

Trade

Introduction – Ships and Trade

Where do the things we eat and use come from?

Bring in items... common goods like sugar and tea and tinned goods. Look at the packaging. What languages are used and what languages are missing?

Bring in items of clothing and plastic goods. Where are most goods manufactured now?

What is used to convey these goods around the world?

Ask for estimates of how much of everything we touch, use and eat has been moved by a ship?
(Answer is 95% or more)

Ask the class 'what species travel great distances on the surface of water'.

It is only humans that travel like this and it is much safer to be in the air or under the sea.

Humans have become dependent on global trade. We are always looking for better ways to move things around the world.

Print out the pictures of trading ships for teams of pupils to cut out and put in chronological order.

Trade and Colonialism - Teachers Notes – Introductory Lesson – Ships

1.



2.



Trade and Colonialism - Teachers Notes – Introductory Lesson – Ships

3.



4.



Trade and Colonialism - Teachers Notes – Introductory Lesson – Ships

5.

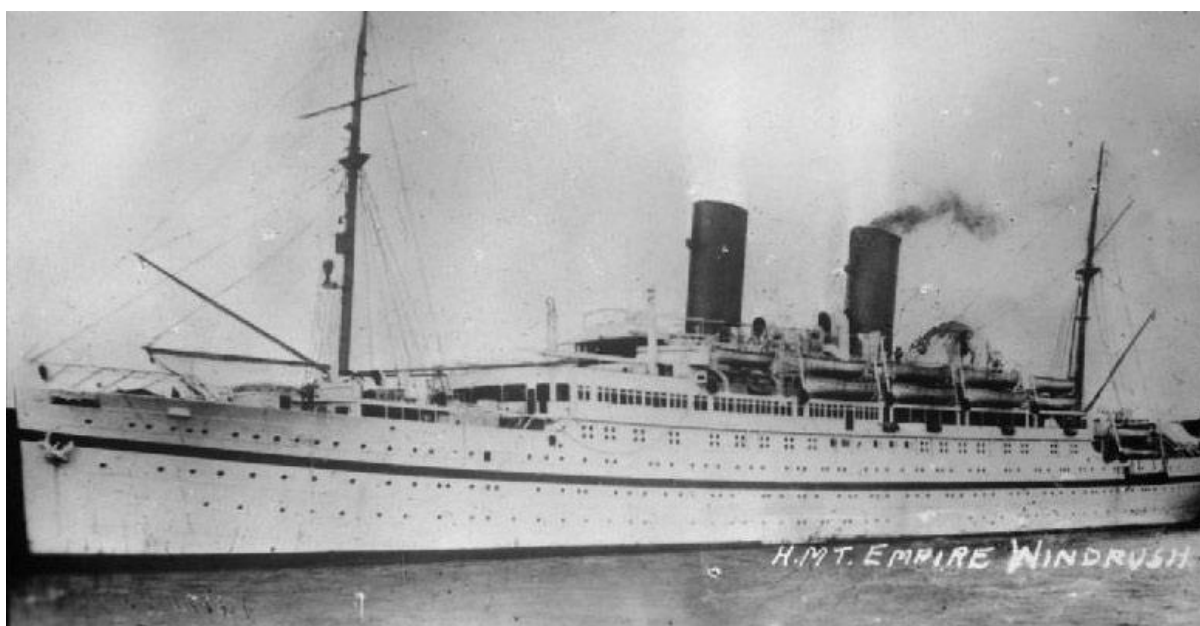


6.



Trade and Colonialism - Teachers Notes – Introductory Lesson – Ships

7.



8.



Trade and Colonialism - Teachers Notes – Introductory Lesson – Ships

Ships in chronological order –These are dates based around the start when these ships would have been trading. Display the grid.

Ship	Dates	Powered by
6. Chinese Junk	c2000BC (4000 years ago)	Sail
2. Polynesian Waka(Two Hulled Canoe)	c.1200BC(3200 years ago)	Sail and paddles
5. Viking trading Ship (Narr)	c.1000AD (3000 years ago)	Sail and oars
4. Caravel (Like The Matthew a replica vessel in Bristol Harbour))	c.1500AD (500 years ago)	Sail
1. Steam Clipper	c1800 (220 years ago)	Coal and Sail
8. Paddle Steamer	c 1815 (205 years ago)	Coal
7. His Majesty's Transport - HMT Empire Windrush *	1930s (90years ago)	Diesel / Oil
3. Container Ship	present day	Diesel/ Oil

**HMT Windrush was an early diesel vessel that transported troops and then was the first ship to transport migrant workers into Britain – Hence the term Windrush generation.*

Summary -

Sail ships dominated global trade for 300 years from mid 16th Century to mid 19th Century

Steam ships took over until the start of 20th Century.

Burning oil (Diesel) in internal combustion engines took over in the 1900s until the present day

Trade and Colonialism - Teachers Notes – Introductory Lesson – Ships

The future –To meet rapidly changing global laws on pollution, ship design and ship propulsion has to find new sustainable methods of transport.

Show images of concept ships for the future –some of these are now a reality.

Pupils could look up concept ships online to research ideas

Sails – Mechanically hoisted and adjusted by computer



No crew needed to hoist sails

Trade and Colonialism - Teachers Notes – Introductory Lesson – Ships

No crew needed at all with an autonomous ship steered by satellites



Flettner Rotors – Spinning columns driven by the wind. An invention of the 1920s ignored because coal was cheap – now being fitted to ships.



Extension activity – How does a Flettner Rotor work - What is the Magnus Effect?

Activity - Pupils design their own concept cargo ship for the future.

This can be in pairs or small teams. There are plenty of images on-line of futuristic shipping solutions. The team should consider these points.

- **What will it transport?**

Currently we transport everything –grains, solid materials, liquid materials, gas and mixed loose goods in containers, refrigerated goods.

Some goods leave the country they were produced in and get re packaged or processed and sent back to the country they came from – eg: Coffee, flowers.

- **Where will it go?**

Currently goods are transported in larger and larger ships to large ports with the cargo handling facilities. From here the goods enter the road network. Is there an alternative (canals, smaller ports, off shore handling using drones?)

- **How is it powered?**

Burning oil will not be possible in the future, hydrogen, electricity, sail, Flettner rotors, wave energy. solar power.

- **How fast does it need to be?**

Ships don't need to travel fast if it is part of a continuous supply chain of non perishable material.

What about travel underwater with autonomous ships following the communication cables laid on the ocean bed. These ships can stop and recharge batteries on the sea bed using stations that extract power from the waves and wind above.

- **How will goods be loaded and unloaded?**

Liquids and some dry goods can be pumped from platforms away from land. Are there alternatives to the lorry and the container ship. The container was invented in the 1960s and transformed the handling of goods at ports – what is next?

- **How big a crew?**

Ships and docks were once big employers. The job is now done by machines with smaller crews on bigger ships and cargo handling machinery.

An old fashioned sailing ship needed a very large crew. Now a ship could use satellite navigation and could be steered from the shore with no crew on board.

Round up by displaying and discussing pupils ideas for shipping in the future.