

Teacher's Guide

Project Qualification

Your guide to the Edexcel Level 3 Extended Project

We're delighted to introduce this Teacher's Guide, which will support you with the delivery of the new Project Qualification. This guide has been carefully structured based on the experience we have gained throughout the two-year pilot programme. It includes:

- an outline of assessment objectives and weightings
- guidance on programme delivery and mentoring
- sample Project titles and timelines
- an in-depth overview of four Extended Project types.

As well as this guide, you'll have all the support you need including a wide range of free web resources, such as exemplar student projects with moderator commentary and detailed examiners' reports. For more specific and personal support, use our Ask the Expert service to get answers from the people who have put together the Project specifications. Simply email projectqualification@edexcelexperts.co.uk

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Introduction

This Teacher's guide has been designed to help you prepare learners for the Edexcel Level 3 Award in the Extended Project (ZPJ30).

It is suitable for those teaching:

- Unit P301: Dissertation
- Unit P302: Investigation/Field Study
- Unit P303: Performance
- Unit P304: Artefact.

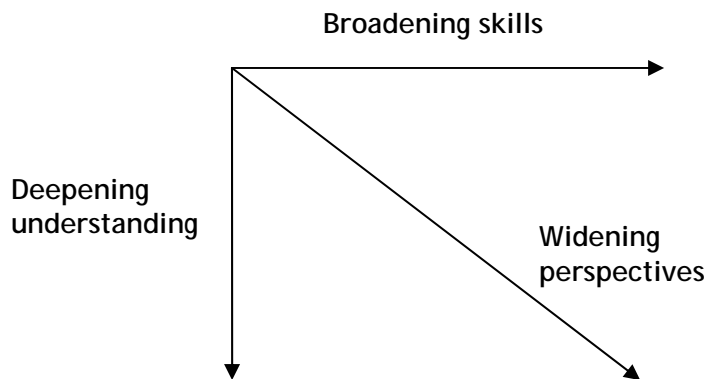
Assessment Objectives and weightings

There are four Assessment Objectives for the Edexcel Level 3 Award in the Extended Project. These detail the knowledge, skills and understanding that the learner needs to demonstrate in each unit. These are detailed below along with the approximate weighting that they are given in each unit.

AO1 17%	Manage Identify, design, plan and carry out a project, applying a range of skills, strategies and methods to achieve objectives.
AO2 22%	Use resources Research, critically select, organise and use information, and select and use a range of sources. Analyse data, apply relevantly and demonstrate understanding of any links, connections and complexities of the topic.
AO3 44%	Develop and realise Select and use a range of skills including, where appropriate, new technologies and problem solving, to take decisions critically and to achieve planned outcomes.
AO4 17%	Review Evaluate all aspects of the extended project, including outcomes in relation to stated objectives and own learning and performance. Select and use a range of communication skills and media to present evidenced project outcomes and conclusions in an appropriate format.

Definition of extension

The Extended Project (EP) should involve a significant extension or stretch for learners. This extension can range across three dimensions.



Broadening learner skills

The recommended number of guided learning hours (GLH) for the EP is 120. It is recommended that 40 GLH are spent on the taught element although this may vary depending on circumstances (eg type of learner/project).

The number of hours spent on project work is substantially larger than for most other projects learners will have carried out previously. It is therefore expected that they will broaden their skills base, through the taught course component as well as through the process of carrying out their EP. Generic skills which are required by all EP units include:

- selecting and refining a suitable project objective
- time management of an extended piece of work
- independent research and evaluation of sources
- coherent writing
- synthesis of source material
- analysis of approaches, ideas and arguments or data
- evaluation of the project process
- self-reflective presentation on the outcomes.

There will also be technical skills specific to each EP unit (eg logical analysis of arguments in the Dissertation; data collection and analysis in the Investigation/Field Study; rehearsal, production and performance skills in the Performance and design and construction skills for the Artefact).

Whilst these skills will already have been developed to some extent by learners' work in other areas of study, the EP is designed to broaden learners' skills base. It provides an opportunity for an initial taught course specifically targeting the acquisition and development of these skills followed by an extended period of time in which the main purpose is for learners' to strengthen their skills through applying these skills continuously.

For example, learners writing a dissertation will be expected to produce a piece of work which will be longer than for most assessment units and therefore to demonstrate skills in managing the production of a sizeable piece of writing.

Learners conducting an Investigation/Field Study will have substantially more time than would ordinarily be available for fieldwork, or experimental activities. An EP Investigation/Field Study therefore is a good context for teaching and learning new investigative skills and techniques, including statistical analysis. The same can be said for the practical and technical skills needed for EP work on performances. For the Artefact unit there might be extended study of critical and contextual references. Learners could demonstrate their understanding of how fashion, style, marketability, design for purpose and ethical considerations etc impact on art, craft, design, engineering, construction and other disciplines.

Widening learner perspective

Learners' work during their EP course should complement their main line of learning (in the case of learners taking the EP as part of a Diploma) or other areas of study (other GCE courses), or offer opportunity to study in an area related to their aspirations for future study and/or their vocation. This means that they should not, during their work on an EP, simply be doing more of what they could be doing as part of their other lines of learning or areas of study.

Often the inspiration for their choice of project will come from these other lines of learning and, for most learners, this is to be encouraged, since it is likely to lead to project work which shows greater depth and understanding. To achieve the goal of stretching learners, they should be encouraged to approach their project topic from a range of different perspectives.

Almost all project objectives will lend themselves to a cross-curricular approach. For example, a learner following the *Perspectives on Science* designed programme leading up to a Dissertation would be expected to research and develop scientific and ethical perspectives when examining questions, such as animal welfare issues or the nature of mental illness. In the Investigation/Field Study unit, a project on pollution might include scientific analysis (covering both primary data collection and a review of the secondary literature) as well as consideration of the social, environmental and ethical impact of pollution. A learner designing a mahogany table as part of an Artefact EP could approach this from the design perspective, as well as researching the economical, environmental and ethical questions surrounding the use of tropical hardwoods. A Performance EP learner could choose to explore a question such as 'Do actions have a definite meaning?', looking at different theories of how behaviour is interpreted and leading up to planning and producing a performance which embodied the learner's own response to this question.

Deepening learner understanding

With more time to pursue independent research, and the development of a personalised learner response to their chosen project objectives, the EP is a way of achieving deeper, more reflective understanding of a subject area.

Essentially, this is a matter of challenging learners to think more reflectively and analytically about the main concepts that they use in their project and which they might ordinarily take for granted.

In the course of a project which involved a study of business enterprise, for example, learners could reflect on deeper, philosophical questions, such as 'What is a business?'/ 'Is the only purpose of a business to make profit?'/ 'How important is enterprise?'

Learners' personal views on these deeper issues can then link with their project work and where appropriate, they may engage with the viewpoints of others. Learners working on an Artefact might, for example, compare and contrast a design approach which aims at minimum product cost with one aiming at aesthetic beauty, before explaining their own preferred approach and showing how this is embodied in their work.

Since this may be their first opportunity to carry out a project which raises analytical questions like this, it is not expected that all learners will take this aspect of EP work to very great lengths.

However they should all be expected to reflect on the ideas that they encounter in a critical way, looking to explore questions which may not lead to definite answers but which do lead towards deeper understanding.

Distinguishing features of a Level 3 project

Level 3 is characterised by the use of critical, analytical thinking skills as well as a higher level of independent research, writing, analysis and presentation skills.

For example, in comparison to Level 2, learners will develop and explore the central idea in their project, discussing the different aspects. At the upper end of Level 2, there will be evidence of some supporting reasons for the choices they have made during project development and/or answers to research questions. At Level 3, more reflection should go into these choices and arguments. There should be evidence of the development of lines of argument and/or consistent, sustained, reflective discussion on the direction the project is taking. There should also be greater critical awareness when handling source material or data, including an awareness of significance. Level 3 learners should also be better able to relate their project to a wider social or ethical context and will show greater levels of investigative or technical skills in producing of Investigations/Field Studies, Artefacts or Performances.

Routes to the Extended Project

Complementary to other qualifications being studied

Selecting a project objective can be a difficult challenge for some learners. This route provides a more secure way for them to build on their existing knowledge, whilst at the same time looking to meet the challenge of extending their skills, perspectives and understanding.

For example, Creative and Media or Business, Administration and Finance Diploma learners might, during their Principal Learning thought about the ethics of advertising. A project in which the research question was 'What are the limits of acceptable advertising?' would fit well with the goal of extension. It would require learners to think about fundamental questions raised by their subject (eg 'What is advertising?', 'What place should it have in our society?') and for them to learn something about ethical arguments, thus taking them into a new field of learning. The outcome from a project like this could take the form of a Dissertation with an analysis of the ethical issues, an Investigation/Field Study featuring case study research and surveys of consumer attitudes, an Artefact in which learners design advertisements to illustrate their point of view on the question, or a Performance in which their ideas are performed in a series of devised pieces illustrating ethical and unethical advertisements.

Progression

Learners should have the opportunity to undertake EP work which is not linked to their current study but provides a basis for future work/study. For learners who are looking to branch out in a new direction, a project based on their new-found interest is a natural route into the new subject area. It is important that learners are given sufficient support to enable them to perform at Level 3 during their project. If there is genuine doubt about whether a learner will be able to achieve at this level, it may be worthwhile discussing the choice of project closely, to see whether the learner can find a topic which fits their interests but also provides the opportunity to build on existing skills and knowledge.

Form of project objective

Stronger projects are often those with clear, well-focused, defined objectives, which can be classified as follows.

Unit	Form of objective
Dissertation	Research question
Investigation/Field Study	Research question/hypothesis
Performance	Performance topic and title
Artefact	Solution to a design brief

A central skill in project work is selecting a suitable, focused project objective. Successful projects are those with clearly defined objectives which can be achieved realistically within the time frame of the EP planning, research, realisation and evaluation process (approximately 80 guided learning hours).

With Dissertations, the best way of focusing the objective of the project is to put it in the form of a question. Learners are more likely to progress if they can identify a specific question within a broad field of learning. For example, if learners are interested in contemporary art, they might choose to focus on the work of a particular artist, such as Tracey Emin, and ask a specific question ('Does Tracey Emin's work show that art is more about ideas than beauty?').

With the Investigation/Field Study, learners should be encouraged to frame their objective in terms of a research question or hypothesis (eg 'Do advertising campaigns aimed at reducing smoking have a measurable impact on people's behaviour?').

Performances may also be produced in response to a stimulus question (eg 'How far can people with a mental illness be held responsible for their actions?'), where the question focuses and guides the development of performer research, development of script ideas, selection of theatrical techniques and choice of stage setting and publicity materials.

Artefacts might be produced in response to a design brief: a specification of the role or function the Artefact has to fulfil (eg 'Design and build a portable high chair for children', 'Produce a piece of graphic communication to support the aims of a charity or campaign')

OR - a self-generated brief or a commission (eg 'Design a mural or piece of public sculpture to celebrate an event or achievement related to a specific site').

Guidance on programme delivery

The taught course basis

Setting up EP provision within a centre, or across a consortium, to best facilitate this kind of work involves creative thinking about the curriculum, timetabling and best use of particular teacher's skills. A model which works well is to set up one or more EP courses, which target learners within particular areas and aim to give them with the skills they need to carry out good quality project work which complements their principal learning. Ideally, the taught course basis for an EP will ensure that learners have the necessary skills for project work (some of these skills will have already been developed in their other courses), give them training in research methods, thinking, project management and presentation skills, and introduce them to a range of areas of study which are good starting points for effective project work.

Very often, courses like these will involve interdisciplinary work. Where possible, timetabling courses to involve several staff with specific skills to contribute is beneficial. If a cross-disciplinary team is used, learners should be assigned a teacher to act as their project supervisor. Much of the work will be independent learning, possibly outside the classroom, and regular supervisory contact is necessary for each learner, to ensure work is well focussed in the Level 3 assessment criteria.

In the initial phase, learners should encounter a range of activities designed to help them begin to use and develop their research skills. Whilst a wide range of materials could be used for this purpose, it is likely that learners will be working as part of a group so it makes sense to look for a selection of case studies, stimulus materials, small-scale research activities and opportunities for training in presentation skills. These elements can be chosen from any taught course to represent a selection of the possible research areas which learners may choose to explore further in their project. Examples of some learner activities for projects include:

- contemporary case studies (such as the debate over the right to freedom of expression) which give learners a chance to begin reading source documents critically
- philosophical arguments (such as arguments for and against the existence of God) where learners are expected to learn to recognise and criticise arguments for and against a particular point of view
- ethical discussions (about issues such as animal welfare) in which learners apply key ethical frameworks to help them formulate reasoned opinions on ethical topics.

The focus of these activities is learners engaging in discussion and debate, and they could be followed by short written exercises summarising arguments explored in the classroom. The emphasis is on teaching learners *to do* particular things; the learning outcomes from the lessons relate to thinking, research and presentation skills, not to specific content.

In many areas of research, there are a few dominant theories or frameworks of thought. Introduce learners to these in a basic way, since they will need to recognise and apply such theories when engaging in their own research. A brief introduction to key frameworks is a useful tool in learners' research kitbags.

The taught course basis should also cover technical skills development exercises, where learners develop and extend their skills before starting their project (eg training in performance techniques, vocal training, presentation skills exercises, design and construction skills).

Time frame

A variety of delivery models for the EP can be chosen. It may be appropriate, with able learners, to begin the project immediately then provide guidance and supervision during the project process. However, it is worth bearing in mind that most learners will need prior training to develop their skills, as well as a period of time to try out various ideas before selecting their project objective. Learners will benefit from progressing via the taught course basis, which will

support them by developing their skills and enabling them to encounter a range of topics from which they can choose suitable projects. The taught course may be completed before the project work, or the two can be interlinked, with specific skills being taught whilst project work is underway.

A sample time frame for a one-year EP programme is provided below. There is value, where possible, in extending the period of work on the EP over more than one year; older learners will tend to have greater maturity and more developed skills, which can lead to stronger projects. However, it is worth planning a project programme to avoid those periods when learners will be occupied with examinations or coursework deadlines. A four or five term programme beginning in Year 12 and running into Year 13 is a model worth considering.

Sample EP programme for one-year delivery

Topic	Activities	Time scale
Skills development	<ul style="list-style-type: none"> • Research methods • Thinking skills • Technical skills training 	<ul style="list-style-type: none"> • Early autumn term • Mid autumn term • Mid to late autumn term
Project development	<ul style="list-style-type: none"> • Planning and writing project proposal • Collecting research sources/data • Project development • Editing/reviewing project/analysis • The presentation 	<ul style="list-style-type: none"> • Late autumn term • Early spring term • Mid to late spring term • Late spring term • Late spring term

Research skills

All units require learners to carry out research to find source material to support the development of their response to the project objective. Depending on the unit, research will involve primary or secondary source materials. At Level 3, it is expected that learners will critically evaluate their source material, for example, by distinguishing between fact, subjective opinion and speculation and by assessing sources for possible bias or lack of reliability. Developing these skills is one important role of the taught course basis.

Coherent writing

Learners will have produced material during the course of their project work (activity records, records of research, notes of important discussions or decisions etc). In each unit, learners are asked to produce a report which should draw on this work. An important skill is that of selecting, structuring and writing up their project work in a coherent way. Coherent writing means that:

- information is presented in a logical order
- text is structured clearly with clear connections between the different parts of the text
- information is clearly relevant to the project (focused).

Structuring project outcomes

There is no requirement for project outcomes to be structured in a particular way, beyond the requirements listed in the specification concerning what pieces of assessment evidence should be submitted for each unit.

Since learners' work should relate to the Assessment Objectives, a structure which matches these objectives should be used where possible. One model for achieving this is for learners' work to be written up as a project report, with a structure corresponding to the Assessment Objectives.

Project reports can provide clear, coherent and credible accounts of project development. Having read the reports, the reader should be able to appreciate the project objectives, the rationale behind their choice, how learners explored the research material relevant to their objective, how they developed and realised their own answers to the central questions posed by the objectives and what they learned in carrying out their project (including an account of how their ideas developed, what problems they foresaw, what difficulties they encountered that they did not expect, and what they have learned which would be relevant to future projects).

Much of the material for the reports will come from learners' activity records and records of research carried out during the project. If learners do produce a report, they should be encouraged to edit this work, selecting material which best provides evidence of achievement against the Assessment Objectives, and writing this up in a clear, coherent, structured manner. For example, where research has been conducted, an edited summary should be included in the form of a literature review or summarised data tables. Projects which rely on data collection should include a summary of collection methods, rationale and analytical methods including mathematical handling. Projects which rely on discussion, negotiation, design and redesign should include an edited summary of the key developments in a section of the project report on development.

Well edited, focused writing where the key decisions, developments, lines of argument and salient research are explained succinctly, is preferable to unstructured writing or 'stream of consciousness' projects in which little attempt to select or edit material has been made.

If a report has been written which integrates the relevant research successfully there is no need, for this also to be included with the final project submitted for moderation.

For the Artefact unit it is expected that learners will produce work that demonstrates a coherent design and making process with the effective use of a range of visual and other source materials to inform the project outcome. As with the written report, selective editing of material is recommended in order to avoid duplication and confusion, while fully presenting evidence of research, development and realisation of the final artefact

Format of project outcomes

The following format is not mandatory, but provides one way of helping learners to structure their project outcomes to ensure that the amount of writing corresponds broadly to the weighting of the Assessment Objectives, and to support learners in ensuring that their assessment evidence is logically structured, clearly organised and relevant to the Assessment Objectives.

Judgement should be used about how best to advise learners on structuring their projects. A written report is not the only model; learners producing Artefacts may have produced a workbook, annotated design sheets and sketchbooks, maquettes, tests of materials or project outcomes appropriate to the project's objectives (eg a manual to go with a machine they are designing). The aim of the model below is to encourage learners to reflect on how best to present their material. Careful organisation and selection can enhance the quality of the project outcome considerably.

This is particularly relevant if learners have produced extremely long activity logs. They should be encouraged to consider which material from the log best reflects the creative journey they have been on during their project (the key decisions which were taken and the reasoning and arguments which were part of this decision making). A carefully presented activity log would, in

the case of the Artefact or Performance units, provide a great deal of evidence for AO3 (Develop and realise).

Section	Number of words			
	Dissertation	Investigation/ Field Study	Performance	Artefact
Total word count	6000	5000	3000	1500/3000
Abstract/ summary	200	100	100	50/100
Introduction	800	600	400	200/400
Research Review	1800	1600	900	450/900
Discussion/ Development/Analysis	2700	2300	1350	675/1350
Conclusion	500	400	250	125/250
Bibliography	No recommendation	No recommendation	No recommendation	No recommendation
Appendices (PPF, activity records, raw data)	No recommendation	No recommendation	No recommendation	No recommendation

Evidence requirements

The evidence submitted should be selected carefully and presented to show how the Assessment Objectives have been met.

All projects should include the following items:

- a Project Proposal Form
- Project Activity Records/Log
- the outcome. (Details regarding the submission formats are outlined under each outcome type)
- evidence of the presentation and its assessment. An evaluation by the teacher assessor must be included as the Oral Presentation Checklist, a witness statement or observation record
- an evaluation (which may be included in a project written report)
- a completed Candidate Record sheet

Evidence submitted in electronic format

If samples include evidence in electronic format, DVD, CD or video, these should comply with the recommended applications listed in *Annexe E* of this document. Edexcel moderators have a pre-defined software toolkit installed on their computers and will not be able to access content which is viewed via a PC if it requires the use of any other application. These recommended applications are either common to most users or free and available to download online. Refer to *Annexe E* for further details.

- The maximum number of candidates work supplied on any one device will be 12. The minimum number will be 10, unless the cohort consists of fewer than 10 candidates.
- Evidence must be provided on DVD+/-R , CD+/-R or video in standard VHS format and must be a new, previously unused tape/disc.

- Where possible, one device per unit should be submitted for moderation.
- Two copies should be created; the master copy held securely at the centre and the copy sent to the moderator.
- The master copy should be retained securely by the centre until after the deadline for EAR applications has expired. (This is approximately one month after results are issued).
- Before sending the copy to the moderator it should be tested to ensure that it functions as expected.
- For each CD ROM a separate folder on the top-most level of the folder tree should be created for each of the sample candidate ePortfolios. Each folder should be named according to the following naming convention: [centre #]_[candidate #]_[first two letters of surname]_[first letter of first name]. For example, John Smith with candidate number 9876 at centre 12345 would have an ePortfolio in a folder titled, "12345_9876_SM_J"
- The DVD/CD/video should be labelled with the following information: unit number, exam series, centre number/name, candidate number/name and, if appropriate, the title of the film/performance.
- The details of the centre contact name including phone number and email address should also be included. If there are any problems the moderator will contact the named person at the centre using these details. If a sticker is used to label the device it should not interfere with the ordinary functioning of the format.

Please **do not zip** CD folders containing candidate work. The moderator should be able to access all files and folders directly from the CD without unzipping or altering the file or folder structure in any way.

Reports

Work should be submitted as treasury tagged A4 reports and candidates should refrain from using poly pockets.

Designed products or artwork

These could include any projects which have been developed in response to a design brief or take the form of a piece of art.

This will include evidence of project planning, collection and use of source material, the development of ideas, the exploration and safe use of materials and processes, and selection of the best ideas to produce a final artefact. The final outcome should be represented by no more than five photographs. The selected work by the candidate may contribute to their evidence for evaluation, presentation and reflective practice.

- The activity log/diary should be supported by design development sheets not exceeding A1, and if appropriate one project sketchbook (either A4 or A3 size). Candidates should refrain from layering images or attaching notebooks to the sheets.
- All two-dimensional work must be packed flat and not exceed A1. Work may be in any suitable medium provided that it can be packed and moderated without work smudging or sticking together. Work must be packed in such a way as to avoid damage in transit. Staples should not be used when mounting work.
- All three-dimensional work should be carefully photographed, using appropriate lighting and background context to show three-dimensional form and space and different viewpoints.

- Photographs should show construction, the materials used and any important use of colour, texture or surface qualities.
- Photographs should give a clear indication of actual size and the proposed scale if the work is made as a finished maquette for a larger piece.
- The final outcome should be represented by no more than five photographs.

Websites

- Candidates creating a website should submit a working copy on CD. Moderators are instructed not to access websites online.

Performances

- The activity log/diary/rehearsal schedule should be supported by a complete, unedited recording of the examination performance video/DVD/CD.
- The number of candidates in a group should not exceed 12 in each performance.
- Candidates must introduce themselves clearly by name, candidate number and the role(s)/instruments/equipment that they will perform in use at the beginning of each recorded performance.
- Centres must check that all introductions and performances are on the recording.
- Individual performances on DVD/CD should be divided into chapters.

Drama

- The performance length will depend on the number of candidates in the group, but the minimum length should be approximately 20 minutes (3 or 4 candidates) and the maximum 50 minutes (10 or 12 candidates).
- During the introduction candidates must also wear their performance costumes and state any costume changes that may take place. There should then be a full length shot clearly showing all candidates involved in each performance. The first candidate must introduce the title of the performance and the date.

Choosing a topic of personal interest

with particular relevance for Dissertation or Investigation/Field Study

The topic chosen by the learner should:

- allow a sufficient and suitable degree of research through the existence of adequate background materials
- allow the depth and breadth of study suitable for a Level 3 qualification.

It is suggested that a good project proposal title would meet the following criteria:

- the proposal could be controversial. There are arguments for and against which the learner is expected to contribute to
- the proposal is one that has an existing body of literature or source material that can be reviewed by the learner
- the proposal could extend a current line of learning that will lend itself to further rigorous exploration.

Research skills

The core skills which learners will need to use in the course of their research are:

- to think logically about arguments which are encountered in personal research
- to gather and handle source material critically
- to appreciate the importance of precision in the use of language or data when building a case for their point of view
- to show sensitivity to counter-arguments or rival theories
- to develop skills in presenting the project in a persuasive, cogent fashion
- to undertake a reflective study of what has been learned during the course of research or the statistical significance of the results.

Investigation/Field Study

It is important to recognise that project work on the Investigation/Field Study will be more reliant on gathering information/data that can be analysed. The scale of the Investigation/Field Study means that, in many cases, there will be time for both primary and secondary research. A model would be to use secondary research to provide a context within which to conduct and interpret primary data collection. For example, learners whose Investigation/Field Study concerned the effect of reducing speed limits on CO₂ emissions could research published literature to provide the background to their own study. The investigative work they carry out could then yield data which could be compared with the findings of their secondary research.

An important part of the discussion/conclusion must be an awareness of the significance in results. Some statistical methods would be expected and would need to form part of the taught element.

Performance

It is important to recognise that there are many different performance formats and that these do not need to be related to the performing arts and music. Sport or other physical activities that display learners' ability to express themselves in a physical manner can also come within this format, as could vocal forms of expression (eg performance poetry).

The research element of Performance projects will vary. It will be crucial to the success of the performance that there is a clear understanding of the time frame for the project so that rehearsals, or training for the final performance, are carried out to demonstrate the learners' achievement to its fullest potential.

Learners should be encouraged, where possible, to engage thoughtfully in the decision-making process leading up to a performance. They should research a range of approaches to performance and discuss the influences on their work critically and reflectively.

It is important that learners think carefully about the suitability of their performance for their target audience. Their production should be appropriate to the audience, both in terms of the nature and level of material they use and also in terms of length. Shorter pieces which have been crafted thoughtfully in relation to the target audience may well work better as performances.

Artefact

The range of potential projects that can result in the production of an Artefact Unit is very broad and learners will need to select their own areas for research to develop their projects. Important areas of research to be considered are:

- research of primary sources perhaps to include studies from observation, collection of objects and forms to study, documents, photographs and relevant data
- secondary source materials including critical and contextual references
- research that will provide background information for the ideas being considered
- consideration of other related disciplines such as aesthetics, principles of design, semiotics and communication
- an analysis of how others have used visual language, signs and symbols, and how they have used materials, techniques and technology
- research into the use of appropriate materials, construction and making techniques and technologies with practical experiment, exploration and testing where this is appropriate
- contextual references that look at style, characteristics of particular periods, fashion and taste
- research into public perception of similar artefacts and design or art work.

As the project develops this research process will assist in refining a final idea and selecting the most appropriate media. It is important that sources are used intelligently to inform the project work and that they are not just collections of images or data.

A clear action plan and time frame is essential to the success of the project and this should allow changes of direction or technical difficulties to be resolved before the presentation.

Preparing learners for their presentation

The presentation should be made to an audience who have the opportunity to respond at the end during a question and answer session.

It is expected that learners will present using their normal mode of communication.

It is good practice, where possible, for the audience to include two teacher-assessors who can jointly discuss the award of marks. Where this is not possible, having another adult present as part of the audience may be helpful.

Learners should be guided to produce presentations which give a succinct account of the main arguments or developments from their project. The question and answer session should address issues raised by the presentation, but also give learners an opportunity to review their work.

For the Artefact unit, it may be appropriate to present the project work in a portfolio or exhibition. Learners should select the work for display and plan/design the exhibition carefully. Consideration may be given to showing the project development and the finished work. If the work is a prototype, or maquette for a larger piece, then it may be helpful to show how it would be used and what materials would be used for the finished piece. If the work is intended for a specific site then drawings or photographs showing it 'in situ' might be appropriate.

The presentation will be a summary of learners' work, including research and the final project and will take place after the project has been completed. Presentation is a daunting task for most learners and before they carry out their presentation, they should have some training in presentation skills and an opportunity to practise their skills. This may include:

- watching (real or filmed) presentations and discussing their strengths and weaknesses
- mini-presentation exercises (eg presenting their work to a friend in a class discussion)
- a 'dress rehearsal' with feedback from a teacher-assessor.

It is important that all learners present in similar conditions eg to a similar sized group of peers.

Questioning learners after the presentation is useful, partly as a way of authenticating the originality of their work and partly as a way of giving them a chance to demonstrate the extent of their understanding further. The question and answer session can provide evidence for AO4 (Review).

Suitable questions include:

- 'which of the resources used proved to be the most useful to you and why?'
- 'what factors influenced your choice of presentation style?'
- 'looking back at your project, are there any processes you would change? If so, why?'
- 'did you anticipate any particular difficulties when approaching this subject and how did you/would you have dealt with them?'
- 'what areas of your subject do you think provide opportunities for further exploration and why?'

A check sheet for different aspects of the presentation is given in *Annexe A*. This may help in making decisions about the award of marks for the presentation in AO4 against the specification assessment criteria.

Teaching staff and mentoring

Suggestions are:

- appointing one teacher as overall co ordinator for the Extended Project. For example, the Head of Sixth Form
- finding mentors who have specific subject interests, from within and outside the centre, eg local sports leaders or local employers/academics, and allocate mentors to learners
- collaborating with other centres to provide a broad base of expertise.

Ensuring momentum is kept up over a long period of time

Mentors should hold regular meetings with learners to discuss and record progress made. They should also arrange for learners to present what they have done so far during the project to practise for the final presentation. These meetings and learner progress can be tracked in a formal way using documents such as tutorial forms, a project log-book or journal. It is advisable to sign and date these meetings for audit purposes.

Group activities

Learners undertaking a group project must have a clearly identified role within the group which can be assessed individually. There should be individual written submissions and individual contributions to the presentation of the project.

It is important that each learner has the opportunity to access all the Assessment Objectives. Project proposals from groups of learners should be checked to ensure that this is the case. It would not, for example, be acceptable to allow one learner to do all the research work for the project, whilst another made all the decisions about project objectives. Each learner should make a contribution to the project which can be assessed in terms of project management, use of resources, development and realisation and review.

In certain circumstances, a group may work on a single project outcome. In this case, it is vital that the contribution of each learner is clearly identified. For example, if a group of learners are all working on a Performance, the submitted assessment evidence should clearly identify each

performer at the outset. A jointly written report should be annotated by learners and the teacher-assessor, indicating which learner had responsibility for which section.

Group activities could include:

- a debate about a contentious issue (Performance)
- an international aid project, eg designing and making a model of a sustainable school (Artefact)
- a performing art production; music - ensemble, group or band performance; a sports activity - athletics, martial arts; abseiling or other outdoor venture activities
- the production of a themed fashion show with garments, advertising and promotional material, and stage sets
- an Investigation/Field Study requiring extensive primary research and collation of material
- production of a short film, animation or video.

Project topic areas

If learners are to make progress with their projects, it may help if they are working in areas where there is a body of literature/data which they can research. Also, since the point of a project is for the learners to explore their own ideas, the topic areas should ideally have a controversial aspect to help provide focus. The examples below are drawn from a range of subject areas. The basic idea of looking for topics which have a basis of secure knowledge, as well as containing controversial aspects where learners can develop their own points of view, is applicable to a wider range of subjects.

Research field	Sample research topic areas
Perspectives on Science (PoS)	The origins of the universe The human mind The beginning and ending of life
Religious studies	The existence of God The power of the Catholic Church in modern society
Citizenship	The effects of terrorism on society Freedom of religious expression in the 21 st century Climate change and individual responsibility
Astronomy	Matter distribution in universe Space exploration Life elsewhere

For example, a learner might wish to explore animal welfare and in particular, 'vivisection'. They should define a suitably specific research question within this general field, eg 'vivisection using chimpanzees in the UK'. They should explain their interest in the topic and identify controversial aspects of the question. These aspects may include the necessary role of experimental work in testing theories and the problems of generalising from one species (chimpanzees) to another (humans), as well as questions about animal pain, the legitimacy of deliberately inflicting suffering and issues surrounding utilitarian justifications for vivisection.

Specific to the Artefact

Projects centred on issues that affect the locality or community where the learner lives.

- Create a photographic essay to be displayed in the form of an exhibition or booklet that celebrates the character of an area of your environment that is threatened with redevelopment.
- Produce a photographic survey of teenage culture in your locality, what young people do, how they dress, how they entertain themselves.
- Produce designs and models for a facility catering for the needs of young people.

Issue-based projects

- Produce designs for promotional materials to communicate something you feel strongly about such as cruelty to animals, the plight of the homeless, the dangers of smoking or alcohol abuse, eating disorders and size zero fashion.

Re-designs

- Take an existing object that you consider to be out of fashion or no longer effective and re-design it. Produce a prototype of your final design.

You could consider how you might make the object:

- more stylish, contemporary and fashionable
 - to exploit a new technology
 - more environmentally friendly
 - more marketable
 - more functional .
- Produce a range of artefacts that are influenced by a contemporary event and that use historical styles as an important source of information and form. For example, you might make design or craft objects such as jewellery based on archaeological or historical precedents to accompany a major exhibition, or a film or TV series.

Commissions

- Produce designs and artefacts for a specific environment or to celebrate a specific event. This might be in the form of mural designs or site-specific sculpture, wall hangings or textiles, graphic design. These might be live briefs for particular clients.

Produce artworks to be located in a hospital, sports centre, village hall, school or college etc. to enhance the visual quality of the environment to improve the wellbeing of users of the facilities.

Models for project structure

Mainly relevant to the Dissertation or Investigation/Field Study

The project may be structured under the following headings where appropriate.

Unit 1: Dissertation

- Abstract/summary
- Introduction
- Research/review
- Discussion
- Conclusion
- Bibliography

Unit 2: Investigation/Field Study

- Abstract
- Introduction/context
- Research/data collection
- Analysis/discussion
- Evaluation/conclusion
- Bibliography

Abstract/Summary

The abstract should summarise the view point and conclusions reached in the project. It is suggested that, as with professional papers, the abstract should be considered once the main body of the report has been drafted. The abstract will focus the reader on the purpose, findings and conclusions of the report.

The introduction

The introduction should include an explanation of, and rationale for, the project title, an identification of the controversial aspects of the title and of the relevant literature/data sources and explanations of key terms (perhaps given in a glossary) and analytical techniques that will be used in the project. This will be based mainly on work learners produced for the project proposal.

In the example discussed previously the introduction would consist of a re-draft of the project proposal together with a discussion of key terms (eg what counts as vivisection, definitions of utilitarianism and notions of animal rights) and the pertinent legislation.

Research review

Learners should use their research to outline the literature/theories that underlie their project stating key dates, developments and the people involved. They should relate developments to their social context and discuss the influences on the key figures.

They should also use skills gained from looking at the case studies to comment on the reliability of sources (eg by distinguishing between primary and secondary sources, as well as distinguishing between facts, speculation and subjective opinion). For example, learners should note whether the source of the data comes from a newspaper summary of original research (and may therefore be abridged or even misrepresented). They should also be sensitive to the fact that particular

sources will offer biased information (for example, the focus and emphasis of a scientific report on vivisection may be affected by the organisation or group that funds the report).

For example, this section would outline the history of the use of chimpanzees in the UK for vivisection and explain the changes in society, which have led to growing concern about this.

Discussion/Analysis

In this section, learners should advance a case for a particular argument/hypothesis in relation to their question. This will mean stating their point of view clearly and identifying central arguments both for and against. They should try to critically evaluate these arguments. Learners should identify crucial assumptions from the arguments and assess them critically, paying attention as to whether or not the arguments are logically valid. They should consider arguments for and against their point of view and offer defences against objections. Throughout their discussion, they should be aware of the importance of clear and consistent use of language, particularly in relation to key technical terms used in their chosen topic area.

A learner might wish, for example, to look at the argumentative framework for vivisection. They might then go on to explain to what extent current practice in the UK with chimpanzees meets these conditions. They could justify their approach by considering alternative views (eg a wholesale ban on vivisection or unrestricted permission of the practice) and criticise the arguments for these alternatives. They would need to look at how language is used in the debate. (For example, is it meaningful to talk about animal rights?).

Conclusion/Evaluation

Learners should state their conclusions clearly, having considered how the arguments supported their point of view, or how the analysis of data does, or does not, allow or reject the proposed hypothesis. They should engage in a reflective study of the research process, or of the significance of results, explaining how their ideas have developed, and what they have learned about the methodology of research.

For example, learners might explain that their study has led them to qualify their initial opposition to/support of vivisection in important ways. They might describe how they learned to criticise literature written from a particular point of view (eg animal rights publications). They should identify further possible study (eg comparing UK practice with European).

Bibliography

Throughout the report, learners should use a consistent reference system for source material. References should make clear which author is being quoted, and where the quotation comes from. The bibliography should include reference to the author, date of publication and publisher. A full URL should be given for any websites that have been used so that the exact page can be located, the website address alone is not sufficient.

The Artefact

The structure of a project for the Artefact unit will vary according to the form of artefact to be made and learners should adopt appropriate strategies to produce their project.

Design projects will normally include the following phases:

- analysis of the brief or commission including recognition of objectives, constraints and opportunities
- research into a range of primary and secondary sources that will inform and inspire the work

- research into appropriate critical and contextual references with indications of how these relate to the project work. Identify the key ideas that will help to focus the project
- exploration of and experiment with materials, techniques and processes with ongoing annotations that evaluate the potential of these
- development of alternative ideas that provide possible solutions to the brief. These will be tested and reworked as necessary. This work will integrate or synthesise aspects of the research and learners' own ideas. The best ideas, images, forms, structures etc will be selected for further development and refinement
- production of a final piece of work
- NB in working through the design cycle learners may return to any of the project phases to amend, improve, and refine the work against the original brief. Any changes in direction will be noted and explained
- critical evaluation of the process and final work against the original brief
- completion of bibliography, acknowledgement and review of sources used
- presentation of the work in an appropriate form.

Plagiarism

It is important that learners are made aware of the issue of plagiarism. Projects must not contain material which has been taken, without acknowledgement, from websites, textbooks or any other sources. Learners should be aware of the serious consequences of submitting work as their own that has been plagiarised from other sources. Each case of malpractice will be considered and judged on an individual basis, in the light of all available information. The outcome should be appropriate to the extent of the malpractice as determined by Edexcel. Edexcel may withhold certification in cases of plagiarism.

Learners should be taught how to make proper use of published material in supporting of their arguments. It is expected that all source materials will be properly referenced and that transcribed material from books or websites will only be used in the form of explicit quotations.

It is good practice to have a formal statement on the front cover of the final submission document(s) where learners sign to indicate that they are submitting work which is authentic and that all appropriated sections have been formally acknowledged.

Guidance on moderation

External moderation

The purpose of external moderation is to determine, through the re-assessment of a sample of candidates' projects, whether centres are assessing accurately and consistently, to agreed National Standards.

Moderation is concerned solely with judging the quality of centre assessment decisions through the external moderation of internally assessed and standardised work. It does not extend to providing support and guidance to centre staff. The process will inevitably involve implicit support and guidance, through the generation of feedback reports where centres are deemed to be outside tolerance levels.

Internal standardisation

Internal standardisation must be carried out within the centre before submission. A sample is required for each unit where candidate entries have been made in order to verify assessment and issue final marks to candidates. In your sample you should aim to include work marked by each teacher-assessor and which covers the range of candidate ability.

This process should be followed for each units where work is being submitted and all assessors should be included. It is not necessary to standardise across different units.

It is recommended that this process is delivered by someone who can manage the different stages of internal standardisation, such as a Projects Domain Assessor. This Domain Assessor has a specific brief to manage the Project process and, whilst they may be the same person who acts as Domain Assessor for Principal Learning, Project internal standardisation should be managed as an individual process. This enables the standardisation of all Project assessment, regardless of the programme the learner is following, which is likely to cover different lines of learning and other pre or post 16 programmes. This role would benefit from looking over the whole consortium rather than just within a specific centre, as within Principal Learning candidates are likely to be attending several centres for delivery.

Centres should be aware that when an entry is made, the external moderator will look at the candidate work within the sample and make decisions on the assumption that internal standardisation has taken place. This means that if the centre cohort submission is made up from work that has been produced from a number of centres or programmes, the Project Domain Assessor needs to ensure that the standardisation exercise has been fully completed across the cohort before marks are submitted.

The Project Domain Assessor should ensure the following.

- Candidate work is completed in accordance with the assessment evidence requirements for each unit and is ready for sampling by the required date.
- Internal assessors are aware of the Assessment Objectives and Marking Grids for the relevant units.
- The sample or samples to be submitted have been subject to a suitable process of internal standardisation. The nature of this process is the responsibility of the centre which is submitting the sample. A recommended model involves distributing exemplar work to teacher-assessors, collecting marks, then giving feedback to assessors about where they are in line and where they need to adjust their marking. Further marking guidance is available in the Projects specification.

It is recommended that, where possible, use is made of assessors with experience at the appropriate level for the different units. For example, performance work may be assessed by, or cross-checked with, a performance assessor. Within units, teacher-assessors do not need subject specific knowledge in order to make assessment judgements as the criteria are process oriented.

However, if assessors have doubts about the level of a learner's understanding, they should consult an assessor with relevant subject knowledge.

Sample selection

All external moderation is carried out postally. There are no centre visits. You are expected to provide a sample of candidate work for each unit entered in each series. The candidates to include in the sample are indicated on Edexcel Online by a tick in the "sample" column, up to a maximum of 10 candidates. (For cohorts of 10 or less, all candidates will be requested as part of the sample). The sample can be viewed at the same time as marks are entered.

If the sample indicated online:

- does not include the candidates with the highest mark, and lowest marks above zero these should also be added to the sample
- has not included a full sample of 10 (or all the candidates in a cohort of less than 10) then you must manually select candidates to make the sample up to 10. A sample of 10 must always be provided for cohorts of 10 or more
- includes candidate/s who have been withdrawn or are absent (marked by an X) then you must manually substitute other candidate/s in their place.
- does not fully cover a set of candidates across the ability range, then you should also include samples which cover the full range.

Sending the sample to the moderator

Details of your allocated moderator will appear on Edexcel Online, click on the *Assessment Associates* link to display your moderator's name and address. Please ensure that where there are different moderators for different units you use the correct moderator and address details for the appropriate units.

The sample should be sent to the allocated moderator by the given deadline. The unit and your centre number should also be written on the package/s, above the moderator's address details. You should also include the package number if more than one is being submitted, for example 1 of 2.

Samples should be sent ordinary post and not recorded delivery, so they may be received at the moderator's address when they are not there. You should, however, obtain a proof of postage certificate from the post office.

If the moderator does not receive the samples you will be contacted directly. You may be required to produce a proof of postage in order for the second copy to be accepted for moderation.

In cases where electronic evidence is not named, formatted, labelled or structured according to the guidelines in this document, it may be returned to centres unmoderated. Under such circumstances, Edexcel cannot guarantee the timely issue of results for candidates.

Annexes

Annexe A - Administrative Project forms

Contains a list of forms used to record project progress and assessment outcomes.

Annexe B - Sample project titles

Annexe C - Sample timelines for Dissertation and Investigation/ Field Study

These may be of use to teachers and/or learners when planning project activities. They correspond to around 80 guided learning hours, assuming four hours per week of project work.

Annexe D - Guidance for Perspectives on Science centres

Information about the changes for centres who have been using the PoS AS course and are moving to the Extended Project. This includes guidance on filling in the Project Proposal Form for the EP, which is different to the PoS Research Proposal in some areas.

Annexe E - Recommended applications and formats for electronic submissions

Edexcel moderators have a pre-defined software toolkit installed on their computers and will not be able to access content that which is viewed via a PC if it requires the use of any other application. These recommended applications are either common to most users or free and available to download online.

Annexe A - Project forms

- **The Project Proposal form** - Used throughout project to document objectives and planning, reviewer comments and milestones. Copies are available in Word and PDF format.
- **The Activity log** - The activity log should provide evidence to support the award of the mark for AO1. Learners who have kept journals throughout their project should be encouraged to edit these and provide a brief, but clear and detailed, record of the key developments which have occurred whilst working on their project. Copies are available in Word and PDF format.
- **Oral Presentation checklist** - This is used by the teacher-assessor to record their marking and comments for the presentation.
- **Candidate Record Sheet (CRS)**- Used by the teacher-assessor to record the mark awarded overall, mark breakdown and comments. The CRS must be signed by the candidate and also acts as an Statement of Authentication.
- **Witness Statement**

Up-to-date copies of forms can be found on the Edexcel Project website.

Annexe B - Sample project titles

P301: Dissertation and P302: Investigation/Field Study

- Is it ethical to genetically engineer babies for designer purposes?
- Do violent computer games contribute to anti-social behaviour?
- What are the ethical issues in trade relations between the West and China?
- Should businesses change their practice to respect the environment?
- Are American fundamentalist religious beliefs partly responsible for global warming?
- Is the only aim of business to make maximum profit?
- Can you believe in God and the Big Bang?
- What does being healthy mean to you? A case study of the effects of food standard guidelines on people's eating habits.
- How do our senses affect our food preferences?
- Is wi-fi safe?
- Is there a perceptible difference between organic and non-organic food?
- Will we find life in the solar system?
- What is the impact of Dark Energy?
- Can we justify human space exploration?

Sport/Health

- What are the long-term health effects of binge drinking?
- How can training and diet improve flat-water canoe techniques?
- How can sports fitness improve through football?
- What are the ethical issues around 'size-0 models'?
- Should anyone be allowed to become a foster parent?
- Do government health campaigns affect levels of binge drinking?
- Should abortion be free on the NHS?
- Is the NHS having a beneficial impact on the fight for cancer, particularly breast cancer?

Trade

- Is free trade the way forward?
- What is the impact of fair-trade on both developed and developing nations? A research study based on the marketing and enterprise skills used by two rival companies in a local town centre.
- How do supermarkets gain competitive advantage? A case study of Tesco and Sainsburys.

Teaching

- Do teaching assistants have a beneficial effect on the attainment of learners in the Primary and Secondary FE sectors?
- How have children's likes and dislikes changed since they moved from Primary to Secondary school?

Astronomy

- Solar variability near Solar minimum and its effect on cloud cover.

Business/IT

- How important is market research in producing a successful business project?

- How do successful businesses use ICT? A case study approach.

P303: Performance

- How can live performance engage an audience in the current technological age?
- What role does comedy have in serious culture?
- Can Brechtian techniques be successfully applied to today's social and political issues?
- Is music effective as a tool for motivating workers?
- How can we make classical texts popular to new audiences?
- How can we express the rhythm of eastern cultures and communicate them to a western audience?

P304: Artefact

- Nature's vessels - design and make a series of ceramic forms based on natural containers such as seedpods, shells, nests etc.
- Portrait and personality - make a series of 2D or 3D images that are based on the theme of portraiture.
- Illustration - make illustrations for either a poem or a children's story of your choice.
- Recycled - design and make a collection of sophisticated jewellery or body adornment from unconventional recycled materials.
- The issue is ... - Produce graphic material, (illustrations, posters, leaflets etc) for a promotional campaign on an issue of your choice. The subject may be social, environmental, ethical, political etc.
- Erosion and decay - Produce a series of images, (paintings, drawings, prints, photographs, mixed media) based on the theme of erosion and decay.

Annexe C - Sample timeline for Dissertation

This provides an example of how learners might use their time when working on different parts of a Dissertation. It assumes around 4GLH per week and a total of 80GLH for the Dissertation.

Section	Approx. number of weeks	Activities and skills building
Project proposal and planning	2	Draft project proposal Plan a research timetable
Literature review	5	Write a mini-literature review of three sources Select resources Evaluate web resources Update activity log
Discussion	8	Formulate point of view Peer interview Develop arguments Consider counter-arguments Contribute to work in progress seminar Update activity log
Introduction	1	Write up project proposal plus key term analysis
Abstract	0.5	Write overview of whole project
Bibliography and final revisions	1	Learn and use conventions for bibliography
Conclusion	1.5	Summarise main arguments Evaluation of research process Update and edit activity log Extension ideas
Preparation for oral presentation	1	Small group rehearsals

Annexe C - Sample timeline for Investigation/Field study

Section	Approx. number of weeks	Activities and skills building
Project proposal and planning	2	Draft project proposal Plan a research/data collection timetable
Investigation or Field Study	7	Set up experiment or study Primary data collection Select secondary resources Evaluate web resources Evaluate significance of data
Discussion/ Analysis	6	Analyse data using appropriate methods Formulate hypothesis Independent specialist interview Develop theory Consider counter-theories
Introduction	1	Write up project proposal including hypothesis plus key term analysis
Abstract	0.5	Write overview of whole project
Bibliography and final revisions	1	Learn and use conventions for bibliography and referencing
Conclusion/ Evaluation	1	Tell the 'story' of the project Reflective study of research and analysis of methods Extension ideas
Preparation for oral presentation	1	Small group rehearsals

Annexe D - Guidance for Perspectives on Science centres

As the foundation from which the criteria for the Extended Project Dissertation were developed, Perspectives on Science (PoS) can be easily integrated into the new course. The issues surrounding the History, Ethics and Philosophy of Science, such as genetics or the human mind, lend themselves to further study and development and an Extended Project Dissertation provides an ideal framework for this.

There are a small number of changes to what learners are expected to produce and the way projects are assessed.

Format of PoS EP submissions

Between 5000-6000 words is the recommended length for an EP Dissertation, not 7000 as with the AS qualification. There is no fixed penalty for work falling outside this range but the criteria do refer to the need for concise writing, so excessive length may attract a lower mark.

The PoS model of an abstract, introduction, literature review, discussion, conclusion and bibliography can be used for EP Dissertations.

As well as their Dissertation, learners should also submit their project proposal form and an activity log. Records of research would normally be integrated into the literature review and do not need to be submitted separately.

Assessing PoS using the EP criteria

The mark for AO1 should be awarded mainly by looking at the project proposal form and the activity log. Guidance on how PoS learners might fill in their project proposal is given below. The activity log should contain a summary of the key developments which have occurred during the course of the project. In particular, it should explain how the learners' ideas developed during the course of the project (in the AS qualification, this would have been discussed in the conclusion) and how their research question has been developed and refined.

The literature review and introduction will provide most of the evidence for AO2 (Use of resources). The focus of writing in the introduction should be on the research question; stronger learners will have explored the scientific, ethical and/or philosophical aspects of their research question in detail, showing a thorough understanding of its complexities. The quality of referencing and bibliography should also be considered in reaching a decision about the mark for AO2.

Analysis refers to the exploration of the meaning of key ideas in the project (eg key term analysis, which can be included in the introduction).

Synthesis refers to the integration of material into a coherent whole. Stronger literature reviews will be written in narrative form (establishing links between sources) and will contain the key details of the scientific developments underlying the research question.

Sources should be evaluated as they are in the AS PoS model.

The discussion section of the Dissertation and the conclusion will provide most of the evidence for AO3. As with the PoS AS criteria, stronger learners will present lines of reasoning (not just unconnected arguments) and will address both argument and counter-argument. The strength of the conclusions should be assessed in terms of how well learners have summarised their point of view and the case they have made. Aspects of the quality of written communication should also be considered when deciding on a mark for AO3.

The mark for AO4 should be awarded based on learners' presentation and also on the quality of their evaluation of the project process. Evaluative evidence may be included in the Dissertation itself (eg in the conclusion, via comments on what they have learned about the research process or in comments recorded in the activity log) or in their answers to questions following their presentation.

Annexe E - Recommended applications and formats for electronic submissions

Please note that:

- images are designed to be viewed at screen resolution of at least 1024x768 pixels
- moderators have been instructed not to open any *.exe applications they may encounter whilst viewing an ePortfolio, since these can potentially damage their computers
- DVDs should be burnt at the full speed rate as this could cause incompatibility issues with stand alone DVD players.

These recommended applications are free and available to download online. Visit the Projects micro site for links to access and download these applications.

Player	Supplier	Media	Examples of file formats supported
Acrobat Reader	Adobe	PDF documents	.pdf
Flash Player	Adobe	Multimedia	.swf, .flv
PowerPoint Viewer 2007	Microsoft	Presentation	.ppt, .pptx, .ppsx
QuickTime Player with Picture Viewer	Apple	Multimedia	.avi, .mpeg, H.264
VLC Media Player	Videolan.org	Multimedia	.mpg, .avi, .wmv, .wma, .ogm, .wav, .flv, .mp4
Windows Picture and Fax Viewer	Microsoft	Multimedia	.bmp, .gif, .jpg, .tiff, .png
Windows Media Player	Microsoft	Multimedia	.wmv, .mpeg, .mpg, .wav, .mp3, .midi
Excel Viewer 2003	Microsoft	Spreadsheets	.xls, .xlsx
Internet Explorer	Microsoft	Web pages	.hml, .html
Irfanview	Irfanview	Graphics	
Java Runtime Environment (including Java 3D and Java Media Framework)	Sun	N/A	N/A
Java Media Framework 2.1.1	Sun	N/A	N/A
Java 3D 1.5.1	Sun	N/A	N/A
Mediator 8 Viewer	Matchware	Multimedia	.md8
Mediator 9 Viewer	Matchware	Multimedia	.md9
Microsoft Office Compatibility Pack	Microsoft	N/A	N/A
Mission Player	Immersive Education	Games	.playmission
Firefox	Mozilla	Web pages	.htm, .html
Openmind 2 Viewer	Matchware	Mind maps	.omp

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