The teacher in residence placement occurred between August 6 and September 15, 2014. The placement involved myself (Unley High School Science teacher, Adam Wallace) visiting Flinders University over the course of three full days across three different weeks. The goal of the placement was to develop connections between Unley High School and Flinders University that could be utilised to benefit Unley student’s engagement and achievement in science, technology, engineering and mathematics (STEM), while establishing mutual benefit for Flinders University (the nature of which was developed throughout the placement). These goals were achieved by various meetings with and observation of Flinders staff and academics.

Initial meetings with Darlene Voss and Jamie Quinton from Flinders provided opportunities to establish connections with staff and academics at Flinders and meeting were scheduled to form a timetable for subsequent placement days.

The first placement day (August 6) involved meetings with relevant staff to develop ideas of how connections with Flinders could engage students in considering a STEM pathway and keep students engaged once they are on such a pathway (for example, after selecting to study STEM subject as a part of their SACE). The remainder of the day involved observations of and discussion with teachers of the “Science and Mathematics at Flinders” (SMAF) program that was being delivered that day.

The second placement day (August 12) involved meetings with academic staff in the Flinders University education faculty, specifically around reforming previous connections made between Unley High School and Flinders University and optimising pre-service teacher placements in STEM subjects at Unley.

The third placement day (September 15) involved meetings with academic staff in the Flinders University science and engineering faculty with the aim to understand STEM pathways beyond high school and how high school student understanding of these pathways can be enhanced.

As a result of the placement, the following outcomes were achieved:

- A “taster day” is to be established early in year 10 to expose students to what can occur on STEM pathways and allow students to differentiate/clarify between different science learning areas. This day will run twice to allow all year 10 students (half of the cohort on each day) to have the experience
- Review and remake the “coping with bullying” DVD in conjunction with Flinders education and media faculties. This was realised during the week from 27/10 to 31/10 when Flinders staff in conjunction with Unley staff ran a week long problem based learning activity with approximately 20 year 10 students to begin the review process.
• A goal to organise a guest speaker as part of the “scientist in schools” program early in year 11 physics, with a focus on career pathways. This is so students with an interest in STEM pathways (namely, those that have chosen physics in year 11) have some understanding of the range of pathways available.

• Possibly deliver “Lego physics” in year 10 science (developed by Flinders staff) with the aim to increase student engagement in physics. Flinders staff to collect data on student retention.

• Deliver electricity unit in second semester physics developed by Flinders PhD student (inquiry based with focus on assessing student achievement).

The development of several connections (some of which have already been realised and directly impacted upon the learning of high school students) is evidence of the successful nature of the teacher in residence placement.