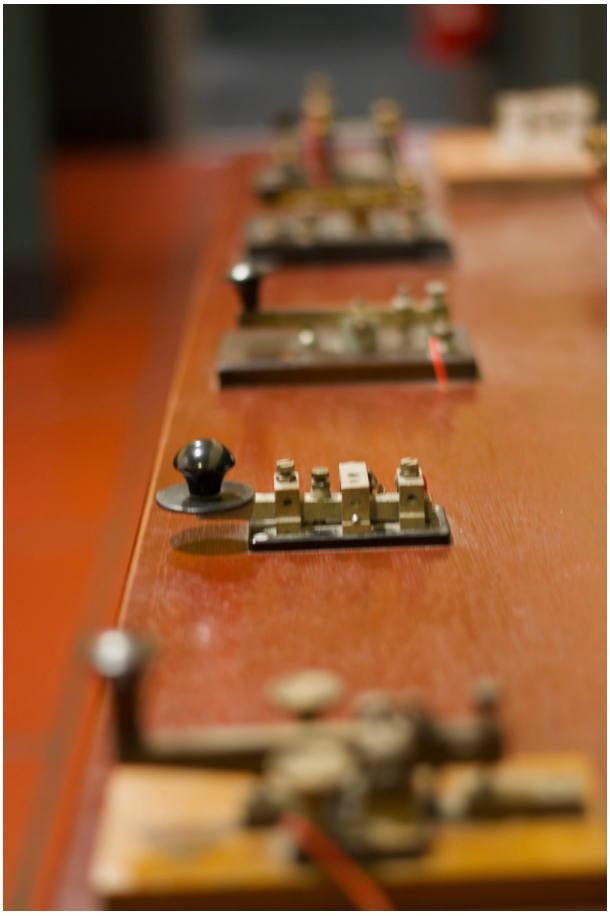
PK Porthcurno- Museum of global communications

SELF-GUIDED TRAIL- SCAVENGER HUNT



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PK PORTHCURNO

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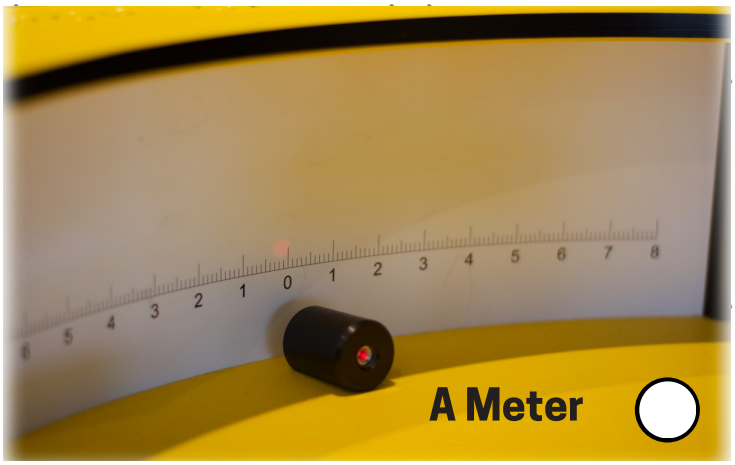
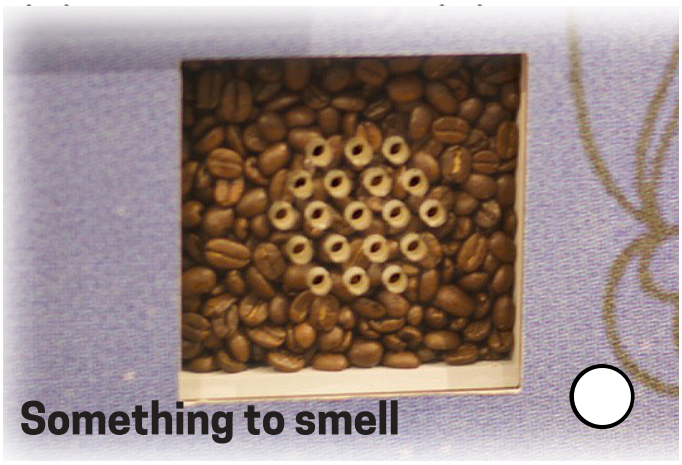
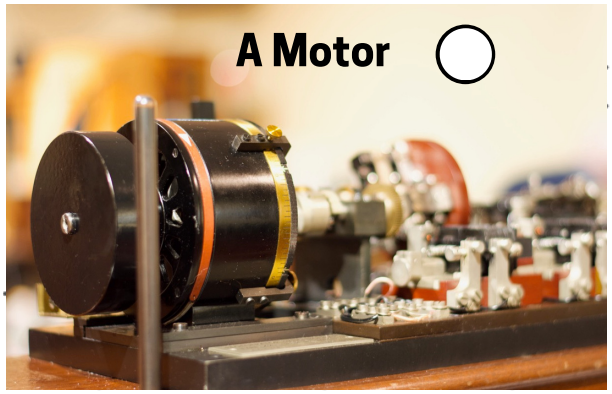
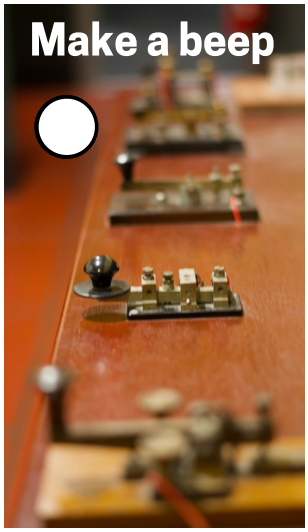
PK Scavenger Hunt

Can you find these things to see and do?
Tick them off as you go

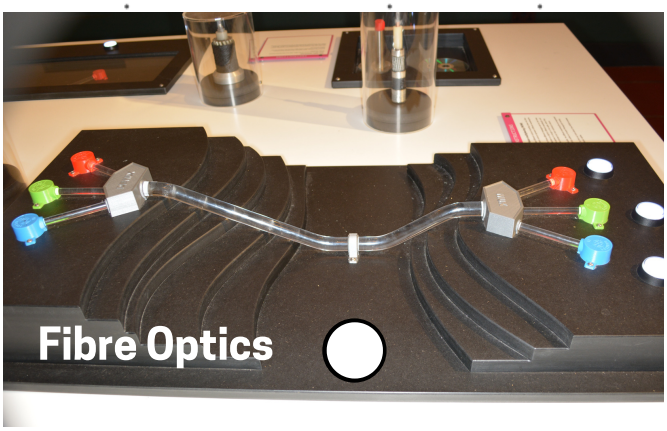








Hunt continues on next page..



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Scavenger Hunt

This trail presents items to find as you tour the museum. Some of the pictures are of objects which are unique within our museum. Here are some notes for your information:

A Meter: There are a lot of meters throughout the museum, from the Victorian mirror galvanometer in a cabinet in the main hall to smaller meters as part of the hands-on activities in the cross-tunnel. Some have linear scales like a ruler, others are circular, like clock dials. Which ones do your group prefer to read?

Something to smell: There are samples of coffee, cloves and cinnamon enclosed in the world map of cables in the main hall. Telegraph workers posted abroad might meet smells of spices and foods they were not familiar with at home. What parts of the world do the members of your group think these three come from?

A Sentry: Because of the vital importance of telecommunications the equipment was moved into specially built tunnels during World War 2, and heavily protected.

A Sextant: Before GPS, working out where you were on your cable ship was more difficult than it is now, and involved astronomical measurements as well as mathematical skills. A sextant was used to measure the angular distance between two visible objects. Often these would be an astronomical object and the horizon. Knowing this angle and the exact time it was measured helped to work out the position of a ship.

Make a beep: Try this at the hands-on activities in the cross-tunnel. How many noises can you make? A beep? A buzz? A ring?

A Motor: There are several to be seen in the Regen equipment in the tunnels. Regen automated the process of reading and resending messages . It was introduced in 1925 - long before computers - and used electric motors, magnetic switches and clocks.

A Switchboard: The switchboard at the back of the south tunnel is a WW2-vintage field telephone system. This shows how a circuit had to be completed between two telephones in order to make a call. Someone had to physically connect the circuit. The widespread introduction of automatic exchanges through the second half of the twentieth century led to more and more homes having a phone and less and less use of telegrams. Porthcurno stopped being a cable station in 1970, but remained a training college until 1993.

A Keyboard: There are several, mainly within the Regen area of the tunnels. Typing a message on a keyboard could punch holes in a paper tape (you'll see a lot in Regen). Running the paper tape through a machine could send a message much more quickly than a person operating a key.

Some paper tape: The tape also made it possible for messages to be read automatically. Punched paper tape was also a means of data storage - it provided a record of messages sent. Amazingly, paper tape was first used to control machinery in 1725, and is still in use, although rarely these days, for sending messages.

A Grapnel: This was used to lift sections of broken cable for repair. In the test room in the north tunnel, you can also see the tool kit (jointing box) used for cable repair. Why do the hooks not all lie the same way? (They are in sets, at right angles to each other, to improve the chances of a hook catching the cable).

Test Equipment: It was possible to get a very good idea of where a cable was broken so that a ship did not have to search the whole length of a cable to find and repair a break. A video presentation next to the test equipment explains how.

A Trencher: In the early days of subsea cables, no-one knew what the seabed was like in the deep ocean. You could say that submarine telegraphy was responsible for the birth of oceanography. Nowadays, a submersible trencher like this is used to bury the cable in the sea bed, giving extra protection.

Generate some electricity: In the cross tunnel you can turn a handle to generate enough electricity to ring a bell or light a lamp. At one time, telephone switchboard operators had to do this to make someone's phone ring.

Fibre Optics: Today, almost all of our worldwide communication takes place through fibre optic cables. Switching in optical systems is billions of times faster than in the telegraph system. The fineness of the fibres means that many more can be carried in a single cable. Advances in coding and the ability to use more than one colour of light means an even greater increase in the information-carrying capacity of fibre optic cables compared to copper.

Other things to do on your way around:

- Explore Magnetism
- Build a Circuit
- Pack a suitcase for a Cable Station Worker
- Walk up the escape steps (weather permitting)
- Find a World War 2 bomb and the story of how it stayed in St. Levan
- Learn about Cable and Wireless's activities in wartime