ID4001 Communication and Teaching in Science

15 credit module, ie 150 hours of work for the average student at this level.

Teacher Handbook  2019-20

This takes the form of extracts from the student handbook, plus a statement on risk management, and a teacher-specific programme for the induction event. The whole of the student handbook and other materials are available on the website at the URL noted below.

Module Co-ordinator
Dr Bruce Sinclair, School of Physics and Astronomy
b.d.sinclair@st-andrews.ac.uk, 01334 463118

Please see information on the module open website at
https://www.st-andrews.ac.uk/students/academic/interdisciplinary-modules/communication-teaching-science/
and additional information and marks/feedback for students on MMS
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7. WRITTEN AND ORAL COMMUNICATION

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Observation Logsheet for the Reflective Journal

Five Minute Extract from Sample Lesson – Peer Observation and Feedback Form

Daily Logsheet

Practice Presentation in Tutorial Group – Peer and Dep Rep Feedback Form

Special Project Log Sheet

ID4001 Mid-Placement Feedback Form

ID4001 Attendance Log Sheet

Risk Assessment for ID4001 And ID4002

ID4001 Communication and Teaching in Science - Code of Conduct

Confidentiality Agreement

Child Protection Statement and Agreement
Welcome to the Communication and Teaching in Science module. This is a rather different module from most others that you have done. Much of the work is “learning by doing”. It might be considered a vocational module in as much as you will be learning “on the job”. The skills that you should develop are highly useful in many areas outside teaching, as well as in education-focussed careers.

Those of you considering teaching as a career should find this module to be particularly useful in letting you see whether or not this is for you, and to give you useful experience in this profession. Those of you who are considering a career in which communication is important (ie almost all careers), you should find this module very useful in providing development of such skills, and giving evidence of these skills. You should all find that thinking about your subject in a way that you can present it to school pupils should enhance your understanding of your degree topic.

You will be in the classroom in a professional role, and you should look and act the part. Your work in this role is not just for your degree, but is also important to the pupils that you will be working with. This again makes this module “different”, and we expect full commitment from students to the module for the sake of the pupils and our ongoing relations with the schools involved – that is part of professional practice. You are a University ambassador in the school or other institution that you work in, as well as being someone who is being relied upon to contribute to the education of young people. You are in this module to learn, but you are also in the module to teach, and both roles have important responsibilities associated with them.

You will be working with young people with a wide range of learning abilities, and you will be developing ways of communicating science effectively with them all. You will need to read and think carefully about a range of educational issues and how they matter in your role. You will need to prepare well for your sessions in the schools, and reflect after each session on your performance. This reflection should include recognising things you have done well, noting what you have learnt from the experiences, and what areas you need to improve your performance and how. You will be interacting with your mentor teacher (and other staff) in the school, and it is your job to ensure that you learn from them, and work safely and effectively under their guidance. In this module you need to take care of your learning - there will be little of people standing up and telling you what you need to know. The experiences that you should gain should serve you well in your future studies and employment.

You have taken the decision to enroll on this “different” module – embrace the opportunities and get as much out of the experience as you can for yourself and for those you interact with in the schools.

This is an interdisciplinary science module for SH (or M-year) undergraduate students in the Schools of Biology, Chemistry, Computer Science, Geography & Geosciences, Mathematics & Statistics, Physics & Astronomy, and Psychology & Neuroscience. The coordinator is in the School of Physics and Astronomy, and the module itself sits in a “quasi-School” with ProDean Dr Martin Campbell as the Head of the quasi-School. There are departmental representatives from each of the participating Academic Schools, and these people also act as tutors with their subject groups. Your departmental reps are here for consultation throughout the module; please do turn to them and to your mentor teacher for guidance and discussions as appropriate.

The module is operating as part of a national organization called the Undergraduate Ambassadors Scheme (UAS) (www.uas.ac.uk). UAS works with universities all over the UK to develop similar modules in other science, technology, engineering and mathematics departments, and has links with various other subject organisations and professional institutions. UAS now results in the placement of over 1000 students a year. UAS is endorsed by a number of professional bodies, including the Institute of Physics, the Royal Society of Chemistry, the London Mathematical Society, the Royal Society, the Institute of Materials, Minerals and Mining, the Institute of Mathematics and its Applications, the Geological Society, and the British Association.

Dr Bruce Sinclair, School of Physics and Astronomy
Module Coordinator for ID4001
1.1 Summary of module aims and outcomes

Module aims - for the student

By taking part in this module you will have the opportunity to apply your subject knowledge in a very different way to what you have experienced in most other modules at St Andrews. You will be working alongside teachers and other educational professionals to learn how to communicate your subject to pupils with a range of learning abilities. You will need to understand how to do this, how to address the varied needs of others and how to reflect on your own progress and to adapt accordingly. You will also need to gain a high level of understanding of current educational issues. This is a very different type of module. It will be challenging and will require you to take note of your environment and to work in a mature and professional manner. The extent to which you learn from this experience, and express your knowledge and understanding in the various assessments will provide you with a module grade that is associated with the formal learning outcomes (below). The experiences that you gain are expected to serve you well for future employment, whatever career pathway you choose to take.

Of equal or greater importance to the grades and credits that you achieve is the experience that you will gain from taking part in this module. You will learn important, marketable and transferable skills of benefit to you in employment and in life, whether or not you decide to enter the teaching profession. A good degree is no longer enough in the competitive world of work, and involvement in a module like this will be of great interest to many potential employers. The specific and transferable skills you will be able to gain include:

- Public speaking and communication skills
- Organisational and interpersonal skills
- Time management skills
- Team-working skills
- Working in a challenging and unpredictable environment
- Professional conduct
- Addressing the needs of individuals
- Taking the initiative and problem solving
- The ability to improvise
- Providing constructive feedback, receiving and acting on formative feedback
- Handling difficult and potentially disruptive situations
- Experience of teaching methods

You will have the satisfaction of making a positive impact on the education of pupils of a range of ages and the chance to act as a role model for your subject. It is a chance to put something back into the community by sharing your knowledge and helping to motivate young people and to raise their aspirations towards your subject. You should develop your confidence in answering questions about your own subject and in devising appropriate ways to communicate a principle or concept that may be difficult for school pupils to understand. You should develop your communication skills and gain a better understanding of your own level of expertise. You should learn to devise and develop subject specific projects and teaching methods appropriate to engage the relevant age group. For those of you who are interested in teaching as a profession, this will be an opportunity to explore whether it is a path you want to pursue. Hopefully, you will also get a lot of enjoyment out of this module.
1.2 Role and Responsibilities: Partnership – School – Student - University

Students have a responsibility to their placement school and their mentor teacher. There is also a responsibility to the University in terms of the need to submit and have assessed work on a well-conducted set of educational activities.

Students should:
- Ensure that they understand and act within the placement school’s rules and regulations in all areas, and specifically including Confidentiality, Responsibilities, Child-protection, Appropriate use of Social Media, Inter-personal Relationships, and Health and Safety.
- Ensure that they understand and act within the University’s rules and regulations in all areas, specifically including both Child Protection and Placement policies.
- Be aware of, and act upon, the material in the University’s generic risk assessment that is given in the module handbook, and any relevant risk assessments in their placement school.
- Be proactive in working with their departmental rep and their mentor teacher to create a risk assessment for any activity that would require a specific additional risk assessment.
- Work in a team and/or as an individual as appropriate towards achieving the module goals in a timely manner, taking note of the module calendar and its deadlines as published later in this booklet.
- Work with their mentor teacher and their University departmental representative to plan and deliver and reflect upon an appropriate set of educational experiences for their pupils.
- Ensure that they understand in depth the science related to their work.
- Be applying their academic knowledge to their work and showing initiative.
- Be recording their work appropriately, and submitting work to be assessed by the specified deadlines.
- Reflect on their experiences, and use this in their preparation for future work in the school.
- Ask to have information re-confirmed if they are not sure.
- Define boundaries and responsibilities with their teacher mentor.
- Ensure that their timekeeping is good, and that they undertake at least the minimum amount of time in the placement school required for the module.
- Arrive in good time for each school visit, and inform the placement school immediately if they are unable to attend, or are likely to be delayed
- Be aware that by accepting a place on the module that there will be some sharing of relevant academic and contact information about them between the University and the placement school.
- Be aware of their rights to a safe workplace environment, and be aware of local safety regulations
- Be aware of their rights to be treated in accordance with applicable legislation for the workplace
- Be aware that they should never be left alone with a pupil or pupils

Teacher Mentors should:-
- Discuss with the student how the student should work to assist with and learn from the teaching activities, and with the student plan a series of activities that will provide experiences suitable for this module.
- Ensure that appropriate arrangements are in place for the student to work safely and productively.
- Support the student in their project work, including discussions and constructive feedback.
- Provide opportunities that range from the student observing classes at the start of the module, through a role similar to that of a classroom assistant, to a supervised teaching session (or equivalent) towards the end of the module where the student has had significant input to the planning of the session. We ask that students are provided with opportunities to lead between one and three hours of lessons.
- Liaise with the University course team in the case of any problems, or if advice is needed with regard to the University requirements etc.
- Ensure that students are not left alone with school pupils.
- Fill in and return the mid-semester report.
- Fill in and return the assessment proforma at the end of the placement.
The University Departmental Representative should
• Be available as a point of contact and advice and information for the student and teacher mentor, particularly with regard to the University’s expectations of the placement
• Provide tutorial support to the student subject group
• Assess student work fairly
• Liaise with the module coordinator

The Module Coordinator should
• Manage and administer the module
• Be available for discussion with students on the module
• Oversee the organisation of the placements
• Report the module grades to the relevant Examiners’ Meeting and University systems

1.3 Attendance and behaviour in the module

Students are responsible for arranging with their teacher mentor classroom contact time in the placement school. They should aim for at least 25 hours of time in the classroom (including observation time), though the absolute minimum is 20 hours. Students considering any more than 30 hours in the classroom should contemplate how they fit in all the work needed in this module outside the classroom, as well as the time needed for their other modules. We would not normally expect significantly more than 30 hours of classroom contact time. Note that failure to attend for a minimum of 20 hours contact time at the school will result in a 0X grade for this module. We would normally expect students to take the opportunity to lead running a class(es) for between one and three hours. It is important to ensure that your attendance logs are completed.

Students who take this module are ambassadors for the University of St Andrews and role models for local school pupils. In the unlikely event that a student’s behaviour is unacceptable they will be withdrawn from the module and will receive a 0X grade if this occurs after the module has begun.

Absence from classes
Note that in addition to the University’s requirements for absence reporting, this module also requires you to inform the host school and teacher mentor immediately if you are unable to attend any pre-arranged visit. It is your responsibility to find out the placement school’s procedures for reporting absences. Remember that you are a University Ambassador- it is essential that you act in a professional manner when working with your placement school.

Responsibility for student learning
Students are reminded that this is a module with a good deal of experiential learning, and that both their mentor teacher and their departmental representative are here to assist them with their studies. Students are asked to be pro-active in seeking advice and support on the module. Their departmental representative is available for consultation on matters large and small outside the tutorial sessions as well as within them.

Summative Assessment
Students are summatively assessed by University staff on:- a document that proposes a topic for the special project undertaken with the placement school, an oral presentation on the special project, and a written report on what they have learned from the placement. A teacher at their placement school provides a judgement on the student’s work on the placement. More details on these assessments are given later in the handbook.
1.4 Calendar for ID4001
Please would students read this carefully, and note it in their personal planners, as students are expected to act on what is here without any further prompting. If necessary, please would students remind academic staff or mentor teachers of things that should be happening. If mentor teachers, students, or departmental reps are aware of things not progressing as shown here, please alert the module coordinator, Bruce Sinclair, as soon as possible.

<table>
<thead>
<tr>
<th>Time</th>
<th>Summary of activity</th>
<th>Ideal Development Path</th>
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<tbody>
<tr>
<td>Pre-summer</td>
<td>Students contact mentor teachers where possible to discuss how things may work next session, and this may include a visit to the school.</td>
<td>Students and teachers discuss way ahead</td>
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<tr>
<td>Summer</td>
<td>Students reading about education issues and consider them.</td>
<td>Consideration of ideas &amp; evidence in the literature</td>
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<tr>
<td>By or in Orientation Week, Week beginning 9 September</td>
<td><strong>In Contact with School</strong> Students must be in contact with their mentor teacher to arrange their first visit. This first visit should ideally be before or within Orientation Week. This visit (or prior communication) should include discussion on dress code, wishes and requirements of the host school, timetable of visits, and classes to be involved. It may be appropriate to have initial discussions on possible Special Project topics.</td>
<td>Students gain appreciation of the expectations of their placement provider. Mentor teachers plan for observation and teaching inputs from the student.</td>
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<tr>
<td>13 September</td>
<td><strong>Induction Event Friday 13th Sept 2019, 1.30 pm – 5.00 pm, J F Allen (Physics) Building Theatre B with external and internal speakers. This is compulsory for students; teachers are welcome. Details will follow, sessions with talks and/or activities led by teachers, a student, Dundee School of Education, and local academic staff.</strong></td>
<td>Students use this event to build on their summer reading to ready them for the observation in their placements.</td>
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</table>
| Week One, wb 16 Sept     | **Observation Session in the Classroom** This or Orientation Week ought normally to be when you have your first experience in the school classroom, observing one or more classes in action. Begin talking to your mentor teacher about your special project. Discuss with your mentor teacher what active role(s) you may have in the classroom next week. 

*Remember to complete the Observation Log sheet for your first visit and start your reflective journal. Remember to get your teacher-mentor to sign your Attendance Log as evidence of your accumulating hours.*

*Group tutorial 1 this week* - to be arranged by your departmental rep. Discussion of education paper(s) specified by your rep, discussion of items from induction, discussion of placements.

*Students are reminded that it is their responsibility to communicate with their dep rep and/or mentor teacher if they are not sure or if they have any concerns.*

**Seminar with Susan Buckman from Dundee University Education – Two important areas in current education – Co-operative Learning and Formative Assessment, J F Allen Building (Physics) Theatre B, 5.45-6.45 pm Monday 16 September** | Aim for your first full visit to school, which is meant to be an observation session, where you note what happens in the classroom, and discuss this with your mentor teacher afterwards. Discuss classroom assistant role for next week. |
| Week Two, wb 23 Sept     | **Classroom Experience** You should now be attending your school on a weekly basis at times arranged between you and your mentor teacher. 

*Remember to sign-in as you enter the school. Write-up your daily log sheet for each visit / session you participate in at your placement school as soon as possible after it happens, adding this to your reflective journal.* | In this and the next few weeks you should aim to be in the role of a classroom assistant, albeit “in training”. This may be assisting with labs or investigations, special input to small groups of pupils, etc. |
| Week Three  wb 30 Sep | Finalise discussing the aims of your **Special Project** in negotiation with your teacher-mentor.  

**Mid-semester feedback**- Students should give the mid-semester feedback form to their mentor teacher and ask them to fill this in to get to the relevant dep rep directly or via student by Friday this week.  

**Group tutorial 2** this week or next, organised with your departmental rep. This tutorial should focus on lessons learnt so far, and a discussion of preparation for the project proposal submission.  

**Seminar with Fraser Tweedie** (formerly Depute Rector at Buckhaven High School). Fraser was the school co-ordinator for the UAS programme, and previously worked with St Andrews students for a number of years on the Student Tutoring programme. He will take you through his Classroom Management Toolkit (students attending will receive their own copy) to give you an insight into the craft of teaching, discuss the essential ‘do’s’ and ‘don't's’, and give you practice in dealing with real life scenarios in the classroom. Students will be asked to sign up for one of the three sessions, currently planned for 30 Sep, 1 and 2 October 5.00-7.00 pm, MBS Seminar Room 1. | Discuss with your mentor teacher what you both wish you to do for your special project.  

Discuss preparation of the proposal with your mentor teacher and with your dep rep.  

Finalise, if necessary, discussion with mentor teacher on topic of special project. |
|---|---|---|
| Week Four  wb 7 Oct | **Mid-semester feedback**  
Teachers should have provided their mid-semester feedback by Friday of last week. Students should submit the mid-semester feedback form with teacher and student comments on it to their departmental rep by Friday of this week. If any issues are flagged up they should be dealt with at the tutorial or privately, as far as possible by the end of week five. If any issues are flagged up by mentor teacher they should where possible be explored and action taken by the end of week seven.  

**“Lesson” Practice and Feedback**  
Students are asked to prepare a five minute activity of the type they may later use in their school placements, and to run this for a group of ID4001 students. Peer feedback to be provided at the session, which is intended to be run with students from different University Schools. Coordinator will ask students to select from a series of times. | Dundee and Fife state schools holiday |
| Week Five  wb 14 Oct | **Monday 11 Oct 17:00 is the deadline for submission of your Special Project Proposal to MMS**, using the proforma provided.  

*Reading and preparations if not on a school visit.*  

**Group tutorial 3** this week - to be arranged by your departmental rep. The main topic to be covered is feedback associated with the proposal submissions. This may be done as a group discussion or as individual “surgery” appointments with the departmental rep. Some feedback to come in the tutorial, and then written feedback by the end of the week in which the tutorial is held – marks may be much later. Student and tutor may work to do a skills audit at this stage. | Dundee and Fife state schools holiday |
| Week Six  wb 21 Oct  Ind. Learn. Wk | First travel claims may be submitted  
School visits normally continue  
Students please consider if they are on target in their work. Discuss with Dep Rep and Teacher mentor if they consider that they are not.  

*Prepare a five minute presentation for next week’s tutorial*  

**University ILW**  
By now students should definitely be taking some responsibility in a classroom assistant role | |
| Week Seven  wb 28 Oct | **Group tutorial 4** – to be arranged by your departmental rep. Each student gives a five minute presentation on a relevant topic, video recorded, with intention of self, peer, and tutor feedback. This short talk should be in the same sort of style that is requested for the formal | It may be helpful for students to lead part of a lesson as preparation for |
presentation at the end of the module. The chosen topic should normally be something of the type that might be featured as part of the final presentation. This talk does not contribute directly to marks, but feedback should be very useful.

**Tutorial and Peer Support** Students are invited to ask their departmental reps for consultation on issues to do with this module as the semester progresses. Students are encouraged to communicate with their peers, including in other disciplines, to learn useful practice from each other.  
*Students are reminded that it is their responsibility to communicate with their dep rep and/or mentor teacher if they are not sure or if they have any concerns.*

| Week Eight  
wb 4 Nov | Remember to write-up your daily log sheet for each visit / session you participate in at your placement school as soon as possible after it happens, adding this to your reflective journal. This will be important to your reflective learning, and in preparing for your presentation and final report. You may wish to discuss aspects of these log sheets with your mentor teacher and/or your departmental rep. | Students should be taking increased responsibility in the classroom. |
| Week Nine  
wb 11 Nov |  | Over the placement we would like to see students leading between one and three hours of lessons. |
| Week Ten  
wb 18 Nov | **Group tutorial 5** Student – Dep-rep meeting in this week, as a tutorial group or a series of one-to-one meetings as determined by earlier discussions. | Likely week for the main part of the special project |
| Week Eleven  
wb 25 Nov | You must have completed your placement, including your special project, by the end of this week -after this week your hours will not be counted.  
Ask your mentor teacher for their final signatures on your time log, and give the completed log to your departmental rep by Friday this week.  
*Teacher-Mentors’ Assessment Forms should be returned directly to the University by Friday 6 December please.* | Final visit to the classroom, finish evaluation of special project work |
| Week Twelve, Revision Week,  
wb 2 Dec | **Oral Presentations this week**, delivered at the University - dates and times to be confirmed by your department rep, but likely to be early in the week. Students will need to attend all of one session (morning or afternoon). They will deliver their presentation for assessment and benefit from feedback on their talk, as well as learn from the talks of others. Feedback on the talks to be provided within five working days of the presentation in order that students can use this feedback when they write their final report. Slides to be put on to MMS in .ppt, .pptx, or .pdf format in advance of the presentation.  
If there is any aspect of your placement that you wish to bring to the attention of the examiners you should do so in writing to the module co-ordinator not later than 5 pm on the Thursday of this week. (This is not the same as a lodging a formal complaint or appealing an academic decision - those processes are separate.) |  |
| Week 13  
Exam week  
wb 9 Dec | Second set of travel claims may be submitted | |
Note – the University staff realise that students will necessarily have different experiences in different schools. That is inevitable in any placement activity of this type. However, we wish all students to have a useful educational experience, and we ask mentor teachers and students to aim towards the suggestions above. This includes 25-30 hours of placement time in the school, 1 to 3 hours of the student being the lead person in lessons, and the special project being something that the student can “make their own”, albeit under the guidance of the mentor teacher. Students are encouraged to discuss any concerns with their mentor teacher and their departmental representative.
1.5 Induction session for ID4001 and ID4002, Friday September 13th 2019

J F Allen Building (Physics) lecture theatre B. Please register between 13:30 and 13:45. Separate registration desks will be open for ID4001 and ID4002. Please complete registration in time for the 13:50 start.

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<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Registration opens in the foyer. Collect handbooks and submit signed Codes of Conduct.</td>
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<tr>
<td>13:50</td>
<td>Welcome and introductions – Eric Stoddart and Bruce Sinclair, coordinators</td>
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<tr>
<td>14:05</td>
<td>For those in secondary schools - The current philosophy of teaching in many Scottish Schools, as seen in “Curriculum for Excellence”. Presentation by David Porter, University of Dundee’s School of Education. Theatre B</td>
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<tr>
<td></td>
<td>For those in primary schools – Primary school teaching. Session led by Nikki Doig, University of Dundee School of Education. Room 301</td>
</tr>
<tr>
<td>~14:35</td>
<td>Discussion with speaker</td>
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<tr>
<td>14:50</td>
<td>Break – juice boxes available in main concourse</td>
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<tr>
<td>15:05</td>
<td>What is ‘reflecting on what happened’? Previous students and ID4001/2 staff will comment on this, and take questions as a panel.</td>
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<td></td>
<td>• David Cooper (see above) – ‘The teacher as a reflective practitioner’.</td>
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<td></td>
<td>• Lisa Jones, Dept. of Philosophy, ‘Reflecting’.</td>
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<tr>
<td></td>
<td>• Bruce Sinclair – comments on reflection, recording and feed forward in ID4001/2.</td>
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<tr>
<td></td>
<td>• Student comments on their experience of reflecting, recording, making a difference to their teaching, and getting it in to the oral presentation and the final report.</td>
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<tr>
<td></td>
<td>• Panel answering questions from this year’s students:-</td>
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<td></td>
<td>Eric Stoddart ID4002; Lisa Jones ID4002, Bruce Sinclair ID4001;</td>
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<tr>
<td></td>
<td>Students from ID4001/2 last year: Barbora Doksanská, Chloe Martin, Verity Kernohan, Gracie Wilson.</td>
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<td></td>
<td>• Reflecting on the Induction Event so far – led by Eric Stoddart.</td>
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<tr>
<td>15:45</td>
<td>Students are asked to meet in placement school groups and exchange contact details if they wish. Q&amp;A discussions with dep reps and former students, plus some teachers. There will signs within Theatre B to show where different (sets of) schools should gather.</td>
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<tr>
<td>16:05</td>
<td>Learning and Teaching, Dr Petra Mclay, Bell Baxter High School.</td>
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<td></td>
<td>Opportunity for visiting teachers and module staff to meet, room 301</td>
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<tr>
<td>16:45</td>
<td>Final words, then election of class reps led by Faculty Presidents.</td>
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<tr>
<td>17:00</td>
<td>Depart</td>
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</tbody>
</table>

Directions to the JF Allen building are given at http://www.st-andrews.ac.uk/physics/pandaweb/newtour/sta/maps.htm

If you come in the main entrance of the School, carry straight on past theatre A along the corridor. Part way along, on the left, is the entrance to room 233. At the end of the corridor there is an intersection, with a corridor going off to the left and stairs going off up to the right, and the door to theatre B is then to your right and behind you.
1.6 Tutorials and seminars

Your departmental representative will run at least four tutorials with you, normally with other students in your subject area. Dates and times will be as agreed with your departmental representative within the constraints set out in the module calendar. The purpose of the departmental tutorials is for you to discuss your progress and to exchange experiences and ideas with one another. Attendance at these departmental tutorials is compulsory and they may take place over lunch or after 5pm if no other timetabling schedule permits.

Seminars will be run by visiting tutors covering material useful for your teaching experience. These are most likely to take place after 5pm because of timetabling availability.

1.7 Mentor teachers are the experts

The vast majority of our students recognise before the start of the module that their mentor teachers are experienced professionals in the field, and a tremendous source of guidance. A major benefit of the module for students is learning from their mentor teacher and other teachers in the placement school. Students and mentor teachers may wish to discuss with each other the relative merits of different teaching styles and classroom management techniques in different situations. Students should not appear to be advising mentor teachers to change said teachers’ professional practice.

1.8 Presentations

Near the start of revision week, with permission from the Dean, students will attend a session of talks at which they will each give a presentation on what they have learnt from the module.

1.9 Leaves of Absence, Returns to Module

We recognise that on rare occasions students may need to take a leave of absence from their studies for health or other reasons. This impacts on the placement school as well as the student, but there are situations when this cannot be avoided. A student who takes a leave of absence while on this module will have to re-apply to join the module in any subsequent year should they wish to take part in the module again. There is no guarantee that such an application will be accepted.

1.95 Taking this Further

Some students may wish to move in to school teaching following graduation. There are various routes to this, and these may be discussed with our invited speakers or with staff in the University Careers Centre. The following web sites may also be a useful start.

- [https://www.st-andrews.ac.uk/careers/exploring-your-future/career-options/a-z/teaching/](https://www.st-andrews.ac.uk/careers/exploring-your-future/career-options/a-z/teaching/)
- [http://www.gov.scot/Topics/Education/Schools/Teaching/ITE](http://www.gov.scot/Topics/Education/Schools/Teaching/ITE)
- [https://getintoteaching.education.gov.uk/explore-my-options/teacher-training-routes](https://getintoteaching.education.gov.uk/explore-my-options/teacher-training-routes)
- [https://www.teachfirst.org.uk/](https://www.teachfirst.org.uk/)
- [https://www.ucas.com/postgraduate/teacher-training/train-teach-scotland](https://www.ucas.com/postgraduate/teacher-training/train-teach-scotland)
- [https://teachinscotland.scot/](https://teachinscotland.scot/)
2. CONTACT DETAILS

2.1 University Staff Involved in the Module

**Module Co-ordinator**
Dr Bruce Sinclair  
School of Physics and Astronomy,  
North Haugh, University of St Andrews,  
St Andrews, Fife, KY16 9SS  
b.d.sinclair@st-andrews.ac.uk  
01334 463118

**Head of ID4001 Virtual School**
Dr Sharon Leahy  
Pro Dean Curriculum - Science  
Deans’ Office, College Gate, St Andrews  
prodeansci-curr@st-andrews.ac.uk  
01334 46 3937

Administrative responsibilities such as Academic Misconduct Officer and Exams Officer are taken by the people with those roles in the Co-ordinator’s School.

**Biology departmental representative:**
Dr Tracey Gloster  
School of Biology, BMS Building,  
University of St Andrews,  
St Andrews, Fife, KY16 8LB  
tmg@st-andrews.ac.uk  
01334 467245

**Chemistry departmental representative:**
Dr Brian Chalmers  
School of Chemistry,  
North Haugh, University of St Andrews,  
St Andrews, Fife, KY16 9ST  
bac8@st-andrews.ac.uk  
01334 463785

**Computer Science dep rep**
Ms Judith Malcolm  
School of Computer Science,  
Jack Cole Building, North Haugh,  
University of St Andrews,  
St Andrews, Fife, KY16 9SX  
judith.malcolm@st-andrews.ac.uk

**Geography & Geosciences dep. rep:**
Dr Catherine Rose  
School of Earth and Environmental Sciences,  
Irvine Building, North Street,  
University of St Andrews,  
St Andrews, Fife KY16 9AL  
cvr@st-andrews.ac.uk  
01334 462874

**Mathematics & Statistics dep rep:**
Dr Aidan Naughton  
School of Mathematics & Statistics,  
Mathematical Institute, North Haugh,  
University of St Andrews,  
St Andrews, Fife, KY16 9SS  
an18@st-andrews.ac.uk  
01334 463712

**Psychology and Neuroscience dep rep:**
Dr Paula Miles  
School of Psychology & Neuroscience  
Westburn Lane  
St Andrews, Fife, KY16 9JP  
pjm11@st-andrews.ac.uk  
01334 462089

**Physics & Astronomy dep rep:**
Dr Bruce Sinclair  
School of Physics & Astronomy,  
Contact Details as above under Co-ordinator

2.2 Placement School Staff

Each student will be assigned to a teacher mentor with whom they may spend much of their placement. Some schools have also identified a “Link Teacher” who will act as a coordinator between the placement school and the University. Students may wish to note here contact details for these people, the phone number for their placement school office, etc.

Mentor Teacher  
Link Teacher  
Placement School Office
3. OVERVIEW OF THE MODULE

3.1 How to use the module handbook

This Handbook is intended to give you an overview of how the module will run and to help you prepare for the challenges ahead. It contains important information about the organisation of the module, the assessments, marking systems and deadlines. It also contains information that will help you with your placement in the classroom. Read it carefully and use it as a reference throughout the duration of this module. In this handbook you will find copies of the forms that you are asked to sign during the induction session, including those on pupil confidentiality. As an ambassador, it is important to remember that you are entering a working environment that has its own rules and procedures. Make sure you are aware of the guidelines in place at the school and ask your teacher mentor if you are unsure of any issues that affect your safety or that of any pupil with whom you are working.

3.2 What will you achieve by taking this module?

The Communication and Teaching in Science module will reward you with academic credit for working as a ‘student-tutor’ with teachers in local schools and will help you to develop some valuable transferable skills. You may already know about ‘student tutoring’ schemes that work on a voluntary basis. Most of these run very successfully without giving academic credit for taking part, but do provide immense satisfaction to the truly committed undergraduates who get involved. This module is different in that you are rewarded with credits towards your degree for the work you do in the classroom. More importantly, you are an ambassador for the University and a positive role model to school pupils. You are different from a teacher or a parent. This additional perspective is one of the most important things that you bring to your role. The pupils will enjoy sharing your enthusiasm for your subject and this is an excellent opportunity for you to let them what it is like to be a student at St Andrews. You should develop a range of transferable skills, as outlined in the introduction to this handbook.

Note, however, that you are not a qualified teacher and there is no intention that you should be seen in any way as substituting for a teacher. You are there to learn from your mentor teachers. Your work in the classroom should always be supervised by a teacher.

3.3 How does the module work?

The module will involve:

- Being paired with a teacher mentor at your host school who will work with you to identify your aims and objectives for the term, and support your work in the host school
- Attendance at an induction session in Orientation Week giving you an introduction to the fundamentals of working with children and conduct in the school environment
- Attending presentations/discussions with outside speakers with experience of the modern classroom.
- Spending 25 hours of pupil contact time in the classroom (including observation) developing your role within the classroom. The absolute minimum is 20 hours and there is a recommended maximum of 30 hours. You keep a reflective journal to allow you to keep track of your learning and plans.
- Design and completion of a Special Project
- A series of tutorials with your departmental representative at the University
- Student-initiated consultations with their departmental rep
- Completion of four assessed elements - special project proposal, end of module report, teacher’s assessment and assessed talk

Please note that most of the learning on this module comes from your experience in the placement school. The induction event, your summer and subsequent reading, and the contents of this handbook aim to give you useful background, but you are in your placement school to learn as well as to teach. We add to that learning experience with the evening seminars, and the directed reading for, and discussion in, tutorials. But a major part of your learning and preparation is what you observe, discuss, plan, and try out in your placement school, coupled with reflection on all of this.
3.4 Role of the teacher mentor

At the start of the module the teacher mentor will:

- Communicate with the relevant university departmental representative directly or through the student to discuss ways in which the teacher can make most effective use of the undergraduate student and help them to achieve his or her objectives.
- Meet with the undergraduate student before, or at, the start of the module to discuss their aims and objectives, their role and what will be expected of them, and to outline the areas of teaching to be covered during the autumn term. The undergraduate student should contact the teacher directly to arrange a convenient time for this meeting.
- Agree with the undergraduate student a suitable time for their school visits as soon as school and University timetables are available.

During the module:

- The teacher should be a source of guidance and advice to the undergraduate student, and it is expected that the teacher will provide some level of briefing to the undergraduate about each lesson. This briefing could occur at the end of the preceding lesson, during a phone call or through email. Throughout the term, the teacher should provide feedback to the undergraduate student on areas of the work that are going well and where improvements could be made and how. The teacher should also provide advice to the undergraduate with respect to the planning and implementation of the special project.
- Please provide a mid-placement report for view by both student and departmental representative. This is not any form of grading sheet, but is meant to be formative feedback to the student and useful information for the departmental representative.
- The University departmental representative may wish to be present at one of the undergraduate student’s visits in the latter part of the module to gain some insight into the student’s experience at the school in order to aid the assessment process. Where this is the case, they will contact the teacher mentor in advance directly or via the student to agree a convenient time.

After the module:

- At the end of the module, the teacher mentor will be asked to complete a brief assessment of the undergraduate’s performance and progress during the term. This is a brief ‘tick-box’ form with space allocated for comments. It is provided later in this handbook. This assessment constitutes 25% of the total mark given to the undergraduate for this module. The mark will be moderated by the module coordinator and departmental representatives to ensure parity of standards.

3.5 Student Representation

This module and ID4002 have a joint Student Staff Consultative Committee chaired by the two Faculty School Presidents. ID4001 representatives are invited from each participating University School, and we ask that people are identified for this at the induction event. These representatives can take matters to the departmental representatives, the module coordinator, and the SSCC. All students on the module, however, are also invited and encouraged to talk directly to their departmental representative or the module coordinator if they have any queries, concerns, or suggestions.

3.6 Travel Claims

The University is willing to reimburse students for reasonable travel expenses for attending their placement schools. It is not normally possible to provide funding in advance. Travel claims may be submitted to administrator Ms Niki Stalker niki.stalker@st-andrews.ac.uk, School of Mathematics and Statistics, by the start of week 6 and by the start of week 13. The claim form is on the University web site at www.st-andrews.ac.uk/media/finance/documents/Student%20Travel%20and%20Subsistence%20Form.doc
Claims must not be for more than the amount spent. It is expected that the claims will be for up to one round trip journey for each week that the school placements are running as part of the module. The maximum claim is expected to be equivalent to the return bus fare from St Andrews to the placement school. If the buses are used, then the tickets should be provided with the claim. If a student’s own vehicle is used, then the University mileage charge can apply up to the limit set above. If a student uses a vehicle they should note that it is at their own risk, and that they should check that the vehicle insurance includes these journeys that insurers may regard as being outwith the “default” social, domestic, and pleasure use of the vehicle.
4. THE STUDENT’S TIME IN THE CLASSROOM

4.1 Overview

You should arrange a visit to the school that you have been assigned to, prior to starting your work in the classroom, so that you can meet your mentor teacher and discuss which classes you will work with and how you might organise your time in the school. You should aim for a minimum of 25 hours in the classroom (including observation time), though the absolute minimum is 20. We would not normally advise students to spend significantly more than 30 hours in the classroom. Your visits should be spaced across several weeks to allow you to learn from and reflect on each experience. The day and time of the school placement will be decided on an individual basis to match the timetable of you and the teacher and it is your responsibility to organise the timetable and to alert the teacher in the event of any problems. It is important that once you have agreed to take part in the school’s work at particular times, your timekeeping is excellent. If you are unable to keep the agreed time, for example due to illness, you must make every effort to communicate with the host school immediately. You will be able to review progress and discuss your work with your department representative at the University, both through timetabled tutorial sessions and during their office hours.

Your role in the classroom/laboratory should progress through the semester from initial observation sessions to constructive support of the teacher. It is expected that students will progress to leading part, if not all, of a lesson under the supervision of the class teacher by the end of the module. You should expect to become more involved in school activities possibly by working with small groups of pupils on specific topics or activities, or in setting up practicals and demonstrations. As you gain experience and confidence, you may be asked to take a more responsible role such as using equipment to demonstrate a principle or phenomenon, by helping in extracurricular activities such as Science Club and presenting a talk about undergraduate experiences.

Throughout the module, the level of interaction with the pupils must be agreed with the teacher and should at all times be under the teacher’s direction. You will be expected to plan your own role in each lesson and to discuss your plans with the teacher mentor. Although your plans will not be formally assessed, they are often needed in order to ensure good outcomes to your teaching sessions, and they will be a useful source of information for your end of module report and for tutorial discussions with your departmental representative. An example of a lesson plan is provided in this handbook.

You will be required to plan, prepare and implement a Special Project. The choice of the project should be made following discussion with the teacher and with the departmental representative. This project should allow the student to develop their ideas gained through the placement, and should not normally be “just” following an existing lesson plan from the school. The special project should be targeted, where possible, at a specific concept or activity for which there is a perceived need in the school. You are required to submit a proposal for the special project, and your University departmental representative will provide comments on this. Further information about the special project is given in the next section.

4.2 The Reflective Journal - keeping notes and using the log sheets

You are required to keep a reflective journal of your experiences in the school and what you learn from them. This is part of good professional practice, and will also be useful for you developing your skills and recognizing your progress and determining your “next steps”. In addition, this reflective journal is important for informing your report and talk at the end of the module. Your reflective journal is not directly assessed for part of the module grade, but its use should greatly enhance what you get out of the module in experience and in marks in the formally assessed work. You may hear the parts of your reflective journal referred to as a log book.

Your first day on placement is focused on the observation of the teacher’s interaction with pupils and how topics and concepts are introduced and developed. Use the Observation Log Sheet (copy in final section of this handbook online) or similar template to record your first observation session in the classroom. If possible, specific situations should be discussed with the teacher. You should later reflect on what you have found out, perhaps note what you have read on related topics in the literature, and note on the sheet what you have learnt and what actions you plan to take on the basis of this learning.
Each subsequent visit should be documented and summarised in a set of Daily Log Sheets (copy in final section of this handbook online) or similar templates. You should complete one for each visit to the school. It is not expected that the teacher will read these log sheets unless you wish them to, but you might find it helpful to refer to your log sheet entries when you meet with your teacher mentor. University staff will need evidence that you have regularly updated your Log Book and you will need these notes for your written report. You should make time after each school visit to reflect on what has happened. What went well and why? What did not go so well, and what might you do on a future occasion to try to get greater success? What have you learnt from that school visit? This should be recorded on these sheets, which should come together to form your reflective journal.

Each time you visit the school you must record the visit on the Attendance log sheet (available at end of this handbook online) and ask your teacher mentor to initial each entry to confirm your attendance. This sheet is a formal record of the hours that you have spent in the school and it will be used to determine whether or not you have completed the minimum contact hours required for this module.

Bring your reflective journal to the tutorial sessions so that you can refer to your notes. The reflective journal should also include a copy of the Observation log sheet, the signed copy of the Attendance log sheet and a copy of the Special project log sheet.

4.3 Advice on using the Reflective Journal / Log Book

The purpose of the reflective journal is to provide you with a structured approach to your visits to the school and to allow you to map your own progress and improvement during the course of your placement. Aim to demonstrate how your skills have developed over the period of the placement. Use our learning outcomes as guidance for completing the daily log sheet. Please do not feel as if you have to complete each section each time - they may not always all be relevant to that particular visit. You might also like to reflect on the subject-specific knowledge that you are required to use and how your understanding of it has been challenged or changed in dealing with school pupils. As an element of the module you can use it to determine the extent to which you have made progress within each of the learning outcomes, whether you have developed an understanding of the school environment, and whether you have approached the work in a structured and systematic manner. You should provide examples of achievement or progress and identify how you might improve on a weakness in a particular area.

- Refer to the example completed logsheet in this handbook to help you use an appropriate content style and layout.

- Be selective in what you choose to write about. You are not expected to report everything you do in the classroom, but you are expected to select the experiences that you can write about in a reflective/evaluative way. Remember that you will be using your log book to select and describe particular experiences during the module, in order to improve your skills from one session to the next, and to refer to as you write your final report and prepare your talk.

- Do not merely describe what you did. Each example of your work should follow the process of what you did, why you did it, and what happened as a result. Importantly, you should reflect on how the activity went. You should comment on what went well and why, and where appropriate also include suggestions of how you might improve things next time. Think: What, Why, How and Result. Comparisons of your experience or observations with the literature may also be useful.

- You should aim to link each situation or example of your work with the specific assessment criteria outlined in the assessment briefing.

- Do not be vague in writing up your evidence. Sing your own praises and don’t be afraid to say ‘I did this’, ‘I did that’. Do not write passively as though anyone could have done what you are writing about.
• The ‘Observation Log sheet’ is intended to give you the opportunity to observe teacher/pupil interactions and classroom techniques that will help you to analyse and develop your own competence. You only need to complete one of these at your first observation session within the classroom. However, use it as a guide to your development during the school placement.

• The ‘Special Project Log sheet’ is intended to provide you with a structured approach to the planning and implementation of your special project. You might find it useful to show this to your teacher mentor as you discuss the project and its implementation.

Reflective practice and reflective writing will be covered in the module’s Induction Afternoon. There are various resources out there on reflective writing that may be of use. These include:-

The University of Portsmouth provides a useful introduction to reflective writing.
http://www.port.ac.uk/media/contacts-and-departments/student-support-services/ask/downloads/Reflective-writing---a-basic-introduction.pdf

The Universities of Nottingham and Reading have
https://www.nottingham.ac.uk/studyingeffectively/writing/writingtasks/reflective.aspx
https://libguides.reading.ac.uk/reflective/writing

4.4 The Special Project

A “Special Project” is undertaken by students towards the end of the project, after consultation with their mentor teacher, and following feedback from their departmental representative on a “Proposal” for the special project.

The Special Project should be seen as a ‘climax’ to your placement within the school, allowing you to practise some of the skills you have learned. The choice of the project must be agreed with the teacher mentor and may follow a suggestion from the teacher, an original idea of the student, or originate elsewhere. It must be more than just following a lesson plan provided by the school. The University department representative may be consulted about the topic. As part of the planning process the student is required to submit a project proposal for discussion with the departmental representative in advance of the special project, and the departmental representative will provide feedback on this document. The student should be able to deliver the project in the classroom or with a group of pupils before the end of the module, subject to approval by the teacher mentor.

Some suggestions for special projects include:- a novel method of presentation appropriate to the topic, a particular experimental demonstration or a pupil activity, the preparation of special materials, an extracurricular activity (e.g., helping to run or set up an after-school club or arranging a visit to the student’s University department). The nature of the project and materials must be discussed fully with the teacher and agreed with them, and through the work associated with the “proposal” for your special project also with your University departmental representative. The special project must involve you leading pupil learning for their benefit, and it must not be primarily an educational research project. Safety issues must be addressed, including for the use of equipment, fieldwork, etc, and the teacher’s advice should be carefully followed. The University department may require a University risk assessment, as may the host school.

Delivery of the special project is not assessed directly but it will be a component of the teacher mentor’s assessment of the student’s performance in the classroom and it will be the subject of the oral presentation. In addition, the student will use elements of the project in the written report that is assessed within the University; and the project proposal itself carries part of the module marks.

Examples of some special projects

1. Organising a team to take part in the National Team Mathematics Challenge.
2. Use of geometry software package “Super Logo” for S2 pupils.
3. Lung dissection for special-needs students.
4. Supporting understanding of trigonometry with lower attainment S5 pupils.
5. Undertaking activities in probability with S1 pupils looking at the “Monty Hall problem”.
6. Investigating learning styles differences in chemistry between S1 and S4.
7. Supporting top set pupils in a coursework project on Copper.
8. Giving presentations on the student experience at University in a Widening Participation school.
10. Running a visit for pupils to come into the University to do experiments in radioactivity.
11. Introducing primary school pupils to a programming language
12. A world-wide web of opportunity – development of an html and css based image gallery
13. Designing a field trip for S5 students to look at slope analysis and slope stability
14. Taking a class to collect beach sand samples along a transect of the West Sands and bringing them to the University for grain size analysis
15. The use of ‘clickers’ to run an interactive quiz lesson with S1 and S2 pupils.
16. Working with a Science Centre to design a presentation on energy for S2 pupils; take pupils to the Centre and evaluate the outcomes.

More detailed descriptions of some special projects:-

Mark – BSc Physics (from www.uas.ac.uk)

Mark chose to do his special project with a class of ‘top set’ Key Stage 3 pupils and two Year 12 pupils. He devised theoretical and practical lessons introducing concepts of energy conservation, mechanics and material properties, which were based on squash balls. The students began by looking at actual quality control tests carried out by the World Squash Federation to ensure that all squash balls passed the ‘bounce’ test. Working in teams, the Key Stage 3 pupils were given squash balls and asked to plan and conduct an experiment to investigate the effect of different temperatures on the rebound height of the balls, showing which ones would pass the bounce test. With his Year 12 pupils, Mark spent a couple of lessons covering the theory of Thermal Physics before moving onto the same practical quality control experiment as the KS3 pupils but asking them to carry out a suitable error analysis, look at what factors caused the change in energy and to calculate the loss of potential energy and the maximum kinetic energy of the ball. With both groups Mark was pleased to have introduced a new way of approaching the subject which both encouraged teamwork and enabled him to test their understanding of the theory he had taught them in an interesting and practical way.

Michelle – BSc Environmental Science (from www.uas.ac.uk)

Michelle decided to work with her Year 9 class on the topic of Acid Rain. In doing so she was trialling a new element of the GCSE for the school – the IAS (Investigative Skills Assessment). This involved pupils collecting their own data in a practical lesson and then doing a 45-minute written test in the classroom under exam conditions.

The practical Michelle chose to do was a simple one growing cress in Petri dishes. Watering the cress using water with different pH levels to simulate different levels of acid rain, the pupils measured how tall the cress grew. The pupils were very conscientious about the experiment, coming in on non-science days to water their cress. They used the results to plot graphs and to identify trends.

As a result of the experiment the pupils produced posters which were used as classroom displays.

Jane – MPhys Physics (from St Andrews, though name changed)

Jane worked in one of the local secondary schools and through her placement experienced lessons in all year groups. The school wished to promote science to S1 pupils, and Jane was aware of some science outreach work going on at the University. She and her mentor teacher negotiated with the senior management team at the school to organise a day where every one of the S1 classes could experience a set of hands-on exhibits on
the topic of light being used in applications to science and medicine. Jane also trained S6 pupils that she had been working with earlier to be demonstrators to the S1 pupils.

As each class came in to the exhibits through the day she introduced what was happening before supervising (and assisting with) the hands-on activities hosted by the S6 pupils. She then ran an interactive “what have we learned” discussion at the end of the class period. She worked with the school to evaluate the effectiveness of this special day, and presented this to the University in her talk and her project report.

**John – Computer Science (from St Andrews, though name changed)**

John worked in a primary school with P6 pupils. He first observed a number of lessons, and got used to the sorts of learning opportunities that were being provided. Following discussion with the class teacher, John developed his own lessons aimed at introducing the pupils to programming ideas, going beyond the ICT that might have been expected, and motivating study in Computer Science. A secondary aim was to assist in the development of pupils’ multiplication skills by incorporating this into computer games to be developed.

He introduced the “Scratch” platform to allow pupils to program, and encouraged the pupils to use their creativity in designing characters to “live” on the screen. He used a variety of teaching techniques and feedback from the pupils to help the project. Every pair of pupils succeeded in creating a game with some form of extra personalization or extension beyond the original goals.

**Jane – BSc Psychology (from St Andrews, though name changed)**

Jane did her special project with a composite class of Primary 6/7 pupils in an Additional Support Needs class. The topic was taken from the Curriculum for Excellence (Scottish primary schools, science) and negotiated with the class teacher. The aim of the project was to introduce the concept of germs to the children and provide them with a basic understanding that germs are small and can be easily spread. After an assessment of the children’s literacy skills, she chose an interactive approach, as children’s learning style would benefit more from a ‘hands on’ approach. The basis of the project was a simple experiment to demonstrate the concept of germs clearly. It involved the use of baby oil and glitter (to represent the germs) and the task involved touching various objects to show the spread of germs. From this core idea, she integrated other areas of the curriculum; e.g. understanding the importance of using a tissue when sneezing (health and well-being), and the production of a poster explaining ways to prevent spread of germs. Jane evaluated the sessions as successful in achieving the set aims, and in introducing Co-operative Learning (C.L); children working together as a group, and all playing a role to help each other’s learning. This was identified in Jane’s research as an effective method for learning in children with Additional Support Needs.

**Timmy – BSc Maths (from St Andrews, though name changed)**

After discussing ideas with his teacher-mentor Timmy decided to do his special project with his S1 class on the topic of “Exploring Pi”. The project was designed to tie in with two particular aspects of the Curriculum for Excellence: helping children to become "successful learners, confident individuals, responsible citizens and effective contributors” as well as investigating "the relationships between the radius, diameter, circumference and area of a circle”.

After a thorough review of the literature relating to this stage of learning Timmy decided to use elements of active learning, collaborative learning and dialogic learning in his project. Timmy divided his lesson up into: introduction and basic definitions; class forms groups to measure circular objects of various sizes; students analyse their measurements; class discussion; recap to conclude the lesson. Amongst the advantages of this approach were: the class honed their motor skills through measuring diameters and circumferences, improved their social skills through group work, learned how to record and analyse data as well as discussing their ideas where Timmy used the scaffolding technique to build upon their previous knowledge. Timmy evaluated the lesson through a class test and feedback form and noted areas which could be refined for future lessons.
Chris worked in a primary school with P6 and P7 pupils. The teacher was keen to develop some new Earth science resources for the class and geological time was the first one to be tackled. Pupils made large cards that represented Earth history and the geological time periods. The pupils used paints and other materials to represent time and geological events and then they hung the cards from a string across the classroom, with the distance between the cards scaled to represent geological time. They were so beautifully made, and so visually informative, that they are still in the classroom to this day (June 2016).

Another activity that the teacher wanted to develop was a field trip. Searching for fossils is something that most young people like doing, but developing a field trip whose objective is to interpret what rocks represent is more challenging. Chris designed some activities which focussed on the pupils making particular observations which would lead them to a specific conclusion. She also designed a risk assessment so that the pupils understood the importance of safety and recognising hazards. The weather was very good for the trip, and the pupils really enjoyed it – as important though, was that the pupils really stayed very focussed on making observations and didn’t get distracted because they were well prepared for what they needed to achieve and understood what to look for, even though the geology was actually quite complicated. The teacher has since run the trip on her own and felt confident about doing so.

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Up to this point of the handbook is provided to students on paper. There is much more information provided online, and this online material should also be consulted, please.

The paper version of the handbook for mentor teachers contains the material up to here, plus some of the later forms.

The rest of the handbook is available electronically from the module website at

https://www.st-andrews.ac.uk/students/academic/interdisciplinary-modules/communication-teaching-science/
Your report comprises 25% of the undergraduate student’s assessment for this module, and so your care in completing this form is most appreciated. Please comment constructively on both strengths and areas for development, as appropriate, under each of the headings below. Your comments will be seen by the student and the examiners. Please provide a score for sections 1-4. The sum of these scores should help guide you to which box is the relevant to tick on the final page of this form. *NB. It is your choice of rating on the final page that determines the student’s mark, not directly the scores in boxes 1-4.* You may make particular reference to the issues and attributes listed in brackets, or any others that you consider relevant. Please concentrate on the student’s attainment towards the end of their placement with you, by which time they have had a good chance to learn from their experiences.

We ask that you please bear the following in mind when making your assessment:

- The extent to which the student was presented with opportunities to become involved in lessons and other teaching activities within your school.
- Students on this module are not expected to make significant inputs to the management of classroom behaviour by pupils.
- What can realistically be expected of an undergraduate student, who is *not a student teacher*, (spending approximately one quarter of their working time for one semester on this module i.e., 150 hours in total, including preparation, class time, and providing coursework to the University).

1: **The student’s general approach and attitude** (including attendance, enthusiasm, responsibility in dealing with agreed actions, initiative, the quality of working relations with school staff, disposition and attitude towards pupils and willingness to learn from the placement experience):

   **Boxes expand for comments in downloadable version.**

   **Performance Level:**
   
   (6 - exceptional; 5 – very good; 4 - good; 3 – fair; 2 – adequate; 1 – poor)

2: **The student’s appreciation of key educational issues.** (Please bear in mind that they have much less time and input on some aspects of this than a student teacher. In particular, please note that they are not expected to have had major input to behaviour management in the classroom. Matters to consider may include grasp and use of pedagogic principles such as the importance of planning and preparation, understanding of learning aims and outcomes, recognition of specific issues such as learning differences and health and safety requirements, grasp of principles of the curriculum, and appreciation of the teacher’s role):

   **Comments**

   **Performance Level:**
   
   (6 - exceptional; 5 – very good; 4 - good; 3 – fair; 2 – adequate; 1 – poor)

3: **The student’s communication skills** (including oral & written communication skills, presentation skills, ability to use material at an appropriate level, use of and responses to questioning, adherence to syllabus and learning aims and outcomes and contribution to any extra-curricular activities):

   **Comments**

   **Performance Level:**
   
   (6 - exceptional; 5 – very good; 4 - good; 3 – fair; 2 – adequate; 1 – poor)
4: The student’s ‘special project’ (including its appropriateness, originality, relevance to the curriculum, value to the school, evaluation and reception by pupils):

Comments

Performance Level:
(6 - exceptional; 5 – very good; 4 - good; 3 – fair; 2 – adequate; 1 – poor)

5. What more should the student have done at this level, and within the 150 hours allocated?

Comments

6: Any other general comments:

Total of Performance Score from sections 1 – 4 (out of 24) =

The following performance classifications are provided as a guide to marking. Please tick the box which best represents the overall performance of the student, bearing in mind what you have written above. The descriptions below also map to first, upper second, lower second, etc classifications.

Please tick one row only.

<table>
<thead>
<tr>
<th>Exceptional performance in the student’s approach, attitude, organisation, delivery of educational content, level of inspiration conveyed, and communication. The student has performed well beyond expectations to an exceptionally high standard in all areas. No placement student could realistically do better than this level of performance. We expect this box to be ticked rarely. (May correspond to an overall score of 24 above.)</th>
<th>Corresponds to</th>
</tr>
</thead>
<tbody>
<tr>
<td>As close to perfect as is possible.</td>
<td></td>
</tr>
<tr>
<td>Outstanding performance in the student’s approach, attitude, organisation, delivery of educational content, level of inspiration conveyed, and communication. The student made the most of the opportunities they were given, responded well to feedback, and performed at a very high standard in all areas. Very little room for improvement. (May correspond to an overall score of around 23.)</td>
<td>High first class attainment</td>
</tr>
</tbody>
</table>
**Very high level of performance** in the student’s approach, attitude, organisation, delivery of educational content, level of inspiration conveyed, and communication. They have responded well to feedback, recognizing where they could improve and putting things in place to do so. The student has performed at a very high standard in **most, but not all**, areas, or has performed at a **high standard across all** areas. (May correspond to a mix of ‘5’ and ‘6’ responses above.)

*Ratings should be based on attainment, not quotas, but we might anticipate that around one quarter of placement students would reach this level of attainment or higher.*

<table>
<thead>
<tr>
<th>First class attainment</th>
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**High level** of performance overall but with some development still required, or additional contribution expected, in one or two of the following areas: student’s approach, attitude, organisation, delivery of educational content, level of inspiration conveyed, or communication. They have responded well to feedback, recognizing where they could improve and mostly putting things in place to do so. (May correspond to a mix of ‘5’ and ‘6’ responses above)

<table>
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<tr>
<th>A good upper second class attainment</th>
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**Good level** of performance overall but with more development required, or additional contribution expected, in three or four of the following areas: student’s approach, attitude, organisation, delivery of educational content, level of inspiration conveyed, or communication. They have responded well to feedback, recognizing in most cases where they could improve and in some cases putting things in place to do so. (May correspond to an overall score between 15 and 19)

<table>
<thead>
<tr>
<th>Modest upper second class attainment</th>
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**Fair performance** overall but requires development in many of the following areas: student’s approach, attitude, organisation, delivery of educational content, level of inspiration conveyed, or communication. They have responded reasonably well to feedback, recognizing in most cases where they could improve and in some cases putting things in place to do so. (May correspond to an overall score between 12 and 14)

<table>
<thead>
<tr>
<th>Lower second class attainment</th>
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**Adequate performance overall** but an unreasonable amount of assistance required from the teacher needed to develop most of the following areas: student’s approach, attitude, organisation, delivery of educational content, level of inspiration conveyed, or communication. We would expect that the Departmental Representative of the students would already have been alerted to this low attainment. (May correspond to an overall score between 8 and 11)

<table>
<thead>
<tr>
<th>Third class attainment</th>
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**Adequate performance part of the time** but significant assistance required from the teacher and the student was otherwise poorly prepared or reluctant to engage with the work. We would expect that the Departmental Representative of the students would already have been alerted to this low attainment. (Corresponds to an overall score of 6 or 7)

<table>
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<tr>
<th>Bare pass on the placement</th>
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**Inadequate performance overall** with areas of significant concern and a failure to engage with the teacher or the pupils properly (a Fail). A student receiving this mark will be deliberately limited to a maximum overall grade of 7.0 for the module, and may obtain a grade lower than this and thus fail the module. The Departmental Representative of the students should already have been alerted to this low attainment.

<table>
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<tr>
<th>Fail on the placement</th>
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Teacher’s Name:  
School Name:  
Signature:  
Date:  

**Thank you for completing this form.** In order to meet the University’s deadlines for reporting student results we need to receive it by 5pm on **Friday 6th December 2019** please.

Our preference, please, is for this form to be completed electronically and sent to ilh@st-andrews.ac.uk (note that the second character is a letter, not a one) from your school email address. If you complete the form on paper, please either scan and send to the email address above, or put in the Royal Mail to Iona Hutchison, School of Chemistry, University of St Andrews, St Andrews, KY16 9ST. Please do not give your student this form to deliver on your behalf. If you and your school wish to give a copy of this form to your student we do not object, but this is not the norm. We will give access to the completed form to the student in January. Your student will also need to submit the form that you sign to show the number of hours spent on placement. It is OK for them to deliver that form to us.
ID4001 Mid-Placement Feedback Form

Teacher-mentors and students are asked to use this form to let the departmental representative know how things are going. Teacher-mentors and students have an open invitation to contact the relevant departmental representative at any time, by phone or by email.

The normal expectation is that the student will give a copy of this form to the teacher, the teacher will fill it in and pass to the student, the student will take note of the teacher’s comments and fill in their part, and then pass the whole thing to the departmental representative. We realise that in some situations the teacher and student may both wish to pass their part of the form directly to the departmental representative, and this is also acceptable. This form is not used in the summative assessment process – the end of module teacher’s assessment form is.

Areas of performance that may be discussed include planning and preparation for visits, subject knowledge, taking on board educational practice, communication skills, engaging with pupils’ learning, commitment, rapport with pupils and staff, understanding and working within the school environment, professional attitudes …

Student name _____________________ Subject area _____________________

School name _____________________ Teacher name _____________________

Teacher’s mid-placement feedback - Initialled ___________________

Please note two or more areas where you are particularly pleased with the achievement or progress of the student.

Please note two or more areas where additional development from the student would be most helpful, and recommend how.

Does attendance to date suggest that the desired 25 hours of classroom contact time (20 absolute minimum) will be achieved by 1 December? yes / no

Any other feedback?

See over for student comments to be filled in after the teacher’s comments
Please note two areas where you are particularly pleased with your achievements

Please note two areas where you recognize you need to develop, and how you plan to achieve this.

Please note your response to any comments from your mentor teacher above

Please note any particular questions or concerns or comments that you may wish your departmental rep to address.

Do current achievement and plans suggest to you that you will get your desired 25 hours of classroom contact time (20 absolute minimum) and your special project achieved by 1 December? yes / no

Please return form to departmental rep by the time stated in the Module Calendar.
Thank you for completing this form and considering the way forward.
ID4001 Attendance Log Sheet

Please hand in a completed form to your departmental representative after you have completed your placement. Please ask your mentor teacher to sign to confirm your attendance at the school at the times stated. You may add additional cells to the table as necessary—further copies can be downloaded from the module website.

<table>
<thead>
<tr>
<th>DATE OF VISIT</th>
<th>TIME OF VISIT (e.g. 13:00 to 14:00)</th>
<th>NUMBER OF HOURS FOR VISIT</th>
<th>INITIALS OF TEACHER</th>
</tr>
</thead>
<tbody>
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<tr>
<td>Name of Student</td>
<td>Total Hours of attendance at school</td>
<td>Confirmation of total hours (signed by teacher)</td>
<td>Date</td>
</tr>
</tbody>
</table>

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Module ID4001 allows fourth and fifth year honours students a placement in schools where they undertake a target of 25 hours of classroom experience. Students start by observing class teachers, move to a role similar to that of a classroom assistant, and by the end of their placement lead one or more teaching sessions, always under the direct supervision of the class teacher.

The module is based on a scheme devised by the UK Undergraduate Ambassadors Scheme, adapted to suit our local circumstances. The module handbooks provide detailed guidance for students and for teachers. The selection procedure for this module is by application and interview. Students need to progress satisfactorily through the PVG scheme, and sign child protection forms before being placed in schools.

Throughout the placement-semester students have access to, and meet on a number of specified occasions with, their departmental representative in the University. The module is planned for experiential learning and reflection, rather than any form of “educational research” of the type that would require ethical clearance from the University and/or external organisations.

ID4001 University departmental representatives are responsible for securing and monitoring placements in schools for students. Although placements are often in the same discipline as the University school, there is some flexibility permitted. Placement schools may be in the state or private sector, and are normally within commutable distance from St Andrews. The departmental representative liaises with the placement school and individual students to ensure compatibility. Once placements have been decided, students are responsible for good communication with their mentor teacher. Students are reminded that they should have “professional” attitudes to their work on the module, and they have the status and responsibilities of temporary staff while on placement in schools. Students and mentor teachers are told that their University departmental representative and the module coordinator are available to answer any questions about the module, including any difficulties about the placement that may arise.

Department representatives give the module coordinator contact details for mentor teachers and students.

During the summer the module coordinator sends the following information to all placement schools:
- details of the students who will be placed there
- a paper or online copy of the Module Handbook for Teachers
- contact details of the departmental representative and the module coordinator
- notification that by accepting a placement student the placement school is agreeing to work with the University in line with the principles in the handbook, including:-
  1. providing a safe working environment, covered by risk assessment policy and procedure
  2. including the student in the placement school’s public liability insurance
  3. providing suitable educational experiences for the student
  4. reporting to the University mid-semester and end-of-placement
  5. reporting to the University on any issues of concern that may arise

The module is run under the University’s regulations, including the 2016 policy on Managing Work Placements, and the 2016 policy on Safeguarding of Children, Vulnerable Adults and Prevention of Radicalisation Policy. For 2018-19 the Head of the Virtual School of ID4001 is Dr Martin Campbell, one of the University’s Pro-Deans. The placement and module coordinator is Dr Bruce Sinclair (Physics and Astronomy). The placement mentor for each student is their departmental representative. The work-based supervisor for each student is their mentor teacher.

The University’s public liability insurance policy is relevant to placement students, and this requires that students are supervised in placement schools at all times, and that students have gone through a selection process and through the Disclosure (PVG) process. A generic risk assessment for the University is in the module handbook; specific risk assessments may need to be written for some activities.

BDS 3.8.18
# ID4001/2 Induction Event

**Friday 13th September, 2019; 13.30 – 17:00 (attendance for part of the time is fine!)**

J F Allen Building (Physics) lecture theatre B on the North Haugh, St Andrews, KY16 9SS

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Registration in the foyer.</td>
</tr>
<tr>
<td>13:50</td>
<td>Welcome and introductions – Eric Stoddart and Bruce Sinclair, coordinators</td>
</tr>
<tr>
<td>14:05</td>
<td><em>For those in secondary schools</em> - The current philosophy of teaching in many Scottish Schools, as seen in “Curriculum for Excellence”. Presentation by David Porter, University of Dundee’s School of Education. <em>Theatre B</em></td>
</tr>
<tr>
<td>14:50</td>
<td>Break – juice boxes available in main concourse</td>
</tr>
<tr>
<td>15:05</td>
<td>What is 'reflecting on what happened'? Previous students and ID4001/2 staff will comment on this, and take questions as a panel.</td>
</tr>
<tr>
<td></td>
<td>- David Cooper (see above) – ‘The teacher as a reflective practitioner’.</td>
</tr>
<tr>
<td></td>
<td>- Lisa Jones, Dept. of Philosophy, ‘Reflecting’.</td>
</tr>
<tr>
<td></td>
<td>- Bruce Sinclair – comments on reflection, recording and feed forward in ID4001/2.</td>
</tr>
<tr>
<td></td>
<td>- Student comments on their experience of reflecting, recording, making a difference to their teaching, and getting it in to the oral presentation and the final report.</td>
</tr>
<tr>
<td></td>
<td>- Panel answering questions from this year’s students:-</td>
</tr>
<tr>
<td></td>
<td>Eric Stoddart ID4002; Lisa Jones ID4002, Bruce Sinclair ID4001; Students from ID4001/2 last year: Barbora Doksanská, Chloe Martin, Verity Kernohan, Gracie Wilson.</td>
</tr>
<tr>
<td></td>
<td>Reflecting on the Induction Event so far – led by Eric Stoddart.</td>
</tr>
<tr>
<td>15:45</td>
<td>Students are asked to meet in placement school groups and exchange contact details if they wish. Q&amp;A discussions with dep reps and former students, plus some teachers. There will signs within Theatre B to show where different (sets of) schools should gather.</td>
</tr>
<tr>
<td>16:05</td>
<td>Learning and Teaching, Dr Petra Mclay, Bell Baxter High School.  Opportunity for visiting teachers and module staff to meet, room 301</td>
</tr>
<tr>
<td>16:45</td>
<td>Final words, then election of class reps led by Faculty Presidents.</td>
</tr>
</tbody>
</table>

Teachers are welcome to attend any or all of this event should they wish. Where we would most appreciate their involvement is in the 15.45 session where they may be able to meet with some of “their” students, and may be able to answer questions from a group of students, or pose question to those students to think about.

Our venue is number 15 on the University map at [https://www.st-andrews.ac.uk/media/university/maps/wwwmap.pdf](https://www.st-andrews.ac.uk/media/university/maps/wwwmap.pdf)

The easiest approach is by foot, from Kennedy Gardens. You’ll see the building from that street then follow the steps down.
Our venue, the JF Allen (physics) building, is part of the cluster of concrete buildings on the North Haugh, which is at the north west side of the town. Directions to the building are given at http://www.st-andrews.ac.uk/physics/pandaweb/newtour/sta/maps.htm
If you come in the main entrance of the School, carry straight on past theatre A along the corridor. At the end of the corridor there is an intersection, with a corridor going off to the left and stairs going off up to the right, and the door to theatre B is then to your right and behind you. Room 301 is at the top of the stairs by the main entrance to the building.