



SO What?

Saving our world's habitats & animals together!

Age 7-11 Teaching Pack



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Shark Aid UK

**Great White
Shark**

So What?

About Us

The future of some of the world's most captivating animals is hanging in the balance! - So What? The mountain gorilla's habitat is being encroached upon by an ever-increasing human population! - So What? The tiger is being hunted to supply high value products such as skins, bones, tonics and meat! - So What? The lion's dwindling habitat has led to most of its populations becoming too small and isolated from one another! - So What?

So What? (Saving our world's habitats & animals together) is the UK based educational website that aims to bring wildlife conservation into the classroom. The purpose of So What? is to encourage more schools and teachers to run So What? clubs, or challenge their students to complete a So What? conservation research topic, all in order to help young people to learn more about the conservation of some of the world's most threatened animals.

The purpose of So What? is simple: to make it easier for schools and teachers to inspire a future generation of wildlife conservationists. A future generation which will not reply "So What?" when faced with the struggles of modern day conservation, but instead be dedicated to saving our world's habitats and animals together.

Matthew Payne

So What?

Website: <http://www.sowhatuk.com> Facebook: <http://www.facebook.com/SoWhatUK> Twitter: https://twitter.com/#!/SoWhat_UK

so what?

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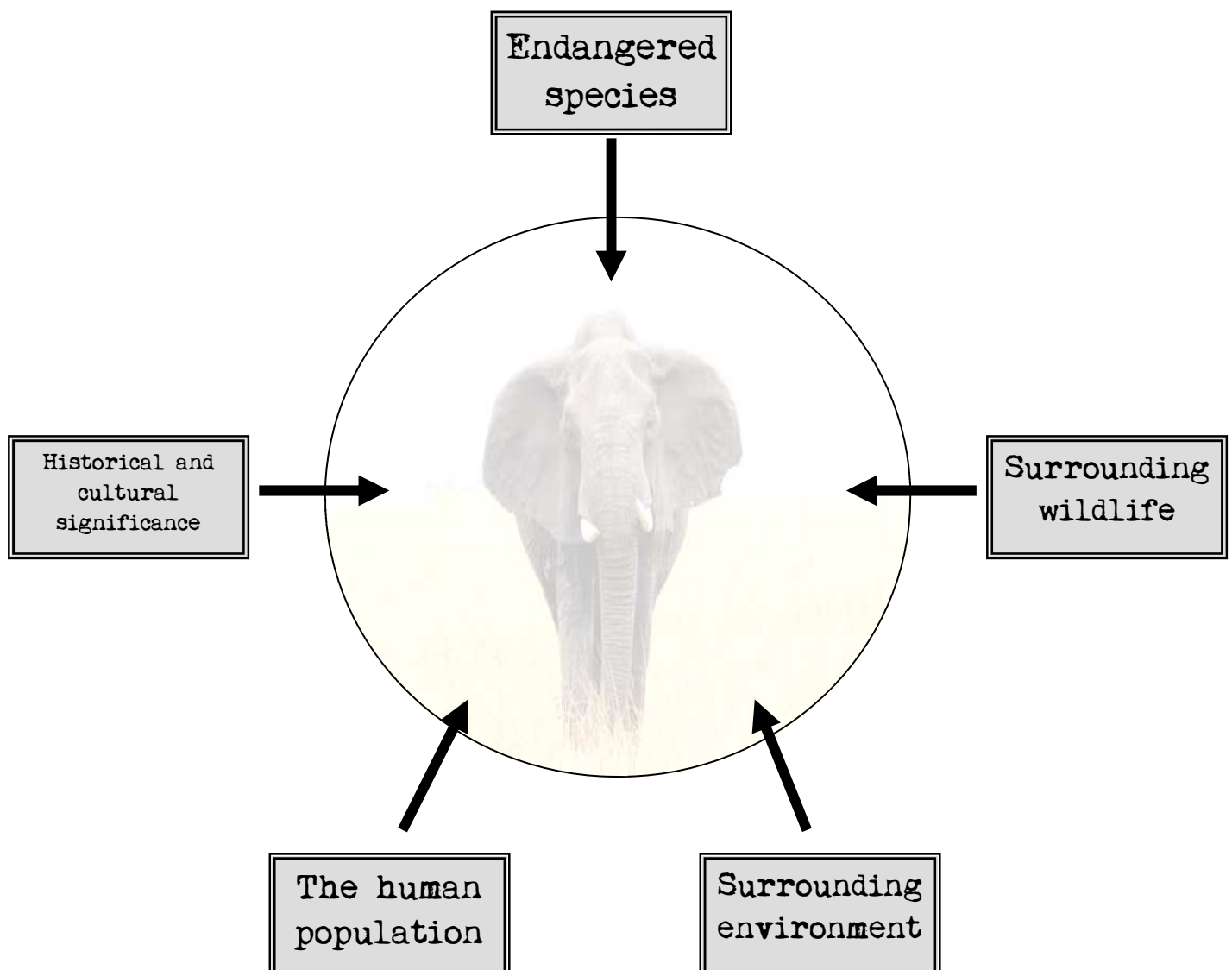
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so what?

Education Model

The So What? age 7-11 Education Model illustrates the holistic approach to conservation which the age 7-11 teaching packs take. The objective of the Education Model is to ensure that children taking part in the sessions learn about every issue a conservationist must consider when trying to preserve a threatened animal.



so what?

Session Titles

Endangered
species



What is a great white shark?

Surrounding
wildlife



Which other wildlife does the
great white shark live
alongside?

Surrounding
habitat



Where does the great
white shark live?

The human
population



What is the great white
shark's relationship with
people?

Historical and
cultural
significance



The story of
Ka'ahupahau

Developing own
conservation
resource



How can we help?

Self evaluation



How did we do?

so what?

Session Objective Overview

Endangered
species



I can research factual
information about great white
sharks.

Surrounding
wildlife



I know which other wildlife great white
sharks live alongside.
I can classify animals in groups.

Surrounding
habitat



I know which environments great white
sharks live in.
I know how great white sharks are
adapted to their environments.

The human
population



I understand the relationship between
great white sharks and the
surrounding human population.
I can give my opinion clearly.
I can listen to and challenge the view
of others.

Historical and
cultural
significance



I can recount a traditional
story.

Developing own
conservation
resource



I can design and create my own
conservation advert as part of a group.
I can work effectively as part of a
group.
I can clearly explain the reasons behind
my choices.
I can present my advert clearly.

Self evaluation



I can critically evaluate the
effectiveness of my own conservation
advert.
I can make realistic suggestions about
how I could improve my advert.

so what?

Curriculum Links

Endangered
species



Literacy, ICT and science

Surrounding
wildlife



Numeracy, ICT and
science

Surrounding
habitat



Geography and science

The human
population



Speaking and listening

Historical and
cultural
significance



History and literacy

Developing own
conservation
resource



PSHE and depending on
the activity (E.g. T-shirt
design would be linked to
art)

Self evaluation



PSHE and literacy

What is a great white shark?



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Session 1

What is a great white shark?

Session objective:

I can research factual information about great white sharks.

Session opener:

For 3-5 minutes, get the children to note down everything they know about great white sharks on a sheet. It is important that this sheet is kept so it can be used at the end of these sessions to assess the impact of the So What? teaching pack.

Session introduction:

Share the children's facts from the session opener and mind map their findings on a interactive whiteboard (IWB).

Explain that today they are going to be researching facts about great white sharks. In mixed ability pairings, ask the children to generate three questions they want to answer about great white sharks.

Less able or special needs children (SEN) may require teacher support. You may wish to challenge your more able children by asking them to come up with more questions, focusing particularly on

the great white shark's anatomy and how it is built to help the shark hunt its prey.

Before researching, share questions as a class and note down good examples on the IWB, coloured paper or post—its. The questions could also be placed up on a display wall.

Mixed ability group work:

In mixed ability pairs, children should use laptops, or any available books, to research the answers to their questions. A list of recommended websites and books can be found in the resources section on the So What? website. If you do not have sufficient internet access, then you may wish to download facts for your children to read prior to this session from our list of recommended websites.

5-10 minute challenge:

Time permitting, you may wish to challenge your pupils further by showing them a picture of a great white shark and asking the pupils to research the names of as many other species of shark as they can find in an allotted time. Afterwards, tell the children that there are 454 different species of shark.

Session 1

What is a great white shark?

Using A3 pieces of plain paper, children can note down the facts and answers they find through their research. Again, these sheets could be put up on a display after the session.

You also may wish to model how to make good notes from research prior to the children starting this activity.

For the mixed ability work, teacher support may be required to support the research and note taking of less able or SEN children. Own session outcomes regarding the number of facts researched should be set for this activity. These outcomes should depend on the ability of the children and the time available for research.

Encourage the children to add illustrations, but ensure that they label these clearly.

Extension activity:

If some groups finish early, tell them that one of the most commonly known facts that the general public knows about great white sharks is that they can smell blood from remarkable distances. While great white sharks do have an excellent sense of smell, there

are also two lesser known sensing organs that they use to hunt: the "ampullae of Lorenzini," and the "lateral line." Ask the children to research where both of these organs can be found on a great white shark's body, and how they help the shark to hunt its prey. Get the children to add their notes about the "ampullae of Lorenzini," and the "lateral line," to their A3 sheets.

End of session review:

To assess the children's achievement, ask each group to share with another group on their table their facts about great white sharks, and if applicable, the "ampullae of Lorenzini," and the "lateral line."

After this, ask the children to share with the class a group/ or individual, who they think has achieved today's objective and why.

Try to reinforce the main threats facing great white sharks (the children will hopefully have researched these anyway).

- Over-exaggerated threat to human safety and negative media attention.

session 1

What is a great white shark?

- Sports-fishing and commercial drumline trophy-hunting.
- Being trapped through longlines, fish-traps and other devices.
- Direct exploitation from sports fisheries, the curio trade, the oriental shark-fin trade and even the public aquarium trade.
- Habitat degradation (development, pollution and overfishing).
- Lack of legislative protection.

Which other wildlife
does the great white
shark live alongside?



Session 2

Which other wildlife does the great white shark live alongside?

Session objectives:

I know which other wildlife great white sharks live alongside.

I can classify animals in groups.

Session opener:

In talk partners, ask the children to list as many of the facts that they can remember from the last session about great white sharks. Mind map the facts on a IWB.

Session introduction:

Tell the class that in order to preserve a threatened animal such as the great white shark, you must always consider the surrounding wildlife. Discuss as a class why they think this is important.

Explain that today the children are going to research the different types of wildlife that live in the same environments as the great white shark.

Show the class the information collection sheet (from the resource section on page 38). Explain that they will be using this sheet to classify the animals they are researching. The sheet has a box for consumers, producers, great white shark prey and not great

white shark prey. Recap or explain to the class what consumers and producers are. (Consumers eat other organisms, producers make their own food and are food sources for other organisms).

Quickly, model and share as a whole class how to fill in the sheet for a sea lion, orca and single-celled algae (usually referred to as coccolithophores).

Time challenge (10-15 minutes):

In pairs, the children should use the internet to find as many names as they can of animals that live alongside great white sharks. The children must correctly classify the animals on their sheet. The pair with the most animals wins.

Show a larger version on the IWB and quickly fill in a selection of the children's findings.

Mixed ability paired work:

Children to use the internet to research facts and create a fact file either as a pair, or individually if they would rather, detailing facts about one of the animals that lives alongside the

Session 2

Which other wildlife does the great white shark live alongside?

great white shark

Must achieve:

To have at least four different sections in their fact file and a labelled diagram.

Should achieve:

To have at least five different sections in their fact file and a labelled diagram.

Could achieve:

To have at least five different sections in their fact file, a labelled diagram and a clear introduction and conclusion.

Teacher support should be focussed on the less able or SEN children who are working with other pupils.

Extension activity:

What is your chosen animal's relationship with the great white shark? Is it hunted by the great white shark or does it pose a threat to the great white shark? How is it different to the great white shark? Children to add this information to their fact file.

End of session review:

Share fact files with each other and discuss who has achieved the session objectives. Focus on the fact that in

order to save the great white shark, you must understand its relationship with the animals it lives alongside, as they may be just as important to its survival.

Where does the great white shark live?



Session 3

Where does the great white shark live?

Session objectives:

I know which environments great white sharks live in.

I know how great white sharks have adapted to their environments.

Session opener:

Reinforce what a marine animal needs to live in an area. What do they think the great white shark needs? Children to discuss in talk partners. List their ideas on the IWB.

Session introduction:

Tell the children that today they are going to learn where great white sharks live and why they are adapted to live in these marine habitats and not others.

Using the map on the IUCN website (<http://maps.iucnredlist.org/map.html?id=3855>), show the class the current range of the great white shark throughout the world.

Take the time to show the oceans which the great white shark currently lives in and the locations of these oceans in relation to each other, nearby countries and continents and finally the UK. Ask the children how they might travel to

some of these oceans, countries and continents from the UK. Explain to the children that whilst UK seas do have a stable food supply of marine mammals, and are currently warm enough to support great white sharks, there have not been any confirmed sightings of great white sharks in UK seas as of yet. However, they have been found in the Bay of Biscay, near France.

It should also be pointed out to the children that whilst the great white sharks' range looks vast, it is in fact a "vulnerable" species and there are believed to be less great white sharks left on the planet than tigers! Tell the children that due to the vast range of great white sharks, no one really knows their actual global population, yet it is believed to be somewhere between 800 and 2,600! Furthermore, it is also claimed that in the west coast of America, there are only 350 great white sharks left! An increase in the fishing of great white sharks, along with the other threats discussed in Session 1, have severely depleted its population.

Paired ability group work:

In talk partners, ask the children to

Session 3

Where does the great white shark live?

discuss what they think a great white shark needs to live in an area. Note down the children's suggestions on a IWB. Give the children, depending on ability, a number of marine habitat images and descriptions from around the world which can be found in the resource section starting from page 39.

Tell the children their challenge is to read the description for each marine habitat and decide whether they think a great white shark could live there.

Once they have made a decision for each marine habitat, they must write down or draw their reasoning, clearly explaining why a great white shark may or may not live in that marine habitat.

Less able and SEN:

To examine four marine habitats and decide as a group, with teacher support.

Able:

To examine six marine habitats and give reasons for their decisions.

More able:

To examine eight marine habitats and give reasons for their decisions.

Extension activity:

Once completed, extend your pupils by asking them to choose an animal they think would live in each of the eight marine habitats and explain their choices.

End of session review:

As a whole class, decide which marine habitat/s great white sharks live in and allow the children to explain their choices. Tell the group that great white sharks actually live in open oceans and shallow seas.

Reinforce that habitat degradation is one of the main threats facing the majority of threatened marine life from around the world. Explain that the way we care for our marine habitats greatly impacts upon the survival of the great white shark. For any species to thrive, we must conserve its habitat and fully understand how it supports the local population.

What is the great white shark's relationship with people?



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Session 4

What is the great white shark's relationship with people?

Session objectives:

I understand the relationship between great white sharks and the surrounding human population.

I can give my opinion clearly.

I can listen to and challenge the view of others.

Session opener:

Tell the children that the great white shark is classified as a "vulnerable" species. Discuss with the class what they think this means and can they remember why the great white shark is "vulnerable."

Session introduction:

Tell the class that great white sharks are a "vulnerable" species that faces a number of threats to its survival in the wild, which are as follows:

- Lack of legislative protection.
- Sports-fishing and commercial drumline trophy-hunting.
- Being trapped through longlines, fish-traps and other devices.
- Direct exploitation from sports fisheries, the curio trade, the oriental shark-fin trade and even the public aquarium trade.
- Habitat degradation (development, pollution and overfishing).
- Over-exaggerated threat to human

safety and negative media attention.

For many years, the final reason has been a particularly common one for the decreasing great white shark population. With a recent rise in great white shark attacks in Western Australia, this is surely going to continue to be a real threat to the great white shark.

The risks of being attacked by a great white shark:

Tell the class that of the 454 species of shark, very few are considered to be potentially dangerous to people. Incidents of people being bitten by sharks are extremely rare - yet ignorance and sensationalism has caused the "Jaws" myth to be widely perceived as reality.

Tell the children that research has shown that more people are killed every year by dogs, bees, lightning and lions than by sharks. In fact, it is often difficult to identify the shark species involved in incidents, and in some cases the wrong species is blamed. Along with the great white shark (who are responsible for 33% of shark attacks globally) 2 other shark species: the

Session 4

What is the great white shark's relationship with people?

tiger and bull shark, are most frequently associated with serious incidents, yet numerous other varieties of shark will potentially bite accidentally if they feel threatened in any way.

Share the following facts with the group about shark attacks in general:

- Between 1990 and 2008 there have been on average 56 reported shark attacks each year, worldwide
- However, incidents in developing countries are often unreported and so there are probably between 75 and 100 incidents each year, of which 10-15 may be fatal.
- In 2000, there were only 23 'attacks' (with no fatalities) on the 264 million people who entered the water at 68 USA beaches.
- Globally, the risk of drowning at sea is 1,000 times that of suffering a shark attack.
- In Australia, where great white sharks often swim close to popular beaches, drowning outnumbers shark attacks by 50 to 1.

Great white sharks: to cull or not to cull?

The recent rise in fatal shark attacks off the coast of Western Australia (5 in

the last 10 months), has caused some officials to call for an end to the ban on killing great white sharks. Furthermore, some have even called for a culling program to lower the population of all sharks in the water. Discuss the term "culling" briefly with the children.

Tell the children that great white sharks are increasingly coming close to beaches, popular with people going into the water, because conservation efforts have caused local populations of seals, which the sharks prey on, to increase.

Whilst officials in Western Australia ruled out culling for now following protests, they have set out measures aimed at reducing the risk of shark attacks at beaches. Now, fisherman are able to take "proactive action" if a shark presents an imminent threat to people.

Conscience alley drama activity:

Imagine you are a fisherman and you spot a great white shark in water near your boat. You can see a local beach which is packed with families swimming, sunbathing and surfing. You are legally allowed to kill it as it could present a threat to the people in the water.

Session 4

What is the great white shark's relationship with people?

What would you do?

Note:

(Conscience alley is a drama activity where one individual, acting as the fisherman, stands at the end of two parallel lines of children, who face one another. The fisherman walks down the alley, listening to the advice from every child).

Whole class debate:

The recent rise in shark attacks in Western Australia, all believed to be by great white sharks, has re-ignited the debate on lifting the protection given to great white sharks and to allow a cull.

Split the class into two halves. One side is to argue in favour of a cull and the other side is to argue against a possible future cull. For less able or SEN children, arguing against the cull is often an easier concept to understand so it may be better to allow them to join that side. Allow the class sufficient time to formulate their arguments then move onto the debate, with the teacher acting as the chair. Due to the complexities involved in this particular debate, you can find a list of arguments for and against in this pack's resource

section, on pages 43 and 44. These points will hopefully provide both sides of the argument with some evidence, but try to encourage the children to use their own personal views and experiences as well.

End of session review:

After the debate, allow the children to vote for who they think is right. Have three areas (in favour, against and undecided) around the classroom for the children to move towards in order to indicate their vote. After a countdown, ask the children to move towards the correct area to indicate their vote.

Discuss the results as a whole class and the message they portray. Hopefully the debate will have shown that there is not always a clear answer when trying to manage the interests of both threatened animals and local communities.

Reinforce with the children that in reality, humans kill many more sharks than sharks kill humans. For every fatal shark attack, it is estimated that up to 10 million sharks are killed by people. One reason for this, which will be discussed in the next session, is the

Session 4

What is the great white shark's relationship with people?

shark fin trade.

Finish by explaining that in order to conserve any threatened animal, such as the great white shark, we must understand the impact both local and global human populations have upon its survival. It is imperative that conservationists find a way to support the requirements of not only a threatened animal, such as the great white shark, but also the local human population working at sea or living on land.

The story of Ka'ahupahau



session 5

The story of Ka'ahupahau

Session objective:

I can recount a traditional story accurately.

Session opener:

Discuss what we mean by historical and cultural significance. How can an animal be culturally significant? Do they know of any animals which have been significant to people in the past? For example, cats and the Egyptians.

Session introduction:

Tell the children that the iconic shark fin gliding across the ocean's surface is well known, and is often associated with impending doom in western culture. To some people, the shark itself is a symbol of menace and has many negative elements, including; an insatiable hunger, greed, hostility, and a human killing nature.

Western culture even uses the name "shark" as a negative description. For example, the word "shark" can be used as a negative reference about a person, describing them as a lowly character. In addition to this, the metaphor "swimming with sharks" also suggests that you should be ready for an

unpleasant encounter.

Three historical events have contributed towards the shark's negative image in western culture.

Explain to the children that the first happened in 1916, when World War I was in full swing and the American media redirected public hysteria to a series of shark attacks that took the lives of 4 young men on the coast of New Jersey.

Later, in 1945, the USS Indianapolis, after delivering the atomic bomb, sank and its 900 survivors were left in the water for 5 days. When they were rescued, only 300 men were found, and over-exaggerated US Navy and media reports indicated wrongly that the majority of 600 missing had been killed by sharks. However, evidence from the survivors indicated that whilst some men were indeed attacked by sharks, it was not close to the numbers reported by the media and US Navy.

After this, in 1974, Peter Benchley's best selling novel "Jaws" and the subsequent 1975 film resulted in leaving the great white shark with the image of being a "man eater" in the public mind. Immediate links between wild great

session 5

The story of Ka'ahupahau

white sharks and the malicious beast in film, a shark with a ravenous appetite for human flesh, are often still made within the media today. However, there have been some modern movies such as the excellent "Sharkwater" and the animated "Shark Tale," which present sharks in a far more favourable light.

With the media sometimes over-exaggerating rare shark attacks and films such as "Jaws," it is easy to see why sharks have developed such a fearsome reputation.

Continue by telling the children that in other cultures, attitudes towards sharks, such as the great white, are very different. In aboriginal societies the shark is deeply respected and tends to symbolise power, strength and nobility. To native Hawaiians it is also a symbol of all consuming love. Sharks are generally revered in aboriginal cultures; they are considered to be God-like and act as protectors.

Further to this, in ancient Polynesian culture, sharks were also considered an important source of food and tools. Drum heads and sandpaper made from shark skin and shark teeth were used to

craft various tools. Teeth from the most feared sharks, such as the great white and tiger shark, were particularly useful for crafting weapons.

Then, explain to the children that sharks are often seen as a delicacy in Asia and play an important role within a centuries old Chinese tradition. Shark fin soup holds particular significance as it is traditionally served to honour special guests and celebrations. The dish acts as a symbol of high status; one bowl of shark fin soup can cost as much as £100, depending on the quality of the shark fin used. Shark fin soup is expected at weddings and there is immense pressure on couples to serve this delicacy to fittingly honour their guests. There is also a sense of shame attached to not serving this soup, as the absence of this dish implies a poorer position within society.

The fin itself is tasteless and the soup has to be flavoured with pork or chicken. Shark fin soup is also viewed as a type of health tonic equivalent to chicken soup in western cultures. As well as this, the cartilage in shark fins is believed by some to cure cancer.

session 5

The story of Ka'ahupahau

Despite this increased awareness, wealth in the Far East is steadily increasing and the demand for fins is rising. Between 79 and 100 million sharks, regardless of age, size or species, are killed each year in order to satisfy the demand, and it is devastating shark populations around the world.

Experts believe that within a decade, many species of shark will be lost due to the shark fin industry.

(Adapted from the Shark Trust website - see their excellent website at www.sharktrust.org)

The story of Ka'ahupahau

Hawaii is known for its relationship with nature and many native Hawaiians to this day maintain a spiritual connection to the natural world. In fact, early Hawaiians had 9 named shark gods and chief among these was Ka'ahupahau, who lived near Pu'uloa (now Pearl Harbour) and protected the island of Oahu from other sharks. In some stories, she is often portrayed as half woman, half shark.

Read the tradition story of Ka'ahupahau together with the children. This can be given out on paper or shown on an IWB.

Copies of this story can be found in the resource section on page 45.

Independent and group work:

Less able:

Using comic strips from the resource section on page 47, children can retell the story of Ka'ahupahau by completing seven boxes. They can use both drawings and speech bubbles to aid their recounts.

The sequence of events may need jotting down on a white board as a reference.

Able:

Children to work in groups of 4 and by using freeze framing, retell the story of Ka'ahupahau. Encourage the children to be as creative as possible. This could be by letting them recount the story in a different format, e.g. as a news report.

Allow the groups time to plan and practise their freeze framing. Use a camera to record each group's performance and if possible, encourage any other groups watching to assess the performing group's freeze frames.

session 5

The story of Ka'ahupahau

More able:

Children write a diary entry, pretending to be a character from the story; they could be Ka'ahupahau, one of the worshippers or the local girl. Challenge the children to use descriptive language, complex sentence structures and punctuation. Children to use also write a clear introduction and conclusion to their tale.

Teacher to support and possibly scribe for any SEN pupils if needed.

Extension:

Ask the children to plan, and if there is time also write, their own traditional story involving sharks and Ka'ahupahau. Get the children to think about message behind their story.

End of session review:

As a whole class, watch the photographs of the able group's freeze framing and using 2 stars and a wish, ask the children to assess their performance. Then, allow children from all ability groups to share their diaries and comic strips with the rest of the class.

How can we help save the great white shark?



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session 6

How can we help save the great white shark?

Session objectives:

I can design and create my own conservation advert as part of a group.
I can work effectively as part of a group.

Session opener:

Using talk partners, ask the children to discuss the key features of working well as a group. Create a set of rules for working well as a group on a A3 piece of paper. Tell the children that these are the rules they must abide when working as part of a group during the next 3 sessions.

Session introduction:

Tell the children that after learning about the great white shark over the last few weeks, they are now going to create their own creative conservation advertisement, aimed at raising awareness about the great white shark and its conservation status.

Explain that conservation charities often use magazine adverts, billboards, t-shirts, posters etc to raise awareness about the different animals they work hard to preserve.

In talk partners, ask the children to recap the reasons for why great white shark is a "vulnerable" species. After a few minutes, feedback the reasons as a class and note these down on the IWB.

Tell the class that they are going to work in groups of two, three or four to plan, develop and perform or present their own conservation advert over the next three sessions. Allow the children as a whole to decide the size of their groups. Also, it is completely fine if a child wishes to work independently for this activity.

Note:

This activity can be carried out in anyway that fits the ability of the children, the resources within the school or the preference of the teacher.

The activity can be structured by giving the whole group a single focus and leaving it up to them how they design it. For example, you may wish the whole class to create a t-shirt. However, it can also be more unstructured by giving the children their own choice to design a conservation advert in any medium.

session 6

How can we help save the great white shark?

For example, one group may choose to create a t-shirt, while another group might create an television advert using Windows Moviemaker. While the following session in the teaching pack will plan for the last idea (unstructured), they can easily be adapted to suit a more structured idea.

Possible ideas for creating a conservation advert:

T-shirt, webpage, PowerPoint, video recorded advert, photo story, leaflet, game, song, poem, fact file, story, poster, dramatic performance, radio advert, choral performance, play script, persuasive letter.

Mixed ability group work:

Explain that before any wildlife conservation charity produces any type of advertisement, it always plans and designs it in detail before officially releasing it for the public to see.

In their groups, give the children the rest of the session to draw or write up a presentable plan or design for their resource.

You may choose to model how you wish the class to set out their design if you have a particular preference. Remind the groups that they should also list the materials they will need so they can be organised for the next session.

Teachers should roam the class, listening to ideas and highlighting good practice as well as support those children who may find this level of creativity difficult.

End of session review:

Allow the groups to share their designs with the rest of the class. Encourage the other groups to assess their ideas by commenting on good aspects of the design, whilst also making recommendations. If there is time, you may wish to give the groups time to amend their designs after this part of the session.

You may also want to ask the children to nominate people who they feel abided by the class rules of working as a group.

Session 7

How can we help save the great white shark?

Session objectives:

I can design and create my own conservation advert as part of a group.

I can work effectively as part of a group.

Session opener:

Use this time to organise the class in their appropriate groups and hand out equipment. You may also want to reinforce the rules for working as part of a group again.

Session introduction:

Tell the class that they have this session to create their conservation advert. Recap with the class as a whole what they have to do to work effectively as a group.

You may wish to use this time to model how to use any equipment or how to create an advert if you have chosen to do the same as a whole class, e.g how to paint accurately onto a t-shirt.

Before the groups begin, remind them of the importance of using their design to help guide their work.

Mixed ability group work:

The children are to work in their groups from the last session to create their advert.

Again, teacher support should be to groups as required.

End of session review:

Ask the class to suggest children from their groups who they think achieved today's objective of working well in their group.

Encourage the children to share their reasons for their choices clearly.

Session 8

How can we help save the great white shark?

Session objectives:

I can present my advert clearly.
I can explain the reasons behind my choices clearly.

Session opener:

Great white shark Quiz Challenge! Get each child to write a question to test another's knowledge on great white sharks. Once all of the children are ready, the children wander round the classroom to some music, until the teacher presses pause. The children pair up with the child closest to them. The pair then ask each other their questions. If both children answer correctly, they can swap their questions. If not, they have to keep their questions. The teacher should give them 1 minute to do this, then play music to get the children to move around the classroom once again. Press pause and repeat. Ask the children to always find a different partner to their last.

Session introduction:

With the help of the class, move all the tables and chairs to the back of the class to create a large area. Sit the class down in their groups,

leaving space at the front of the classroom for the a single group to perform or present their advert.

Take the time to establish, as a class, the rules for how the audience should act whilst groups are performing or presenting. These suggestions could be noted down on a IWB as a constant reminder if possible.

After this, ask the class what they think they might want to know from each group when they present their advert (this is not required if the advert is a performance), E.g. How was it made? What materials were used? Etc. Note down these suggestions on the IWB or a large piece of paper for the groups to refer back to.

Mixed ability group work:

Allow each group to come to the front of the class and perform or present their advert. After each group has finished, allow the audience an opportunity to ask any questions they may have. Then, after any questions, ask the class to use 2 stars and a wish, or any alternative assessment method, to assess a group's advert.

Session 8

How can we help save the great white shark?

(2 stars and a wish is an assessment technique where children say two aspects they liked about a resource, and a single aspect they think could have been improved for next time).

End of session review:

After each group has performed, ask the class which adverts they liked and encourage them to explain their choices clearly.

How did we do?



copyright Alex Wright, Shark Aid UK.



copyright Alex Wright, Shark Aid UK.

session 9

How did we do?

Session objectives:

I can critically evaluate the effectiveness of my own conservation advert.

I can make realistic suggestions about how I could improve my advert.

Session opener:

Ask the class what they think it means to critically evaluate a piece of work. Allow the children to share their ideas and ensure they understand what a critical evaluation is.

Session introduction:

Explain that after a conservation charity has designed, produced and presented or performed their advert, they reflect back on their progress. This allows them to remember and celebrate good techniques or ideas they had used as well as understanding why any mistakes were made to ensure they don't happen again.

Take this time to recap on the evaluations at the end of the last session again as a class. Model how to fill in the evaluation sheet from the resource file on pages 48 or 49, showing how to fill in the sheet.

Independent work:

Less able:

As a table, give each pupil evaluation sheet A and work through each question as a group. Get a child to read out a question, then discuss possible answers as a table. Give children time to complete it, then move on to the next question.

Middle ability:

Children to complete evaluation sheet A independently and critically evaluate their performance.

More able:

Give children evaluation sheet B. Children to complete the sheet independently, with the added challenge for them to write how they could use some of the skills they have learnt in the future at school or at home.

Extension:

If children have completed the activity above, allow them to start writing up basic instructions for how they created their advert. This can be done using drawings with basic instructions for less able pupils, up to a set of full instructions for G and T pupils.

session 9

How did we do?

End of session review:

Allow the children the time to share their evaluations with the rest of the class. Focus on any common problems each group had and discuss how could these be avoided in the future.

Ask the children to note down everything they now know about great white sharks on a sheet. The results from this can be analysed in comparison to the same exercise which was carried out in Session 1. This will give you an indication of the impact of this So What? teaching pack.

Teaching pack resources



session 2

Wildlife sheet

	Producers	Consumers
Great white shark prey		
Not great white shark prey		

session 3

Deep oceans



The deep ocean is the lowest layer in the ocean at a depth of around 1,800 metres. The deep ocean begins where shallow waters give way to the dark depths where little or no sunlight penetrates. As a result, organisms have to rely on senses other than vision. The deep oceans contain some of the most peculiar creatures on the planet. With no plants or algae here to form the base of the food chain, life here is largely dependent on the dead material and droppings that sink down from above. Mammals such as the sperm whale, minke whale and narwhal can be found here. The basking shark can also be found here. Some scientists claim that more is known about the moon than this layer of the ocean.

session 3

Estuaries



An estuary, which is a partly enclosed coastal body of water, is an inlet of the sea, into which flows a river or stream. Fresh and salt water mix here, so the inhabitants have to cope with both. Water depths rarely exceed 30 metres. Some estuaries have extensive mudflats which are exposed at low tide and teem with life. Many estuaries were formed at the end of the Ice Age, when sea level rose and flooded the coast. If an estuary completely silts up, it will turn into a delta. Many species of mammal can be found here, from grey and common seals to common bottlenose dolphins and beluga whales. In addition, many species of bird and reptile can be found here as well as common jellyfish.

Session 3

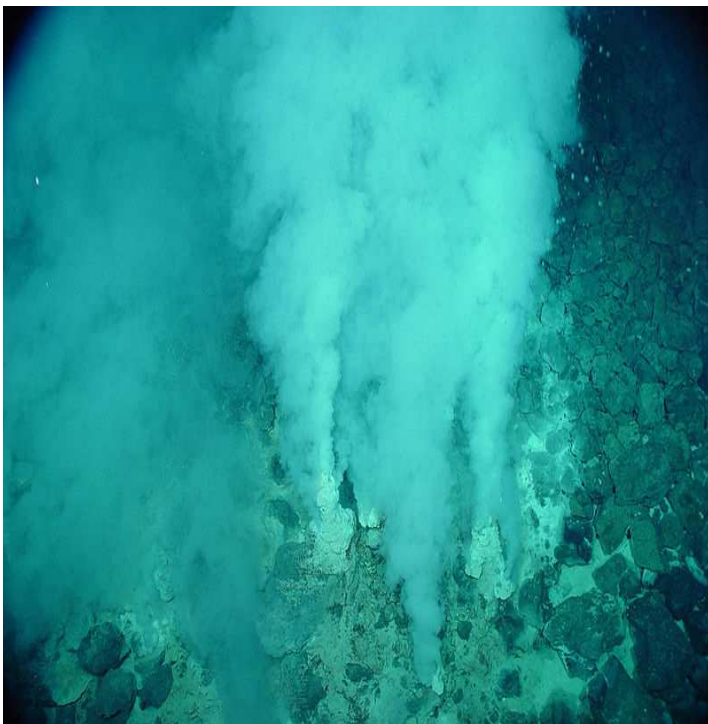
Intertidal zone



Intertidal zones lie on the shore between the high and low tide marks. Rocky shores, mudflats and sandy beaches all fall within this area. The animals and plants that live here need to be able to cope with being both submerged in salt water for part of the day and exposed to the sun for the rest of it. Those that are able to survive in these extremes also need to be wary of a multitude of hunters and scavengers, from foxes and otters to lizards and flocks of birds. Crocodiles, caiman and green sea turtles are the most common reptiles known to be able to live in intertidal zones. Others are sepia and common cuttlefish, hermit crabs, sea scorpions, starfish, seals, sea lions, sea otters, walrus and a range of birds.

Session 3

Hydrothermal vents



Hydrothermal vents - black smokers, white smokers and warm water vents - are areas on the sea floor where water heated by volcanic activity under the seabed gushes out. Unusually, the animal communities down here don't use the sun to get their energy. Instead, chemicals in the hot waters form the basis of the food chain. Hydrothermal vent communities do, however, still rely on oxygen produced by photosynthesis in the sunlit zones. Most hydrothermal vents are found at a depth of 2,100 metres. Compared to the average 2 degrees Celsius water temperature recorded at the depths, the water emerging from the actual vents can range from 60 up to 464 degrees Celsius.

session 3

Open oceans



Any water in the sea that is not close to the bottom or near the shore can be said to be the open ocean. The open ocean is the sunlit top layer and its average depth is 3.6 kilometres, but can also extend to as deep as 11 kilometres. The vast bulk of the sea, it covers over 360,000,000 square kilometres of the Earth's surface. It's referred to as the 'marine desert' because nutrients are lower here than in the shallow seas and life can be scarce. Open ocean, or pelagic, predators therefore have to travel fast and far to find food; hence many - such as marlin, tuna, shark and dolphins - are swift swimmers. The open ocean supports a number of mammals: such as a range of seals, whales and dolphins and a number of shark species. In addition to these, a range of birds also hunt here.

session 3

Reefs



A coral reef is much more than old rock lying on the sea bed. A complicated structure, complex set of relationships and different zones offer countless places for animals to live and hide, which leads to incredible diversity. Many reefs result from the depositing of sand, wave erosion and other natural processes. However, the best-known reefs are the coral reefs of tropical waters dominated by corals and algae. Artificial reefs, such as shipwrecks, are sometimes created to improve areas on generally featureless sand bottoms in order to attract a diverse assemblage of organisms, especially fish. Common and Indo-Pacific bottlenose dolphins can be found in reefs, along with black-banded sea krait and green sea turtles. In addition, manta rays, lemon sharks, hammerhead sharks, frogfish, starfish, leafy sea dragons also roam this marine habitat.

session 3

Shallow seas



Shallow seas are sunlit waters where the oceans are most productive, where biomass is highest and where all the major sea fisheries of the world take their catches. The average depth of shallow seas is around 200 meters. The shallow seas include warm tropical waters, temperate seas like those round the UK and the chilly waters of the Arctic and Southern Oceans. Seals, sea lions, walrus, manatee, dolphins, whales, orcas, penguins and a range of birds can be found in these marine habitats. In addition to these, ground, lemon, hammerhead, tiger, whale and basking sharks can be found in shallow seas as well.

session 3

Sea beds



The sea bed is the ecological region at the lowest level of a body of water. The deep sea floor is usually at around 4,000 metres. It is inhabited by animals and plants that either live permanently on, burrow within, or are closely linked with the bottom of the ocean. Organisms which live on the sea bed are different from those elsewhere in the depths of the sea. Many are adapted to live on the bottom and in their habitats they can be considered as dominant creatures. Many organisms adapted to deep-water pressure cannot survive in the upper parts of the sea. Because light does not penetrate very deep into ocean-water, the energy source for this ecosystem is often organic matter from higher up in the water column which drifts down to the depths. This dead and decaying matter maintains the sea bed food chain; most organisms in this zone are scavengers. Furthermore, due to high pressures and isolation, neither tidal changes nor human impacts have had much of an effect on these areas, and the habitats have not changed much over the years. Starfish, crabs, urchins, octopus, sting rays, lemon sharks, sea turtles, narwhal and sperm whales can be found here.

session 4

Arguments in favour of a great white shark cull

Below is a list of arguments given by officials and other individuals for why great white sharks **should** be culled in Western Australia:

- Many have pointed to the great whites shark's protected species status as a possible cause of the increased attacks. The ban on killing great whites has caused the shark population to surge, resulting in more cases of shark injuries.
- Shark attacks are increasing. A 2011 study showed that the total number of shark attacks in Australia rose from 6.5 incidents per year between 1990 and 2000 to 15 incidents per year in the past decade.
- Great white sharks are now bigger. Some academic believe that it is the great whites shark's protected status that has allowed them to live longer, and therefore grow larger.
- The \$6.85m (£4.4 million) package includes funding for tagging and research programmes as well as for killing. This will help us learn more about great white sharks whilst offering beachgoers greater protection and confidence.
- The recent rise in killings is believed to have seriously impacted the tourism industry in Western Australia and those people who want to visit there to enjoy an ocean experience will now be more reluctant.

(Arguments adapted from an article written by Bailey Johnson in July 2012 for CBS News)

session 4

Arguments against a great white shark cull

Below is a list of arguments given by officials and other individuals for why great white sharks **should not** be culled in Western Australia:

- There is no evidence that increases in shark numbers are influencing the rise in attacks in Western Australian waters.
- Some academics believe that it is the increased human presence in the waters, not great white sharks, that is causing the rise in attacks.
- All sharks are common in Australian waters, but fatal attacks remain rare, averaging about one a year over the last two decades.
- Some believe the rise in deaths to be a result of an increasing human population, more people visiting beaches and a rise in the popularity of water sports. People are also visiting previously isolated parts of the coast, getting into the water over a larger part of the great white shark's range.
- Academics also argue that a culling program would be far more difficult and expensive (\$6.85m ((£4.41m))), in addition to being potentially harmful to the ecosystem, than a simple program of raising human awareness.
- It is argued that it is impossible to understand what the effect the great white shark's protected status has had on the rise in attacks. Great white sharks are extremely rare, and there are dozens of animals, not hundreds off the Australian coast.
- Allowing fishers to kill great white sharks could have real consequences beyond the shores of Australia. Sharks are migratory animals, and great white sharks can range hundreds of miles.
- Academics argue that a culling program would also affect the ocean's ecosystem in ways we cannot understand or predict.
- Culling will not solve the problem as even if the entire great white shark population off Western Australia is destroyed, other sharks would move in quickly.
- Conservationists state that Australia has an immense moral and legal responsibility to protect great white sharks in their waters.

(Arguments adapted from an article written by Bailey Johnson in July 2012 for CBS News)

session 5

The story of Ka'ahupahau

Many years ago, early Hawaiians had nine named gods. Chief among their gods and goddesses was Ka'ahupahau, who lived near a place called Pu'uloa and protected the people on the island of Oahu from other monstrous sea creatures.

As a young girl, K'ahupahau often swam with sharks and learned how to overcome them by tapping them on the nose and pushing them away. K'ahupahau also had a brother called Kahi'uka, and they were both believed to have been born as red-haired twins of human parents. Some say that as they grew up, they became extraordinarily strong and possessed incredible swimming skills. In fact, they often plunged themselves into the sea to protect local sailors against other man-eating creatures in the water. In time, legend says that they even obtained the power to shift from their human form into half humans and half sharks. Furthermore, they could even undergo a full transformation into a shark. They often kept their shark-heads above waters to prevent sailors from entering monster infested areas.

One day, the people of Oahu decided to hold a celebration for K'ahupahau, to thank her for protecting the people from the dangers within the seas. In her human form, K'ahupahau was delighted to see all the different events the people had put on for her, including traditional singing and dancing.

One part of the ceremony involved each worshipper presenting the nicest "leis" (a flower necklace) they could create to K'ahupahau. One by one, each of the worshippers presented their "leis" to K'ahupahau. K'ahupahau was delighted. However, the goddess quickly heard a loud commotion nearby. As she looked down the line of worshippers, she noticed a young, local girl who was extremely upset. "I want it! Give it to me!" the local girl screamed, "I'm having it!" Before K'ahupahau could interject, the local girl snatched the loveliest "leis" K'ahupahau had ever seen away from another girl in front of her, and began to run down the path, towards the beach.

K'ahupahau was furious! In her eyes, the young girl had shown her no respect and the goddess decided she was going to make the local girl pay for her actions! K'ahupahau stormed down the path and onto the beach. She could see the local girl

session 5

The story of Ka'ahupahau

swimming out furiously towards a rock. Fuelled by anger, K'ahupahau screamed out to any nearby sharks in a language that no human could ever understand. She screamed, "that girl is spoiled and selfish and has no respect! She deserves to die!"

On hearing her call, a nearby shark raced through the water and before the local girl could reach the rock, the shark dragged her into deeper waters and killed her.

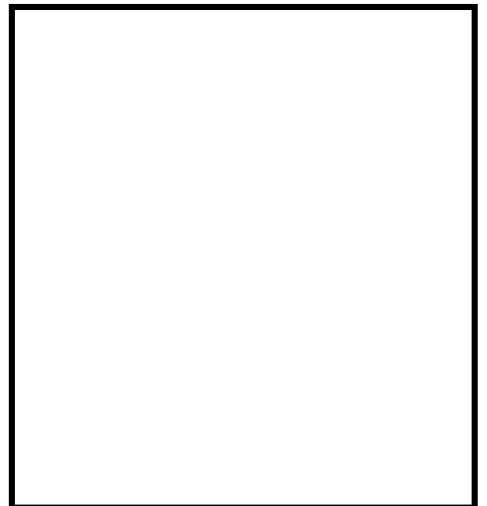
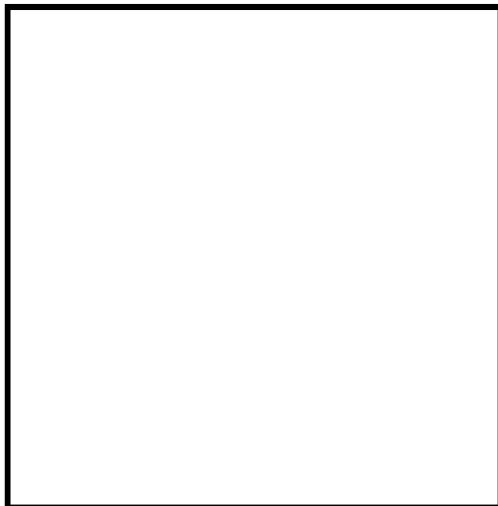
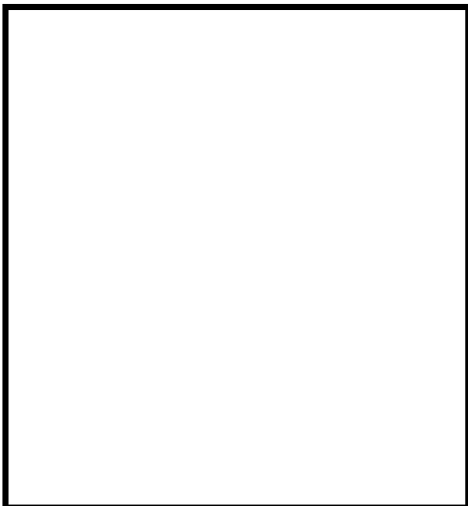
On seeing this from the shore, K'ahupahau felt an immediate and terrible guilt. She was new to her powers and could not believe that her anger had led to the death of a young girl. Beside herself with guilt, she promised the local people of Oahu that no shark would ever kill a human again!

Every year, the people of Oahu continued to celebrate K'ahupahau for her protection by feeding her and her brother.

(Adapted from: Crawford D, (2008), *Shark*, Reaktion Books)

session 5

The story of Ka'ahupahau Comic strip



session 9

Evaluation sheet A

Give a brief description of your advert

What do you think worked well with your advert?

What would you do differently next time?

List the skills you had to use to create your advert

session 9

Evaluation sheet B

Give a brief description of your advert

What do you think worked well with your advert?

What would you do differently next time?

List the skills you had to use to create your advert

How could you use these skills during school or at home?

Thank you

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- Name and location of your school
- How many children have taken part in the club
- The teaching pack you have chosen to use, for example, the cheetah.

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