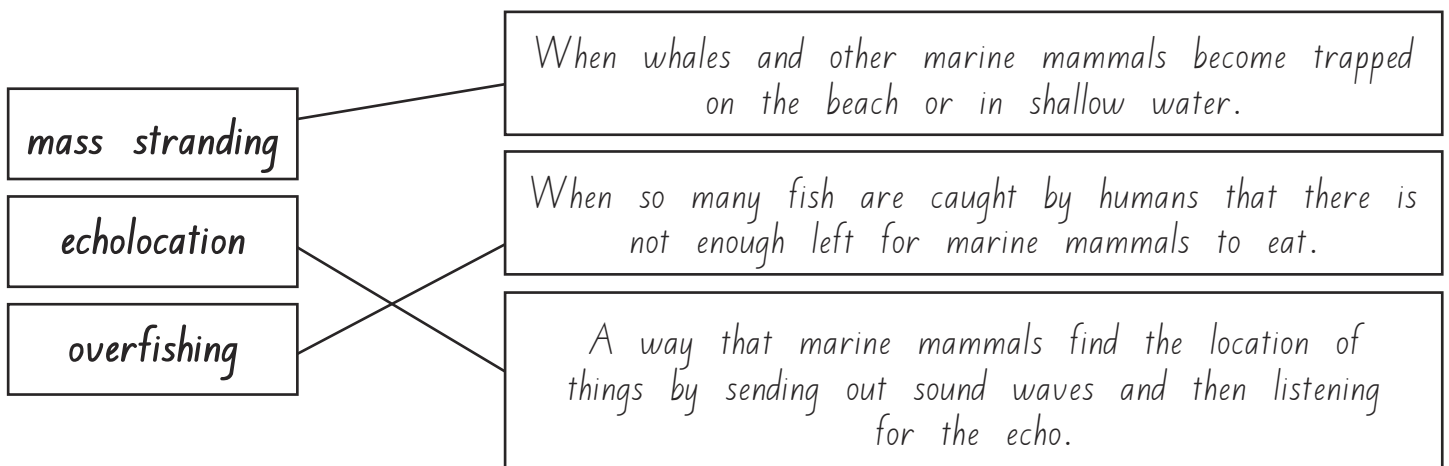
Common dolphins

Pygmy sperm whales

Blue whales

Beaked whales

3. Draw three lines to match each word to its meaning.



4. How does echolocation help whales to navigate? What happens when echolocation doesn't work well?

Answers may vary, but could include the following information:

- The sound made by whales bounces off objects in the ocean and creates an echo, telling the whale how big an object is or how far away it is.
- By knowing where objects in the ocean are, whales can navigate around landmarks and stay in deep water.

- When whales can't echolocate properly, a whale could accidentally become stranded in shallow water or on the beach.

5. What is Farewell Spit and why is it a common place for whales to become stranded?

Farewell Spit is the longest sand spit in New Zealand. It is a common place for whales to become stranded because it traps whales in a bay with shallow water. The water gradually becomes shallower, meaning that whales can't echolocate so well.

6. How could being careless with plastic and rubbish result in strandings?

When marine mammals eat plastic and rubbish, it could make them sick and weak. This could result in a stranding because the mammals can't keep up with their pod and find daily activities more challenging.

7. 'Anyone can help at a stranding, as long as they can move around, carry things and follow the instructions of the team in charge.' Why do you think those three things are important?

Answers will vary.

8. Name some ways Project Jonah help marine mammals:

Answers will vary but could include:

- Picking up rubbish at the beach
- Attending and helping at stranding events
- Campaigning to keep marine mammals out of captivity
- Designing the first floatation device
- Training volunteers
- Educational visits at schools

9. Why do you think volunteers receive training to attend and help at stranding events?

- Volunteers can understand the instructions given and respond quickly at a stranding event.

- If they are first on the scene at a stranding event, they know who to call and what to do.
- New Zealand has a high stranding rate so the more volunteers who can help, the better.
- If a volunteer is not trained, they might accidentally do more harm than good.
- It might be quite stressful and upsetting to see whales stranded; knowing what to expect and how to help might mean a volunteer can remain calm and focussed on what to do.