

Name: _____



An tSraith Shóisearach do Mhúinteoirí

Junior **CYCLE**

for teachers

Cluster Delivery 2019/2020

Wood Technology



An Roinn Oideachais
agus Scileanna
Department of
Education and Skills



Specification

www.jct.ie

Classroom-Based Assessments in Wood Technology

There are two Classroom-Based Assessments in Wood Technology. They are assessed at a common level. They relate to learning outcomes and are scheduled to be undertaken by students in a defined time period within class contact time to a national timetable (as advised by the NCCA) in the school calendar. This timetable for Classroom-Based Assessments for all subjects will be provided on an annual basis at www.ncca.ie/junior-cycle and at www.curriculumonline.ie/Junior-cycle. The Classroom-Based Assessments for Wood Technology and indicative timings are outlined in Table 1 below.

Table 1: Classroom-Based Assessments for Wood Technology

Classroom-Based Assessments	Format	Student preparation
Wood science in our environment Year 2	Investigation and presentation on a wood science related topic Response may be presented in a wide range of formats Students can collaborate, but each student must present an individual piece of work	During a maximum of 3 weeks with support/guidance from teacher
Student self-analysis and evaluation Year 3	Individual analysis of their own skills Response may be presented in a wide range of formats	During a maximum of 3 weeks, with support/guidance from teacher

Classroom-Based Assessment 1: Wood science in our environment

Wood science in our environment provides opportunities for students to engage in practical, authentic learning experiences that gives them the experience of investigating a wood science-related issue within a local/global context. The Classroom-Based Assessment will ask students to research, analyse and draw conclusions on their findings.

Students have the option of first choosing a setting to base their research and then are expected to identify a wood science related stimulus for their Classroom-Based Assessment.

Students should structure their Classroom-Based Assessment through the lens of:

- **research and analysis**
- **concepts and application**
- **evaluation of their findings**
- **communicating their Classroom-Based Assessment.**

Students will capture the various stages of the Classroom-Based Assessment through a learning log that will be presented as part of their final submission. The learning log can be produced in a suitable format, to be decided upon in agreement with the teacher that captures the students work throughout the Classroom-Based Assessment. Students may present models, artefacts and any other form of evidence to accompany the learning log to further communicate their findings if they deem it necessary.

The learning outcomes assessed will, to an extent, depend on the topic chosen and the media in which the work is presented.

Junior Cycle Wood Technology, Guidelines for the Classroom-Based Assessments, page 9

Scan code/click to go to
Assessment guidelines
for Wood Technology



Evidence of learning

The students are required to capture evidence of learning from their classroom-based assessment using an individual learning log. The learning log can be produced in any format that is appropriate for capturing the ideas of the students. For example:

- In written form, such as a report
- In digital form, such as a blog, a video or slide presentation
- In visual form, such as a graphic presentation or a display
- In audio form, such as a podcast or a voice-over

This list is not intended to be exhaustive but serves to offer suggestions as to the possible choices in developing the learning log. Students may present models or prototypes as part of their submission to support their learning log.

Junior Cycle Wood Technology, Guidelines for the Classroom-Based Assessments, page 14

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Assessment guidelines
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Notes

Deciding on the level of achievement: Wood science in our environment

There are four level descriptors of achievement in each Classroom-Based Assessment: *Exceptional*, *Above expectations*, *In line with expectations*, and *Yet to meet expectations*. All work submitted is judged to fit one of these four descriptors. Teachers use the Features of Quality, set out in these assessment guidelines, to decide the level of achievement in each Classroom-Based Assessment.

Features of Quality: Wood science in our environment	
<p>Exceptional</p> <p>A piece of work that reflects these Features to a very high standard. While not necessarily perfect, the strengths of the work far outstrip its flaws, which are minor. Suggestions for improvement are easily addressable by the student.</p>	<ul style="list-style-type: none"> ▪ The research method chosen demonstrated a comparison of a range of sources which led to the production of a comprehensive and detailed analysis of the data/findings. ▪ The topic chosen was critically developed through the comparisons of alternative concepts in relation to the topic and included in depth considerations to a local and/or global issue. ▪ Critical evaluation was evident throughout the task that led to refinements at various stages resulting in meaningful, accurate conclusions and informing potential future applications. ▪ The presentation of the findings is of an excellent standard; using a highly effective medium which allowed for a critical consideration of what information best communicates the task.
<p>Above expectations</p> <p>A piece of work that reflects these Features very well. The student shows a clear understanding of how to complete each area of the task. Feedback might point to the necessity to address some aspect of the work in need of further attention or polishing, but on the whole the work is of a high standard.</p>	<ul style="list-style-type: none"> ▪ The research method chosen was effective for the topic and generated an in-depth level of analysis of the data/findings. ▪ The topic chosen was refined after a high level of consideration of alternative concepts and had strong links to a local and/or global issue. ▪ The evaluation of the findings is at a high level, with some relevant and accurate conclusions that can inform potential future applications. ▪ The findings are presented to a very high standard, using an effective medium, with careful consideration of what information accurately communicates the task.



Features of Quality: Wood science in our environment

In line with expectations

A piece of work that reflects most of these Features well. It shows a good understanding of the task in hand and is free from significant error. Feedback might point to areas needing further attention or correction, but the work is generally competent and accurate.

- The research method chosen was appropriate for the topic and generated some analysis of the data/findings.
- The topic chosen was developed with reference to some alternative concepts and had some relevance to a local and/or global issue.
- The evaluation was appropriate; conclusions are brief and include some suggestions on potential future applications.
- The findings are well presented, using an appropriate medium, with careful consideration of what information to communicate to best showcase the task.

Yet to meet expectations

A piece of work that falls someway short of the demands of the Classroom-Based Assessment and its associated Features. Perhaps the student has made a good attempt, but the task has not been grasped clearly or is marred by significant lapses. Feedback will draw attention to fundamental errors that need to be addressed.

- The research method chosen for the topic was ineffective and the analysis of the data/findings lacks depth.
- The topic chosen included some conceptual understanding but showed little or no relevance to a local and/or global issue.
- The evaluation of the findings offers little or no conclusions and makes no suggestions on potential future applications.
- The findings are presented in an unsuitable format resulting in an ineffective communication of the Classroom-Based Assessment.

Junior Cycle Wood Technology, Guidelines for the Classroom-Based Assessments, page 17

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Classroom-Based Assessment 2: Student self-analysis and evaluation

Student self-analysis and evaluation provides opportunities for students to conduct an analysis of their coursework and skills to date in Wood Technology. Students will focus their analysis and evaluation on a range of completed tasks or on a specific completed task. Students are expected to critically review their progress and identify areas of strength and areas for improvement, with a view to informing their work for the State Examination Commission project.

The importance of the second Classroom-Based Assessment, **Student self-analysis and evaluation**, is that it allows for students to engage in the practice of reflecting on their abilities prior to commencing a piece of work. Once the student conducts the self-analysis, they must interpret their analysis and evaluate their findings to offer constructive direction for the upcoming project. The student can communicate the self-analysis and evaluation process through any appropriate media that captures the process. To help structure their approach to the Classroom-Based Assessment, the students should focus their work through the lens of:

- **identifying coursework elements**
- **reflecting on learning**
- **communicating their Classroom-Based Assessment.**

The learning outcomes assessed will, to an extent, depend on the topic chosen and the media in which the work is presented.

Junior Cycle Wood Technology, Guidelines for the Classroom-Based Assessments, page 20

In preparing for the Classroom-Based Assessment **Student self-analysis and evaluation**, students should retain some evidence of projects they would have completed throughout first and/or second year to offer them supporting stimulus to conduct their analysis and evaluation. The evidence does not require the student to retain the physical project, only aspects of the work that may assist the student in completing the Classroom-Based Assessment.

Junior Cycle Wood Technology, Guidelines for the Classroom-Based Assessments, page 23

Notes

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Student Name: _____ Project Title: _____

1. Purpose of research:

2. What type of research did you carry out and why?

Primary:

Secondary:

3. What results did you find?

4. Were your sources reliable?

List your sources:

5. Did any of the findings surprise you?

(Include graphics if appropriate)

6. Based on your findings, what are your main observations from this project?

(Include sketches/images if appropriate)

Activity

Feedback statements

Consider each of these and then tick those that you consider to be examples of good formative feedback

Tell us more. What do they look like?

How do they move?

Gold star

Explain why you think this

How do you think he felt?

Angry that people did not trust him?

Annoyed with himself for lying in the past?

Beautiful, neat work

Well done!!

You have clearly stated one way an archaeologist may find a site.

Are there any others?

Develop these ideas further

Describe the expression on his face

Good, but not as good as your brother's!

How do you know...?

You must try harder

First place in the class

Try one of these or one of your own instead of bad - ferocious, terrifying, evil

Lovely diagram

You're the best

10/10

He showed he was a good friend when... (finish this sentence)

You gave a very realistic description on the damage caused by an earthquake. To improve your work, you need to include all the key terms. Look back and check the list to see which ones you have left out.

What signs of coastal erosion did you see on your field trip? E.g. rock erosion, falling cliffs, structural damage to walls, etc.

NCCA Focus on Learning Workshop 03, page 7

Scan code/click to go to NCCA Booklet on Formative Feedback



Activity

Success Criteria... How are we doing?

Work either individually or with a partner and discuss how well you have developed your classroom practice in setting success criteria.

Traffic light your responses to the questions below using this code:

Always

Sometimes

Never



When I set assignments, I share success criteria with my students

The success criteria are linked to the learning intention

The success criteria are specific and concrete

The success criteria are clearly understood by the students

I discuss the success criteria with the students, and we agree them together

I use the success criteria for tasks as the basis for giving student's feedback on those tasks

I use the success criteria to support peer and/or student self-assessment

I re-visit success criteria during the lessons

NCCA Focus on Learning Workshop 01, page 10

Scan code/click to go to NCCA Booklet on Success Criteria



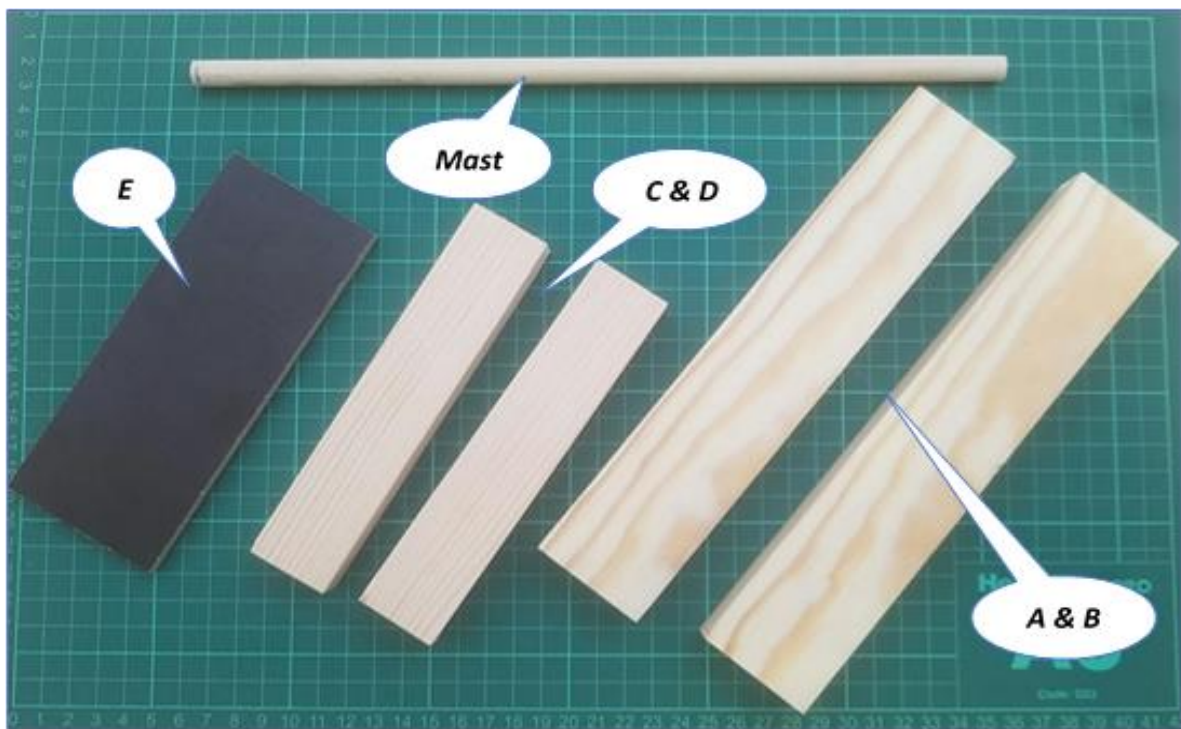
Student Name: _____ Date: _____

Design Problem/Task: (Stimulus)

A person has been shipwrecked on a desert island. They have no means of communication with civilisation. Their only chance of survival is to build a 'craft' of some description to make their way home. They can only use the materials available to them on the island.



<i>Component</i>	<i>Quantity</i>	<i>Thickness (mm)</i>	<i>Width(mm)</i>	<i>Length(mm)</i>
<i>Pieces A & B</i>		20mm	44mm	
<i>Pieces C & D</i>				
<i>Piece E</i>				
<i>Mast</i>		Ø9mm		
<i>Sail</i>				



Task

Imagine you are shipwrecked on the island facing the task of building a craft/boat/raft to get back home. Using the material provided design and build a prototype of a suitable craft which will enable you to escape the desert island. Your solution must include suitable jointing methods to ensure stability of the craft. These pieces may be cut, shaped and jointed in any way to realise your design. The design must be sail driven...i.e. there is no engine, oars, etc.



1. Reflection Point:

What am I being asked to do?

Success criteria

What will make this design successful?

2. Is there any aspect of the problem I need to find out more about?

Shape?

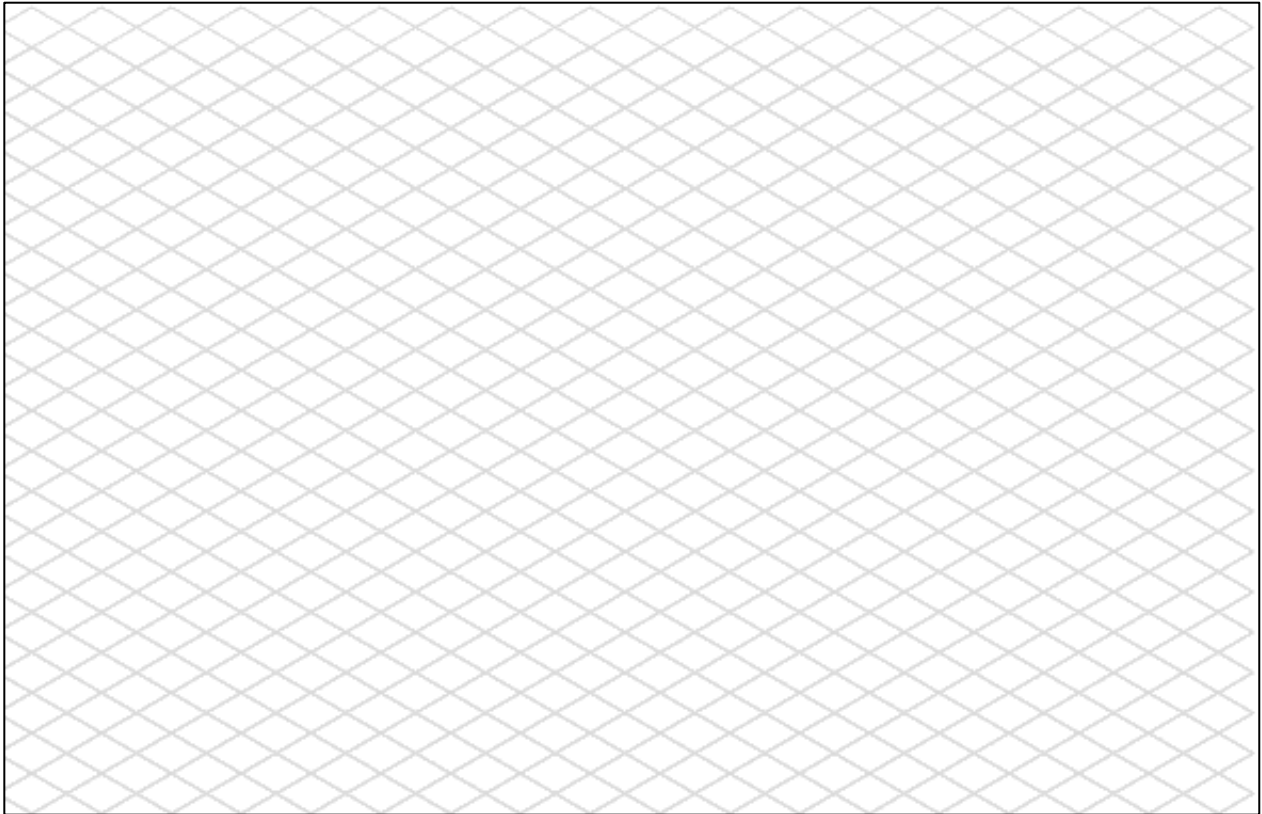
Structure?

Stability?



3. Reflection Point: Use this space or your notebook to record any additional information that will assist you in the design of your solution.

6. What joint(s) will you use in your project? What forces or pressure does the joint need to resist?
Sketch the joint(s) that you plan on using in the space below.



Success Criteria

What indicates a successful joint?

7. Is the type of joint chosen the best option for this situation? Does it make the design stable? Is there a better option or a way of making this joint more stable?

8. **Reflection point:** Is my design idea clear? Does it solve the problem posed at the beginning?



Consider the age, stage and prior learning of the students.
What learning do we want to focus on?
Explore both the strands and elements when choosing learning outcomes.

AGE AND STAGE:

April/May of first year
PRIOR LEARNING:

Basic bench skills, housing joint, cross halving joint, tee-halving joint, basic sketching skills

FOCUS OF LEARNING:

Advance bench skills, introduce Design Thinking, develop research skills, encourage students to reflect on their learning

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EXPLORE STRANDS AND ELEMENTS:

Strand 1 and **Strand 2** will be the focus here

CHOSEN LEARNING OUTCOMES

1.8 apply knowledge of and skills in a range of appropriate existing and emerging principles, processes and techniques

1.9 demonstrate principles of craft excellence through the design and realisation of tasks and artefacts

2.1 explore design problems
2.2 manage information and thinking to support an iterative design process

2.6 produce sketches, drawings and models/prototypes to explore design ideas

2.14 investigate how to minimise material use and manage waste

Identify the learning outcomes for your unit of learning.
Identify the key learning for students using action verbs to support your thinking.
Consider how we will assess and report evidence of learning

KEY LEARNING

Introduce Design Thinking

Design as a process, stages involved in design, incorporating prior learning into designing, Application of knowledge and skills accrued over previous projects.

Develop research skills

Research for a purpose, how to use the information, reflect upon and evaluate their findings.

Advance bench skills

Marking out, sawing, chiselling, jointing techniques, demonstrate their understanding of the material

ACTION VERBS

Apply: select and use information and/or knowledge and understanding to explain a given situation or real circumstances

Demonstrate: prove or make clear by reasoning or evidence, illustrating with examples or practical application

Explore: to think or talk about something in order to find out more about it

Manage: to work upon or try to alter for a purpose

Produce: make or manufacture from components or raw materials

Investigate: observe, study, or make a detailed and systematic examination, to establish facts and reach new conclusions

Develop ideas for how students could experience this learning.
How will I know they are learning?

HOW COULD STUDENTS EXPERIENCE THIS LEARNING?

Sketching, using research to assist making decisions
Design and make a solution to the problem presented

HOW WILL I KNOW THEY ARE LEARNING?

1.8, 1.9 Realise their solution using woodworking skills learned in previous projects
2.1, 2.2, Begin with group discussion on how best to assemble and joint the pieces.

2.6 Use sketches to support their reasoning and design decisions. Use of research presented by the students on a worksheet to support their influence/thinking

2.14, Using only the material supplied for the task to design and make the best possible solution in their opinion with the least amount of material wastage

All – teacher observation
All – teacher feedback

Completion of worksheet, accurate and safe use of tools and equipment in the workshop

Using your own classroom context, what methodologies and resources will support students in experiencing the learning outcomes.
Ensure assessment aligns with the learning outcomes and their action verbs

RESOURCES

Worksheet, materials list, powerpoint
METHODOLOGIES
Teacher demonstration
Groupwork
Teacher feedback

HOW WILL STUDENTS EXPERIENCE THE LEARNING OUTCOMES?

2.1, 2.2, Group discussion. Using any useful information discussed in the group to help in the creation of their own design sketches/idea.
Paired use of devices – phones/tablets to research areas where extra information is needed

2.6, generation of sketches to communicate their design ideas

2.14, economical use of the material supplied whilst still generating a response to the design problem

1.8, 1.9, realisation of their design through the application of processes and skills accrued in projects prior to this

ASSESSMENT

Realisation of design solution presented with student worksheet

REFLECTION

Click or tap here to enter text.

Rationale

Each subject of the technology suite offers the student different experiences which contribute towards their education in technology education. As a result, preparing students for learning in the technology subjects is not just about teaching towards the technology but towards the skills that are fundamental to the technology subjects and are transferable into other areas of their learning. Skills that encourage the student to problem-solve through creation, innovation, communication, collaboration and exploration, all of which are developed in an active learning environment where students can advance their ideas from conception to realisation.

Wood Technology is a subject that will allow students to explore and learn about a key natural resource that nature has provided. Trees and wooden material have a unique relationship with nature and humankind. The sustainable use and management of this natural resource is important as the world faces the challenges of the 21st century. From habitats to construction or recreation to oxygen creation this resource can play a significant role in wellbeing of our planet. To this end it is important that citizens be given the opportunity to become knowledgeable about this resource, exploring its heritage and potential as a material for the future.

In Wood Technology, students will explore the natural and made world through the medium of design, seeking out opportunities to creatively and innovatively apply the material/resource in making and shaping their environment. Wood as a material resource has seen much innovation and change. Technological advances have created significant opportunities to expand the use of wood as a resource for a broad range of applications. However, the uniqueness of this material and craft is that many of the traditional applications and processes are still of value, transcending the test of time.

Learning in this subject will be active and student centred, with learners collaborating in the pursuit of knowledge and in the safe management of the technology classroom environment. Through the challenges posed by the design-based philosophy of the subject, students will develop the relevant knowledge, skills and values to bring ideas from conception to reality in a way that will allow them to be expressive, creative and innovative.

Wood Technology Specification p.4

Aim

The study of Wood Technology at junior cycle aims to:

- enable students to develop the necessary conceptual understanding, disciplinary skills and subject knowledge to design and create artefacts of value
- empower students through designing and making, whilst developing an awareness of sustainability and the use of natural resources
- develop a range of core design skills and relevant manipulation skills through modelling and processing wood and other materials
- develop the confidence and resilience of students through engagement with the uncertainty of design challenges
- encourage students' innovation and creativity through recognition and appreciation of their capacity to design and create

Wood Technology Specification p.5

Notes

WOOD TECHNOLOGY PLANNER

Teacher Name:

Class Group:

Unit:

Duration:

Commencement Date:



Consider the age, stage and prior learning of the students.
What learning do we want to focus on?
Explore both the strands and elements when choosing learning outcomes.



Identify the learning outcomes for your unit of learning.
Identify the key learning for students using action verbs to support your thinking.
Consider how we will assess and report evidence of learning



Develop ideas for how students could experience this learning.
How will I know they are learning?



Using your own classroom context, what methodologies and resources will support students in experiencing the learning outcomes.
Ensure assessment aligns with the learning outcomes and their action verbs

What are my next steps?

When I go back to school tomorrow...

Over the next couple of months...

Next year...

What new strategies could I use in my classroom?

Junior Cycle Terminology

<p>Learning Outcomes</p>	<p>Learning Outcomes: Learning outcomes are statements in curriculum specifications to describe the knowledge, understanding, skills and values students should be able to demonstrate after a period of learning.</p>	<p>Success Criteria (NCCA Glossary)</p>	<p>Success criteria are linked to learning intentions. They are developed by the teacher and/or the student and describe what success looks like. They help the teacher and student to make judgements about the quality of student learning.</p>
<p>Learning Intentions (NCCA Glossary)</p>	<p>Learning Intention: A learning intention for a lesson or series of lessons is a statement, created by the teacher, which describes clearly what the teacher wants the students to know, understand and be able to do as a result of the learning and teaching activities.</p>	<p>Unit of Learning</p>	<p>A unit of learning links learning outcomes which clearly set out what the students should know, understand, and be able to do as a result of the learning and teaching activities within that unit.</p>
<p>Classroom-Based Assessments (CBA) (Framework P. 46)</p>	<p>Classroom-Based Assessments are best described as the occasions when the teacher assesses the students using the specific tasks set out in the subject specification. The tasks are clearly described, as are the criteria for assessment to support teacher judgement. The criteria are found in the Features of Quality linked to each Classroom-Based Assessment. Although the assessment is similar to the formative assessment that occurs every day in class, in the case of classroom-based assessment the teacher's judgement is recorded for Subject Learning and Assessment Review, and is used in the school's reporting to parents and students.</p>	<p>Formative Assessment (Framework P. 35-36)</p>	<p>The Junior Cycle will be underpinned by the further integration of formative assessment as a normal part of teaching and learning in classrooms. Formative assessment involves teachers and students reflecting on how learning is progressing and deciding next steps to ensure successful outcomes. A vital part of formative assessment is the feedback that teachers provide to their students. Through a range of assessment activities, the teacher helps the student to identify what has been achieved and where there is room for further learning and development. To facilitate the type of learning envisaged above, the role of the teacher and the dynamics of the teacher-student relationship will evolve. Teachers will place a greater emphasis on integrating assessment into their teaching, so they can better monitor students' progress in learning and identify how they can support students to reflect on and critically analyse their own learning.</p>
<p>Features of Quality (FoQ) (NCCA Glossary)</p>	<p>Features of quality are the statements in the short course/subject specifications that support teachers in making judgements about the quality of student work for the purpose of awarding achievement grades for certification. As success criteria are closely linked to learning intentions and based on the day-to-day processes in the classroom, student learning will gradually come to reflect the requirements set out in the features of quality which are used for certification purposes.</p>	<p>Junior Cycle Profile of Achievement (JCPA) (Framework p. 46)</p>	<p>The JCPA will reward achievement across all areas of learning as applicable: Subjects, Short Courses, Wellbeing, Priority Learning Units, Other areas of learning. The JCPA will draw upon and report on achievement across all elements of assessment including ongoing, formative assessment; Classroom-Based Assessments; and SEC grades which include results from the state-certified examinations and the Assessment Tasks.</p>
<p>Summative Assessment (NCCA Glossary)</p>	<p>Assessment is summative when it is used to evaluate student learning at the end of the instructional process or of a period of learning. The purpose is to summarise the students' achievements and to determine whether and to what degree the students have demonstrated understanding of that learning by comparing it against agreed success criteria or features of quality.</p>	<p>Subject Learning Assessment Review (SLAR)</p>	<p>In Subject Learning and Assessment Review meetings, teachers will share and discuss samples of their assessments of student work and build a common understanding about the quality of student learning. Each Subject Learning and Assessment Review meeting will be subject-specific and will focus on the Classroom-Based Assessment undertaken by the particular year group.</p>

An tSraith Shóisearach do Mhúinteoirí

Junior **CYCLE** for teachers

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