





Steps to Success

Date	Monday 11 th January 2021
Subject/s	Design and Technology
Learning Objective 	To create a design criteria that meets the needs of the user.

	SA 	TA 
Success Criteria 	I can research into the user's needs.	
	I can research existing products.	
	I can understand the purpose and function of the product.	
Support	Independent Adult Support () Group Work	
Lockdown learning: DC		
Key vocabulary for the lesson:		
research shelter criteria waterproof weatherproof insulating strong		

Build a shelter for Shackleton and his shipmates to live in.

Design:

Criteria:

<u>The shelter must be:</u>	

Read the letter Shackleton sent to his wife when his ship got stuck. Think about what he needs his shelter to be like.

December 5th 1914.

Dear Emily,

Our wonderful Endurance has been encased in ice and we have been forced out of our ship and onto the freezing ground. I feel so responsible and my men are looking to me for guidance. We urgently need some shelter as we can't live here safely. I think our best chance of survival will be to wait until Spring comes and pray the heat will melt the ice enough for us to be free.

I am writing to you because I need your help! I need you to find the best architect to help us design a shelter to protect us from the cold. We could stay here on the ice in Antarctica or we could escape back to Elephant island. Both places have lots of animals that we are trying to keep away.

I have attached the list of crew members so the designer can make sure it fits us all!

Please hurry, I am afraid we may not make it.

Your tired, Micky.

Ernest Shackleton



Date and place of Birth: 15th February, 1874 in County Kildare, Ireland

Date of Death: 5th January, 1922 in Grytviken, South Georgia and the South Sandwich Islands

Why is Ernest Shackleton famous?

- Ernest Shackleton is famous because he is thought of as one of the most inspirational explorers of the 20th Century.
- He explored the Antarctic and South Pole regions.

Shackleton's Early Life

- In his early life, he loved to read and he had an active imagination.
- His dream was to travel and discover new places.
- At the age of just 16, he joined the Merchant Navy.
- By the time he was 18, had been promoted to First Mate (2nd in command on a ship).

Shackleton's Expeditions

1901 - Shackleton started his first expedition to the South Pole.

- His team got closer to the South Pole than anybody ever had.
- Because of bad weather and Shackleton becoming unwell, they had to turn around.

1908 - He led an expedition to the South Pole on a ship called Nimrod.

- They reached within 97 nautical miles (180km) of the South Pole.
- He was given a knighthood, and became Sir Ernest Shackleton.

1914 - This is often seen as Shackleton's greatest success.

- The team had to abandon the ship and were stranded on the ice for several months.
- In the spring, when the ice began to thaw, Shackleton and some of his men, launched a rescue mission. Remarkably, all of his team survived.

Shackleton died during an expedition, in January 1922. He is buried in Grytviken, South Georgia, a small, remote, Atlantic island.

In 2002, the BBC carried out a poll to find the '100 Greatest Britons'; Shackleton reached eleventh position.

Shackleton is stuck on the ice in Antarctica. He and his men could go to Elephant Island as it is quite close. Where do you think they should go?

Remember: they can't take much with them to Elephant Island as they could have to use the small life boats to get there.

Elephant Island



Antarctica



Here is a picture of his crew. What do you notice? There were also a few dogs on board as well!

THE CREW



JAMES WORDIE
Expedition geologist.



TIMOTHY MCCARTHY
Able seaman.



ALFRED CHEETHAM
Third officer.



FRANK WORSLEY
Ship's captain.



ERNEST SHACKLETON
Expedition leader.



FRANK WILLD
Second-in-command.



FRANK HURLEY
Expedition photographer.



DR. JAMES McILROY
Second surgeon.



DR. ALEXANDER MACKLIN
Expedition surgeon.



LEONARD HUSSEY
Expedition meteorologist.



GEORGE MARSTON
Expedition artist.



WALTER HOW
Able seaman.



LIONEL GREENSTREET
First officer.



ERNEST HOLNESS
Able seaman and stoker.



HUBERT HUDSON
Navigating officer.



REGINALD JAMES
Expedition physicist.



THOMAS ORDE-LEES
Motor expert and storekeeper.



JOHN VINCENT
Boatswain and able seaman.



CHARLES GREEN
Ship's cook.



ALEXANDER KERR
Second engineer.



LOUIS RICKINSON
Chief engineer.



TOM CREAN
Second officer.



WILLIAM STEPHENSON
Fireman and stoker.



ROBERT CLARK
Expedition biologist.



THOMAS McLEOD
Able seaman.



HENRY McNEISH
Ship's carpenter.



WILLIAM BAKEWELL
PERCY BLACKBORROW
Able seaman. Stowaway.

Have a think, what should Shackleton's shelter be like?


What should it be made from? What resources are available?


If the ice is cracking, does that make it a safe place to start building? Is it a strong foundation?

What size should it be? Are you making one big shelter or lots of smaller ones?

Now: Go back to the design criteria and fill it in. I will post the design criteria we make in school on Monday at 3pm. Please send yours to Miss Cooke on Class Dojo so she can see your amazing ideas!

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Subject/s	Design and Technology
Learning Objective 	To evaluate the strengths and weaknesses of shelters.

Success Criteria 	I know who the user is.
	I can evaluate its functionality.
	I can evaluate its purpose.
Support	Independent Adult Support () Group Work

Lockdown learning: DC

Key vocabulary for the lesson:

Materials equipment user function success weakness design



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D



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