



# YEAR 11 ICT PROGRAMMING PROJECT ASSESSMENT REQUIREMENTS

## Technological practice

In producing your computer program, you are expected to use good technological practice. This means you will be expected to do such things as:

- Explore the background to the issue
- Evaluate existing solutions and carry out related research
- Determine who are the stakeholders
- Investigate stakeholder requirements and maintain ongoing contact with the stakeholders
- Examine the practice of professionals working in the field
- Consider societal factors related to your project
- Carry out appropriate planning and modify the planning as you work through your project.
- Comply with relevant codes of Practice and codes of Ethics
- Comply with relevant legislation e.g.: Copyright or Privacy legislation
- Increase your own skills as necessary.



## Technological Knowledge

Throughout the project you will be expected to use relevant technological knowledge. It is important to keep track of the knowledge you access and apply during your project. This will be used to judge how well you have met the requirements of the achievement standards assessed through this project.

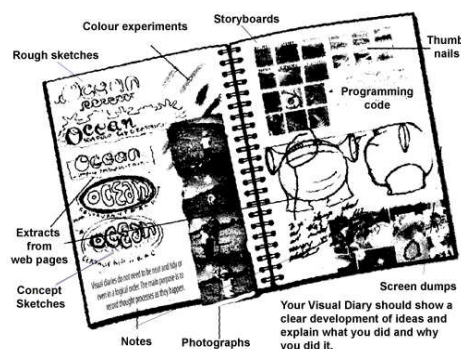
## Evidence

As you work through the project, include plenty of evidence to show how and why you have undertaken your practice in the way you have. The evidence should be included at appropriate stages. This may mean, for instance, that some key factors are identified early and others do not appear until a later stage.

Show all evidence - conceptual designs, research, findings, evaluations, inspirations, consultations (record all decisions you make as if you were consulting with a real client), planning ahead, presentations, organisation of ideas, sketches etc, *as they are undertaken*—this is really important if you are to meet the requirements of the achievement standards.

Someone else should be able to follow your ideas and decisions, know what you are doing and why you did it.

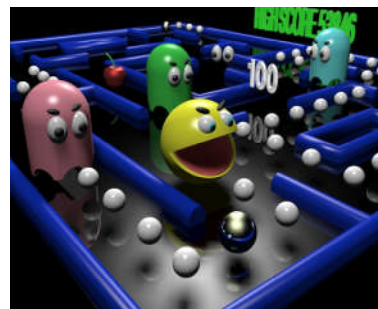
You should try to collect this evidence as efficiently as possible using a range of methods. E.g. you may use email, photographs, screen shots, pix phone clips, etc.



## The issue

The starting point for this project is an issue, namely ‘*Well designed educational computer software ensures children enjoy learning and feel a sense of success straight away. It gives them time to work at their own pace to learn skills and knowledge to become confident kids.*’

*There is a need for more well designed educational software in the home and schools to meet the learning needs of young people.* “



Your challenge is to investigate young peoples’ educational needs and plan, design, program, test and implement a computer program to meet those needs.

Think carefully about the issue—identify what you already know about it, research it, and discuss it with stakeholders. When you have a really good understanding, identify a context that interests you *eg: an educational computer game, a tutorial, a quiz program, etc.* Consult with your teacher to check that your chosen context is appropriate.

## Planning

Use planning tools to assist you to manage the investigations and development work you do towards designing your computer program. These tools could be timelines, Gantt charts, flow charts, diagrams, visual diary notes etc.

- your initial planning should set key milestone dates for your project and identify what outcomes you expect to achieve during each of those stages;
- it should also identify how you intend to allocate time and other resources to each stage. Be careful that the stages are placed in a logical order
- you should use this plan as a guide as long as it remains useful; if you decide to make changes to it as you work through the project, note down what those changes were and justify why you made them
- as you work, record what resources you access and use; *eg: time, money, expertise, equipment, people, software, knowledge bases and access to them*—give reasons for decisions and any changes you make
- as you work through the project, record processes you plan to use, *eg: how you intend to create or capture images*; if you make changes to these processes record what you actually did, giving reasons for decisions
- show how you identified and then resolved or minimised likely problems, *eg: pre-booking equipment to ensure that it is available when you need it, or accessing expert advice*;
- as you come across unforeseen problems, show how you plan to resolve them
- carry out ongoing evaluation of the success of your planning and use this to inform your future plans



## Key factors

You must identify the key factors related to your issue. These will include:

- the needs of stakeholders, those affected directly by the issue or by the use of your proposed program
- design issues you need to consider, *eg: which controls, colours, graphics, navigation system etc to use*
- technology issues, *eg: does your proposed solution require you / stakeholders to have special hardware*
- wider aspects such as laws, political issues, ethical issues (*eg: copyright, morally suitable content etc*), trends, environmental and financial concerns etc

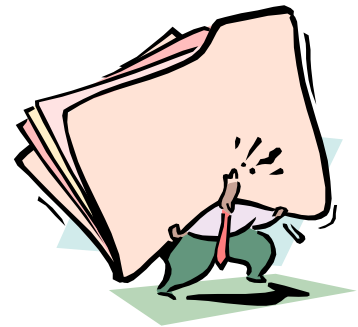
You must explain the implications of the key factors and how they interact with each other, then prioritise them into order of importance for your particular solution. Explain or justify any decisions you make about the prioritising. What you record here will form part of your Brief

As you work through the project you are likely to think of new key factors, record what they are and explain how they might impact on the other factors you had identified, or how they might impact on how you had planned to develop and implement your solution. This may lead you to re-prioritise the key factors. *Eg: you might have been planning to include a photograph in your computer program but hadn't considered getting the person's permission. This would be a new key factor because if permission was not granted it could have a significant impact on your design.*

## The brief

The key factors you have identified will help formulate a brief to address your issue. The brief should:

- identify the purpose of your program by clearly outlining the issue that it aims to address
- clearly identify the key factors, their main implications and how they interact with each other, and prioritise the factors with justification
- list the specifications for your design solution including any constraints that may need to be met. Eg: , the type of navigation and fonts to be used, image sizes, etc



As you work through the development phase of this project you may think of things that you wish to change in the original brief. If this is the case, record any consultation you had with stakeholders about the changes, what the changes were and justify why you made them.

Throughout your work, show ongoing evaluation, against the requirements of the brief, for both the planning and development stages of your conceptual designs and finished design solution.

## Conceptual designs

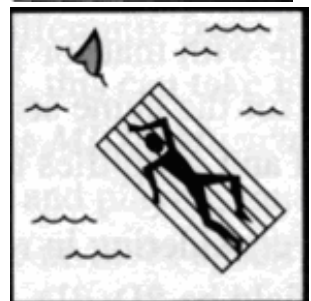
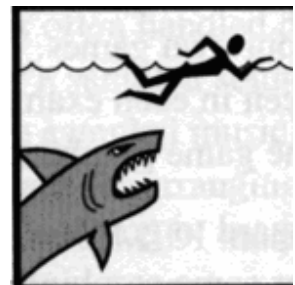
It is important that your program successfully addresses the issue you have identified and meets the specifications identified in your brief. Its ability to do this will be enhanced if you display good design skills—think about:

- how the colours fit together, how readable and legible any text is
- principles of good interface design
- how easy is it to use, etc...

Try to show originality and flair in your concept design but be consistent with the style you use and ensure it is appropriate for your target audience.

Your experimental concepts should be presented as thumbnail sketches or a storyboard in your visual diary. Evaluate each idea against the requirements of the brief, recording your thoughts. If you think of things you wish to change in your planning, or your brief, during this process, don't forget to record the changes and give reasons for your decisions.

When you have decided on the design for the solution that you think best meets the requirements of your brief, develop your ideas in a way that is appropriate for the purpose and the target user group, and are consistent with accepted programming practices.



Again, you should include plenty of evidence to show how and why you have undertaken your practice in the way you have. Always make sure that you record the reasons for your design decisions and if you reject ideas, why they were rejected.

## Outcome Development

To meet the requirements for achievement standard 1.1, you must develop and implement your solution. Continue to follow and regularly review your planning as you do this. Make sure that it meets all the requirements of your brief, is consistent with your conceptual design and follows accepted programming practices.

As you work through this development phase of the project, you may think of things that you wish to change in the original brief or conceptual design. If this is the case, record any consultation you had with stakeholders about the changes, what the changes were and justify why you made them. Where there are changes made to the brief, you should identify how the final solution meets the requirements of those changes.












## Final Evaluation

When the final solution is complete,

- check it to ensure it contains no spelling, formatting or grammatical errors
- test all functional aspects thoroughly to ensure they operate as expected
- make all necessary modifications
- record all evidence of your implementation process including any modifications you made after checking and testing
- record all evaluations you do, eg: comments from stakeholders who use your finished product
- record your own evaluations of how well the design solution meets the requirements of the brief
- record any requirements for the installation of your finished product and how these might be addressed

## RESOURCES AVAILABLE

										
Inspiration	Internet	Word	Email	Excel	Freehand	Visio	Photoshop	VisualBasic	SketchUp	Capture
										
PixPhone	Video	Camera	Scanner	Pencil	Gluestick	Notes	MP3Player	Pen drive	CD Writer	Fax
										
Stakeholder	Teacher	User	Family	Discuss	Phone	Ganttchart	Storyboard	Timeline	Structure Diagram	Books

## ASSESSMENT [ 20 credits]

This project will provide you with the opportunity to be assessed against the following Level 1 Technology achievement standards (Version 2).

### Internal - 16 Credits

- 90046 [Formulate a brief to address a given issue](#)
- 90045 [Develop a technological solution to address a given brief](#)
- 90050 [Present a technological solution that addresses the requirements of a brief](#)

### External - 4 Credits

- 90049 [Demonstrate understanding of technological knowledge](#)

#### 1.1 Develop a technological solution to address a given brief Credits: 6 Internal

This achievement standard requires the development of a technological solution through informed planning to address a given brief.

<b><i>Achievement</i></b>	<b><i>Achievement with Merit</i></b>	<b><i>Achievement with Excellence</i></b>
Outline key stages and their resources in the development of a technological solution.	Review and refine key stages and the allocation of their resources in the development of a technological solution.	Develop a technological solution that is informed by ongoing planning and re-evaluation. Present evidence that shows how the requirements of the brief are addressed, and how any interactions between factors are resolved in making key decisions.
Develop a technological solution guided by planning, with evidence showing how essential requirements of the brief are addressed.	Develop a technological solution that is informed by planning. Present evidence that shows how the requirements of the brief are addressed.	

#### 1.2 “Formulate a brief to address a given issue” Credits: 6 Internal

This achievement standard involves identifying key factors and their implications in relation to a given issue, exploring needs and/or opportunities arising out of the key factors, and formulating a brief for a technological solution that addresses a selected need or opportunity.

<b><i>Achievement</i></b>	<b><i>Achievement with Merit</i></b>	<b><i>Achievement with Excellence</i></b>
Identify key factors and their main implications in relation to a given issue.	Prioritise key factors, explaining their implications and main interactions in relation to a given issue.	Prioritise key factors, explaining their implications and interactions, and justify the prioritisation in relation to a given issue.
Use key factors to identify possible needs and/or opportunities.	Use prioritised key factors to identify possible needs and/or opportunities.	Use prioritised key factors to evaluate possible needs and/or opportunities.
<b>Formulate a brief that addresses a selected need or opportunity and the main implications of the identified key factors.</b>	Formulate a brief that addresses a selected need or opportunity and the implications of the prioritised key factors.	Formulate a brief that clearly states all that is required to resolve the given issue.

**1.6 “Present a technological solution that addresses the requirements of a brief  
Credits: 4 Internal**

This achievement standard involves the presentation of a technological solution, with supporting documentation, to show that the solution addresses the essential requirements of a brief.

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> <li>Present a technological solution, with supporting documentation, to show that the solution addresses the essential requirements of a brief.</li> </ul>	<ul style="list-style-type: none"> <li>Present a quality technological solution, with supporting documentation, to show that the solution addresses the requirements of a brief.</li> </ul>	<ul style="list-style-type: none"> <li>Present a high-quality technological solution, with supporting documentation, to show that the solution addresses the requirements of a brief.</li> </ul>

**1.5 “Demonstrate understanding of technological knowledge” Credits 4 External**

This achievement standard involves the demonstration of understanding of relevant technological knowledge that has been accessed and applied in a technology programme.

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> <li>Demonstrate understanding of relevant technological knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate in-depth understanding of relevant technological knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate in-depth understanding of a wide range of relevant technological knowledge.</li> </ul>