

Dromore High School

Developing Assessment to Measure Progress and Improve Learning

Guidance on
Subject Assessment
at Key Stage 3

Introduction

Dromore High School is a non-selective school for 11 to 18 year olds with around 900 pupils and 56 full-time staff. The school was a pilot school for the revised Northern Ireland Curriculum and was a specialist school in Science. This case study illustrates how the school has developed and implemented a more integrated approach to developing and assessing skills and capabilities alongside subject knowledge and understanding in all subjects at Key Stage 3. It shows how different types of assessment tasks have been created to suit different subject contexts and how they are used to measure progression and improve learning.

Background

The introduction of A Levels to the school in 2011 and the changes to specifications at GCSE have highlighted the need for the Senior Leadership Team (SLT) to ensure a good foundation of teaching, learning and assessment at KS3. This led to developing assessment that could be used more effectively to measure progression by taking greater account of skills and capabilities and contribute to improving learning at KS3.

The vision behind the initiative is that improving pupils' Thinking Skills will lead to improvements in their learning. Assessment, alongside teaching and learning, has a key role to play in helping to achieve this. Assessment and Teaching and Learning are inextricably linked. To enable pupils to progress and develop their Thinking Skills, it is important to know what stage they are at in their learning so that teachers can use teaching, learning and Assessment for Learning (AfL) strategies to enable them to improve their learning (CCEA, 2009). Assessment also provides a way of measuring these improvements as progression.

Over several months there was discussion about developing and assessing Thinking Skills within subjects. This was accompanied by a review of the subject Progression Maps for Thinking Skills and Personal Capabilities (TS&PC) (CCEA, 2009) the Levels of Progression for the Cross-Curricular

Skills and other support materials. It became clear that the key to improving pupil performance in subjects was to ensure that they developed the Thinking Skills essential for deep learning. This enables them to move beyond superficial recall of knowledge to develop a deeper understanding of subject contexts, themes and concepts and to be able to make connections in their learning and apply it to less familiar contexts.

This required teachers to develop pedagogy based on an infused approach to teaching Thinking Skills and Personal Capabilities alongside subject knowledge and understanding (CCEA, 2007). This meant that changes also needed to be made to how pupils were assessed in order to take greater account of the skills and capabilities. It followed that the school's Key Stage 3 assessment arrangements would also have to be revised.

To successfully manage change, the change process needs to be understood and accepted by all staff. Schein (2004), when discussing leadership and changing organisational culture, states that *'the way to unfreeze the present is to use discomforting data to challenge assumptions about the present'*.

The 'discomforting data,' in this case, came from a review and analysis of exam averages in Year 10. It was found that in many subjects the averages for a year group were 'too high', suggesting unrealistic future success. SLT and teachers concluded that part of the reason for this was that, in some cases, the assessments did not sufficiently challenge pupils to engage in using higher order thinking skills. The findings were presented to and discussed with staff who agreed that it would be important to develop a more rigorous approach to assessment at KS3 to help ensure consistency of standards in and across departments.

Developing Assessment to Measure Progress

Managing the change process was challenging because of its complexity and evolving nature. However, by keeping a focus on the main reason

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for change: 'improved thinking – improved performance' and by providing regular opportunities for staff feedback, there was inbuilt flexibility to take account of different views on developing skills and capabilities and how assessment at Key Stage 3 should be developed.

A KS3 co-ordinator was appointed and time was given on a weekly basis to manage implementing the changes. Following a closer examination of the Levels of Progression for Communication, Using Maths and Using ICT, the Thinking Skills and Personal Capabilities subject Progression Maps and other materials, the co-ordinator produced a Skills Reference Booklet (Appendix A). Essentially, this is a skills progression framework for each year of Key Stage 3.

While it was recognised that a pupil's progress in skills may not be linear, it was generally expected that progression would increase with age, providing pupils have appropriate opportunities to acquire and develop these skills. Each strand of the Thinking Skills and Personal Capabilities is set against success criteria. Teachers can then use these as guidelines when setting assessments.

Types of Assessment Tasks

The KS3 co-ordinator then further analysed success criteria statements and identified different types of tasks that could be used to assess skills in an integrated way alongside subject knowledge and understanding.

The tasks were divided into four areas:
Research;
Design;
Investigation; and
Examining Evidence (Appendix B).

Each type of task can be used to assess a different combination of skills and capabilities. For example, a research task focuses on assessing the pupils' managing information skills, such as finding, selecting, gathering, adapting and interpreting information, their Using ICT skills to explore and express information/ideas, their creativity of approach and their skills to communicate information/ideas/findings. Whereas a design task can be used to assess aspects of Managing Information, Using ICT, Communication and Using Maths there is a greater emphasis on assessing creativity.



Year 9 pupils working on a Using Maths task

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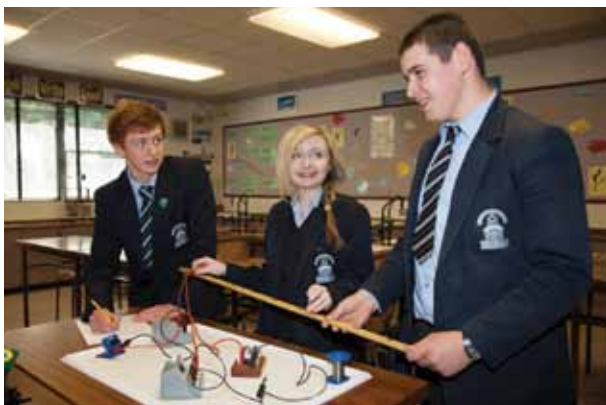
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Using Assessment Tasks to Improve Learning

The tasks have a summative purpose, but they are also intended to be used by teachers alongside AfL strategies to support pupils to improve their learning. For example, before pupils engage with the task the teacher facilitates a class discussion about the nature of the task, shares success criteria with pupils and explains what skills, capabilities, knowledge and understanding they are expected to demonstrate.

When the task is completed there should be opportunities for class discussion. This may be accompanied by self and peer-assessment activities where pupils review and comment on their own and each other's work. The teacher also provides quality written and oral feedback to individual pupils, focusing on their strengths, areas for improvement and ways that they might make improvements in their learning. The aim is to enable pupils to identify gaps in their learning and to support them to explore ways to close these gaps.



Year 10 pupils investigate resistance in a wire



Year 8 pupils investigate the nature of rock salt



Teacher gives feedback to a pupil about her Endangered Species project

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Assessment and Staff Development

Staff training was provided during separate INSET days for teachers. They were separated into two groups: the 'critical thinking-based' subjects and the 'creative thinking-based' subjects. This distinction was based on the main type of skills that pupils were likely to have opportunities to develop in each subject and is not seen as being definitive. Training focused on:

- developing an infusion approach to teaching Thinking Skills alongside the Cross-Curricular Skills and subject knowledge and understanding;
- the importance of assessment planning alongside Teaching and Learning;
- developing assessment tasks;
- using assessment information to measure progression; and
- using assessment information to improve learning and pupil performance.

The training was an opportunity for discussion. Departments and teachers had an opportunity to clarify their roles in Key Stage 3 assessment. It became clear that some subjects were better placed to assess certain skills and capabilities than others. This led to agreement on which subjects would contribute to the assessment of the Thinking Skills and Personal Capabilities and Cross-Curricular Skills in each Year of Key Stage 3.

Implementing Changes in Assessment Practice

The Key Stage 3 co-ordinator worked with the Senior Leadership Team and heads of department to create an assessment schedule (Appendix C). It was agreed that six assessments, which could include tests, tasks, project, practical work and exams, would be introduced to each year group in Key Stage 3. The assessment schedule was implemented from September 2010 and assessment elements are still being reviewed and refined.

Three assessments were completed by the end of January and a further three by May/June. Reports are produced for parents at these stages. The three assessments for each report have weightings of 40 percent, 20 percent and 40 percent. This means that internal exams contribute at most only 40 percent of total assessment with the other 60 percent composed of tasks, tests and practical work. This shift in assessment focus was particularly appreciated by teachers of subjects such as Art and Design, and Technology and Design. It was felt that previously too much emphasis was placed on pupils' performance over one or two hours in the school examinations rather than on their performance throughout the year in class-based activities, including project work and tasks.

The need for rigour was emphasised, with heads of department accountable to the co-ordinator for their part in the schedule. The co-ordinator continued to meet regularly with individual heads of department at this stage to provide support, assist with problems, act as a critical friend, encourage, and keep the change process moving.

A bespoke KS3 tracking system, facilitated by C2k through SIMS Assessment Manager, was put in place. This helps teachers to monitor and track pupil progress. The assessment information is also used to identify inconsistencies in subject standards and to ensure more equivalence in standards across subjects is achieved.

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A Work in Progress

The school is continuing to develop its assessment practice as part of its ongoing process of self-evaluation and development planning. While implementing this initiative has been a challenging experience for all those involved its success is largely due to the teachers' commitment and hard work and to the co-operative culture which exists in the everyday life of the school. Staff development and the creation and sharing of knowledge between colleagues are also vital to securing school improvement initiatives such as this.

As a result of this educational initiative the school has also improved the way it shares information with staff. As well as whole school INSET, workshop INSET was developed for departmental groups and working parties (pods) have been created for completing specific tasks such as reporting.

Reference

Schein, E H, *Organizational Culture and Leadership* (third edition, Jossey-Bass, 2004)

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Appendix A

Year 8 Progression in Cross-Curricular skills: Success Criteria

Thinking Skill	Process/Strand	Success Criteria
Managing Information	Questioning and planning	<ul style="list-style-type: none"> identify question/problem to investigate; suggest some issues relevant to a given task/topic; clarify the task; sequence investigation; and develop a plan for locating information.
	Finding and Selecting Sources Grouping, Sorting and Evaluating Information Recording and Adapting Information	<ul style="list-style-type: none"> identify information required; compare a range of given sources for relevance; locate relevant information; evaluate the usefulness of information; and extract key points, edit and present.
Thinking, Problem-Solving and Decision-Making	Seeing patterns and relationships	<ul style="list-style-type: none"> recognise and describe patterns and trends; describe a process or event; and describe similarities and characteristics.
	Develop a line of reasoning	<ul style="list-style-type: none"> offer reasons for the pattern/trend/viewpoint/attitude/sequence of events; and explain what is happening using relevant subject language.
	Examining evidence	<ul style="list-style-type: none"> consider how reliable and useful the evidence is.
	Analysing multiple perspectives	<ul style="list-style-type: none"> recognise another view about an issue; and give reasons for someone holding that view.
	Making decisions/solving problems	<ul style="list-style-type: none"> clarify the problem; identify some possible solutions to the problem; and outline some pros and cons for each option.
Being Creative	Curiosity	<ul style="list-style-type: none"> identify issues that do not have straightforward answers.
	Exploration	<ul style="list-style-type: none"> generate own and different ideas; and think through ideas, seeing where they might lead.
	Flexibility	<ul style="list-style-type: none"> show openness to new ideas, methods and points of view; and be prepared to work in different ways.
	Resilience	<ul style="list-style-type: none"> accept that mistakes and setbacks are part of learning; and accept that others may have a differing point of view on issues.

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Personal Capability	Process/Strand	Success Criteria
Working with Others	Learning With and From Others	<ul style="list-style-type: none"> willingly engage with others; help others with their learning; and share opinions and viewpoints.
	Roles and responsibilities	<ul style="list-style-type: none"> work in different roles; and take responsibility in group tasks.
	Influencing and negotiating	<ul style="list-style-type: none"> show respect by listening to differences in opinion; and express opinion using appropriate language.
Self-Management	Review and improve	<ul style="list-style-type: none"> think about your approach before acting; and review and discuss your thinking and learning.
	Time management	<ul style="list-style-type: none"> follow a sequence of activities and complete a task on time.
	Goals and targets	<ul style="list-style-type: none"> identify strengths and weaknesses; identify interests, aspirations; work with others to agree personal goals for learning; and identify individual learning needs and follow steps for improvement.

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Year 9 Progression in Cross-Curricular skills: Success Criteria

Thinking Skill	Process/Strand	Success Criteria
Managing Information	Questioning and planning	<ul style="list-style-type: none"> ask a range of questions to clarify the task; identify the issues that are central to the task/topic; select key issues to establish an appropriate sequence for the investigation; and develop a plan for locating and recording information.
	Finding and selecting sources	<ul style="list-style-type: none"> compare sources and judge their usefulness; distinguish fact from opinion; and use a range of given and collected information and/or data.
	Grouping, sorting and evaluating information	<ul style="list-style-type: none"> compare and contrast information from different sources; and evaluate the usefulness of the information.
	Recording and adapting information	<ul style="list-style-type: none"> record and present information in a range of formats; and take audience and purpose into account.
Thinking, Problem-Solving and Decision-Making	Seeing patterns and relationships	<ul style="list-style-type: none"> explain how two different factors/variables relate to produce patterns and trends; use patterns and trends to make generalisations and simple predictions; compare and contrast characteristics of one issue with another; and explain how different parts/events of a process/cycle/system are linked together.
	Develop a line of reasoning	<ul style="list-style-type: none"> analyse an event/process/issue/viewpoint/attitude and explain the most likely causes; and use specific evidence, information and appropriate subject language to support an argument.
	Examining evidence	<ul style="list-style-type: none"> recognise a range of different interpretations; distinguish between fact, opinion, propaganda and stereotyping; and consider ways of ensuring greater reliability.
	Analysing multiple perspectives	<ul style="list-style-type: none"> recognise the views of other groups and explain why they hold them; and recognise the social, economic and environmental perspectives of an issue.
	Making decisions/solving problems	<ul style="list-style-type: none"> explore a wide range of options; identify the pros and cons for each option; and justify their choice of option for the solution/decision.

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Thinking Skill	Process/Strand	Success Criteria
Being Creative	Curiosity	<ul style="list-style-type: none"> • seek out and identify new issues or problems to investigate/ solve; and • pose thoughtful questions and probe for more information.
	Exploration	<ul style="list-style-type: none"> • generate, build and combine ideas in new and flexible ways; • make ideas real and translate them into outcomes; and • deliberately pursue unusual and different solutions to issues/problems.
	Flexibility	<ul style="list-style-type: none"> • examine and respond to points of view in an open manner; and • be willing to try out and develop new ideas and methods, following them through to conclusion.
	Resilience	<ul style="list-style-type: none"> • persist in the face of difficulty and set back; • recognise the strengths and weaknesses of their own work; and • discuss their views on issues with others who hold differing opinion.

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Personal Capability	Process/Strand	Success Criteria
Working with Others	Learning with and from others	<ul style="list-style-type: none"> • help others to learn by sharing ideas and opinions; and • respond to each other in constructive and respectful ways.
	Roles and responsibilities	<ul style="list-style-type: none"> • show initiative in assigning and organising work within a group; and • contribute constructively towards group goals.
	Influencing and negotiating	<ul style="list-style-type: none"> • show respect by listening to differences in opinion; • express opinion using appropriate language; and • explore differences of opinion to reach an outcome.
Self-Management	Review and improve	<ul style="list-style-type: none"> • explain their approaches to thinking and learning; • compare different approaches with a view to improvement; • respond positively to feedback; and • review and discuss their thinking and learning.
	Time management	<ul style="list-style-type: none"> • plan and organise a sequence of activities; and • manage resources to meet a deadline.
	Goals and targets	<ul style="list-style-type: none"> • identify strengths and weaknesses; • identify interests, aspirations; • work with others to agree personal goals for learning; and • prioritise individual learning needs and follow steps for improvement.

Year 10 Progression in Cross-Curricular skills: Success Criteria

Thinking Skill	Process/Strand	Success Criteria
Managing Information	Questioning and planning	<ul style="list-style-type: none"> ask specific questions to clarify the task; use their own knowledge and understanding to identify key issues and related questions that are central to the task/topic; establish their own sequence of investigation; and develop a plan for locating and recording information.
	Finding and selecting sources	<ul style="list-style-type: none"> compare sources and judge their usefulness and identify limitations with sources; distinguish fact from opinion; use a range of given and collected information and/or data; and identify information still required.
	Grouping, sorting and evaluating information	<ul style="list-style-type: none"> compare and contrast information from different sources; combine relevant information from different sources; evaluate the usefulness of the information; and assess the extent to which the sources address the key issues.
	Recording and adapting information	<ul style="list-style-type: none"> record and present information in a logical and coherent way using a range of appropriate formats; and take audience and purpose into account.

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Thinking Skill	Process/Strand	Success Criteria
Thinking, Problem-Solving and Decision-Making	Seeing patterns and relationships	<ul style="list-style-type: none"> explain how complex relationships between a number of factors/variables produce patterns and trends; assess the relative significance of these factors; and weigh up the impact of how changing one part of a situation effects the whole.
	Develop a line of reasoning	<ul style="list-style-type: none"> explain how one set of actions can affect/are affected by another; draw conclusions based on sound and robust evidence; predict and address counter-arguments about an issue; recognise flaws and weaknesses in a specific argument and challenge assumptions made; explain how people's actions and reactions to an issue can affect/are affected by others; and make judgements about the most likely explanations.
	Examining evidence	<ul style="list-style-type: none"> recognise a range of different interpretations. distinguish between fact, opinion, propaganda and stereotyping; weigh up strengths and weaknesses of evidence/ sources in order to validate findings; and identify ways of ensuring greater reliability.
	Analysing multiple perspectives	<ul style="list-style-type: none"> assess the relative merits of a range of viewpoints and come to their own conclusions; recognise the social, economic and environmental perspectives of an issue; and suggest ways by which conflicts of interest might be resolved to the benefit of most.
	Making decisions/solving problems	<ul style="list-style-type: none"> systematically work through a range of options identify the pros and cons and likelihood for each option; justify their choice of option for solution/decision; evaluate and refine their choice of solution/ decision based on experience of other situations; and recognise that solutions have intended and unintended consequences.

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Thinking Skill	Process/Strand	Success Criteria
Being Creative	Curiosity	<ul style="list-style-type: none"> • seek out and identify new issues or problems to investigate/ solve; • search for more meaningful answers; • keep a sense of purpose and direction in pursuing new problems; • understand the complexity of the issues involved and make meaning and order from inconsistent and contradictory information; and • recognise that there are often a number of answers/solutions to issues and tolerate ambiguity.
	Exploration	<ul style="list-style-type: none"> • explore and link complex ideas and information and make new associations; • exercise individually in linking their own ideas to a bigger picture; and • make their ideas real and translate them into outcomes.
	Flexibility	<ul style="list-style-type: none"> • critically examine a variety of conflicting views; • be willing to try out and develop new ideas and methods following them through to conclusion; • be critical in refining ideas and methods; and • review and reflect on new ideas and methods responding to feedback.
	Resilience	<ul style="list-style-type: none"> • persist in the face of difficulty and set back; • recognise the strengths and weaknesses of their own work; • turn mistakes and setbacks into new approaches; • seek excellence; • discuss their views on issues with others who hold differing opinion; and • offer justification for own opinion while accepting that others may disagree.

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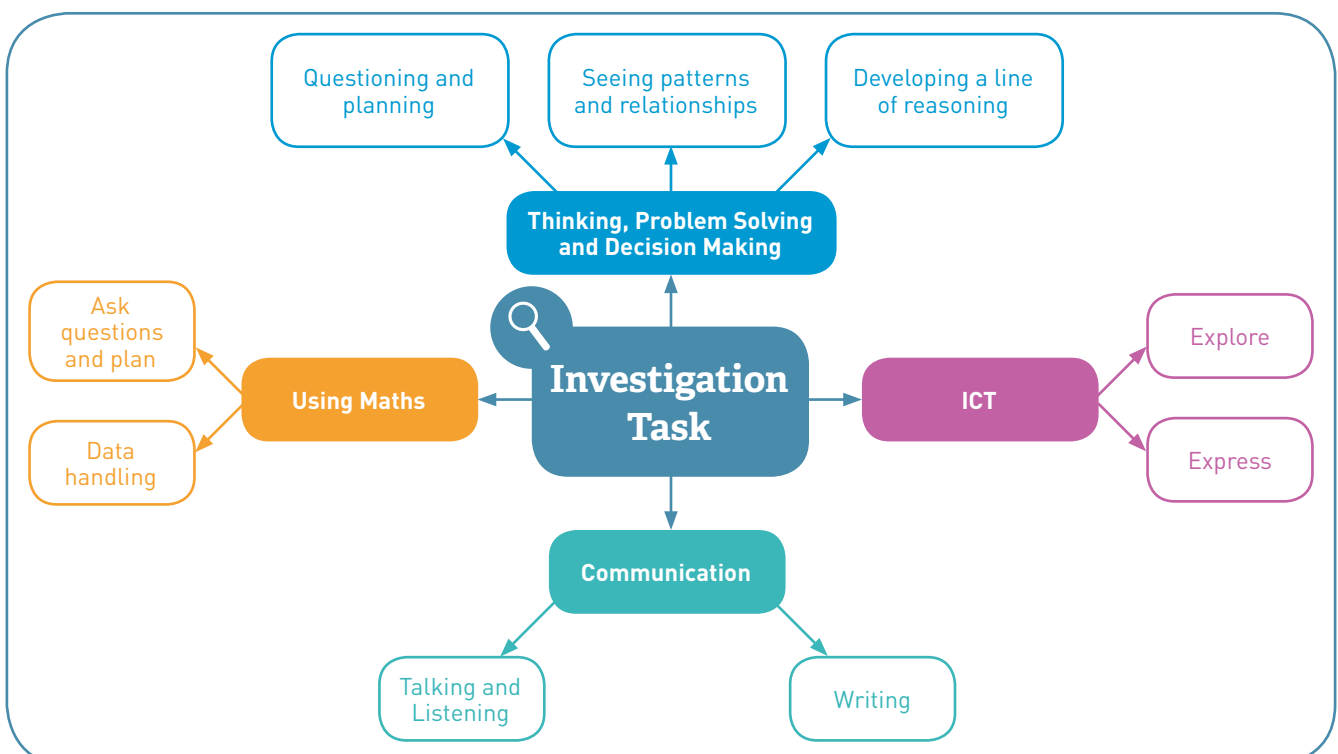
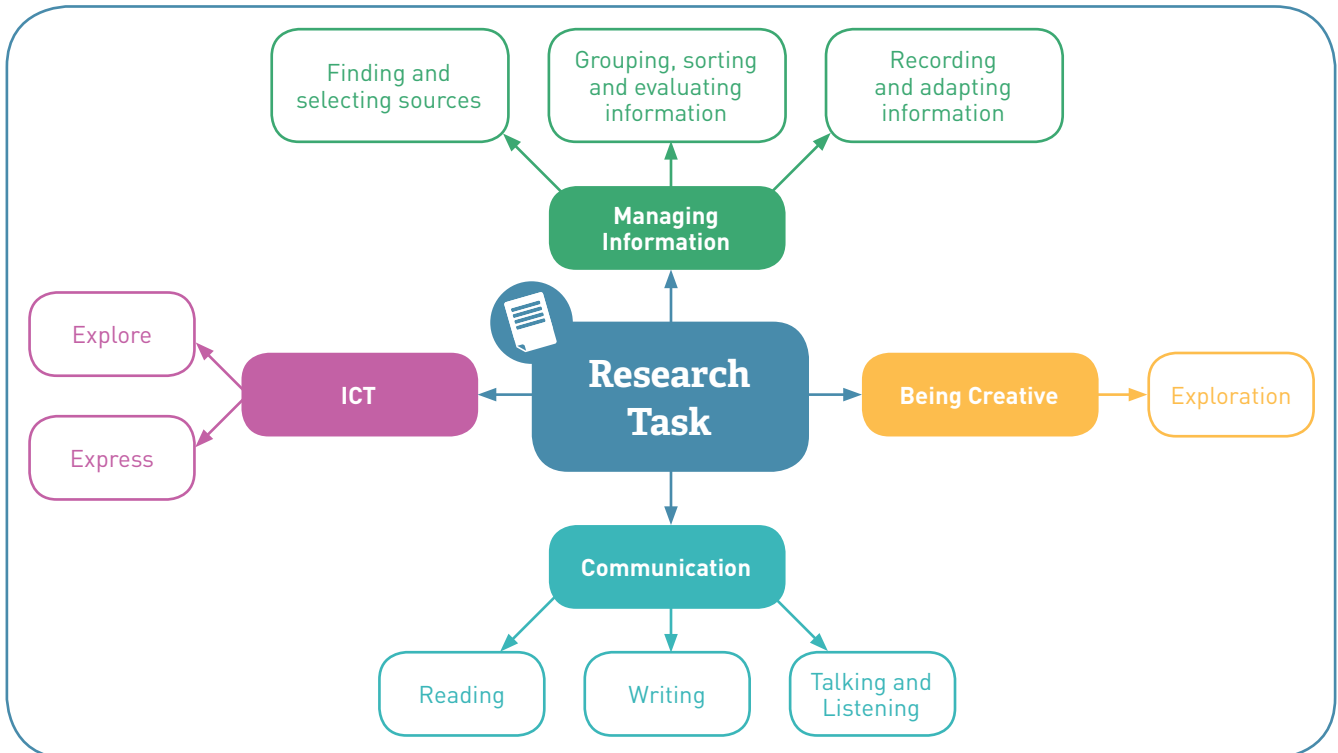
Personal Capability	Process/Strand	Success Criteria
Working with Others	Learning with and from others	<ul style="list-style-type: none"> demonstrate and share expertise with a genuine desire to help others to learn; and respond constructively and sensitively to others.
	Roles and responsibilities	<ul style="list-style-type: none"> identify and agree collective goals; organise roles and responsibilities; and review progress and evaluate outcomes.
	Influencing and negotiating	<ul style="list-style-type: none"> show respect by listening to differences in opinion; express opinion using appropriate language; and use explanation and reasoning to reach an acceptable outcome.
Self-Management	Review and improve	<ul style="list-style-type: none"> avoid making quick decisions and snap judgements; readily and independently evaluate approaches to thinking and learning; apply different learning approaches appropriately to new contexts; and seek out and act on advice.
	Time management	<ul style="list-style-type: none"> plan and organise different tasks, prioritising and reallocating resources in order to meet competing deadlines.
	Goals and targets	<ul style="list-style-type: none"> show independence in setting and following through actions for improvement; and monitor progress and make appropriate change.

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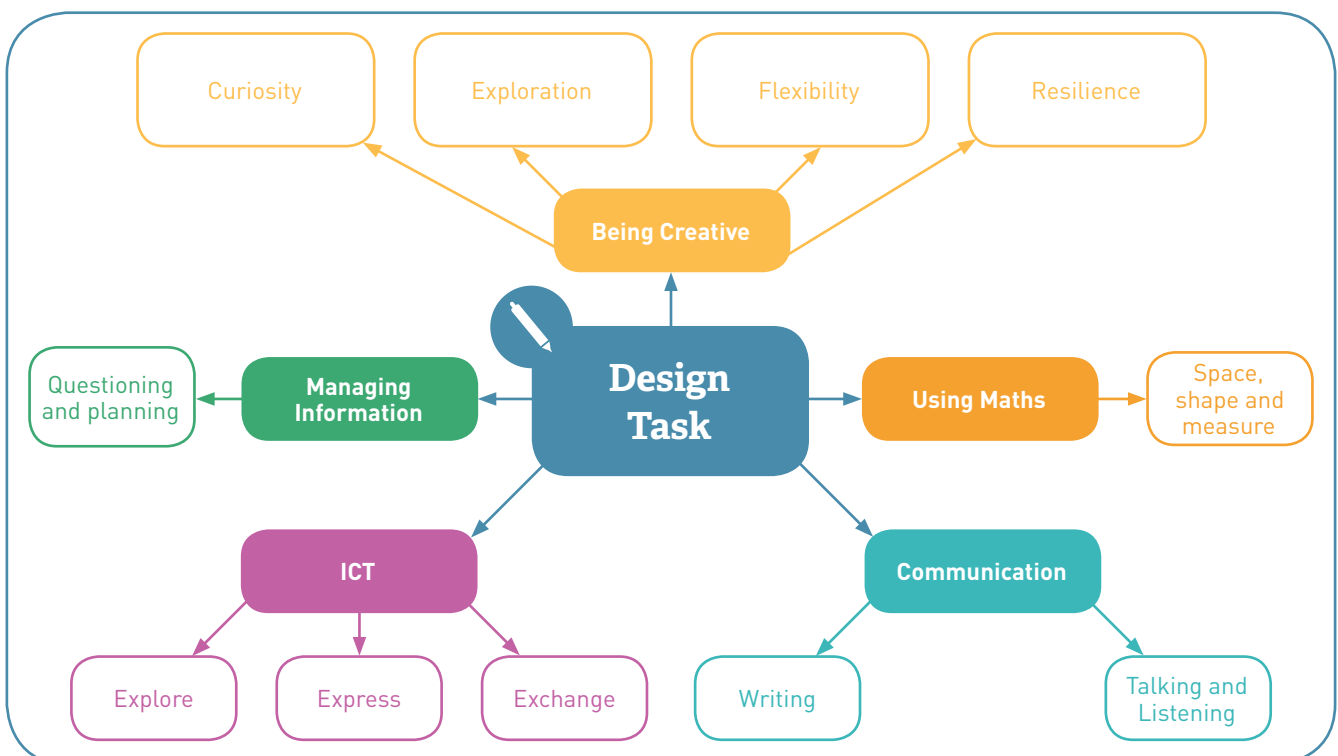
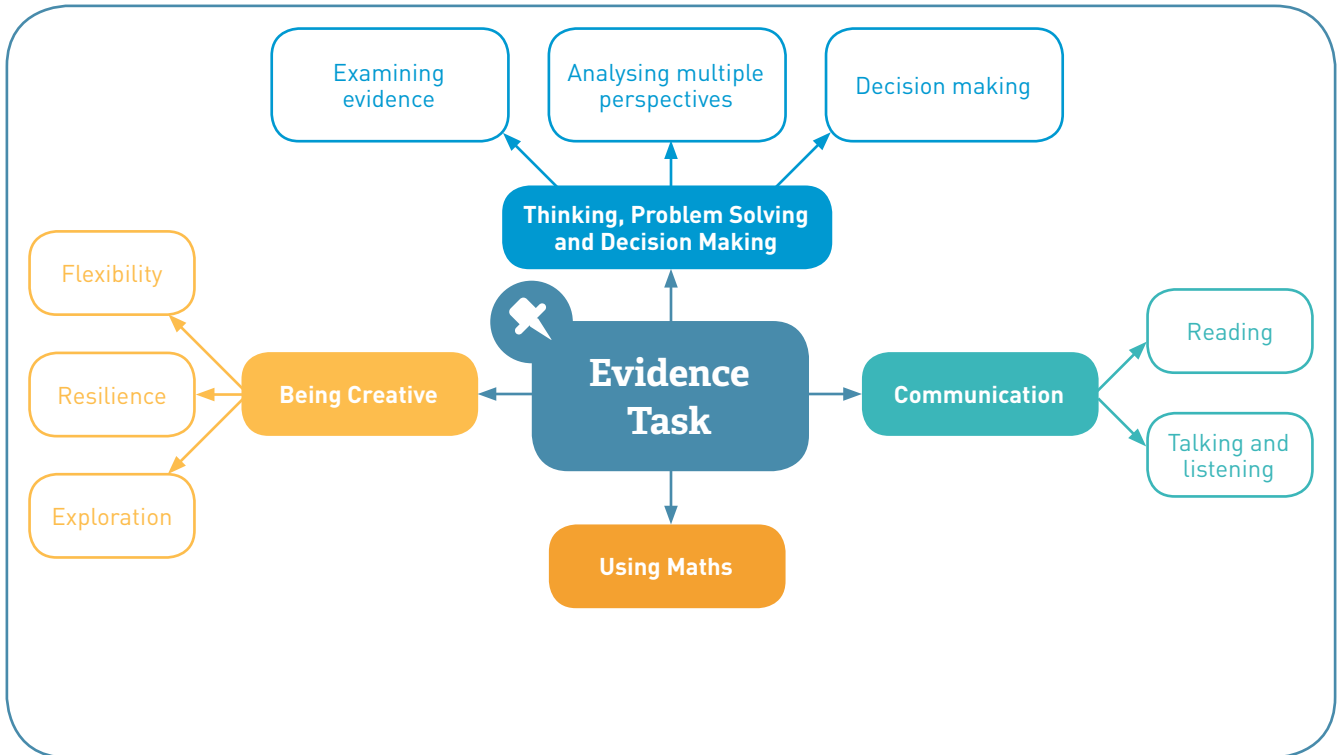
Appendix B



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Appendix C

Key Stage 3 Assessment Schedule

Six Assessments: three by the end of January adding to 100 percent and three by the end of June adding to 100 percent. The final column on the June report gives an average mark out of 200 as an end of year percentage.

Assessment Manager

Year 8	Assessment						
	1	2	3	4	5	6	
English	Reading (20)	Writing and TL (40)	Exam (40)	Reading (20)	Writing and TL (40)	Exam (40)	100%
Maths	3 Tests and task (40)	2 Tests (20)	Exam (40)	4 Tests (40)	2 Tasks (20)	Exam (40)	100%
Science	Test (40)	Skills & Investigation (20)	Exam (40)	Letter Task (20)	Test (40)	Exam (40)	100%
History	Research Task (20)	Test (40)	Exam (40)	Evidence Task (40)	Evidence Task (20)	Exam (40)	100%
Technology	Design Project (20)	Manufacturing (40)	Exam (40)	Design Project (20)	Manufacturing (40)	Exam (40)	100%
Art and Design	Drawing Task (40)	Portraits Task (40)	Exam (20)	Research & Design (40)	Moving Image (40)	Exam (20)	100%
Languages	SLWR Test (40)	SLRW Test (20)	Exam (40)	SLRW Test (40)	SLRW Test (20)	Exam (40)	100%
Home Economics	Test (20)	Investigation (40)	Exam (40)	Test (20)	Practical (40)	Exam (40)	100%
Geography	Test (40)	Investigation (20)	Exam (40)	Test (40)	Task (20)	Exam (40)	100%
RE	Task (20)	Unit Test (40)	Exam (40)	Task (40)	Unit Test (20)	Exam (40)	100%
Music	Performance (20)	Composition (40)	Listening (40)				100%
ICT	Problem Solving (40)	Practical (20)	Exam (40)				100%