

# Time Travelling by Water

Wessex Archaeology

<http://blogs.wessexarch.co.uk/ttbw/>



## WW2 Aircraft Crash Sites at Sea Teacher's Pack

This teacher's pack contains activities and suggestions to complement the teaching of WW2 at KS2 and KS3. It was developed from the HLF-funded Time Travelling by Water Project as part of the project legacy.



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## WW2 Aircraft Crash Sites at Sea

This teacher's pack contains activities and suggestions to complement the teaching of WW2 at KS2 and KS3. It was developed from the HLF-funded Time Travelling by Water Project as part of the project legacy.

### This pack includes:

- A script to introduce marine archaeology to the class – the PowerPoint presentation that accompanies this can be downloaded from <http://blogs.wessexarch.co.uk/ttbw/teacherspacks/>
- An introduction to submerged aircraft, why they are important and how they relate to the Blitz and life on the Home Front
- Three activity suggestions to explore the topic with your class

The following resources are available to download from

<http://blogs.wessexarch.co.uk/ttbw/teacherspacks/>

1. PowerPoint introducing marine archaeology
2. Airman's uniform worksheet
3. Spitfire template

### Curriculum links at KS2 -

This workshop supports National Curriculum history study units 4: *Historical enquiry* and 11b: *Britain since 1930*.

### Curriculum links at KS3 -

This workshop supports National Curriculum history study units 4: *Historical enquiry* and 13: *A world study after 1900*.

In addition this workshop can be used to explore citizenship and geography, and can be an interesting stimulus for literacy and art.





## Introduction to marine archaeology

This script accompanies a PowerPoint presentation or intro.pdf which can be downloaded from <http://blogs.wessexarch.co.uk/ttbw/teacherspacks/>

In this lesson, we are going to become marine archaeologists.

What do you think an archaeologist is or what do you think an archaeologist does?

An archaeologist is someone who wants to know one thing – what life was like for people in the past.

Marine archaeologists study anything that is in the water that can teach them about people in the past, or anything that can teach them about how people have used water in the past.

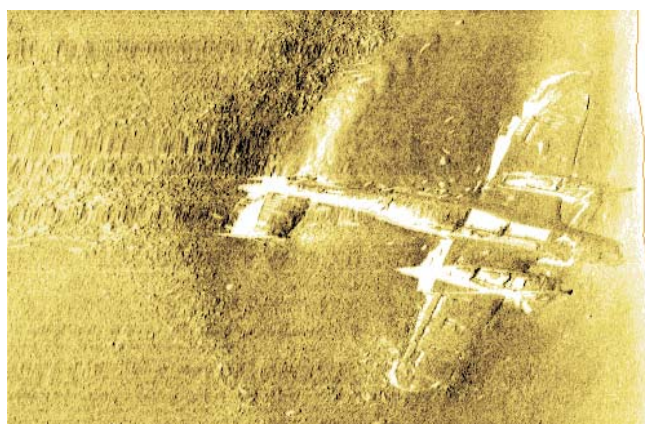
Marine archaeologists are probably best known for diving on shipwrecks, but they also study rivers, lakes, ports, harbours, beaches, bridges... anything that can teach them about people and water in the past.

They have some very clever methods of investigating archaeology underwater. As well as diving, they go wading in shallow water or walking on the beach to study archaeology (*if you have a hi-vis coat, a hard hat and wellies or waders, dress a pupil up to demonstrate this*).

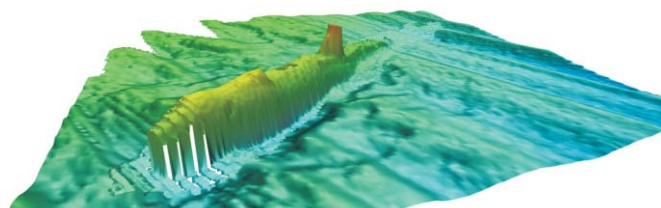
They also work with other people who use the water, such as fisherman and marine aggregate dredgers, and they do something called geophysical survey, or geophys. Geophys is a hi-tech system which uses sound waves to map the sea floor. Look at the pictures that were made using geophysical survey.

These pictures show different types of archaeology on the seabed – can you work out what they are?

1. WW2 Bomber - thought currently to be a German Dornier, which is lying upside down with its bomb doors open. This was found off the Kent coast.



2. A1 submarine - sunk whilst on auto-pilot in 1911. The submarine is currently lying in Bracklesham Bay, West Sussex.



3. The Talis - a ship carrying coal that was involved in a collision in 1906. The damage to the rear of the ship is clear in this picture. The wreck lies to the south-east of Beachy Head in East Sussex.



Archaeologists use all the clues available to them to try and learn about people in the past.



## Why are WW2 Aircraft Crash Sites at Sea Important?

Marine archaeologists are very interested in aircraft that have crashed at sea and a lot of the planes that we have investigated under the water date to WW2. Partly this is because of the acceleration in aircraft manufacture and technology during the war, and partly it is because of the heightened chance of a plane being damaged and ditching or crashing at sea.

Planes that crashed at sea during WW2 are incredibly important. They represent some of the best and, in some cases, only surviving examples of particular types of planes from this period. This is because planes that landed safely eventually became obsolete and were often scrapped and planes that crashed on land were likely to suffer terrible damage. These were normally then salvaged and the metal was re-used. Planes that crashed at sea sometimes had a fairly controlled ditching causing relatively little damage to the plane and they have often not been disturbed since.



*The remains of a Consolidated Liberator aircraft engine and propeller, photographed by Wessex Archaeology off of the coast near the Isle of Wight.*

Aircraft were incredibly important during the war – in fact they changed the way war was fought more than any other event in history as countries many miles apart could now attack the home front of the enemy. Whilst planes were used in WW1 to bomb parts of southern England, it was not until WW2 that planes were used to attack cities on the scale that they were during the Blitz. WW2 also saw the first battle fought entirely in the air – the Battle of Britain.



*Children examining pieces of a German WW2 plane that crashed off of the Norfolk coast. This plane was rediscovered when it was dredged up.*

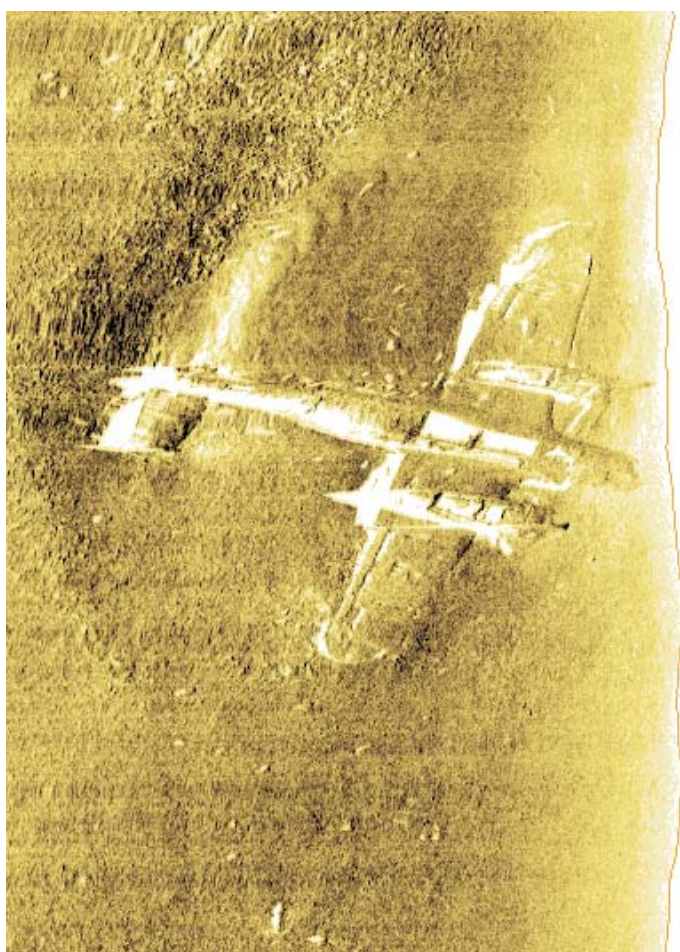




## Activity one – Model a submerged plane

This image can be found at the back of this pack or downloaded from:  
<http://blogs.wessexarch.co.uk/ttbw/teacherspacks/>

Look at this picture of a submerged aircraft – it was made using geophysical survey techniques. Before this survey no one knew where this plane was. Despite WW2 being relatively recent, records of plane losses were poorly kept and are very incomplete. The German record is particularly poor as a lot of records were destroyed at the end of the war. When a crash site was recorded the information is sometimes very vague (e.g. 3 miles south of Sussex).



The plane is currently thought to be a German Dornier, which is a bomber. Wessex Archaeology's Coastal and Marine team are investigating the aircraft to learn more about it.

This picture shows a 2D image of a 3D plane. Ask you class to model the plane using plasticine or clay. See how accurate they can be.



## Activity two – Explore a WW2 airman's uniform

Copy the airman's uniform worksheet from the back of this pack or download it from <http://blogs.wessexarch.co.uk/ttbw/teacherspacks/>

Archaeology is the study of how people have lived in the past. This activity is designed to encourage your pupils to focus on the people who flew WW2 planes and to give them an understanding of the danger that airmen faced. Ask the class to label the following important parts of the uniform:

**Flying helmet**

**Escape scarf**

**Knife**

**Map pocket**

**Gloves**

**First Aid kit**

Talk as a class about some of the important features of the uniform.

Ask the class to answer the following questions (Teachers Notes included):

Why does the airman have a knife buttoned into a pocket on his leg? What might it have been used for? Why is it secured with a button and held by a piece of string?

What is in the white packet? Why was it important to have one of these and why was it stored in a pocket? This example has not been opened and it was made during the WW2. It contains pills and an injection of morphine - do you think they are still safe to use?

Study the gloves. What makes them different from normal gloves? Why do you think they were made in this way?

The pilot would have worn a leather and sheepskin flying jacket over his suit. Why do you think it was made of these materials?

What would the clear plastic pocket on his upper leg have been used for?

Study the silk scarf – what does the design on it show? Think about why it is decorated in this way. Why do you think airmen had these and wore them around their necks?

Look at the flying helmet. The mouthpiece has a microphone in it and the hat has headphones built in. A wire from the back of the hat plugs into the chair to connect them. Why do you think airmen needed headphones and a microphone?



## Teacher's notes

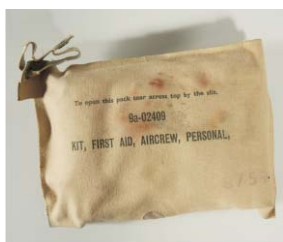
### Knife -



The knife was intended to be used for cutting parachute strings (not stabbing someone, cutting up sandwiches etc.!) If an airman had to bail out of the plane they would either end up over the land or over the

sea. On land there are many hazards that may snag the 'chute and suspend the pilot and at sea the 'chute would quickly fill with water, dragging the airman under. The knife is safely secured with string and a stud to prevent it being misplaced, lost or removed from the suit. Even if our airman had been using it to cut sandwiches at the moment when the plane became endangered, it would still have been with him as he leapt out of the plane.

### First Aid Kit -



The white packet contains a first aid kit and is always stored in the pocket of the flying suit. It contains a few dressings, a syringe of morphine and some medicines. The contents

are likely to be dangerous having been made so long ago.

### Gloves -



The gloves are like mittens, with the exception that the index finger, as well as the thumb, is separate. The airman needs his thumb and finger free to operate the controls of the plane.

However, the other fingers are covered like mittens for two reasons: partly as the material is so thick that it is easier to make and wear them like this and because mittens are warmer than gloves. It was very cold in WW2 planes and the airman would have needed to keep his hands warm.

### Jacket -

WW2 planes were unpressurised and temperature drops as you go higher. Demonstrate this by asking the class if anyone has noticed this whilst, for example, standing on high ground, a hill etc. Modern jets are pressurised and heated which is why they are so warm. The jacket would have been made of sheepskin to keep the airman warm.

### Map Pocket -



The pocket could be used to hold directions or a map. It would be positioned on the airman's thigh when he was seated making it easy for him to see and read the directions whilst flying.

### Scarf -



The silk scarf shows a map - this one is of Burma. The airman had a map of the place he was flying over, not for directions whilst flying, but in case the plane

came down. If he crashed on the land he would need to know where the enemy were, where ally troops are and where the nearest city, town or port is. The map would be worn around the neck for warmth and so would be readily available if he had an emergency and had to leave the plane, or the plane crashed.

### Helmet -



The microphone allows the pilot to talk to other airmen on board and the headphones mean that he can hear what they are saying. The plane would

have been very noisy and having the headphones built into the helmet makes it easier for him to hear and blocks out some of the background noise. The tube at the front of the mouth piece would provide the airman with oxygen.



## Activity three – Spitfire template

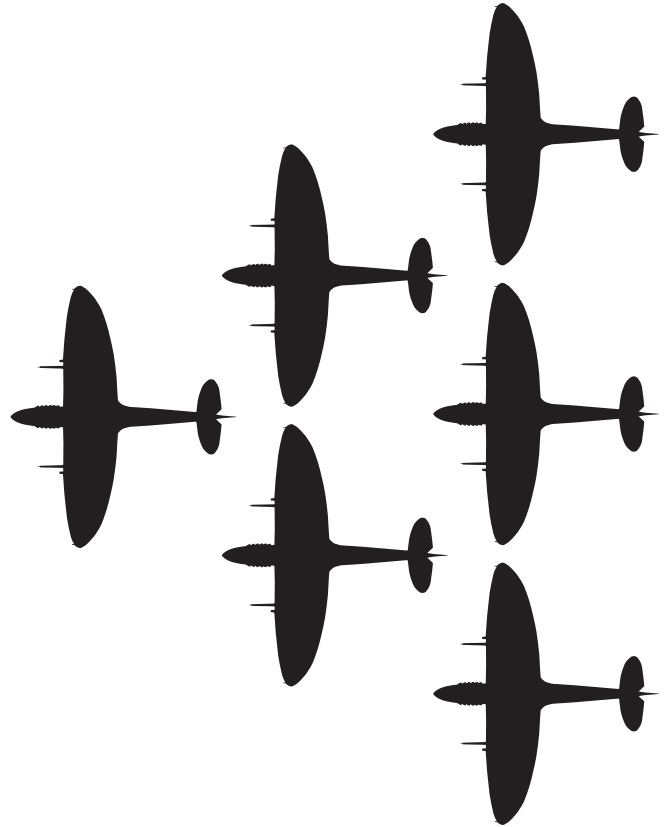
Copy the Spitfire template found at the back of this pack or download it from <http://blogs.wessexarch.co.uk/ttbw/teacherspacks/>

There are many ways in which this could be used in class.

1. Ask each pupil to cut one out and then arrange them into a formation flight with one plane at the front, two behind it, three behind that etc. This helps with numeracy as it demonstrates triangular numbers. Tell the class that this is how British pilots were trained to fly during the Battle of Britain. Unfortunately it was not a good tactic – the pilot in the front plane was the only pilot who could look out for the enemy as the other pilots had to focus on keeping formation. The German's quickly realised that this was a foolish way to fly and called the British Air Force 'idiotenreihen' – meaning idiots in rows! This tactic was later changed.

2. Colour the planes in – the top of a Spitfire was khaki but the underside was blue – why was this? Spitfires designed to fly at sea were blue on top – why was this? (*Hint - it's to do with camouflage!*).

3. Write on the template. There are several activities that this could be used for – I ask pupils to write down how a British airman would be feeling. We discuss our answers and then discuss how a German airman might feel. The answer is (normally, but not always!) that they would have felt very similar.

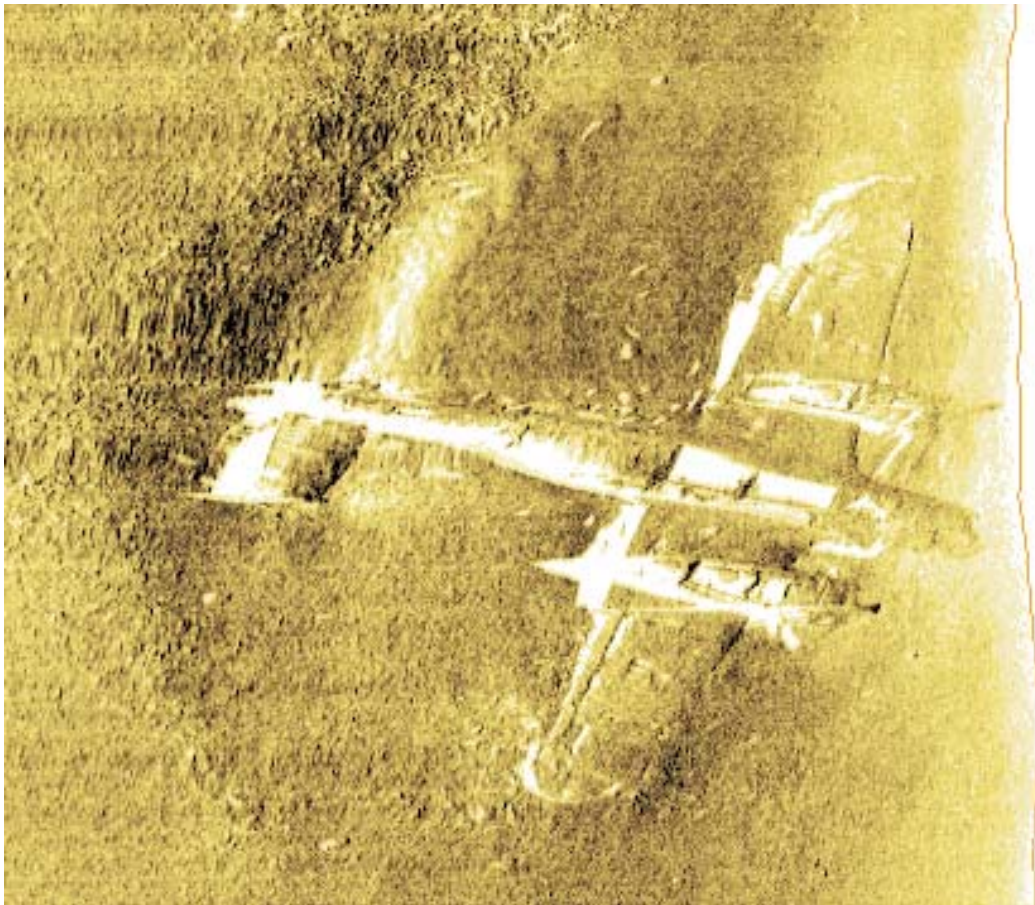
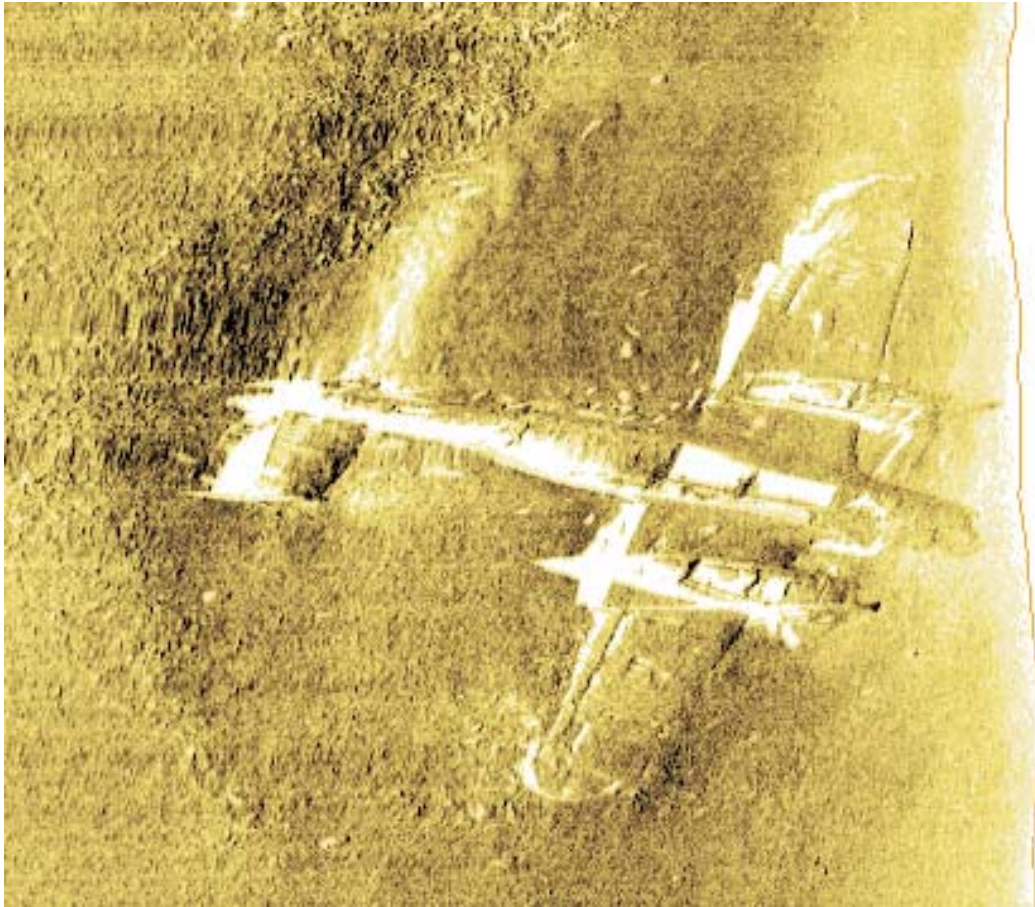


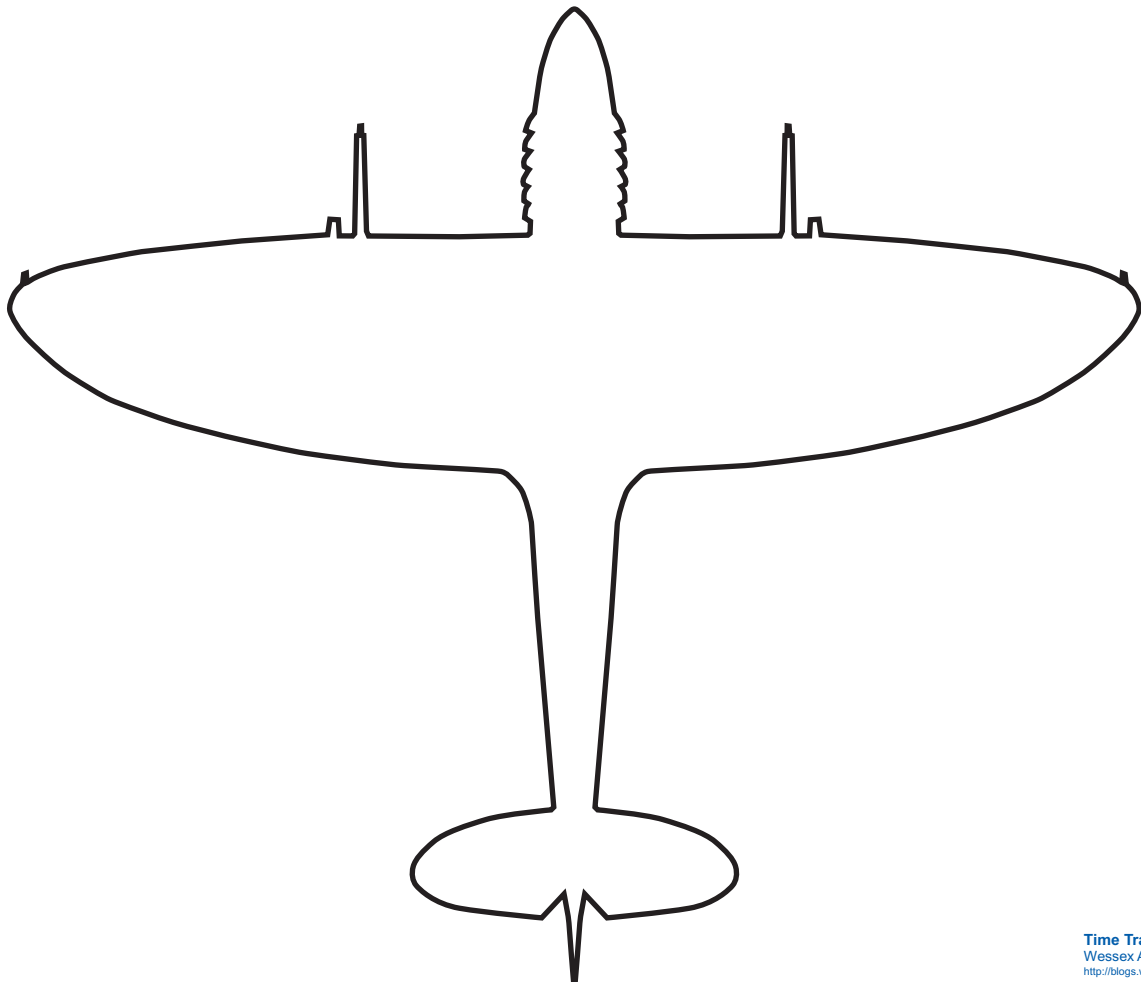
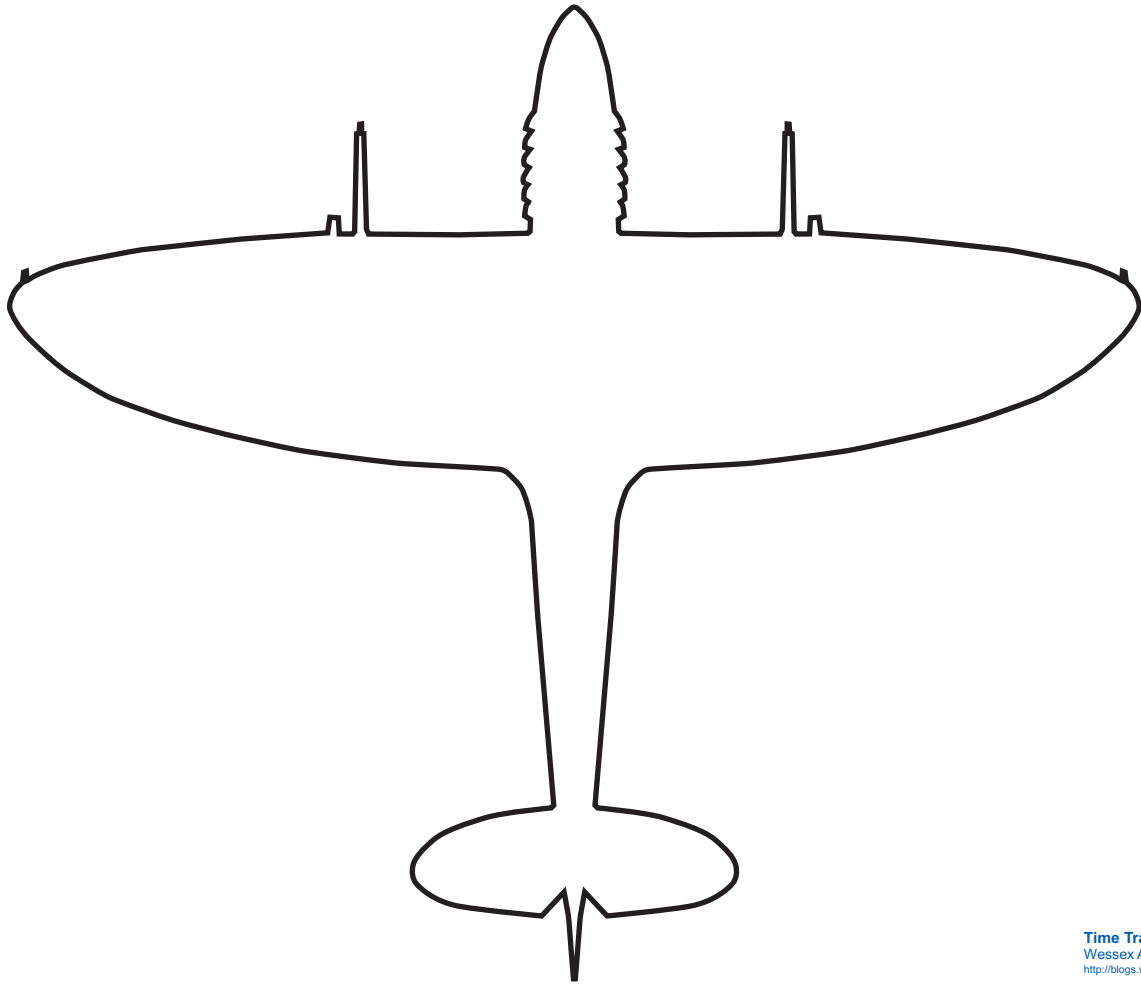




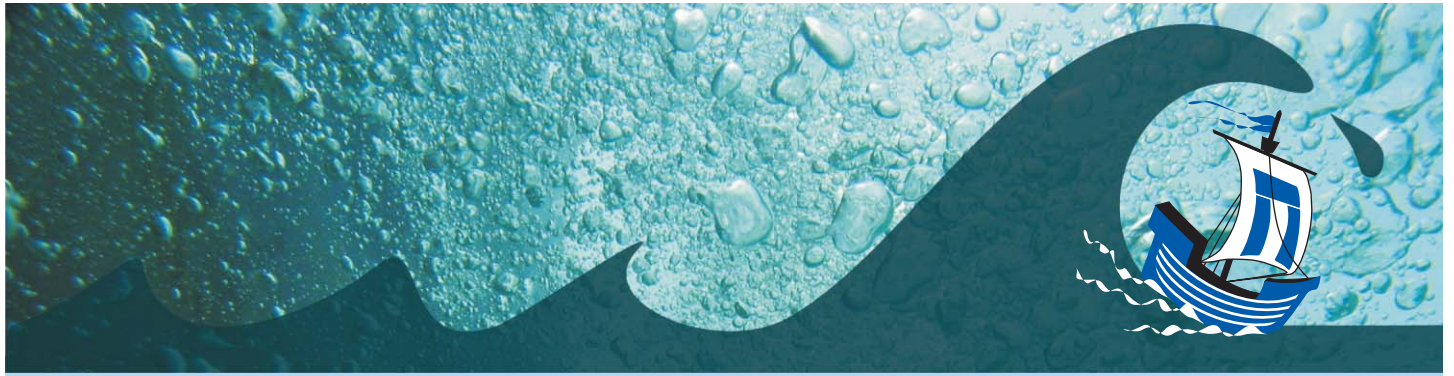
## WW2 airman's uniform











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