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GROWTH AND INNOVATION
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PROGRAMME DESIGN: WHAT DO YOU NEED TO KNOW?

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- National Curriculum
- School Curriculum
- Classroom Curriculum
- Principles of Programme Design
- Developing a Programme
- What do you need to know?



WHAT IS A NATIONAL CURRICULUM?

- No longer seen as a prescriptive document providing the content/skill to be ‘delivered’.
- A national curriculum is viewed as a framework to ‘set the direction for learning’.
- Expectation that teachers, as professionals, will develop programmes reflective of this framework.



WHAT IS THE SCHOOL CURRICULUM?

- Must incorporate principles, values, key competencies and learning area introductory statements and associated achievement objectives.
- Staff strengths and school resources.
- Community needs/desires.



TECHNOLOGY PROGRAMMES

Part of the School Curriculum

Therefore:

- National Curriculum in Technology
- Strengths of Technology Staff
- Contexts Appropriate for Community
- Resources Available in School and Community

CLASSROOM CURRICULUM

Learning Experiences that provide opportunities for students to progress in Technology...

- Strengths of Teacher/s
- Available Resources
- Interests and Experiences of Students
- Current Level of Achievement of Students



PRINCIPLES OF PROGRAMME DESIGN IN TECHNOLOGY

All programmes of learning within a school should link together to ensure students have the opportunity to progress their technological literacy in a seamless fashion.

DURATION...

The duration of programmes should be determined by wider school structures in order to maximise the opportunity to plan for and monitor student progression.

Primary schools and junior secondary - technology is identified as a compulsory learning area therefore programmes should be developed to support at least two years of schooling.

In senior secondary school programmes of learning may be structured around one year intervals, to allow students opportunity to access qualifications and to recognise that students usually select their courses on a year by year basis in these year levels.

FOCUS...

Programmes of learning in technology should ultimately address all components of the three strands as outlined in the national technology curriculum. While these components can be focused on individually, it should be recognised that they all interrelate in order to support the development of a deep, broad and critical technological literacy.

Until 2010 – focus on technological practice to plan for and monitor student progression.



CONTEXTS...

Programmes of learning may include a varying number and range of contexts from which a series of coherent learning experiences can be developed.

A context for technological learning experiences refers to all the aspects that must be thought about to situate the learning. In order to ensure contexts chosen provide for a range of diverse learning opportunities, programmes should include contexts that focus on the transformation of energy, information and materials.

ACHIEVEMENT OBJECTIVES...

Serve to structure programmes and provide guidance to teachers for the development of learning experiences. Levelled achievement objectives are not specific learning intentions.

Achievement objectives require interpretation by teachers into the technology programme and will require further translation into smaller goals for use in the planning and delivery of learning experiences. These smaller goals are referred to as specific learning intentions.



LEARNING EXPERIENCES...

The duration of any learning experience is determined by the intended learning planned by the teacher, and student learning needs in relation to these.

Learning experiences must focus on one or more (as dependent on the time allowed) achievement objectives from the technology strands, as well as any other knowledge and skills needed as determined by the specific context in which the components are embedded.

SPECIFIC LEARNING INTENTIONS...

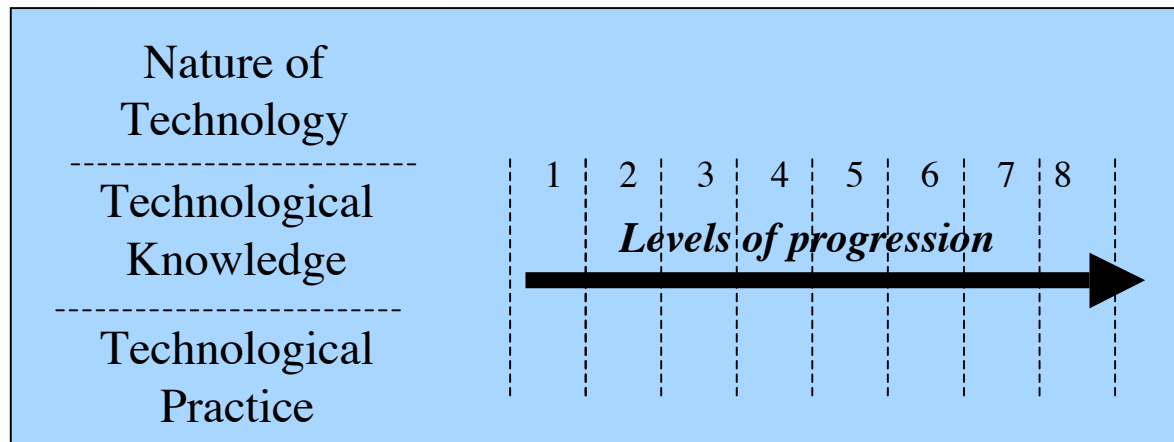
Specific learning intentions should be pre-determined by the teacher prior to the delivery of the learning experiences to ensure students have access to generic knowledge and practice that takes into account students' prior learning (Curriculum driven SLIs).

During the delivery of learning experiences, opportunity should be left to develop negotiated learning intentions (context driven SLIs) that are responsive to students' technological practice, specific contextualised learning needs and/or their interests.

Both include curriculum and context driven SLIs. Curriculum driven SLIs are supported by Indicators of Progression.

Technology Strands

(Generic Achievement Objectives)



Indicators of Progression

Learning Context

(Specific Learning Intentions)



INDICATORS OF PROGRESSION...

Indicators of progression serve to 'break up' the Achievement Objectives primarily for diagnostic and formative assessment, and purposes.

They are also useful tools for developing reporting mechanisms.



REPORTING...

Programmes of technology should include a focus on reporting mechanisms to ensure clear and valid information on student learning is available for students, other teachers within the school, teachers in other schools and caregivers.

Effective reporting mechanisms require careful planning.

IN SUMMARY...

Principles of Technology Programmes that allow for seamless progression of student learning relate to:

- Duration of Programme
- Focus of Programme
- Contexts involved in Programme
- Learning Experiences
- Achievement Objectives
- Specific Learning Intentions
- Reporting

While taking account of additional school curriculum requirements from the overall national curriculum (principles, values, key competencies) and the community and school environment (including teacher strengths and resources available).



DEVELOPING A TECHNOLOGY PROGRAMME:

Possible stages to go through...



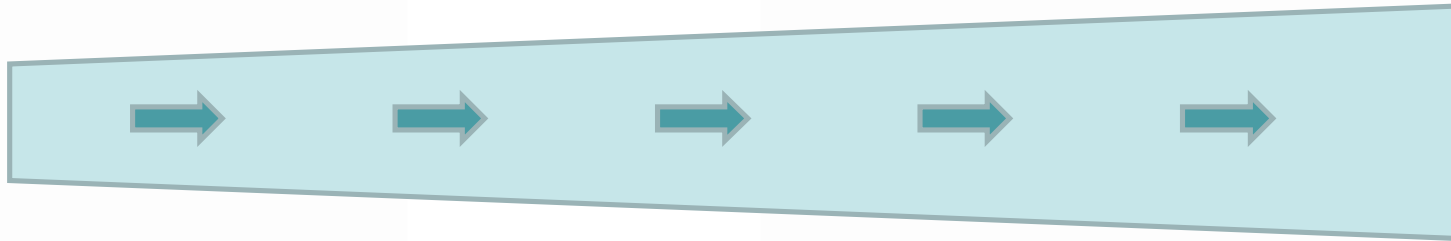
Programmes of Learning

versus

Activity Based Programmes



Entry



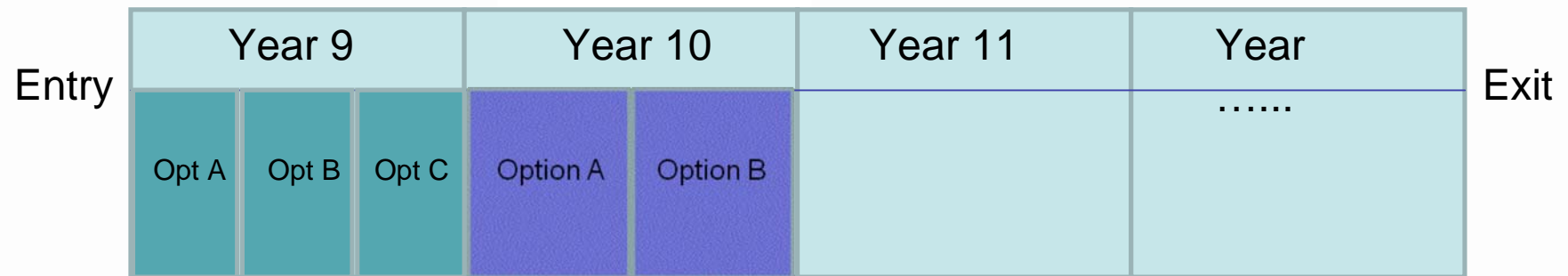
Exit



SHARED VISION

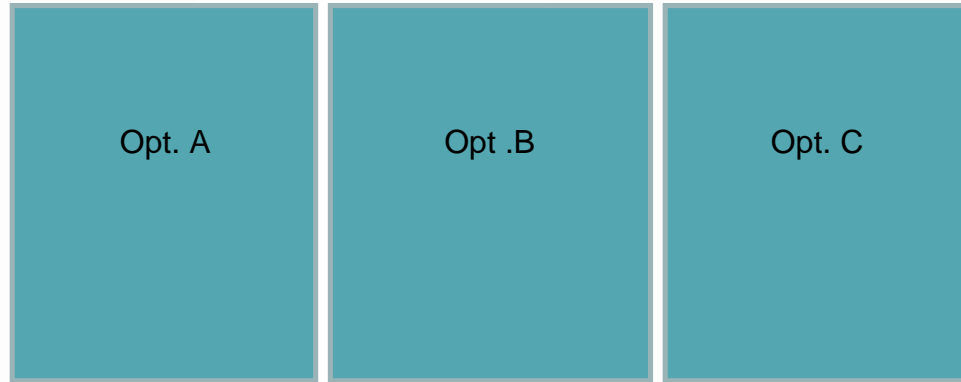
HNHS Technology Mission Statement

To provide individual students with the opportunity to achieve to their highest abilities, effectively communicate knowledge and skills and be adaptable to different contexts and environments through engagement in technology education





Year 9



Planning for Practice

Technological Practice -
components of

Safe working practices

*Plus domain specific
skill/knowledge*

Planning for Practice

Brief Development

Safe working practices

*Plus domain specific
skill/knowledge*

Planning for Practice

Brief Development

Outcome Development &
Evaluation

*Plus domain specific
skill/knowledge*

Generic Unit Outline: Year 9 Option A	Learning intention	Assess Criteria
<p><u>Technological Practice</u> <u>Class Activities</u> Using examples of others technological practice used to develop a technological product, get students to a draw flow diagrams to illustrate the technological practice followed – subset into components of practice.</p> <p>Begin a glossary of terms in the back of student folders and build on it as new terms are used.</p>	<p>Students can:</p> <p>Identify components of technological practice and understand the inter-relationships between then</p>	
<p><u>Introduce Class Issue and Brief.</u></p> <p>Stakeholder Profile and the importance of a stakeholder. Homework to complete profile sheet with stakeholder comments.</p> <p>Identifying relevant information in order to establish an initial brief and specifications.</p>		
<p><u>Class Activity</u> Student groups are given a range of products and are asked to write a retrospective brief with specifications.</p>		
<p><u>Class Activity</u> <u>Planning for Practice:</u> Identify the main stages and a negotiated deadline as a class. In groups identify the proportion of time to be spent on each stage needs to be decided and likely resources required</p>	<p>Identify key milestone stages. Allocate and reflect on time used during practice. Plan for the sourcing of information and the organisation of resources throughout practice.</p>	

Materials Technology: Year 9 Option A	Learning intention	Assess Criteria
<p><u>Technological Practice</u> <u>Class Activities</u> Using examples of two different technological practices used to develop the outside napkin holder get students to a draw flow diagrams to illustrate the technological practice followed – subset into components of practice.</p> <p>Begin a glossary of terms in the back of student folders and build on it as new terms are used.</p>	<p>Students can:</p> <p>Identify components of technological practice and understand the inter-relationships between them</p>	
<p><u>Introduce Class Issue and Brief.</u></p> <p>Stakeholder Profile and the importance of a stakeholder. Homework to complete profile sheet with stakeholder comments.</p> <p>Identifying relevant information in order to establish an initial brief and specifications.</p>		
<p><u>Class Activity</u> Student groups are given a range of wooden toys and are asked to write a retrospective brief with specifications.</p>		
<p><u>Class Activity</u> <u>Planning for Practice:</u> Identify the main stages and a negotiated deadline as a class. In groups identify the proportion of time to be spent on each stage needs to be decided and likely resources required</p>	<p>Identify key milestone stages. Allocate and reflect on time used during practice. Plan for the sourcing of information and the organisation of resources throughout practice.</p>	

REQUIREMENTS OF TEACHERS

All teachers:

- Provide all students opportunity to progress in technology education
- Adhere to agreed strategic plan and the unit foci
- Have a shared understanding of student achievement (levels of progression)
- Can identify and report on:
 - levels of student achievement
 - next learning needs