

Science Innovation KS3 History Explorer Card Version

- Print this document onto A3 card
- Cut out the individual object cards and laminate them
- Create a chronology on the classroom wall
- Create an Island map on the classroom wall or table
- Use in groups or as a class
- Suggested activities:
 - Students work in small groups (or 'mini museums')
 - Share out the cards across the groups (c. 6 each)
 - Each group introduces their objects to the class so everyone knows what the full selection is
 - Each group studies their own object selection, including looking at the place they were discovered on the Island using a map and using the chronology
 - Each group tells a short story about their objects in any creative form (including an exhibition), which can 'borrow' objects from other museum groups – this is presented to the class



For Isle of Wight Museums and Schools





What am I?

The racing dinghy called Nereid

What period in history am I from?

C20th (1946)

Where is my Island connection?

On the Solent off the IoW

What am I made of?

Wood and canvas

Who made or used me?

Designed and built by Uffa Fox

What was I used for?

Sailing and racing

Where am I now?

Photograph at the Classic Boat Museum

Designed and built by Uffa Fox, it was fast and gave early dinghy sailors some lively racing. It had an extremely strong, yet light hull constructed from closely spaced ribs and two skins made of wood.



What am I?

Halley's Diving Bell (replica)

What period in history am I from?

C17th (1691)

Where is my Island connection?

Solent shipwrecks

What am I made of?

Wood and metal

Who made or used me?

Invented by Edward Halley and used by divers on shipwrecks in the Solent

What was I used for?

To recover cargo lost when a ship sank

Where am I now?

Shipwreck Centre

Shipwrecks often carried cargo with a monetary value to their owner. There was an interest in finding ways to dive safely to recover (or salvage) cargo. In this example, the diver would stay inside the bell which was open at the bottom and had air pumped in from above.



What am I?

Boat timber and flint tools

What period in history am I from?

Mesolithic

Where is my Island connection?

Bouldnor Cliff, IoW

What am I made of?

Wood and flint

Who made or used me?

Early people living here 10,000 years ago

What was I used for?

For living and travelling on the banks of the river Solent

Where am I now?

Shipwreck Centre

Early people living on the Island were nomadic. They travelled between places at different times of year for food, water and warmth. These migrating communities carried new ideas and inventions across distances: working wood and tool-making, for example.



What am I?

Colliwobble powerboat

What period in history am I from?

C20th (1961)

Where is my Island connection?

The Solent, Needles and Cowes, IoW

What am I made of?

Wood and metal

Who made or used me?

Used by powerboat racers

What was I used for?

Taking part in the Cowes to Torquay

Where am I now?

powerboat race
Isle of Wight Heritage Services

Designed for speed, this small hydroplane reached speeds of 35 mph with an ordinary engine, and 55 mph with a race engine. The driver would have had nerves of steel as he knelt at the stern on races that included the famous Cowes-Torquay Race.





What am I?

Photograph showing Guglielmo Marconi

What period in history am I from?

C19th (1897)

Where is my Island connection?

Alum Bay, IoW

What am I made of?

Paper (photographic)

Who made or used me?

Marconi invented the wireless radio and sent the very first transmission from here

What was I used for?

His invention enabled ships at sea to send and receive messages

Where am I now?

Isle of Wight Heritage Services

Marconi was the world-famous inventor of wireless radio wave communications. In this photo he is on board his seaborne laboratory, steam yacht 'Elettra', on which he conducted many experiments.



What am I?

Camera (of the type used)

What period in history am I from?

C19th

Where is my Island connection?

Dimbola Lodge, Freshwater, IoW

What am I made of?

Wooden camera with glass lens

Who made or used me?

Julia Margaret Cameron

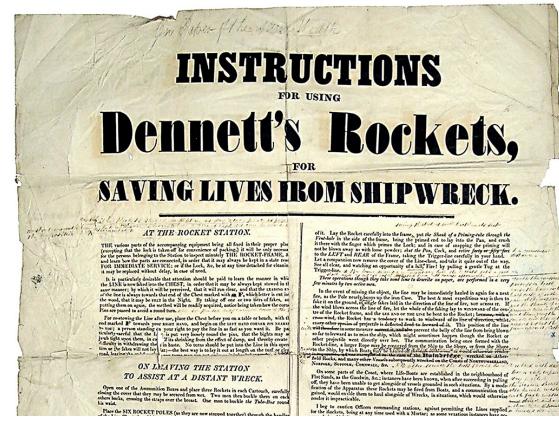
What was I used for?

To take portrait photographs of local people and visitors

Where am I now?

Dimbola Lodge Museum and Gallery

Julia was 48 when she received her first camera as a gift and began using a larger camera in 1865. With this camera she took large-scale, close-up portraits as emotional and experimental works. She sought to capture an essence of person in her work, rather than preciseness



What am I?

Instructions for using Dennett's Rocket

What period in history am I from?

C19th

Where is my Island connection?

Atherfield, IoW

What am I made of?

Paper

Who made or used me?

John Dennett who invented the rocket

What was I used for?

Saving the lives of shipwrecked crew off the coast

Where am I now?

Isle of Wight Heritage Services

Dennett was a local man who invented a portable device for use in shipwreck rescues. It was rocket-powered and shot a rope out to the ship. On 8th October 1832 a line was shot out to the Bainsbridge, wrecked on the Atherfield Ledge, and all 19 crew were rescued.



What am I?

A piece of the Pluto Line

What period in history am I from?

C20th (1944)

Where is my Island connection?

Shanklin Chine, IoW

What am I made of?

Rubber and lead

Who made or used me?

Designed and built by the Allied Forces

What was I used for?

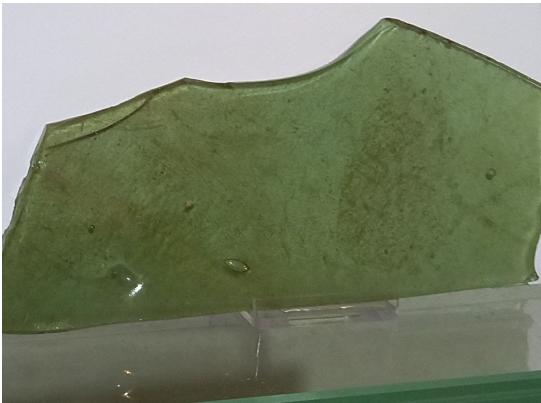
Supplying fuel to troops for tanks and vehicles used in allied invasion of Europe

Where am I now?

Isle of Wight Heritage Services

Operation Pluto was a WW2 operation to construct undersea oil pipelines under the English Channel in support of the invasion of Normandy in 1944 (D-Day). Flexible pipe with a lead core was laid along the ocean floor by cable ship between Shanklin Chine and Cherbourg.





What am I?

Window glass

What period in history am I from?

Roman

Where is my Island connection?

Brading Roman Villa, IoW

What am I made of?

Glass

Who made or used me?

Probably made in London using technology from Europe

What was I used for?

Introducing daylight into homes

Where am I now?

Brading Roman Villa

We take windows for granted now but they were introduced onto the Island by the Romans from Europe. The glass was probably made in London and fitted by a local builder. Only more wealthy Island residents would have benefited from the extra light that windows provided.



What am I?

Hypocaust

What period in history am I from?

Roman

Where is my Island connection?

Newport Roman Villa, IoW

What am I made of?

Pottery tiles

Who made or used me?

Local builders using designs from Europe

What was I used for?

Heating up rooms and water for bathing

Where am I now?

Newport Roman Villa

The underfloor heating system (hypocaust) is an amazing example of scientific innovation built locally. The Romans in Europe invented the hypocaust. A fire (furnace) provided hot air that circulated underneath floors and warmed rooms above. Hollow tiles (box flues) took the warm air up the walls.



What am I?

Hull test models and testing tanks

What period in history am I from?

C19th – C20th

Where is my Island connection?

Bembridge, IoW

What am I made of?

Models are made of wood

Who made or used me?

Used by Blanche Coules Thornycroft

What was I used for?

Testing the best hull shapes for cutting through water at speed

Where am I now?

Models and photographs at the Classic Boat Museum

Thornycroft was a shipbuilders based on Southampton Water and the family lived at Bembridge. Blanche was daughter of the owner and became one of only a few recognized women naval architects (ship designers) of her day.



What am I?

Jessie Lumb lifeboat

What period in history am I from?

C20th (1939-)

Where is my Island connection?

Bembridge, IoW

What am I made of?

Wood

Who made or used me?

Built by shipbuilders, J.S. White, in

Cowes for the RNLI

What was I used for?

Saving lives for people at sea

Where am I now?

Classic Boat Museum

The Cowes shipbuilder, J. Samuel White, became well-known for building self-righting lifeboats that were buoyant and could automatically turn themselves back upright if they capsized. Jessie Lumb served as the Bembridge lifeboat from 1939–1970.





What am I?

Tin opener

What period in history am I from?

C19th (1881)

Where is my Island connection?

Royal Victoria Arcade, Ryde, IoW

What am I made of?

Metal and wood

Who made or used me?

Henry Knight who had a shop in Ryde

What was I used for?

Easily opening canned food tins

Where am I now?

Isle of Wight Heritage Services

Preserving food in wrought iron cans was developed in the early C19th. Opening them involved a hammer and chisel! By the 1860s, smaller steel cans were made and created the opportunity for a tin opening device. Knight sold his design to Cross and Blackwell who brought it into regular use.



What am I?

800 mph Speedometer from Thrust 2 car

What period in history am I from?

C20th (1982)

Where is my Island connection?

Wootton Creek, IoW

What am I made of?

Metal and plastic

Who made or used me?

A team of engineers on the Isle of Wight

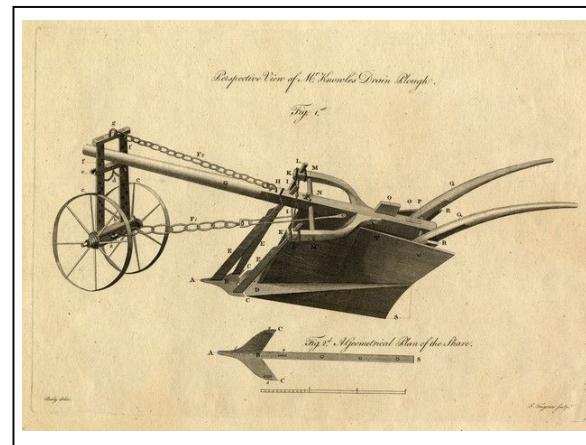
What was I used for?

Breaking the world land speed record

Where am I now?

Isle of Wight Heritage Services

This speedometer is from the World Land Speed Record car, Thrust 2. The fastest the car ever travelled was 633.468 miles per hour (mph). It was powered by a single jet engine and had a sleek 'aerodynamic' design. The current world record is 763 mph set in 1997.



What am I?

Picture showing a Knowles Drain Plough

What period in history am I from?

C18th (1772)

Where is my Island connection?

Newport, IoW

What am I made of?

Metal (plough) and wood

Who made or used me?

Invented by local man, William Knowles

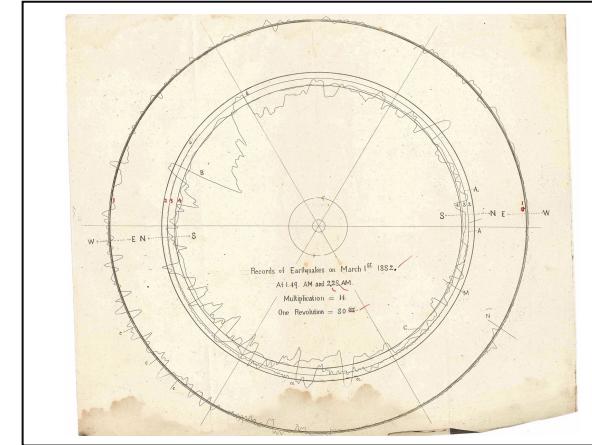
What was I used for?

Draining fields of water so crops could be planted

Where am I now?

Carisbrooke Castle Museum

In 1776 the Royal Society of the Arts set inventors the challenge of designing a machine that could efficiently cut drainage channels to bring waterlogged land into farming use, reducing the cost and time of hand-digging drains. Knowles' invention won him 50 guineas.



What am I?

Chart (seismograph) and record showing the size of earthquakes

What period in history am I from?

C19th – C20th (1882 – 1911)

Where is my Island connection?

Shide, Newport, IoW

What am I made of?

Paper (documents)

Who made or used me?

John Milne and his network of observers

What was I used for?

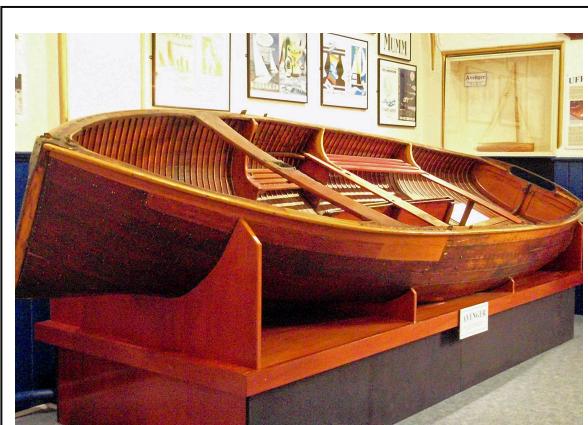
Measuring earthquakes across the world

Where am I now?

Isle of Wight Heritage Services

Charts are records of earthquakes made by the seismometers Milne invented. One recorded the Kemin (central Asia) earthquake of 1911, measured by one of Milne's instruments housed at an observatory in Egypt. He had a network of stations across the world.





What am I?

Avenger, an International Fourteen Class Dinghy

What period in history am I from?
C20th (1927)

Where is my Island connection?
East Cowes, IoW

What am I made of?
Wood

Who made or used me?
Designed and built by Uffa Fox

What was I used for?
Winning and sailing dinghy races

Where am I now?
Isle of Wight Heritage Services

Uffa Fox studied as an apprentice at Sam Saunders boatyard as a teenager. He learnt how boat hulls could be designed to 'plane' or skim across the water by rising up on their bow wave. He applied this idea to racing dinghies, with deep V-shaped hulls that increased speed.



What am I?

The powerboat called Newg 2
What period in history am I from?
C20th (1927-9)

Where is my Island connection?
East Cowes, IoW

What am I made of?
Wood and metal

Who made or used me?
Built by Saunders for Joe Carstairs

What was I used for?
Powerboat racing

Where am I now?
Photograph at the Classic Boat Museum

In 1927, Joe commissioned Sam Saunders to build boats to race against her great rival, the American Gar Wood. Estelle I was shaped like a shark, Estelle II like a small whale and Estelle III never finished. In 1928, Joe set up her own boatyard and built Estelle IV 'one of the cleanest designed hulls ever seen'.



What am I?

Powerboat 'Bluebird K3' (model of)
What period in history am I from?
C20th (1938)

Where is my Island connection?
East Cowes, IoW

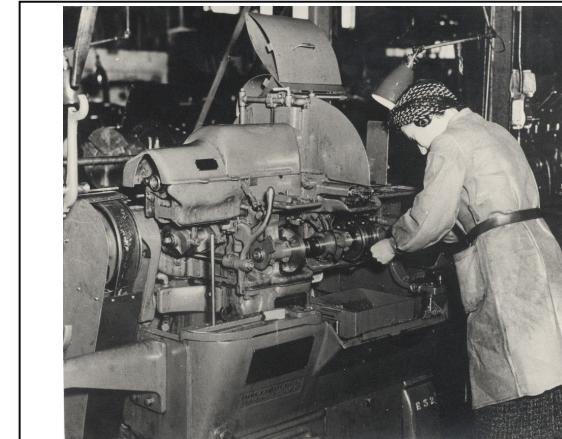
What am I made of?
Metal

Who made or used me?
Built by Saunders Roe

What was I used for?
Sir Malcolm Campbell breaking the world water speed record at 130 mph

Where am I now?
Isle of Wight Heritage Services

Saunders Roe were renowned for designing and building fast powerboats. Bluebird K3's hull was shaped so it cut through the water and air with the least possible resistance. Light enough to travel at speed yet strong enough to carry a metal Roll—Royce racing engine.



What am I?

Photograph showing Saunders Roe women working on a lathe

What period in history am I from?
C20th (1939 – 45)

Where is my Island connection?
Columbine Workshop, East Cowes, IoW

What am I made of?
Paper (photographic)

Who made or used me?
Photographer making a record of the Saunders Roe factory during WW2

What was I used for?
Showing women working during the war taking place of men fighting overseas

Where am I now?
Isle of Wight Heritage Services

With thousands of men away serving in the armed forces, women took on a variety of jobs during WW2. From 1941, women were called up for war work, in roles such as mechanics and engineers.





What am I?

SR.N1 hovercraft (model of)

What period in history am I from?

C20th (1959)

Where is my Island connection?

East Cowes, IoW

What am I made of?

Metal and rubber

Who made or used me?

Designed by Sir Christopher Cockerell and built by Saunders Roe

What was I used for?

To create a craft that 'flew' across water on a cushion of air

Where am I now?

Isle of Wight Heritage Services

The hovercraft was invented by Cockerell. He tested his 'hover' theory by placing a cat food tin inside a coffee tin and blowing a jet of air through the gap. SR.N1 was the first craft to take to sea, crossing the English Channel.



What am I?

Princess Flying Boat

What period in history am I from?

C20th (1950s)

Where is my Island connection?

East Cowes, IoW

What am I made of?

Metal and other materials

Who made or used me?

Designed and built by Saunders Roe

What was I used for?

Designed to carry passengers around the world

Where am I now?

Photograph at the Isle of Wight Heritage Services

To design and build a large plane that could fly and land in water safely with many passengers was a feat. Note how the hull is shaped like a boat hull. Three were made but never went into service as land-based airfields became popular.



What am I?

Airborne lifeboat

What period in history am I from?

C20th (1941)

Where is my Island connection?

Osborne Road, East Cowes, IoW

What am I made of?

Wood and metal

Who made or used me?

Designed by Uffa Fox for use by RAF pilots during WW2

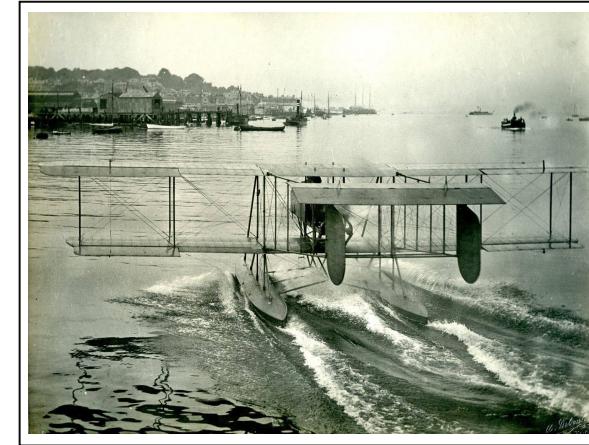
What was I used for?

To save lives if shot down over water

Where am I now?

Classic Boat Museum

Aircrew were valuable to the WW2 war effort, and combat aircraft carried lifeboats that could be dropped by parachute in an emergency. They were fitted with engines, oars, sails and supplies. Their hull shape was stable and gave some protection in rough seas.



What am I?

Royal Navy sea plane

What period in history am I from?

C20th (1914 – 1918)

Where is my Island connection?

East Cowes, IoW

What am I made of?

Wood, canvas and metal

Who made or used me?

J.S. White shipbuilders constructed the planes for use by the Royal Navy

What was I used for?

For reconnaissance (spying) on enemy ships during WW1

Where am I now?

Photograph at the Isle of Wight Heritage Services

In 1912, J.S. White started to build a new form of transport growing in popularity, aircraft. During WW1 they built a number of seaplanes (landing on water using floats instead of wheels).

