

Teacher Guide *A History of Lifejackets*

Lifejackets have been saving lives for over 150 years.

Over the years lifejackets have been known by a range of names, for example life belt, lifejacket, life preserver, Mae West, life vest, buoyancy vest, personal flotation device, flotation aid. The concept of using inflatable devices for safety is not new. Reports dating back to at least 870BC have been found when inflated animal skins were used by attacking armies to cross a stretch of water.

1805 At the Battle of Trafalgar lifejackets were non-existent. All sailors had to cling onto flotsam and jetsam until rescued. During this period the drowning of sailors and fishermen was thought to be an occupational hazard.

1851 – 54 Captain John Ross Ward, a RNLI Inspector, developed the first lifejacket made out of cork for the Royal National Lifeboat Institution crews to protect from weather and give buoyancy. This could have been a copy of the work of the Frenchman Colonel de Gelacy who is reputed to have devised a cork lifejacket as far back as 1757.

1852 US Congress passed the first requirement that passenger steamboats on the nation's rivers carry a float or life preserver for every passenger.

1861 Cork became the main ingredient in all lifejackets and was used for many years. Cork life jackets were seen in the film Titanic. Cork was rather hard and uncomfortable to wear. (Photo Henry Freeman courtesy of Sutcliffe Gallery, Whitby UK)



1896 Kapok, a fibrous vegetable material honeycombed with many air cells, was first used in lifejackets in 1896. The kapok fibre was sealed in canvas and later vinyl plastic packets to prevent exposure to the water. One problem with the vinyl-sealed kapok fibre lifejacket was that the packets could be punctured, causing the jacket to lose its buoyancy. This was more comfortable for the Navy personnel who slept in their life jackets. Kapok lifejackets were standard for many years. Kapok is now prohibited for use in lifejackets in New Zealand.



Kapok fibre photo courtesy of Pema Design
SS Howard T Ricketts life vest photo courtesy of Maine Maritime Museum

1912 The sinking of the SS Titanic prompted many countries to adopt laws requiring ships to carry lifejackets for crew and passengers. However many did not implement this until after World War 1.

1928 The SOLAS (International Safety of Life at Sea) Committee used a mannequin to investigate the performance of a lifejacket and protective oilskins on turbulent seas.

1929 There was an investigation into the shortfalls of some lifejackets. The main shortfall was that the wearer was often left floating face down in the water. Kapok was preferred over cork as the kapok lifejackets floated people with their face up. Photograph courtesy of Marine Warehouse



1940 The US Motorboat Act of 1940 was the first act to address the carriage of lifejackets for recreational boaters. The US Coast Guard recommended and designed a lifejacket for use on recreational vessels. This would support a person for shorter periods of time and be less bulky than ocean going jackets. This would encourage people to wear them.

1939 – 45 The Second World War improved life jacket design with the introduction of inflatable life jackets. The Mae West was used by Air Force pilots. These were inflated manually by blowing through a tube, later with CO₂. However many Royal Navy men drowned as a personal issue lifejacket did not exist. Photograph courtesy of Marine Warehouse



1956 Rescuers from the Andrea Doria disaster noted that survivors wearing lifejackets made of yellow fabric were much easier to spot in the water than camouflaged gear. This has led to fabrics being dyed with colours ranging from canary yellow, international orange to scarlet.

1960s Kapok was being phased out with synthetic foams as the replacement. The flotherchoc was designed in France. It was made of small vinyl air filled pockets but they were easily punctured. The advantage of this design was that it was a tight fitting vest that was more comfortable to wear.

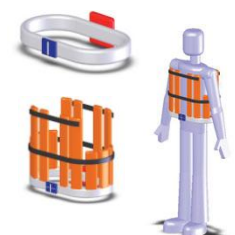
1970s Closed cell foam has been around since 1940s but it was not until the 1970s that it was used in lifejackets. Many isolated air filled cells provide the flotation. These cells can be punctured over and over again with only minimal effect on buoyancy. The air filled cells also provide protection from hypothermia. This technology has brought the flexibility of design enabling each sport to have its own style of jacket.

2000s Increased popularity of the gas inflated life jacket, especially for recreation. This lifejacket is not active until inflated. The most modern are self inflating upon entry to the water. They are designed so they do not ride up and they float you face up.



The future Lifejacket design – Boat US Foundation Lifejacket design Competition winner 2005

A slender belt is worn around the waist. When activated, slender, symmetrically-arranged air bladders stored inside the belt inflate and rise up to surround the wearer on all sides. You float like you would in an inner tube. Graphics Courtesy of Boat US Foundation



Remember, *Lifejackets - They won't work if you don't use them!*