U3A, Science & Technology Community Science, May 2018

Help in speaking

Peter Brooks offers support to produce a PowerPoint demo to show how anybody can knock up a reasonable presentation on almost anything in just 30 mins. After a short demo, he would encourage you to draft up your own ideas and download pictures to put into the presentation. A week later he would help you knock it into shape.

As it would be handy to use the internet to grab images, data etc., going on-line would be important.

Activities

Westcountry Rivers Trust

Become involved with your local river (Yealm, Erme and Avon?) as a river scientist, doing a river walk or volunteering for a river clean-up. Volunteer at http://wrt.org.uk/get-involved/. They will supply the tools to detect the state of the river and you can submit 'observations, photos, wildlife sightings and evidence of pollution'. You'll be able to upload the results just like you would for a photograph. More info (Field Guides and Training Resources) towards the bottom of http://wrt.org.uk/project/become-a-citizen-scientist/

On rivers (but not directly to the above) you might like to see river gauge data at http://www.gaugemap.co.uk/ For the Erme, it shows gauges at Harford and Ermington.

Weather records

Most recently there has been publicity about digitising records for the Ben Nevis Project (http://www.bbc.co.uk/news/science-environment-41166778). There is a larger and continuing project to digitise the records for western Europe. I have taken the following text from https://www.zooniverse.org/projects/edh/weather-rescue/about/research

"Every day since 1860 the UK Met Office has produced daily weather reports from across western Europe. The observations came from Sweden in the north to Spain in the south, and from Ireland in the west to Germany in the east.

Originally the weather observations were transmitted by telegraph to London and collated. Most of the weather observations, especially from before 1950, have never been digitised.

With modern tools we can now reconstruct the weather patterns over Europe but there are many gaps which these observations will help fill.

We will be able to better examine particular storms and unusual weather events. As the world warms we expect the frequency of some types of extreme weather to change and this data will provide a baseline to help us measure those changes. Can you help us rescue these lost observations and fulfil the aspirations of these dedicated meteorologists from over a century ago?"

There is a "Get Started" button at https://www.zooniverse.org/projects/edh/weather-rescue/

Mapping for the disadvantaged

There is an opportunity (Missing Maps, http://www.missingmaps.org/) to help the major aid organisations (Red Cross, Medicines sans Frontières) to support health improvements or to provide relief following a disaster. The aim is to

"map the most vulnerable places in the developing world in order that international and local NGOs and individuals can use the maps and data to respond better to crises affecting the areas".

You could be one of three elements in the humanitarian effort:

- Remote volunteers (us) trace satellite imagery into OpenStreetMap;
- Community volunteers (in the country we have mapped) use our line maps to add detail;
- Humanitarian organisations (MSF, Red Cross) use mapped information to plan risk reduction and disaster response activities.

To get started, you can join Open Street Map (www.openstreetmap.org) and map somewhere in the UK (or anywhere in the world). Instructions are given. If you zoom into Weatherdon Drive, Ivybridge you can see where I practiced (the houses in Weatherdon Drive) but that there's a lot of detail yet to be completed in Ivybridge. The roads have been done already. I added in houses, made them square and corrected the alignment.

When you're confident at having a go, move to Missing Maps. You can also go straight to Missing Maps where they have tutorials and links to YouTube. Victor Abbott is happy to help too.

Natural History Webcams

Devon

There are many opportunities to participate in research or processing of scientific data. The simplest is to view the output of cameras. There are at least 24 above water cameras in Devon (www.camsecure.co.uk). They mainly give a comment free view of the weather, though the Brixham Harbour webcam must double up as a security camera. Its changing line of sight and focus are interesting and you might just see the Lifeboat launch.

<u>Underwater</u>

The PLUTO webcam (https://www.plymouth.ac.uk/research/institutes/marine-institute/pluto) offers real-time underwater imagery. If you scroll down the page a little, you'll see views of fish, cuttlefish and snails (with a cleaned camera lens).

<u>Birdlife</u>

http://www.wildlifetrusts.org/webcams

https://www.rspb.org.uk/get-involved/activities/birdwatch/webcam/