

ACT Board of Senior Secondary Studies

Public Consultation Report

Shape Paper: Interdisciplinary Science A/T/M

- This report has been prepared following public consultation.
- All feedback submitted as part of the consultation process has been recorded and analysed.
- The responses to the feedback have been compiled following the deliberations of the Shape Paper writing team.
- Amendments to the Shape Paper have been made where required, as a result of the consultation process.

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| Topic | Comment | Course Development Team Response |
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| Q1 Which school are you from? | 2 responses 2 ED (same school) | |
| Q2 Shape Paper Background The background provides a clear sense of the disciplinary, systemic and national parameters under which the course will be written. | <p>1 agree 1 disagree</p> <p>1. Whilst the framework is clear and comprehensive, I do not consider the integration of the courses of forestry, Flight and Oceanography matches student interest nor teacher interest. There is one brief statement that this integration of courses will facilitate broader communities of learning. This appears to be a broad generalised statement that I haven't observed as a leader within a school where Flight is taught. I have spoken to current and ex-students of flight. Their comments included the fact that they would have been less likely to choose the course with the label of interdisciplinary Science and their first question consistently was - "can we learn the same stuff. Labelling of subjects as distinct subjects such as "Flight" attracts students to enrol. Taking away the label will significantly reduce interest and enrolments in my view for these subjects. Whilst the content may be permitted in the course, the lack of being able to name the subject will reduce participation in my view. At this school some students choose to study both Flight and Interdisciplinary Science as separate courses. Whilst the numbers may be low, reducing student choice to study what they want seems to defy the logic of the shape paper of catering to student interest and need.</p> | <p>1. Schools may market the course as they see best. The categories of the course allow teachers to cater directly to student interest, and to build on interesting new developments in science. The improved communities of learning and quality assurance, and the reduced risk to students of losing their highly specialised teacher and therefore their planned major, are benefits of this course structure. Schools may also consider using the Interdisciplinary Inquiry course.</p> |

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| | <p>2. Parameters are clear, however the distinction between multidisciplinary/interdisciplinary/convergence research has not been made explicit. Is it understood that "interdisciplinary science" means "interdisciplinary science", or is this term being used interchangeably for any cross-disciplinary approach to research?</p> | <p>2. The course is focused on interdisciplinary science and problems that requires knowledge from multiple disciplines to understand. Products of cross-disciplinary research may be studied or used by students, however, the goal is for students to investigate problems that draw on knowledge from multiple disciplines. Their application of science inquiry skills should be interdisciplinary, not in multidisciplinary groups.</p> |
| <p>Q3 COURSE GOALS The "Aims of the Interdisciplinary Science Curriculum" is clear about the intended learning and priorities, yet allows for flexibility.</p> | <p>1 agree 1 disagree</p> <p>1. Whilst the holistic aims are sound, the claim that this creates flexibility is not agreed. A current student studies Flight and Interdisciplinary Science at my School. This course, if implemented as a replacement to the courses of Flight, Oceanography and Forestry seem to reduce Flexibility</p> | <p>1. Transitions arrangements can be made for the few students in that category. Overall, flexibility in curriculum delivery is quite evidently increased. Consider the use of the <i>Interdisciplinary Inquiry A/T/M</i> in addition.</p> |
| <p>Q4 The rationale for the course and unit structure is well-explained and well-justified</p> | <p>1 agree 1 disagree</p> <p>1. There is very limited evidence of the rationale of change to delete some of the courses this would replace. The concept of interdisciplinary Science is sound and the approach of studying "uninhibited by disciplinary Boundaries" "rather than limited by boundaries of disciplines" is fine. However, it seems to contradict the value of allowing the traditional Flight or Forestry or Oceanography programs to fully run within this banner.</p> | <p>1. Teachers can continue to deliver courses focused on these areas. These areas of study are inherently interdisciplinary.</p> |
| <p>Q5 The proposed units are conceptually distinct</p> | <p>2 disagree</p> <p>1. There is a fundamental difference of opinion about equity and opportunity. Many students value and choose subjects due to the label and utilise these for diverse reasons. Cutting the labels of Forestry, Flight and</p> | <p>1. Schools can market as they see best. Teachers can continue to deliver courses focused on these areas. These areas of study are inherently interdisciplinary.</p> |

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| | <p>Oceanography seems less inclusive of student interest and needs</p> <p>2. The rationale states the importance of "...investigating the complex relationships between systems and domains of science..." This theme runs strongly through each unit, with the remaining differences appearing subtle. E.g., "Uncovering Interdisciplinary systems" vs "exploring interdisciplinary systems": Both units emphasise real-world situations and case studies. The former introduces IDS, whereas the latter appears to focus on examples and case studies demonstrating the application of IDS. The units appear to be differentiated by a student's stage of progression through the course – not unique any Science Understanding.</p> | <p>2. The units might also be differentiated by induction or deduction. Or in following the distinction noted by the respondent. The teacher's program of learning will make the specific 'Science Understanding' concepts explicit. They will have the flexibility to choose the specific science understanding concepts to develop.</p> |
| <p>Q6. The unit descriptions are clear and provide for innovative approaches</p> | <p>1 agree 1 disagree</p> <p>1. Not withstanding the concerns of the deletion of the three courses previously mentioned, I wonder if there is scope to incorporate units from other Science courses within this course. For example, a student who had completed a unit in Chemistry but not a course could feasibly incorporate this into this course. As a Science teacher and school leader I feel I have some sense of what the community understands. I believe the term interdisciplinary Science could be seen by some as valuable if there was an explicit opportunity to include individual units from other Science Courses - with a potential core from the actual Course. I consider this skill set of including units from other Science courses could provide an additional broader community acceptance and understanding of the value of the interdisciplinary Science course. I studied Physics, Geology, Chemistry, Biology, Agriculture and animal and plant Physiology as</p> | <p>1. This proposal is outside the purview of this group.</p> |

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| | distinct units and courses at University. These units and courses individually contributed to a generic Science Degree. Whilst the units described for this course can provide the diversity of learning across disciplines - and this can happen well as written - I don't think such a broad umbrella term of interdisciplinary Science should be pigeon holed to exclude the addition of additional units from the other Science Courses. | |
| Q7 "Considerations", situates the course clearly in relation to curriculum priorities | <p>1 agree 1 disagree</p> <p>1. Whilst the term "interdisciplinary Science" provides a broad opportunity to raise the STEM learning capabilities of students, I consider this should not occur with a premise of including other courses under its umbrella (and loss of naming of these other courses). I struggle to understand the rationale for excluding some courses that are valued by teachers and students even if low numbers.</p> | <p>1. The existing courses are not excluded. The opportunity to provide learning opportunities valued by students continues through the mechanism of this course.</p> |
| Q8 This proposed course is distinct from other BSSS accredited courses. | <p>2 disagree</p> <p>1. I would seek this course to be inclusive of units from other science courses (assuming students don't have a course in the other science) as an option to broaden the value and appeal of this course.</p> <p>2. For students studying IDS as their only science course in college, this lets them study "a little bit" of the content from multiple science courses. Hence, the underpinning Scientific Understanding will not be unique. The point of difference looks to be the strong focus on the process of integration. IDS emphasises the strands of Science Inquiry Skills & Science as a Human Endeavour, with Science Understanding appearing to provide the context for case studies, or the material students will draw upon and integrate. This provides students and teachers with the opportunity to explore many examples of</p> | <p>1. This proposal is outside the purview of this group.</p> <p>2. The science understanding concepts in problems studied in Interdisciplinary Science are inherently interdisciplinary. The science understanding will arise out of the problems and phenomena studied. Teachers will make explicit the science learning expectations in their program of learning.</p> |

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| | interdisciplinary integration of knowledge, however I don't believe pre-existing courses such as Flight or Agriculture will map across to IDS without losing significant emphasis on the strand Science Understandings. | |
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