## **Picture this: photo orienteering in your school grounds**

Photo orienteering in your school grounds is a great way to develop learners' map reading skills while also encouraging attention to detail and providing a practical use of technology to capture photographs of aspects of their immediate environment.

Orienteering is an activity in which individuals or teams compete to find controls (stops or points) that are marked on a map. Usually competitors show that they have found all the controls by punching a card at each one. This means that the organiser sets out an orienteering course by placing a physical marker at each point marked on the map. Photo orienteering involves using a map to find the control points but the teams take a photograph at each control to show that they have found the correct place, so there is no need to place a physical marker at each control.



**Figure 2** - Map of SSERC buildings (courtesy of Fife Council) showing which aspect of which building is to be measured to provide a scale (marked in red).



Figure 1 - Screenshot of image of SSERC taken from Zoom Earth.

In preparation for this activity you will need a map of your school grounds. Many schools already have maps on file or can obtain a map of their building layout from their local authority. However, if you cannot easily obtain a map of your school grounds, then you can make your own and involve the learners in your class in the preparation. There are several online tools and websites which you can use to access an aerial photograph of your school and local area. These include Google Earth [1], Where's the Path [2], and Zoom Earth [3].

To make a map of your school grounds, type your school postcode into a website such as Zoom Earth, then adjust the zoom so that you have an optimum view of your school grounds. Now take a screenshot of this image and print it (Figure 1). Using acetate or tracing paper, trace the outlines of the perimeter of the school grounds and the buildings, marking features such as gateways. Please be aware that the photo on Google Earth may not include any recent changes to your building structure. For example, we have worked with a school in North Ayrshire where Google Earth provided an accurate outline of school buildings and grounds but for a school in Edinburgh that was extended in recent years, the new buildings within the school grounds were not shown on Google Earth. Zoom Earth provides more up to date images but does not have labels or place names to help you identify features or places.

Whether you create your own map or use one provided by your local authority, remember that a good map includes a title, scale, orientation, and labels. Determining the scale for the map is a practical maths challenge for your class. Working in teams, the learners choose a clearly defined feature on the map, e.g. a particular building or a playing pitch. They then choose which aspect of this feature they will measure, e.g. the length of the main school building or the width of the playing pitch (Figure 2). Finally, the learners will need to decide what equipment would be best for measuring this in reality, e.g. a trundle wheel, a tape measure or a metre stick. Once this feature has been measured (Figure 3) the learners can then add their measurement to their map to provide a scale.

To set up the photo orienteering activity, choose a number of landmarks in the school grounds and mark each on one map. This is the map that will show the location of all the controls (stops or points) on the orienteering course and will be kept by the co-ordinator (Figure 4).

Take a photograph at each landmark. Depending on the age and stage of the learners who will take part, this photograph can be a straightforward representation of the landmark (Figure 5a), a detailed aspect of the landmark (Figure 5b, Figure 6) or can be taken at an unusual angle.



Figure 3 - Measuring the width of the building to provide a map scale.



Figure 4 - Co-ordinator's map showing location of all Photo Orienteering control points at SSERC.



Figure 5a - Shark mural in a school playground.



Figure 5b - Shark tail detail from mural in school playground.



 SSERC, Pitrea
 SSERC, Pitrea

 SSERC, Pitrea
 SSERC, Pitreavie Court

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**Figure 6** - Photo detail on SSERC Photo Orienteering course.

You can choose to print the photographs in colour or in black and white depending on the level of difficulty you would like to set.

Print a separate map for each control on your orienteering course with each map showing the location of just one control (Figures 7a and 7b).

Print the photographs of each landmark indicated on the maps and pair the photographs with the appropriate map (e.g. Figure 8), then place them on a clipboard. Unit 2

We have run this activity in the format of Star Orienteering, where the maps and photographs are clearly labelled and are all located centrally (Figure 9). Teams return to the central point in between finding each control. Controls can be visited in any order.

Each team chooses a different number. They then look at the map and decide where the marked point is within the school grounds. They then examine the accompanying photograph. They take the



**Figure 7b** - Close up of maps with each showing a different control point.



Figure 8 - Map and Photograph for control point 4 on the SSERC photo orienteering course.



**Figure 9** - Photos on numbered clipboards, each with their corresponding map, ready for use in the Star Orienteering format.

printed photograph with them but leave the map at the central point. The teams then use i-pads, tablets or similar devices to recreate the photograph (Figure 10).

On completion of the task at one control point, the team return the printed photograph to the accompanying map at the central location and choose another number.

When running this with school groups, we have found it useful to provide the teams with a tick list of the numbers of the controls so that they can keep track of which control points they have already visited.

Once the learners have participated in photo orienteering, an extension activity would be for them to set up a course for another class or for the next year group.

Thank you to Whiting Bay Primary on the Isle of Arran, Fox Covert Primary in Edinburgh and Castleview Primary in Edinburgh for testing this activity and providing feedback.



**Figure 10** - Recreating the photograph at a control point on the SSERC course.

## References

- [1] Google Earth: https://earth.google.com/web (accessed June 2018). You may need to install additional software to use Google Earth.
- [2] Where's the Path?: https://wtp2.appspot.com/wheresthepath.htm (accessed June 2018).
- [3] Zoom Earth: https://zoom.earth (accessed June 2018).

## **Experiences and Outcomes**

I enjoy taking photographs or recording sound and images to represent my experiences and the world around me - *TCH 0-04b*.

I explore and experiment with the features and functions of computer technology and I can use what I learn to support and enhance my learning in different contexts - *TCH 1-04a/TCH 2-04a*.

Through practical activities which include the use of technology, I have developed my understanding of the link between compass points and angles and can describe, follow and record directions, routes and journeys using appropriate vocabulary - *MTH 2-17c*.

Having investigated where, why and how scale is used and expressed, I can apply my understanding to interpret simple models, maps and plans - *MTH 2-17d*.

Through activities in my local area, I have developed my mental map and sense of place. I can create and use maps of the area - SOC 1-14a.

To extend my mental map and sense of place, I can interpret information from different types of maps and am beginning to locate key features within Scotland, UK, Europe or the wider world - *SOC 2-14a*.