

# Titanic Key question 6

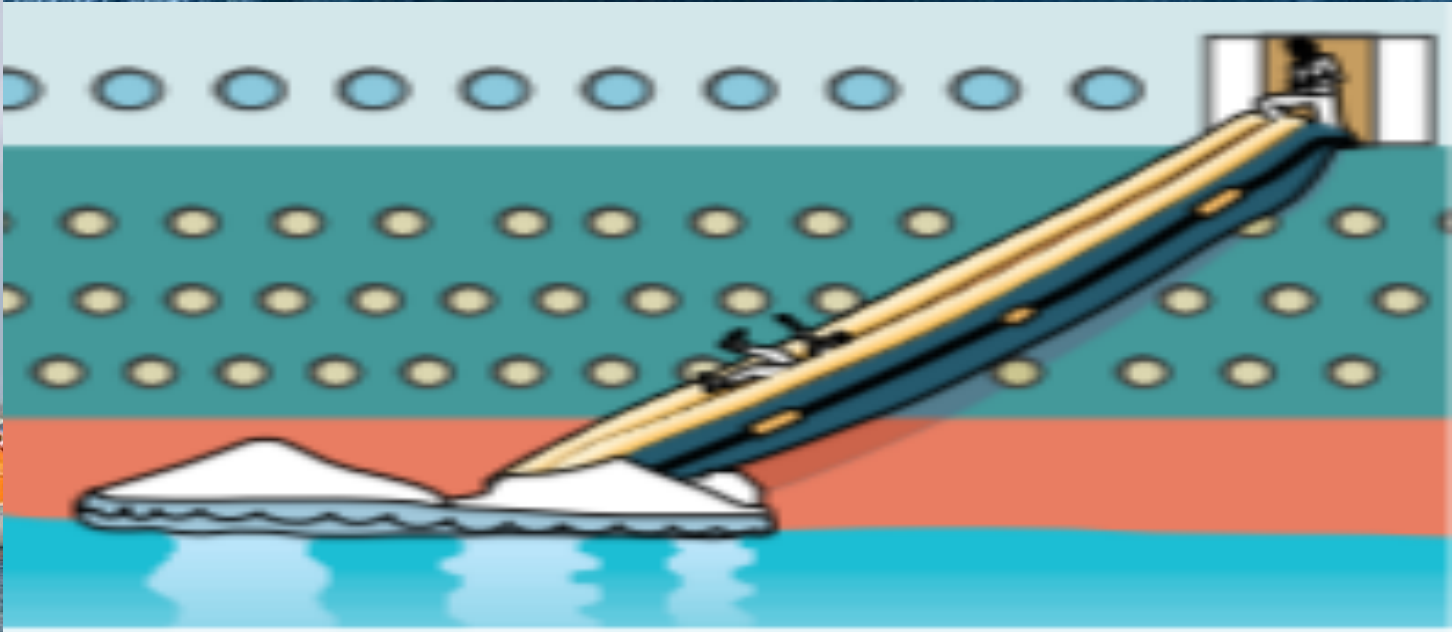
How did they stop disasters at sea such as the Titanic ever happening again?

# How are passengers kept safe on ships these days?

## Thinking task

List a number of ways the ships are safer these days. Also, think which other services and equipment could be used to make it safer e.g. lifeboats with roofs on. This will ensure the passengers are protected from the cold.

Need some help? The next slide may give you some clues.

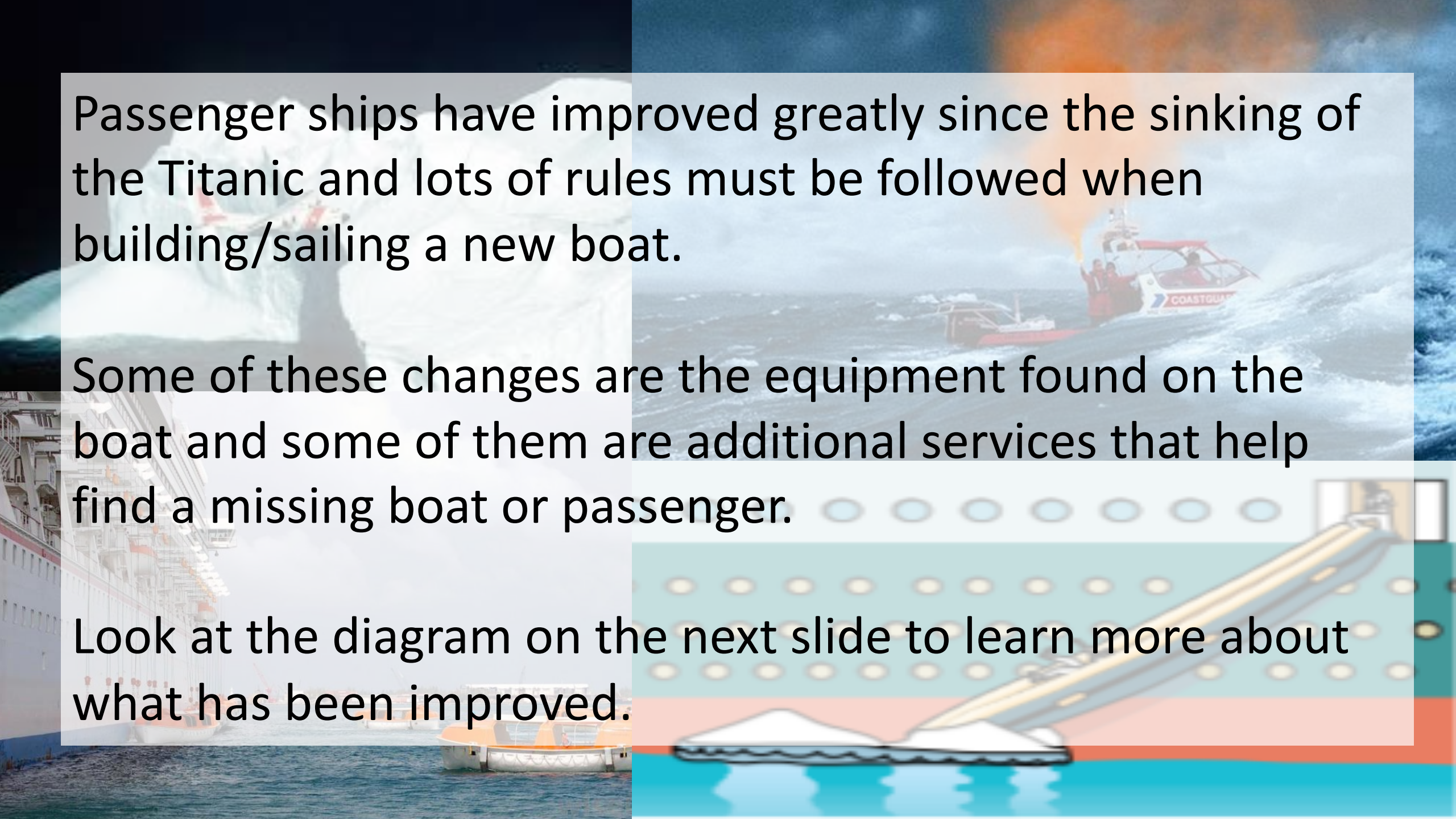




Passenger ships have improved greatly since the sinking of the Titanic and lots of rules must be followed when building/sailing a new boat.

Some of these changes are the equipment found on the boat and some of them are additional services that help find a missing boat or passenger.

Look at the diagram on the next slide to learn more about what has been improved.



# Surviving disaster – The Titanic and SOLAS

In 1914, two years after the Titanic disaster of 1912, in which 1,503 people lost their lives, maritime nations gathered in London adopted the International Convention for the Safety of Life at Sea (SOLAS Convention), taking into account lessons learned from the Titanic. The 1914 version was superseded by SOLAS 1929, SOLAS 1948, SOLAS 1960 (the first adopted under the auspices of the International Maritime Organization) and SOLAS 1974. SOLAS 1974 is still in force today, but it has been amended and updated many times.

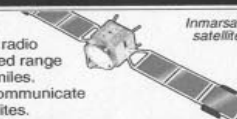
The regulations relating to life saving appliances and arrangements, contained in chapter III of SOLAS, a new version of which entered into force on 1 July 1998, are intended to ensure that in the event of a catastrophe at sea, passengers and crew have the greatest chances of survival.

Improved design and equipment, better fire protection, satellite communications, rescue planes and helicopters and trained personnel also contribute to improved safety at sea.



## Distress alert

The Titanic used radio which had a limited range of 200 nautical miles. Ships can now communicate globally via satellites.



Inmarsat satellite

## Helicopters and rescue planes

Unavailable in 1912, helicopters and rescue planes are now used to locate, search for and rescue survivors.

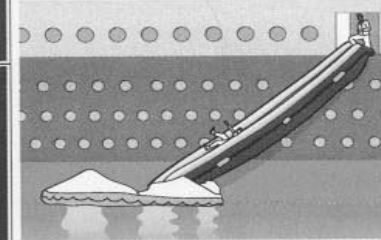


## Lifeboat drill

No lifeboat drill was held on the Titanic. Under SOLAS chapter III an 'abandon ship' and fire drill must take place weekly on all passenger ships.

## Evacuation chutes

Passengers on the Titanic jumped from windows and doorways into the lifeboats as they were lowered, often injuring themselves or other passengers. New emergency evacuation chutes are both safer and quicker.



## Ice patrol

In the first SOLAS 1914, after the Titanic disaster, ice patrols in the north Atlantic were set up and continue to be a SOLAS requirement.



## Speed of navigation around ice

The Commission into the Titanic ruled the loss was due to collision with an iceberg brought about by excessive speed at which she was being navigated.

Under SOLAS, when ice is reported on or near his course the master of every ship at night is bound to proceed at a moderate speed or alter course.

## Public address system

There was no public address system on the Titanic and news filtered to the passengers slowly, adding to the disorder and confusion.

Under SOLAS, all passenger ships must be fitted with a public address system.



## Training of crew in lifeboat drill

The crew of the Titanic lacked training in loading and lowering the lifeboats and few knew which boat they were assigned to. Lifeboats were not filled to capacity because senior officers did not know the boats had been tested and were strong enough. Under SOLAS, every crew member must participate in regular practise drills and have easy access to training manuals.

## Number of lifeboats

The Titanic did not have enough lifeboats for all passengers. Under SOLAS, passenger ships must carry enough lifeboats (some of which can be substituted by liferafts) for all passengers, plus liferafts for 25%.

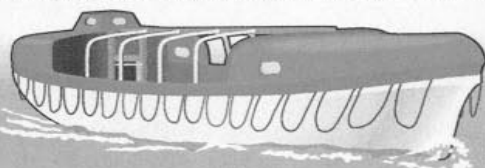
## Immersion suits

The sea temperature when the Titanic sank was below freezing point and many people died in the water from hypothermia. Under SOLAS, a specific number of immersion suits must be carried on both passenger and cargo ships, mainly for the crews of rescue boats.



## Lifeboat design

Some people died from hypothermia in the Titanic lifeboats because they were open and gave no protection against the cold. Under SOLAS, lifeboats must be fully or partially enclosed. On passenger ships, partially enclosed lifeboats can be used as they are easier to get into, but they must have a collapsible roof to fold across.



## Location

The land station at Cape Race, Newfoundland and ships other than the Carpathia and the Californian heard the Titanic distress call but the airwaves were crackling and the Titanic's position was misinterpreted. With EPIRBs and global positioning systems, the position of a ship in distress can be automatically sent.



Cospas sarsat satellite

## The Carpathia

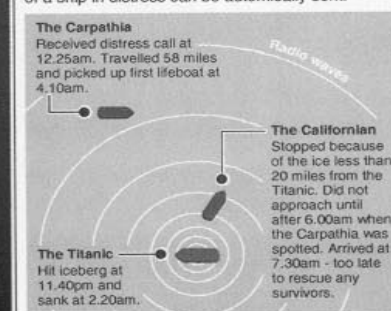
Received distress call at 12.25am. Travelled 58 miles and picked up first lifeboat at 4.10am.

## The Californian

Stopped because of the ice less than 20 miles from the Titanic. Did not approach until after 6.00am when the Carpathia was spotted. Arrived at 7.30am - too late to rescue any survivors.

## The Titanic

Hit iceberg at 11.40pm and sank at 2.20am.



## Distress watch

The Californian was less than 20 miles away but the radio officer had gone off duty when the distress messages were sent. Under SOLAS, every ship while at sea must maintain a continuous watch on the distress and safety frequencies.

On the following slide there are 11 possible options you could do to ensure greater safety if a disaster like the Titanic happened again.

Read these 11 measures and discuss with an adult which ones you think are the most important and why. E.g. Have more and better lifeboats with covered roofs to stop people freezing and to ensure everyone has a chance of surviving unlike the Titanic.



**1**

Have ice patrols so that planes can spot icebergs from the air

**2**

Have speed limits near icebergs

**3**

Have more and better lifeboats with covered roofs to stop people freezing

**4**

Better training in lifeboat drill for the crew and for passengers

**6**

Have better ways of other ships knowing where other ships are

**5**

Make it easier for people to get from the ships into lifeboats such as an inflatable chute

**7**

Have loudspeakers so that everyone can hear clearly what they need to do in the event of an accident

**9**

Have helicopters and planes to search and rescue

**11**

Have better radio signals to tell other ships they need help

**8**

Have special suits that stop you freezing to death if you fall in the water, as well as life-jackets

**10**

Have special red distress flares which are used only in case of emergency

**12**

# What is the best way to stop disasters such as the sinking of the Titanic happening again?

## Diamond 9



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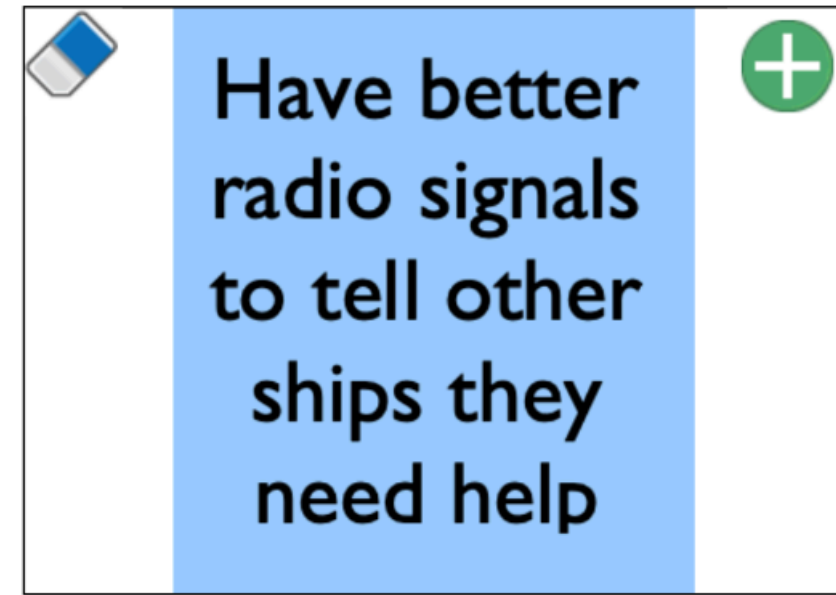
**12**

## Task

The UK government have asked you to decide which ones of the 11 measures they should fund and would like to know your opinion why these ones are the most important to you.

In the 2Do, click the green and white add sign (+). Here, you will find all the 11 measures offered for your choosing. Choose the three you believe are the most important. Give reasons why.

E.g.



This is important as if a ship is in need of help then there is a clear message being sent to all other surrounding ships and they can assist with the rescue.