

## UHI - AGGS Report

It was midway through the typically busy autumn term, that we were invited to get involved in the UHI project. Without appreciating what we were taking on we suddenly found that we were to be a “lead school” and we had to spring into action to create a management group of mainly 6<sup>th</sup> form students. We were fortunate that we had enthusiastic staff involvement as the Head of 6<sup>th</sup> form happened to teach Geography and one of the 6<sup>th</sup> form Tutors who is Head of Science. Our students saw the project as an opportunity to be involved in a major piece of research; something which they would be doing in a few years time, at university – great for the CV/personal statement.

As a lead school it became apparent that we would need to involve the local community to take the all important temperatures. The students took on the job of contacting and involving local Primary Schools, with many returning to their old schools. To get the general public involved; the students, supported by a member of our office staff who has a responsibility for the media, started to contact newspapers, radio and TV stations. We had some useful support from our IT department as a link was set up from our school website allowing the general public to find out more about the project and to make their own contribution. Some good coverage came from local newspapers with visits from a couple of photographers all wanting that special shot of a group of students taking the air temperature! It was now December and those photo sessions turned out to be a test of endurance as the students shivered outside. Our first batch of 30 thermometers had arrived and what became apparent during these ‘photo shoots, was that they recorded a range of temperatures. The discerning students spotted this and had to be reassured, that the experiment would be valid as the instruments would be adjusted with an offset reading based on the average reading. We quickly discovered that not everyone has a scientific background with one paper reporting that we would be taking the temperatures using our barometers! We also discovered that the thermometer had its sensor in the main body of the instrument, so to get an accurate air temperature reading the thermometer had to be held by the display – easy if you are left handed! Since the thermometer is a relatively slow acting device leaving it out overnight was seen as best practice.

As Christmas approached meetings became almost daily. We had a very comprehensive master plan to work from, all focussed on the day selected to take the temperatures. How could we get the thermometers out to Primary Schools wanting to take part? When would the next batch of 190 thermometers arrive? How would we get to know what day has been selected? How would we inform the rest of the school to collect these thermometers? Which students would be prepared to speak to pupils in assemblies? What would we do with the readings? Would we cover a large enough area? Can we get more media coverage and hence more readings? We tried to cover all eventualities but we were heading into the unknown.

We returned after the Christmas break to a week of almost perfect weather; perfect that is for the experiment. A high pressure system produced cold, clear mornings BUT the thermometers were still in transit! When the 190 thermometers arrived, we quickly got onto the job of numbering them, to provide the offset data. This was done by leaving them overnight in a science prep. room, and recording the temperatures next morning. Typically we were getting temperatures of around 18°C, after all this was indoors! The question was then asked, “Is the offset linear? Should we not be taking the offset readings at much lower temperatures? To answer these questions all 190 thermometers ended up overnight in the back of my campervan. Early next morning 2 students braved the cold and quickly recorded

the temperatures. Now we had some accurate figures to give a reliable offset reading – all good science!

We were now approaching the February half-term break but still the conditions were far from ideal, so we waited in anticipation. The day selected for the temperature readings took us by surprise but we were ready! At mid-day, lower school students queued to be allocated their thermometers and slip of paper on which they would record thermometer number (to allow for the offset), location as a post code or map reference, time and temperature. As if by good fortune, all the thermometers had been allocated by the end of lunch. Our media contacts started to come good with BBC Radio Manchester wanting to put in a live link to their morning show and BBC TV wanting to follow the action including filming one of our year 10 pupils at home, recording her early morning temperature readings.

We had decided to make the data collection a bit more exciting than simply handing in a bit of paper. It was an early start to get our operation set up in the main hall but it was even earlier for our Head of 6<sup>th</sup> Form and Head of Science who volunteered to take a couple of students out in their cars to record temperatures on major routes around the city. As pupils and staff brought in their results, coloured dots were placed on a large scale map of the area by our 6<sup>th</sup> form team. We also had an excel spreadsheet projected onto a screen recording all the readings – we had targets and it became a bit like recording the results of a general election! Whilst this was all going on BBC Radio Manchester were interviewing students and staff about the project and taking calls from around Manchester from other members of the public. At about 8.30 am the BBC TV Film crew arrived to follow the proceedings and to interview students and staff involved in the project. The resulting footage and commentary shown at mid-day and in the evening proved to be excellent with some well informed information coming from the presenters.

By mid-day the exhausted team co-ordinating the project were satisfied that they had given it their best shot having managed to obtain over 300 temperatures. When combined with reading taken by the general public we hoped that the results would be worthwhile and valid. Certainly, one of the highlights was the excellent media coverage from both radio and TV. This coverage has recently been extended with our students being invited to contribute to a follow-up feature on BBC Radio Manchester. On reflection the team recognised that the whole exercise not just about making a contribution to scientific research and to raising public awareness but about project management – that alone made it worthwhile. Would we do it again? Probably yes, particularly as we now know what to expect!

Michael Roberts