



Oide

Tacú leis an bhFoghlaim
Ghairmiúil i measc Ceannairí
Scoile agus Múinteoirí

Supporting the Professional
Learning of School Leaders
and Teachers

Wood Technology

PLE 2023/2024

Students at the
Centre of Learning





Introductions



Share



5 minute



Your school context?



Today's Workshop





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Supporting the Professional
Learning of School Leaders
and Teachers



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Oide is a new support service for school leaders and teachers, funded by the Department of Education.

Launched on September 1, 2023.

Formed from the integration of four existing support services:

- Centre for School Leadership (CSL)
- Junior Cycle for Teachers (JCT)
- National Induction Programme for Teachers (NIPT)
- Professional Development Service for Teachers (PDST)





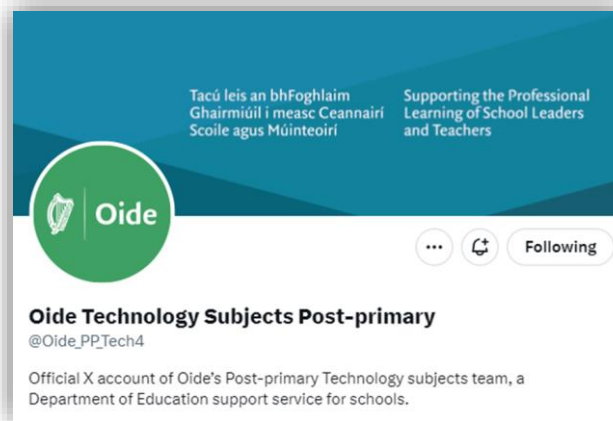
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info@oide.ie



 [@Oide PP Tech4](https://twitter.com/Oide_PP_Tech4)

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Supporting the Professional Learning of School Leaders and Teachers



Wood Technology Support Team

- Support service
- Team of full-time Professional Learning Leaders (PLL)
- Team of part-time associates



Barry Nolan
Senior Leader



Declan Regan
PLL



Patrick Kelly
PLL

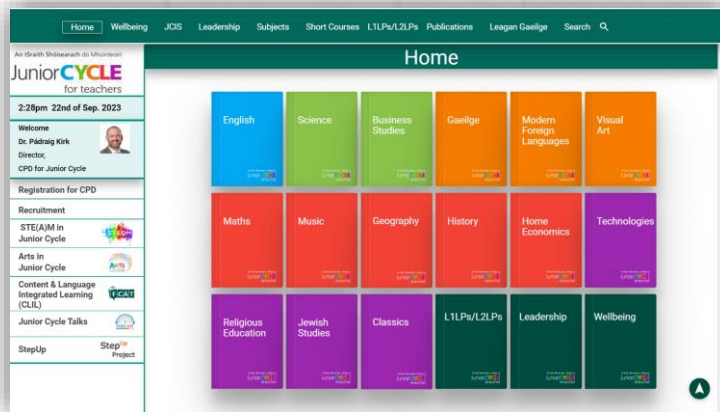


Seamus O'Connell
PLL

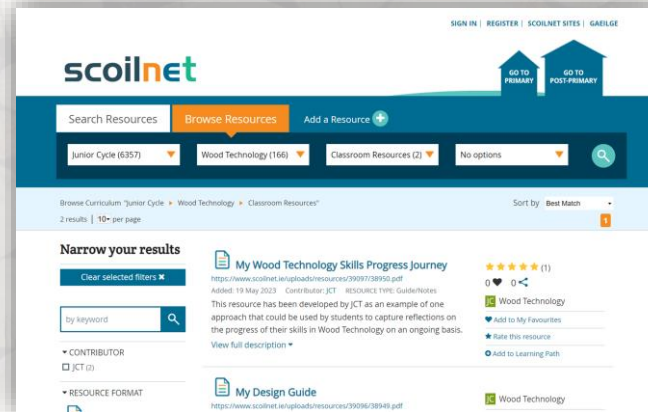


Wood Technology Supports

Supports into the future



www.jct.ie



www.scoilnet.ie



www.oide.ie



Partners



An Roinn Oideachais
Department of Education

www.education.ie



NCCA

An Chomhairle Náisiúnta
Curaclaim agus Measúnachta
National Council for
Curriculum and Assessment

www.ncca.ie



State Examinations Commission
Coimisiún na Scrúduithe Stáit

www.examinations.ie



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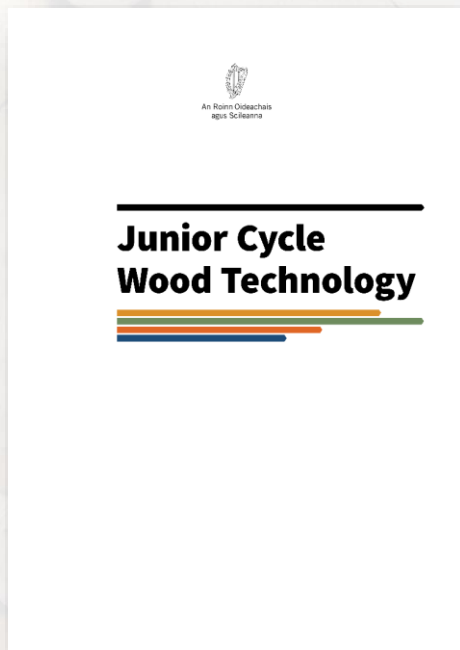
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Supporting the Professional
Learning of School Leaders
and Teachers

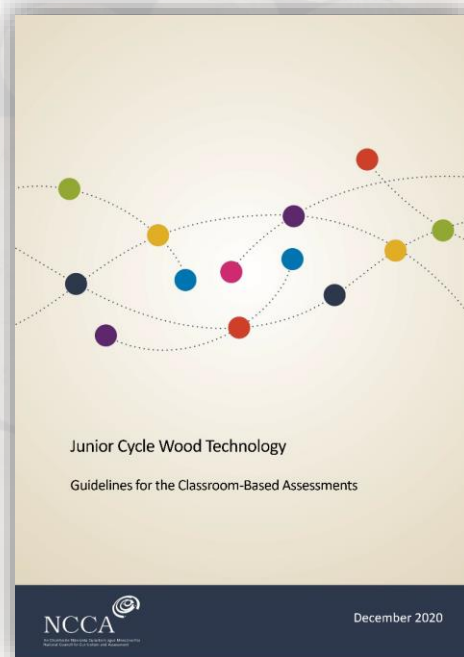
www.oide.ie



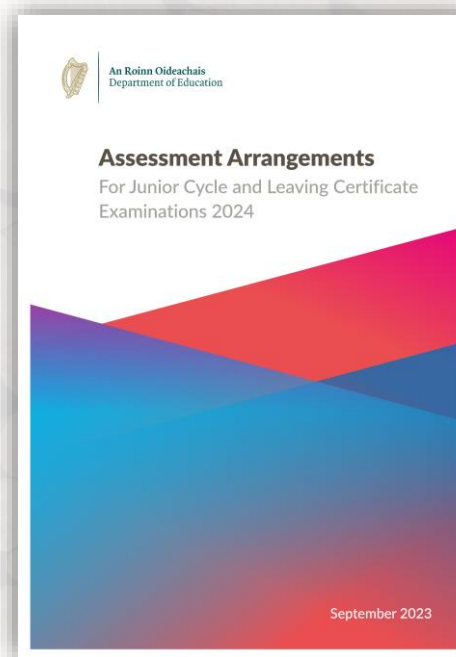
Key Documents



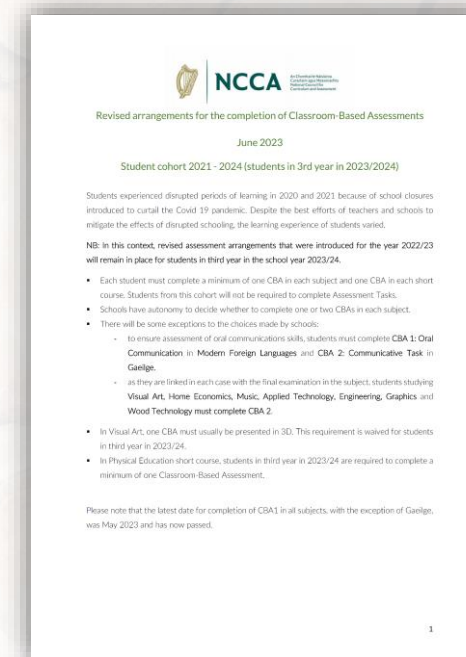
Subject Specification,
NCCA



Assessment Guidelines,
NCCA



Assessment Arrangements
2023/2024,
Department of Education



CBA Key Dates
2023/2024,
NCCA



S.E.C., Information note on Junior Cycle examinations 2022, March 2023



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Cycle Examinations 2022

Information note on
Junior Cycle examinations
in a range of subjects

March 2023

Information Note

Wood Technology

Wood Technology is examined at Common level and consists of two components – a written examination and coursework. The written examination represents 30% (120 marks) of the total marks (400 marks) and is 1 hour 30 minutes in duration. The coursework component represents 70% (280 marks) of the total marks and comprises two elements: a folio entitled *My Design Journey* and an artefact. The adjusted assessment arrangements for the 2022 examinations stated that for Junior Cycle Wood Technology: "Candidates will be required to complete and present two specified headings only, of the six headings in the Design Folio, for 2022."

Some good practice observed in the written examination

The following good practices were observed with varying degrees of frequency in the material presented by candidates for the 2022 examinations. Where they occurred, they assisted candidates in scoring well.

- Candidates frequently gave accurate and relevant answers to the questions asked, indicating that they had paid close attention to the specific requirements of each question.
- Candidates displayed a very good knowledge and understanding of the tools, equipment and fittings presented. The associated health and safety precautions associated with the tools were also recognised and well explained.
- The questions relating to trees and their growth were very well attempted by candidates.
- Candidates demonstrated a good appreciation and knowledge of traditional methods of jointing wood in their answering.
- A wide variety of poster formats were presented by candidates to explain the process of photosynthesis, such as mind maps, word diagrams, sketches and notes.
- In general, a good knowledge of the environment and sustainability in Wood Technology was displayed throughout the answering by candidates. In particular, the reasons why the Tree Council promotes the planting of trees and the use of veneers instead of solid wood were well answered.
- Where candidates were asked to describe the steps in a process, those that communicated distinct steps, which were clear, concise and to the point, with correct terminology used, achieved higher marks.

Advice on engaging with the written examination

The following advice will assist with ensuring that candidates demonstrate their levels of achievement to full effect when engaging with the written examination.

- Candidates should attempt all questions on the examination paper. No marks can be awarded for parts that are not attempted.

Wood Technology, page 28.

in the subject. Every opportunity to in the classroom should be taken. Sketching joints, design ideas, processing and lamination were exhibited by many

se strands of the Wood Technology planning allows opportunities for tools, materials and to develop design and practical aspects of the subject.

to investigate the identification of for the use of each, based on their

using a straight edge to demonstrate interpretation of drawing views.

exposed to all aspects of the Wood years. All the craft skills such as marquetry integrated into classroom teaching and

holder to store coasters were often a very Candidates should be encouraged to be

work with varying degrees of frequency in the 2022 examinations. Where they occurred, they

ted both a *My Design Journey* folio and an artwork, as required.

ues were used by candidates to produce their A4 or A3 format with good use of ICT skills nicate their design solution.

each design brief to develop and present their re was good evidence of creativity and

woods in the construction of their artefacts. f knowledge and understanding of the ent solid woods.

vel of craft, skills and techniques in their ce in areas such as traditional jointing,

and lamination were exhibited by many

of modern technologies such as CNC routers and hance their finished artefacts for final presentation. embled and fittings were appropriately selected and

some surface preparation of their chosen materials surface finish to their artefacts.

sited in the selection of a surface finish depending candidate. For example, most candidates whose ic and safe applied finish.

ork ring that candidates demonstrate their levels of ing and reporting on their coursework.

work component in Wood Technology, the nt should be carefully read and all instructions

Design Journey folio and an artefact. Candidates their folio in line with the instruction given in the

freehand sketches is an essential communication logy. Emphasis should be placed on the ing skills to communicate design solutions. Well-nd freehand sketches should be shaded, rendered is takes time and practice to develop the necessary

design decisions in the folio section *My Preferred* ded clear considerations and justifications of their uld be placed on describing the justifications for the

learning proved challenging for most candidates. good work and showed what they had learned ld be improved. Candidates should discuss their ges they have taken from completing their ore easily to them if such evaluation and their way of working throughout the three years of

id to reflect on what they have learned and to include a Learning Journey over the course of their engagement with

read each of the design briefs carefully. Consideration rements and constraints presented within each brief in the solution.

given to the selection of sustainable and appropriate and techniques when planning the construction of the nd sustainable use of materials contributes to the le practice in Wood Technology.

uraged to use a range of crafts, skills and techniques in and construction of their artefact. Traditional jointing king skills like scroll-saw work, carving, woodturning, arminating should be an integral part of their completed

ments created using a CNC router or laser cutter are mplement the manipulative skills demonstrated in the cannot be used as a replacement for the demonstration of and tools. It is also recommended that the design eets or embellishments should be presented.

allowed at the end of the process for good surface an appropriate surface finish properly to the artefact. A y be achieved by carefully following the application finish.

o submit authentic coursework, duly validated by the class rtes. All coursework must be the candidate's own d in school under the supervision of their teacher.



Looking forward, we will...

Session 1



Explore the incremental development of woodcraft skills



Collaboratively plan a unit of learning having considered student context



Explore learning experiences that are active and student centred



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Session 1

Incremental Development of Woodcraft Skills

Wood Technology - Woodcraft Skills



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'Transcending the test of time'



An Roinn Oideachais
agus Scileanna

Junior Cycle Wood Technology

'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.***

Wood Technology Specification, Rationale, page 4.



Woodcraft Skills

Others?





Development of Woodcraft Skills

Reflecting on your practice...

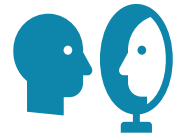
How do you facilitate the development of a broad range of woodcraft skills with your students?



Individually



1 minute



Reflect on your practice





Development of Woodcraft Skills



Wood Technology
Department,
Scoil Ruáin,
Killenaule,
Co. Tipperary.

A Subject Department's Approach:

What?
Why?
How?

How do you facilitate the development of
a broad range of woodcraft skills in the
Wood Technology classroom?



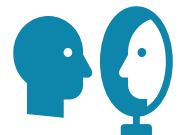
Individually



5 minutes



Watch the video



Reflect on your
practice



Development of Woodcraft Skills

A Subject Department Approach



[Watch the video](#)



Development of Woodcraft Skills

Reflecting on your practice...

How do you facilitate the development of a range of woodcraft skills with your students?



Open Discussion



5 minutes



Share



Striking a Balance

Possibilities & Opportunities



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An Roinn Oideachais
agus Scileanna

Junior Cycle Wood Technology



*‘This specification aims to strike a balance between exploring the **breadth of possibilities** the study of the subject presents and providing **opportunities for in-depth experiences** of particular areas as appropriate.’*

Wood Technology specification, Overview: Course, page 9.



Incremental Development of Woodcraft Skills



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Group Activity:

- Each group will be assigned a woodcraft skill.
- Discuss how students could be supported to incrementally develop the woodcraft skill over three years of Junior Cycle.
- Graphically communicate the group's ideas.



Group Activity



15 minutes



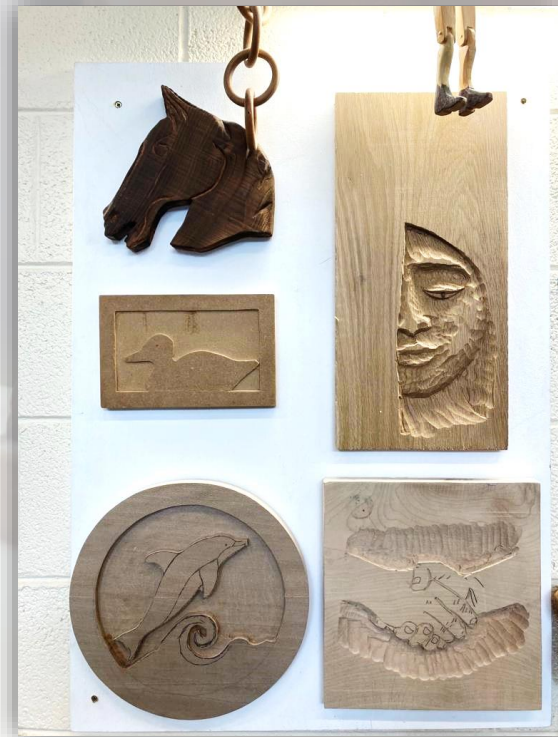
Capture ideas on activity sheet




Incremental Development of Woodcraft Skills



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 Oide <small>Tairé Síolta an tArdteicneolaíochta Chomhairle na n-Éireann Grúpa na n-Éireann</small>	 Incremental Development of Woodcraft Skills	Chosen craft(s):		
Some considerations:	Awareness, Appreciation, Application? 	Opportunities to design and create? 	Sequencing of Learning? 	Depth of Treatment? 



JOINERY

Some considerations:

Awareness, Appreciation, Application?



Opportunities to design and create?



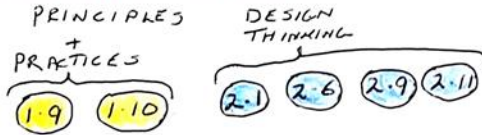
Sequencing of Learning?



Depth of Treatment?



LEARNING OUTCOME



SOME CONSIDERATION.

1st Yr

1. SAWING + TRENCHING
- SAWING ACROSS THE GRAIN
 - PARING ACROSS THE GRAIN
 - HALVING / HOUSING JOINTS
 - DIMENSIONS + PROPORTIONS
 - ALLOW FOR INDIVIDUAL DESIGN
- BASIC MARKING OUT SKILLS

2. VERTICAL SAWING + VERTICAL PARING

- BRIDLE & MORTISE + TENON JOINTS
- ALLOW FOR INDIVIDUAL DESIGN
- ADVANCED MARKING OUT SKILLS

3. EDGE JOINTS

- MULTIPLE JOINTS (3 PIECES)
- DOVETAIL / FINGER / HOUSING JOINTS
- JOINT DESIGN / ALTERNATIVES
- JUSTIFICATION OF CHOSEN SOLUTION

3rd Yr.

OPPORTUNITIES TO DESIGN + CREATE

TO BE INCORPORATED IN EACH PROJECT

• HOW TO INCORPORATE EAR PHONES?

• SAWING + TRENCHING.

MOBILE PHONE STAND/DOCK

3. EDGE JOINTING.

DEPTH OF TREATMENT

- HIGH LEVEL OF SKILL (1.9)
- HEALTH & SAFETY (1.10) PRACTICES - REFLECT + EVALUATE
- EVIDENCE OF DESIGN PROCESS (2.1)
- QUALITY SKETCHES 2D / 3D (2.6)

• LOCK THEME??

• JOINT TYPE / PROPORTION, TO BE DECIDED FOR EACH CORNER

2. VERTICAL PARING VERTICAL SAWING



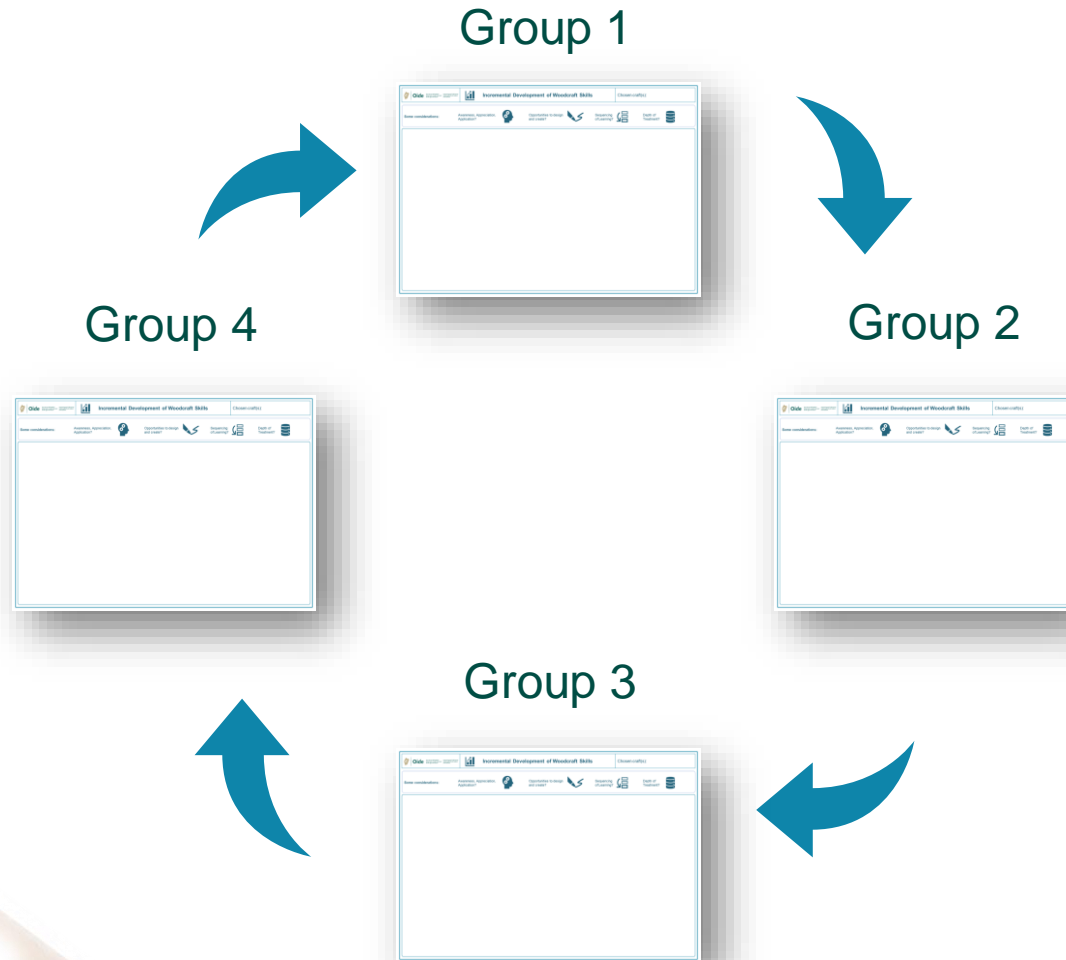
Incremental Development of Woodcraft Skills



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Sharing of Practice:

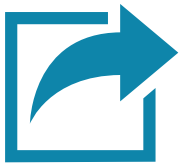
Using a market-place strategy, each group will share and justify their ideas with the other groups



Sharing of practice



15 minutes



Share the group's ideas from the flipchart



Development of Woodcraft Skills The Student Experience



[Watch the video](#)

S.E.C. Information Note



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Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Cycle Examinations 2022

Information note on
Junior Cycle examinations
in a range of subjects

March 2023

[Information Note](#)



'It is important that candidates are fully exposed to all aspects of the Wood Technology specification over the three years. All the craft skills such as marquetry and woodturning should be planned and integrated into classroom teaching and learning practice.'

SEC, Information note on Junior Cycle examinations in a range of subjects, March 2023, Wood Technology, page 29.



Woodcraft Supports & Resources

Oide Teach Us to Sigh Again
Discover the Potential
Supporting the Professional
Learning of School Leavers
and Teachers

The Woodturning Workshop

The following series of videos were recorded with popular woodturner Willie Creighton. These resources are designed to allow a master craftsperson to share his vast experience, so that his knowledge and skills can be passed onto teachers and students. This will help to keep the craft alive and enable students to further express their creativity in Wood Technology.

Scan the QR codes or click the images below to access the associated videos.

1. Parts of the Lathe and Safety
2. Mounting a Piece on the Lathe
3. Turning a Cylinder
4. Basic Spindle Cuts
5. Advanced Spindle Cuts
6. Turning a Table Leg
7. Faceplate Turning
8. Turning a Lamp (Timelapse)
9. Long Hole Boring on a Lathe

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Let's Get Carving!

The following series of videos were recorded with the crafts-person Adrian Taylor-Finlay. These resources are designed to allow a Adrian to share his vast experience, so that his knowledge and skills can be passed onto teachers and students. This will enable students to further express their creativity in Wood Technology.

Scan the QR codes or click the images below to access the associated videos.

1. Choosing Carving Chisels
2. Transferring an Image onto Wood
3. Carving a Basic Profile
4. Adding Depth and Shadow
5. Adding Texture

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The Marquetry Masterclass

The following series of videos are designed to allow students and teachers to become more familiar with the Window method of Marquetry. This will help to promote the craft of Marquetry and enable students to further express their creativity in Wood Technology.

Scan the QR codes or click the images below to access the associated videos.

1. Creating a Template
2. Transferring an Image onto Wood
3. Cutting a Window
4. Filling a Window
5. Completing the Marquetry Panel
6. Assembly of Marquetry Panel

Click here for the full video

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Session 2

Planning for Teaching and Learning



Looking forward, we will...



Explore the incremental development of craft skills



Collaboratively plan a unit of learning having considered student context



Explore learning experiences that are active and student centred

Session 2

Students at the Centre of Learning



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Junior Cycle Wood Technology

*‘Junior cycle education places **students at the centre of the educational experience**, enabling them to actively participate in their communities and in society and to be resourceful and confident learners in all aspects and stages of their lives. Junior cycle is **inclusive of all students** and contributes to equality of opportunity, participation and outcome for all.’*

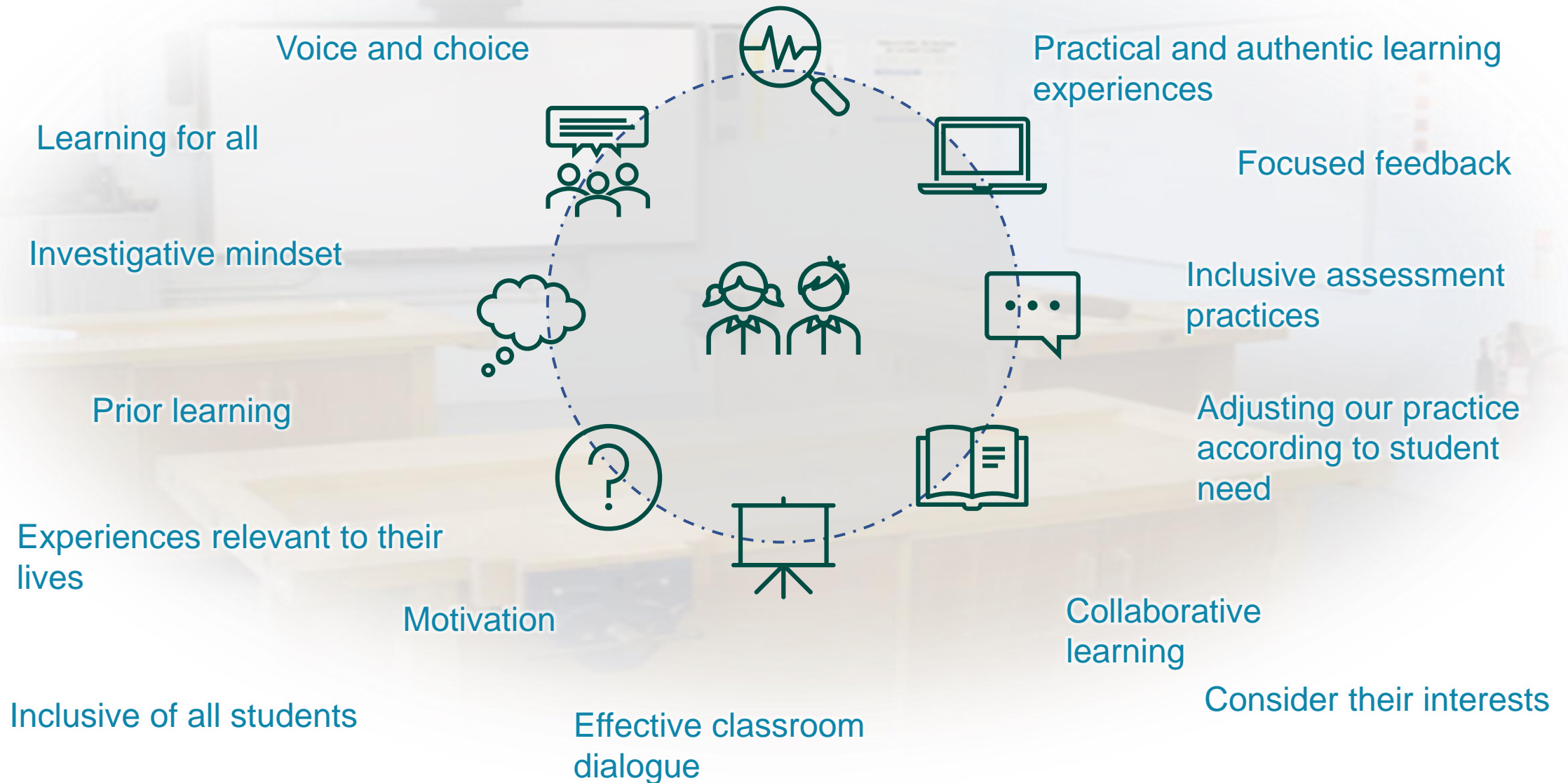
Wood Technology specification, Introduction to Junior Cycle, page 3.

Students at the Centre of Learning

⏸ What does this mean to you?



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Considering Student Context Planning for Teaching and Learning in Wood Technology



[Watch the video](#)



Students at the Centre of Learning

Group Discussion – Sharing of Practice:

What considerations do you have when planning for a student-centred approach to teaching, learning, and assessment?



Group discussion



5 minutes



Share



Sample Unit of Learning



1st Year Group,
Co. Tipperary

Context:

- First-year students – beginning of term 2
- Prior Learning – The students have developed basic bench skills through a number of small projects

Focus of learning:

- Basic introduction to various woodcraft skills



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Unit of Learning:

Class group:

Prior Learning:

Learning Outcomes:

Key Learning: Use the action verbs to support your thinking.

Focus of Learning:

Evidence of Learning

How can students experience the **Key Learning**?

How can the **Key Learning** be assessed?

Ensure assessment aligns with the chosen Learning Outcomes and their associated action verbs.



Prior Learning:

The students have developed basic bench skills through a number of small projects. Students are familiar with the safe use of hand tools to complete tasks.

Focus of Learning:

To provide students with a basic introduction to a variety of woodcraft skills for example marquetry, carving, etc.

Learning Outcomes:

- 2.2 manage** information and thinking to support an iterative design process
- 2.6 produce** sketches, drawings and models/prototypes to explore design ideas
- 1.9 demonstrate** principles of craft excellence through the design and realisation of tasks and artefacts
- 3.8 utilise** the natural aesthetics and properties of wood to enhance the appearance and function of an artefact.
- 1.7 explain** the function and application of a range of tools, equipment, fixtures and fittings

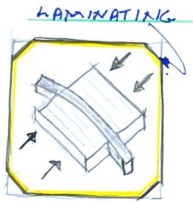
Key Learning: Use the action verbs to support your thinking

Develop design skills through **producing** sketches, carrying out and documenting research, justifying choices. Explore and **demonstrate** basic woodcraft skills, such as: carving, marquetry, pyrography, and lamination. Use sketching to communicate and **explain** the function and application of tools and equipment in these crafts. Understand the properties of different types of wood, and their suitability for various crafts and processes.

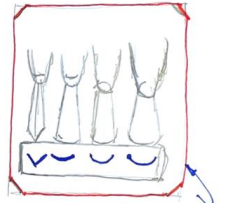
Evidence of Learning

How can students experience the **Key Learning**?

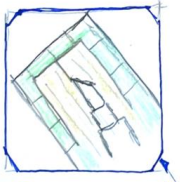
POSSIBLE CRAFTS STUDENTS MAY EXPLORE.



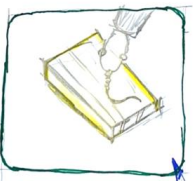
LAMINATING



CARVING CHISELS



MARQUETRY



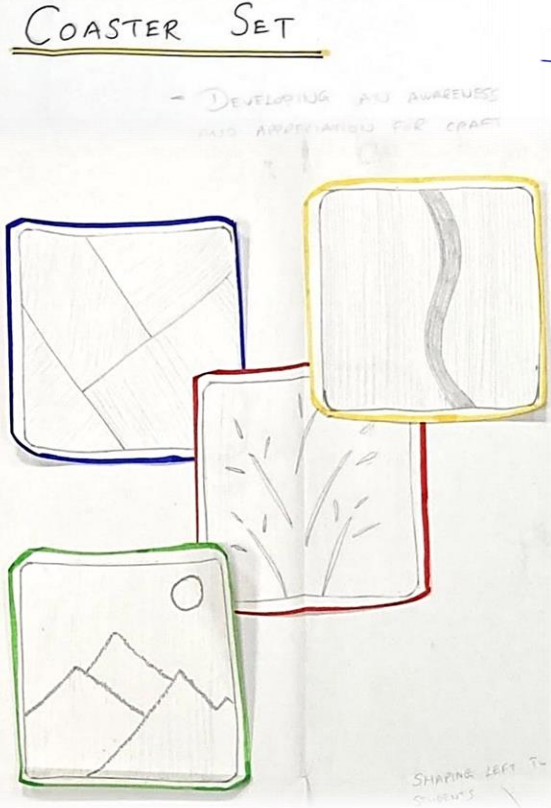
PYROGRAPHY



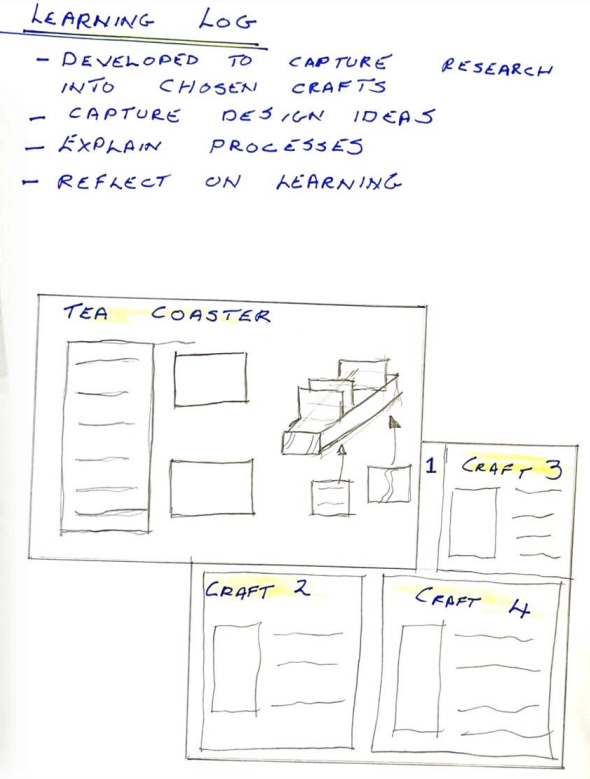
- WOOD CRAFT SKILLS
- BASIC: LAMINATING, CARVING, MARQUETRY, PYROGRAPHY SKILLS.
 - FINISHING TECHNIQUES TO COMPLIMENT CHOSEN CRAFTS/WOODS

- DESIGN SKILLS
- SKETCHING, IDENTIFYING THEMES
 - CARRYING AND DOCUMENTING RESEARCH
 - JUSTIFYING CHOICES

- APPRECIATION OF CRAFT.
- IDENTIFYING LOCAL CRAFT EXAMPLES. (HOME, SCHOOL, PUBLIC BUILDINGS)
 - EXPLORING CREATIVITY
 - POSSIBLE TYPES OF MATERIAL.



How can the **Key Learning** be assessed?



Ensure assessment aligns with the chosen Learning Outcomes and their associated action verbs.



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Sample Student Learning Logs

Wood Technology – Coaster Set Name: _____ Class: _____

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Cups containing hot drinks could damage the surfaces they rest on. Coasters can help to protect these surfaces, while also being an attractive addition to a table or countertop.

Using the crafts introduced to you by your teacher, design and make a set of coasters for your home. Each coaster should show a different craft skill.

Design Ideas – Sketch your final design idea for each coaster on the images below. Explain why you chose your design idea for each craft.

Analysing the above Design Brief and identify all the areas you need to

Plastic materials – wood metal **Coaster** marquetry carving Pyrography Lamin **Craft**

Materials selection and justification
What materials or types of wood has your teacher made available to you? What properties are you looking for in these materials for use as a coaster? Which one would suit each craft? Why?

My teacher is letting us use pine for our coasters. The veneers are hardwood. For carving future projects, pine is a good wood to use because it has close grain but still soft.

Design Idea 1: Star
Incised Carving when you are in side of the side to make the out side smooth.

Design Idea 2: Heart
Relief Carving Carving the background to make the middle stand out to look 3D.

Wood Technology – Coaster Set Name: _____ Class: _____

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Processes
Using notes and sketches, describe how you completed the following processes while creating the Marquetry coaster.

Transferring an image from paper to the veneer.
We used carbon paper to transfer the image from paper onto the wood with my pen and ruler.

Carbon Paper
— design
— carbon paper
— veneer

Safely using the knife to cut the veneer.
we used ruler to keep the blade straight.

Have a mat under your veneer and take a ruler and use the ruler + knife to make a straight line.

Sticking the veneers together before gluing to the coaster.
Use masking tape to have your piece still. So it's easier for you to glue it, put paper onto the veneer and used a waste piece of wood and clamped it.

Self Evaluation
This is to be completed throughout the process, not just at the end.

What?
What skills or crafts am I focusing on?
Carving and marquetry

What am I enjoying or not enjoying about this task?
I didn't enjoy marquetry because it was hard to get the pieces right.

So what?
What feedback did my teacher give me during this project to improve my skills?
Told me to hold the scalpel a different way & stick masking tape on the back.

What are my strengths and/or weaknesses?
I am good at taking out the pieces from the marquetry.

Now what?
What have I learned?
I learned how to use a scalpel correctly and about hardwoods.

What can I do to further improve these skills?
I can improve on doing things slowly and using my time.

S.E.C. Information Note



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State Examinations Commission

Junior Cycle Examinations 2022

Information note on
Junior Cycle examinations
in a range of subjects

March 2023

[Information Note](#)



‘The integration of learning from all three strands of the Wood Technology specification should be planned.


Careful planning allows opportunities for candidates to explore and learn about tools, materials and to develop design and communication skills in tandem with the practical aspects of the subject.’

SEC, Information note on Junior Cycle examinations in a range of subjects, March 2023, Wood Technology, page 29.



Planning a Unit of Learning

Collaboratively plan a Unit of Learning
with your subject department colleagues.

 Oide		Unit of Learning:		Class group:
Prior Learning:	Learning Outcomes:	Key Learning: Use the action verbs to support your thinking		
Focus of Learning:				
Evidence of Learning:		How can the Key Learning be assessed?		
How can students experience the Key Learning?				
<small>Ensure assessment aligns with the chosen Learning Outcomes and their associated action verbs.</small>				



Subject
Department
Planning



5 minute



Explore Resources



Wood Technology – Learning Outcomes



Action Verbs:

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

Appreciate: recognise the meaning of, have a practical understanding of

Collaborate: work jointly with others or together on an activity or project

Communicate: use visual, gestural, verbal or other signs to share meaning or exchange information; interaction between sender and recipient; both work together to understand

Compile: to build up gradually

Consider: think carefully about something, typically before making a decision

Create: process and give form to the topic of what is to be created using selected methods and material and/or to give the material used a new form

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

Devise: to plan or invent with careful thought

Discuss: offer a considered, balanced review that includes a range of arguments, factors or hypotheses; opinions or conclusions are supported by appropriate evidence

Evaluate: (data) collect and examine data to make judgements and appraisals; describe how evidence supports or does not support a conclusion in an inquiry or investigation; identify the limitations of data in conclusions; make judgements about the ideas, solutions or methods

Evolve: to develop through experience

Planning and managing

The learning outcomes in this element encourage students to develop a range of project management skills while evolving their designs to the creation stage. Students develop the necessary knowledge and skills that will enable them to effectively solve contextual problems.

Communicating

The learning outcomes in this element encourage students to select and use appropriate media to communicate design ideas and technical information. Students will use technical language associated with wood science and technology. They learn about the important role that communication plays in addressing global and local environmental issues.

Students will plan and narrate their design evolution highlighting critical features of their solutions to design problems.

Creating

The learning outcomes in this element encourage students to be creative and to explore ways in which they can apply their knowledge and skills and appreciate the practices needed to produce purposeful, functional, appealing artefacts. Students develop their creativity across the three strands and use the natural aesthetics and properties of wood to enhance the appearance and function of their artefacts.

Environment and sustainability

The learning outcomes in this element encourage students to appreciate the environmental benefits and impacts of using wood as a natural and renewable resource, and to use sustainable practice throughout their learning. Students explore the role of forestation and wood in terms of global and local ecology and sustainability.

Strand 1: Principles and practices

In this strand, students learn about and employ the fundamental principles and practices associated with the study of Wood Technology. They learn to work safely and efficiently with equipment and materials, and apply principles of craft excellence through design and manufacture. They will investigate the environmental benefits and impacts of using wood as a natural and renewable resource and learn about sustainable practice.

Students should be able to:

- 1.1 **explore** key elements required for the completion of tasks
- 1.2 **justify** the selection of plans, processes and materials for the completion of tasks
- 1.3 **collaborate** effectively in a workshop learning environment
- 1.4 **manage** themselves and their resources

Strand 2: Design thinking

In this strand, students explore design briefs and their solutions. They use key principles of design and produce sketches, drawings, models/prototypes and artefacts that illustrate their design thinking. Students consider factors such as materials, cost, time resources and skills to produce purposeful, functional, appealing artefacts. They also consider the environmental and social impacts of design decisions and investigate how to minimise material use and manage waste.

Students should be able to:

- 2.1 **explore** design problems
- 2.2 **manage** information and thinking to support an iterative design process
- 2.3 **evaluate** their own progress to inform future learning
- 2.4 **understand** key principles of design and ergonomics

Strand 3: Wood science and materials

In this strand, students explore the natural and physical properties and characteristics of wood. They learn how to use the natural aesthetics and properties of wood to enhance the appearance and function of artefacts. They explore the role of forestation and wood in terms of local/global ecology and sustainability and recognise the importance of considering the impact on the natural environment when sourcing materials.

Students should be able to:

- 3.1 **identify** common species of trees
- 3.2 **evaluate** the characteristics and properties of common species of trees
- 3.3 **understand** the properties associated with a range of materials applicable to Wood Technology
- 3.4 **evaluate** the use of wood in comparison to alternative materials



Scan or click on the QR code to access the Junior Cycle Wood Technology specification at curriculumonline.ie

Action Verbs:

Explain: give a detailed account including reasons or causes

Evaluate: (ethical judgement) collect and examine evidence to make judgements and appraisals; describe how evidence supports or does not support a judgement; identify the limitations of evidence in conclusions; make judgements about the ideas, solutions or methods

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

Identify: recognise patterns, facts, or details; provide an answer from a number of possibilities; recognise and state briefly a distinguishing fact or feature

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

Justify: give valid reasons or evidence to support an answer or conclusion

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

Produce: make or manufacture from components or raw materials

Recognise: identify facts, characteristics or concepts that are critical (relevant/appropriate) to the understanding of a situation, event, process or phenomenon

Represent: bringing clearly and distinctly to mind by use of description or imagination


Understand: have and apply a well-organised body of knowledge

Utilise: make practical and effective use of





Planning a Unit of Learning

 Oide <small>Tais iú an Mhíúgáin @Chomhairle na n-Údair Súil ag na hOide</small>	Unit of Learning:	Class group:
Prior Learning:	Learning Outcomes:	Key Learning: Use the action verbs to support your thinking
Focus of Learning:		
Evidence of Learning:		
How can students experience the Key Learning?		How can the Key Learning be assessed?
<small>Ensure assessment aligns with the chosen Learning Outcomes and their associated action verbs.</small>		

We will use a paper version of the planner for today's workshop



Oide

Tacaíocht le haghaidh Ghairmiúil i measc Ceannairí Scoile agus Múinteoirí Supporting the Professional Learning of School Leaders and Teachers

Unit of Learning:

Class group:

Prior Learning:

Learning Outcomes:

Key Learning: Use the action verbs to support your thinking.

Focus of Learning:

How can students experience the **Key Learning**?

Evidence of Learning

How can the **Key Learning** be assessed?

Prior Learning:

Consider the age, stage, and prior learning of your students.

Ensure assessment aligns with the chosen Learning Outcomes and their associated action verbs.



Oide



Subject
Department
Planning



10 minutes



Planning a Unit of
Learning:
Prior Learning



Oide

Tacaíocht le haghaidh Ghairmiúil i measc Ceannairí Scoile agus Múinteoirí Supporting the Professional Learning of School Leaders and Teachers

Unit of Learning:

Class group:

Prior Learning:

Learning Outcomes:

Key Learning: Use the action verbs to support your thinking.

Focus of Learning:

How can students experience the **Key Learning**?

Evidence of Learning

How can the **Key Learning** be assessed?

Focus of Learning:

What learning do you want to focus on?

Ensure assessment aligns with the chosen Learning Outcomes and their associated action verbs.



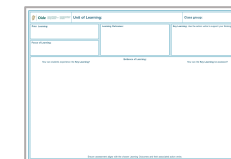
Oide



Subject Department Planning



5 minutes



Planning a Unit of Learning

Planning in Wood Technology



Oide

Wood Technology – Learning Outcomes



Scan or click on the QR code to access the Junior Cycle Wood Technology specification at curriculumonline.ie

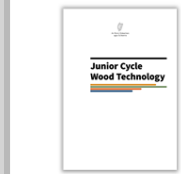
Strand 1: Principles and practices	Strand 2: Design thinking	Strand 3: Wood science and materials
<p>In this strand, students learn about and employ the fundamental principles and practices associated with the study of Wood Technology. They learn to work safely and efficiently with equipment and materials, and apply principles of craft excellence through design and manufacture. They will investigate the environmental benefits and impacts of using wood as a natural and renewable resource and learn about sustainable practice.</p>	<p>In this strand, students explore design briefs and their solutions. They use key principles of design and produce sketches, drawings, models/prototypes and artefacts that illustrate their design thinking. Students consider factors such as materials, cost, time resources and skills to produce purposeful, functional, appealing artefacts. They also consider the environmental and social impacts of design decisions and investigate how to minimise material use and manage waste.</p>	<p>In this strand, students explore the natural and physical properties and characteristics of wood. They learn how to use the natural aesthetics and properties of wood to enhance the appearance and function of artefacts. They explore the role of forestation and wood in terms of local/global ecology and sustainability and recognise the importance of considering the impact on the natural environment when sourcing materials.</p>
Students should be able to:	Students should be able to:	Students should be able to:
<p>1.1 explore key elements required for the completion of tasks</p> <p>1.2 justify the selection of plans, processes and materials for the completion of tasks</p> <p>1.3 collaborate effectively in a workshop learning environment</p> <p>1.4 manage themselves and their resources</p>	<p>2.1 explore design problems</p> <p>2.2 manage information and thinking to support an iterative design process</p> <p>2.3 evaluate their own progress to inform future learning</p> <p>2.4 understand key principles of design and ergonomics</p>	<p>3.1 identify common species of trees</p> <p>3.2 evaluate the characteristics and properties of common species of trees</p> <p>3.3 understand the properties associated with a range of materials applicable to Wood Technology</p> <p>3.4 evaluate the use of wood in comparison to alternative materials</p>
<p>1.5 represent key information graphically</p> <p>1.6 create sketches and working drawings to recognised standards using a variety of media</p> <p>1.7 explain the function and application of a range of tools, equipment, fixtures and fittings</p>	<p>2.5 communicate relevant information</p> <p>2.6 produce sketches, drawings and models/prototypes to explore design ideas</p> <p>2.7 communicate a suitable approach to solving a problem</p> <p>2.8 compile a folio through appropriate media</p>	<p>3.5 explain the properties associated with the classification of wood</p> <p>3.6 discuss the use of wood in comparison to alternative materials</p> <p>3.7 justify the use of materials based on characteristics and properties within a context</p>
<p>1.8 apply knowledge of and skills in a range of appropriate existing and emerging principles, processes and techniques</p> <p>1.9 demonstrate principles of craft excellence through the design and realisation of tasks and artefacts</p> <p>1.10 apply recognised health and safety practices in the use of tools, equipment and materials</p>	<p>2.9 evolve their solutions based on critical reflection</p> <p>2.10 devise templates and models using various media</p> <p>2.11 produce purposeful, functional, appealing artefacts</p> <p>2.12 create an artefact having considered factors such as materials, cost, time resources and skills</p>	<p>3.8 utilise the natural aesthetics and properties of wood to enhance the appearance and function of an artefact</p> <p>3.9 create an artefact that demonstrates an understanding of the properties associated with a range of materials applicable to Wood Technology</p>
<p>1.11 investigate the environmental impacts of using wood as a natural and renewable resource</p> <p>1.12 appreciate sustainable practice throughout their learning</p>	<p>2.13 recognise the environmental and social impacts of design decisions</p> <p>2.14 investigate how to minimise material use and manage waste</p>	<p>3.10 appreciate the role of forestation and wood in terms of local/global ecology and sustainability</p> <p>3.11 investigate the journey of wood from forest to end use</p> <p>3.12 consider the impact on the natural environment when sourcing materials</p>

Action Verbs:

- Explain:** give a detailed account including reasons or causes
- Evaluate:** (ethical judgement) collect and examine evidence to make judgements and appraisals; describe how evidence supports or does not support a judgement; identify the limitations of evidence in conclusions; make judgements about the ideas, solutions or methods
- Explore:** to think or talk about something in order to find out more about it
- Identify:** recognise patterns, facts, or details; provide an answer from a number of possibilities; recognise and state briefly a distinguishing fact or feature
- Investigate:** observe, study, or make a detailed and systematic examination, to establish facts and reach new conclusions
- Justify:** give valid reasons or evidence to support an answer or conclusion
- Manage:** to work upon or try to alter for a purpose
- Produce:** make or manufacture from components or raw materials
- Recognise:** identify facts, characteristics or concepts that are critical (relevant/appropriate) to the understanding of a situation, event, process or phenomenon
- Represent:** bringing clearly and distinctly to mind by use of description or imagination
- Understand:** have and apply a well-organised body of knowledge
- Utilise:** make practical and effective use of

‘Wood Technology uses an interdisciplinary approach which encourages the integration of the three strands in the teaching and learning of the subject’

Wood Technology specification, Overview: Course, page 9.





Oide

Tacaí leis an bhFoghlaim Ghairmiúil i measc Ceannairí Scoile agus Múinteoirí
Supporting the Professional Learning of School Leaders and Teachers

Unit of Learning:

Class group:

Prior Learning:

Learning Outcomes:

Key Learning: Use the action verbs to support your thinking.

Focus of Learning:

How can students experience the **Key Learning**?

Evidence of Learning

How can the **Key Learning** be assessed?

Learning Outcomes:

Explore the strands and elements when choosing Learning Outcomes.
Identify the Learning Outcomes for your unit of learning.

Ensure assessment aligns with the chosen Learning Outcomes and their associated action verbs.



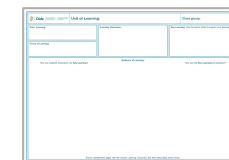
Oide



Subject
Department
Planning



10 minutes



Planning a Unit of
Learning



Oide

Tacaíocht le haghaidh Ghairmiúil i measc Ceannairí Scoile agus Múinteoirí
Supporting the Professional Learning of School Leaders and Teachers

Unit of Learning:

Class group:

Prior Learning:

Learning Outcomes:

Key Learning: Use the action verbs to support your thinking.

Focus of Learning:

How can students experience the **Key Learning**?

Evidence of Learning

How can the **Key Learning** be assessed?

Key Learning:

Identify the key learning for students using the action verbs to support your thinking.

Ensure assessment aligns with the chosen Learning Outcomes and their associated action verbs.



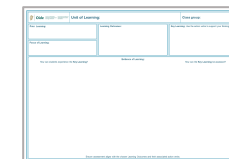
Oide



Subject Department Planning



10 minutes



Planning a Unit of Learning



Oide

Tacaí leis an bhFoghlaim Ghairmiúil i measc Ceannairí Scoile agus Múinteoirí
Supporting the Professional Learning of School Leaders and Teachers

Unit of Learning:

Class group:

Prior Learning:

Learning Outcomes:

Key Learning: Use the action verbs to support your thinking.

Focus of Learning:

How can students experience the **Key Learning**?

Evidence of Learning

How can the **Key Learning** be assessed?

Evidence of Learning:

- Develop ideas on how students could experience the Key Learning.
- Develop ideas on how the Key Learning can be assessed.
- Consider what strategies and resources will support students in experiencing the Key Learning.
- Ensure Assessment aligns with the Learning Outcomes and their action verbs.

Ensure assessment aligns with the chosen Learning Outcomes and their associated action verbs.



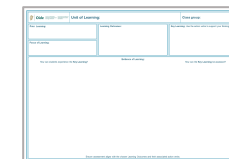
Oide



Subject
Department
Planning



10 minutes



Planning a Unit of
Learning

Planning a Unit of Learning Share



Oide



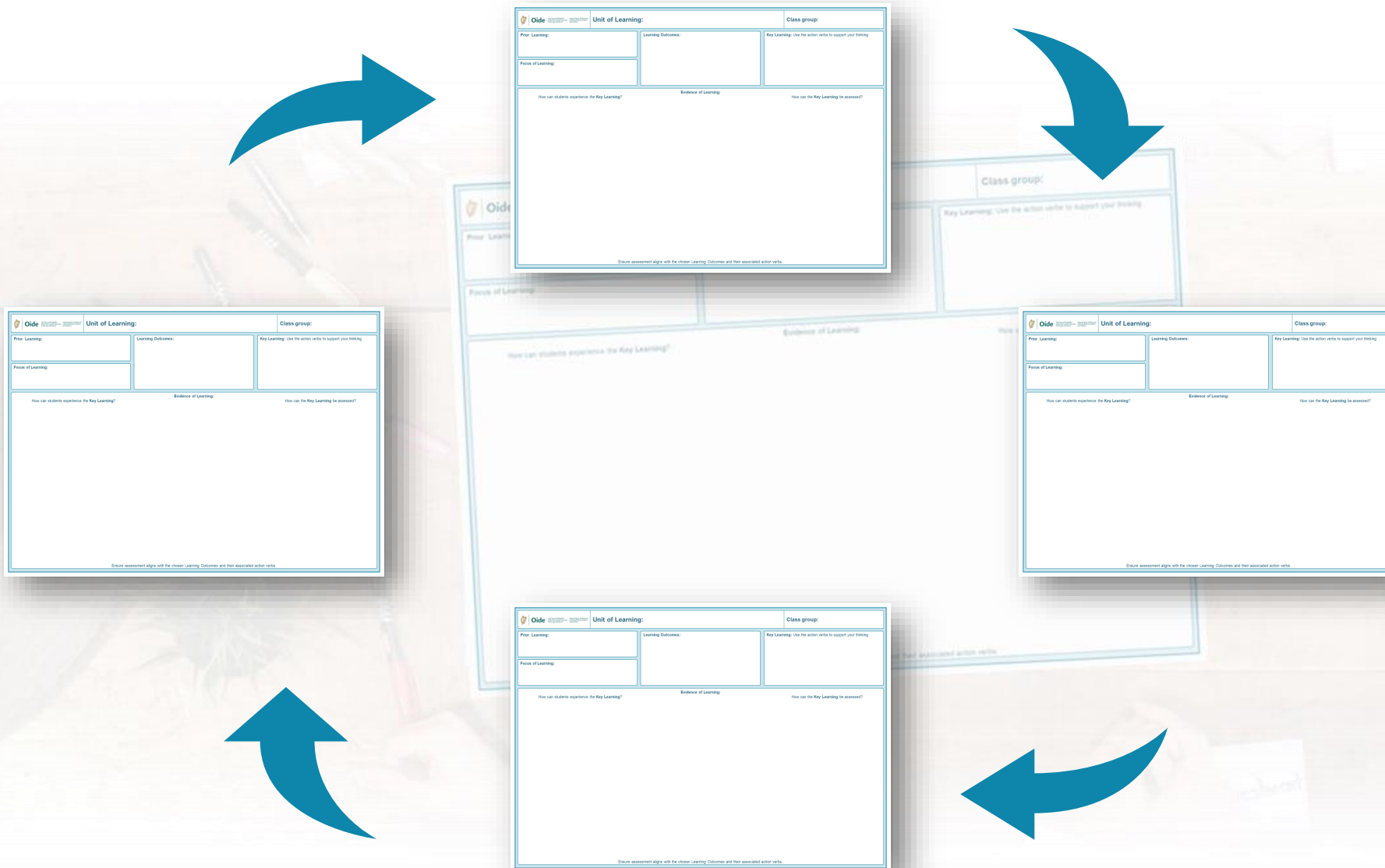
Subject
Department
Planning



10 minutes



Share

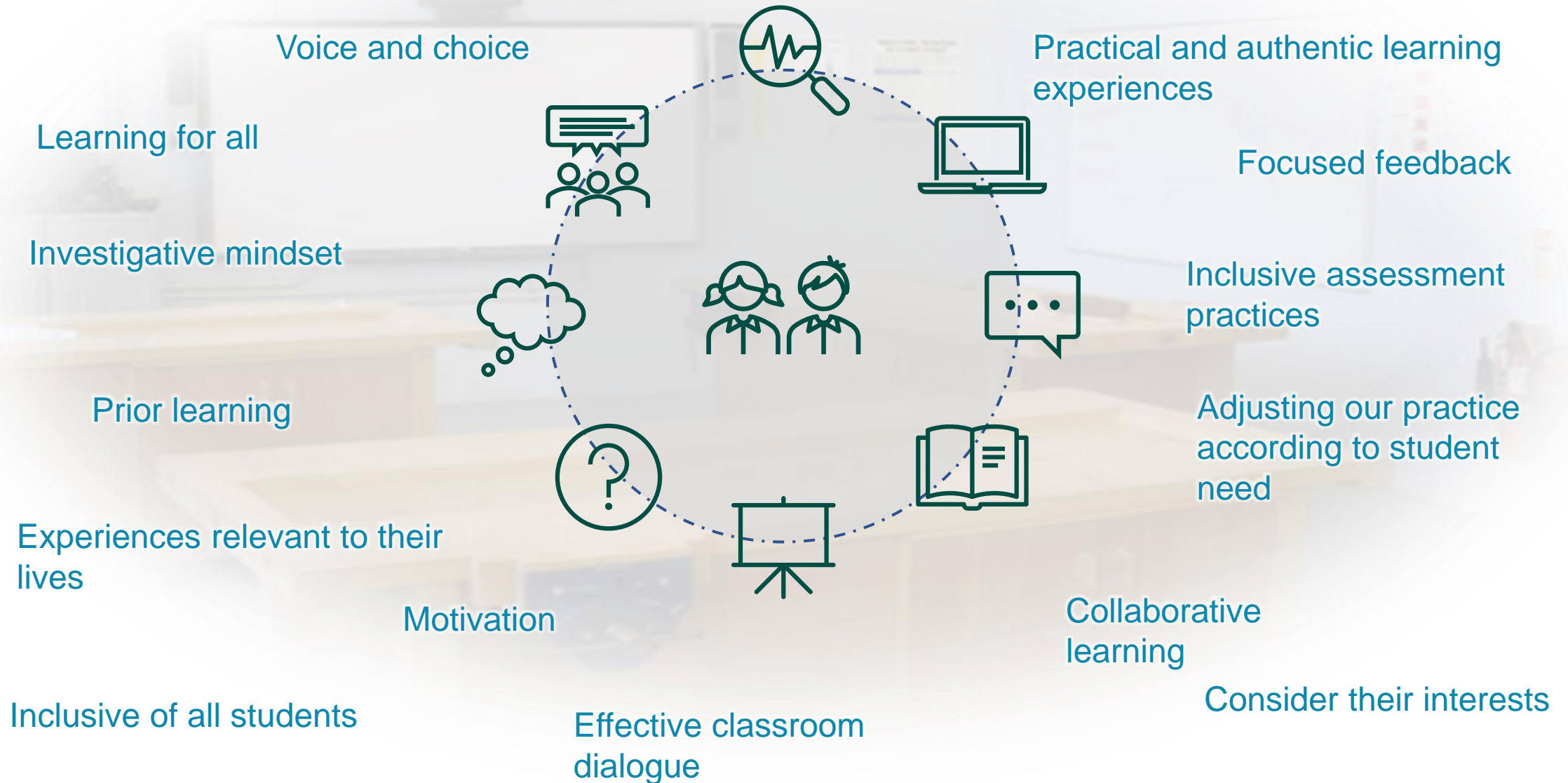


Students at the Centre of Learning

Some Considerations...



Oide





Oide

Tacú leis an bhFoghlaim
Ghairmiúil i measc Ceannairí
Scoile agus Múinteoirí

Supporting the Professional
Learning of School Leaders
and Teachers



Session 3

Student-Centred Learning Experiences



Looking forward, we will...



Explore the incremental development of craft skills



Collaboratively plan a unit of learning having considered student context



Explore learning experiences that are active and student centred

Session 3



An Roinn Oideachais
agus Scileanna

Junior Cycle Wood Technology



‘Junior cycle education places students at the centre of the educational experience, enabling them to actively participate in their communities and in society and to be resourceful and confident learners in all aspects and stages of their lives.

NCCA, Wood Technology Specification, Introduction to Junior Cycle, page 3.

STEM Education: Implementation Plan to 2026



Oide



Riátas na hÉireann
Government of Ireland

STEM Education

Implementation Plan to 2026



The Policy Statement vision for STEM education is that:

*Ireland will be internationally recognised as providing the highest quality STEM education experience for learners that nurtures **curiosity, inquiry, problem-solving, creativity, ethical behaviour, confidence, and persistence, along with the excitement of collaborative innovation.***

STEM Education Implementation Plan to 2026, page 4.



Students at the Centre of Learning



Reflecting on your practice...

Consider a recent learning experience.

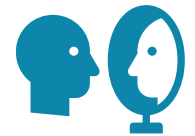
What aspect of the learner experience was student-centred?



Individually



1 minute



Reflect



Learning Experience



1st Year Group,
Balla Secondary School,
Balla, Co. Mayo.



Context:

- First-year students in term three...
- One class period...

3.5

explain the properties associated with the classification of wood

Key learning:

- Compare the properties/characteristics associated with deciduous and coniferous trees



Classification Strategy



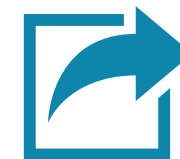
Group activity



15 minutes



Engage with the activity



Share



Student-centred Learning Experience



1st Year group,
Balla Secondary School,
Co. Mayo.



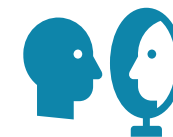
Individually



5 minutes



Watch the video



Reflect on your
practice

What aspects of student-centred learning are evident in this learning experience?



Student-Centred Learning Experience

Tree Classification Strategy



Oide



[Watch the video](#)



Student-centred Learning Experience



1st Year group,
Balla Secondary School,
Co. Mayo.



Group Discussion



5 minutes



Share

What aspects of student-centred learning are evident in this learning experience?



Student justifications for their decisions

grain is tighter together

Leafs are flat.

The tree is semi-circle

The tree is a

There is berries

The leafs are flat

The tree is a

Larch

The leaves fall off in Winter but its Spikey and triangular witch makes it group B.

COST
More expensive

grains more better quality less wood

Takes longer to grow
It's A better quality of wood

Holly

The leaves stay on in the Winter and it has berries.

Mahogany

tight grains

The tree is a



Learning Experience



1st Year Group,
Balla Secondary School,
Balla, Co. Mayo.



Context:

- First-year students in term three...
- One class period...

3.5

explain the properties associated with the classification of wood

Key learning:

- Compare the properties/characteristics associated with deciduous and coniferous trees

S.E.C. Information Note



Oide



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Cycle Examinations 2022

Information note on
Junior Cycle examinations
in a range of subjects

March 2023

[Information Note](#)



‘Sketching is a key communication skill in the subject. Every opportunity to encourage and nurture sketching skills in the classroom should be taken.

Sketching of features of wood, trees, materials, tools, joints, design ideas, processing techniques, and so on should be integrated into everyday classroom practice.’

SEC, Information note on Junior Cycle examinations in a range of subjects, March 2023, Wood Technology, page 29.





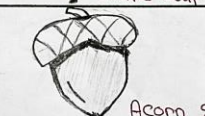

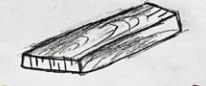

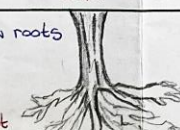
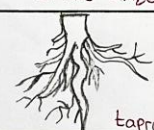
Capturing the Learning









	Deciduous	Coniferous
Leaves		
Seeds		
Timber/Wood		
Roots		

Tuairim leas an bhFoghlaim
Chairiméil leas: Ceannaird
Scoláir agus Múinteoirí Supporting the Professional
Learning of School Leaders
and Teachers



Students Capturing the Learning

	Deciduous	Coniferous
Leaves	Maple Leaves  Maple Leaf	Pine needles  Pine needle Leaf
Seeds	Acorns  Acorn Seed	Pine cones  Pine cone seed
Timber	Oak  Oak timber	Spruce  Spruce timber
Roots	Birch trees : shallow roots  Shallow root	taproots  taproot root

	Deciduous	Coniferous
Leaves	Flat (symmetrical) 	Long (spiky) 
Seeds	Edible (symmetrical) 	Hard (uneven) 
Timber	Dark, slow growing, Dense 	Vertical grain, Soft, knots 
Roots	Deeper roots Cause: Takes longer to grow 	Shallow roots Cause: Grow fast 



What the students said...

• I enjoyed today's activity, I liked working in a big group.

• It was unique and different from a normal class.

• It made it easy to understand

• I loved the ~~hard~~ ~~soft~~ hard wood and soft wood exercise.
• I liked working in groups.

• Easier and preferable learning
• I learnt new things

• Easier to understand and I went at my own pace

It was a better way of doing theory and working in a group easy to understand. Figuring things out.

• I liked today's class
• It was interactive
• You could discuss a lot
• Learned a lot on the differences between hard and soft wood.
• Easier to understand

• I know what type of trees are around where I live now.

I liked this class because it was a better way of learning, and I liked working in a group rather than myself. I learned better this way rather than writing loads of things down.

The activity was good. I learnt how to identify if a tree is coniferous or deciduous. It was more fun than taking down notes. It was fun.

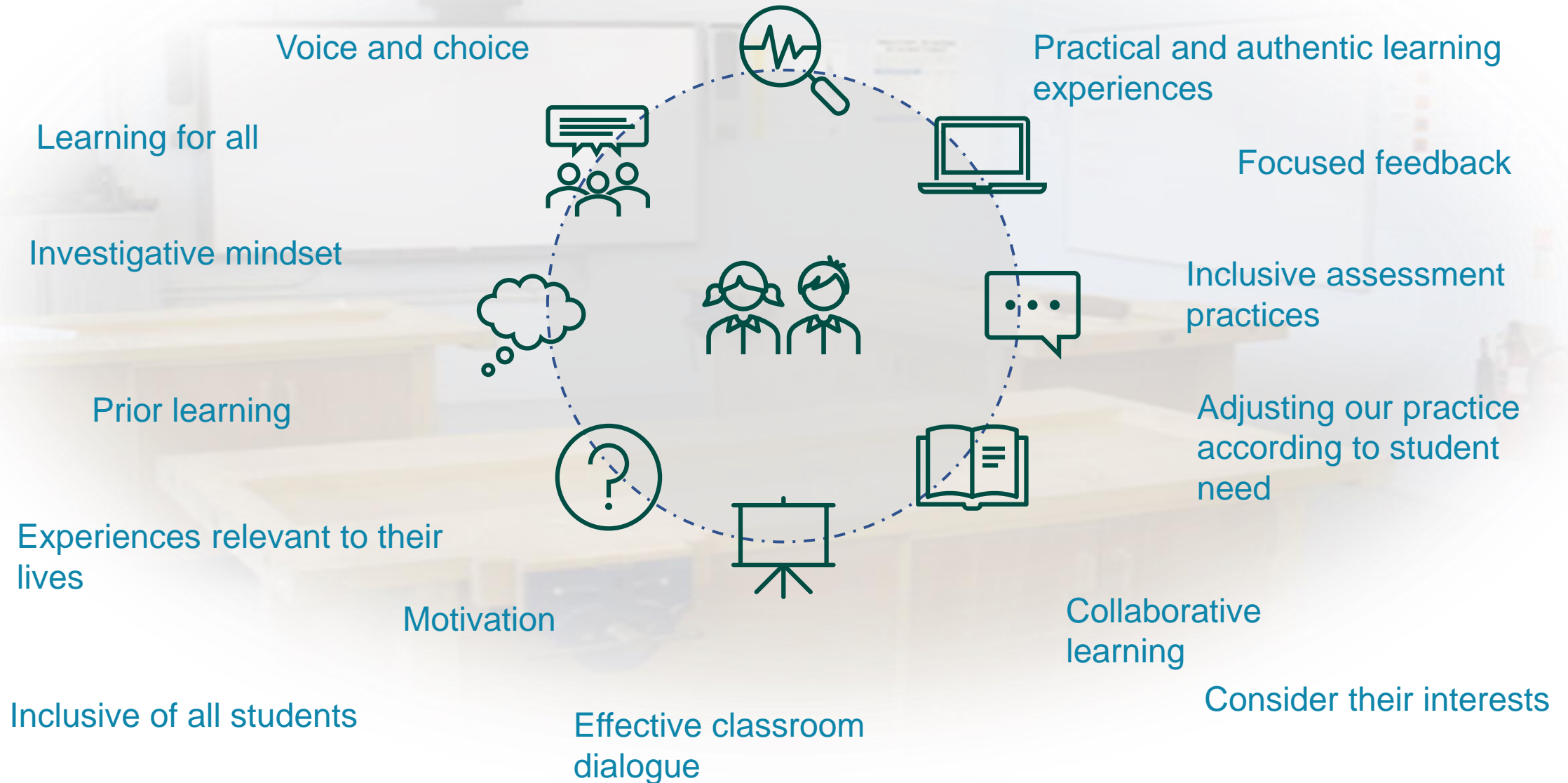
• I learned that air seasoning is weather dependent

Students at the Centre of Learning

Some Considerations...



Oide

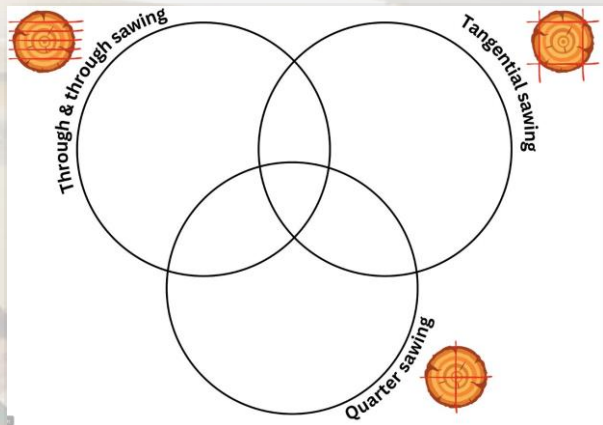




Supports and Resources

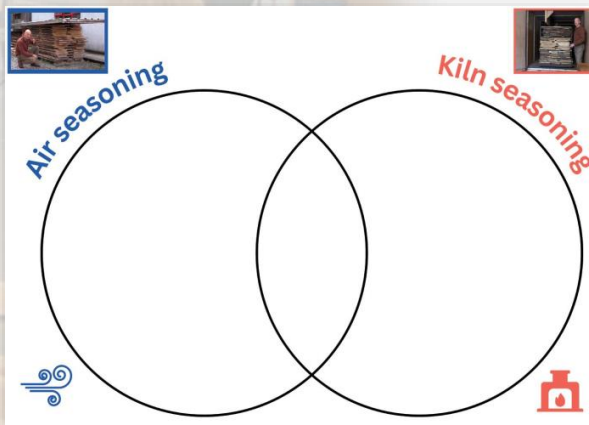
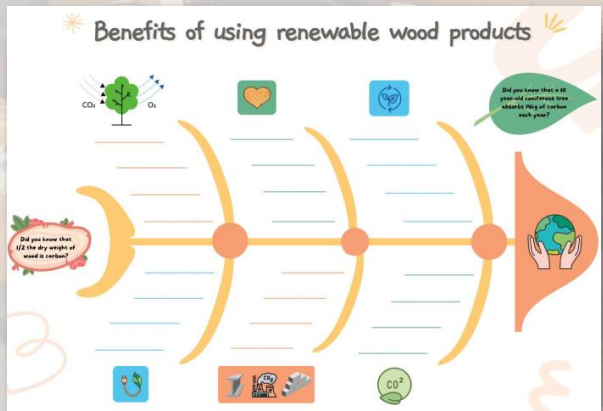
Wood Products
Classification strategy

A spiral-bound notebook-style graphic with the title 'Wood Products' and subtitle 'Classification strategy'. It features illustrations of wood logs, a tree stump, and a tree.



Plywood			MDF
Chipboard			Laminated wood

A collage of various wood products including chipboard, plywood, wood particles, veneers, MDF, wood fibres, OSB, and laminated wood. Each sample is labeled with its name.





Combining resources

Wood Products
Classification strategy

The notebook cover features illustrations of stacked logs, a tree stump, and a tree.

Group A

- Naturally sourced
- Made in a factory
- Size depends on the log
- Walnut - Exotic imported hardwood

Group B

- Wood particles
- Made in a factory
- Can be made into large sheets

- Veneers
- Wood particles
- Wood fibres

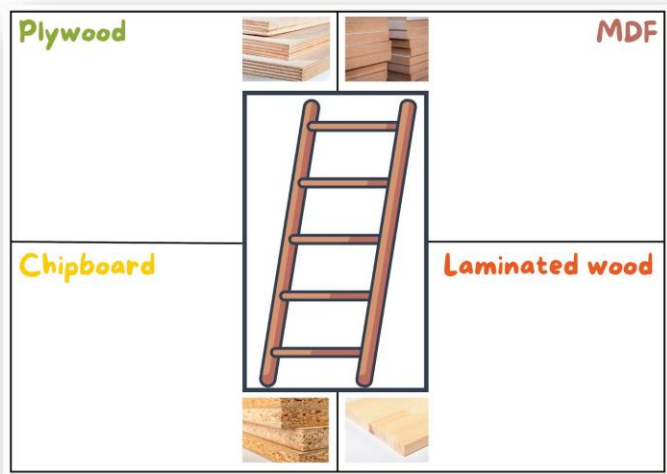
- Can be covered in many colours
- Naturally sourced
- Can be veneered to look like solid wood
- Made in a factory
- Walnut - Exotic imported hardwood
- Size depends on the log
- Can be made into large sheets

- Plywood
- MDF
- Chipboard
- Laminated wood

The cards are arranged around a central illustration of a wooden ladder.



Exploring the resources



Wood Products Ranking Ladder

3.7

justify the use of materials based on characteristics and properties within a context

Key learning:

Compare various wood products, justify the selection of a wood product, use sketching to communicate

Capture all your knowledge on each wood product in each area shown. Using the ladder, determine which wood product would be best suited to make school desks. Explain your group decisions.



Exploring the resources

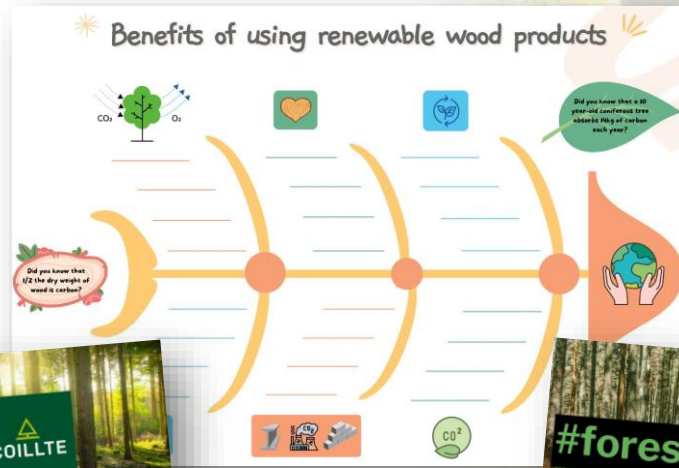
Renewable Wood Products Fishbone Strategy

1.11

investigate the environmental impacts of using wood as a natural and renewable resource

Key learning:

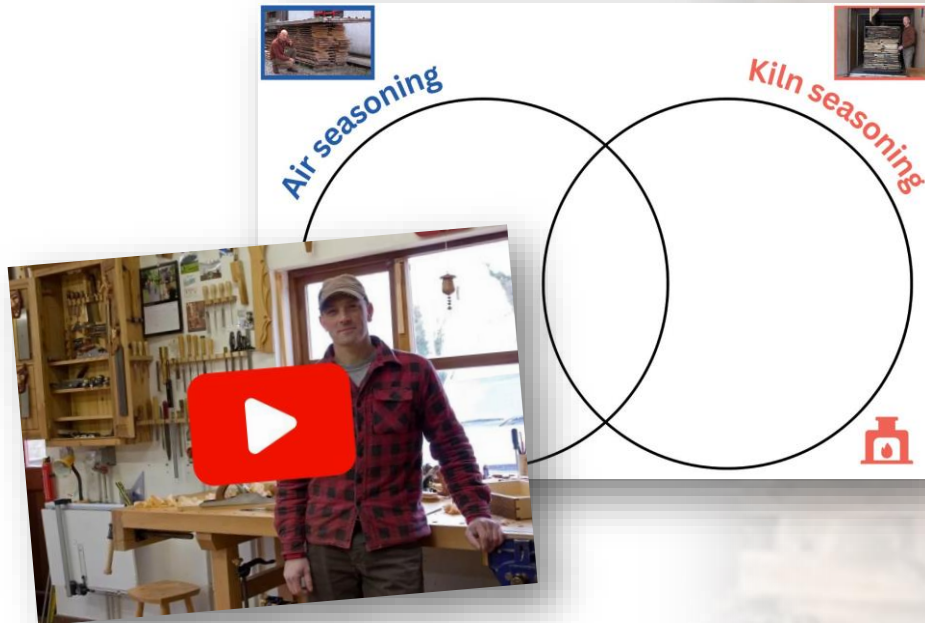
Exploring how using renewable wood products can help tackle climate change



Using the icons on the activity sheet and the stimulus materials provided, identify and discuss the benefits of using renewable wood products.



Exploring the resources



Methods of Seasoning Venn Diagram

3.11

investigate the journey of wood
from forest to end use

Key learning:

Compare methods of seasoning,
explain rationale behind seasoning,
use sketching to communicate

Compare and contrast these two methods of seasoning.
Use images, symbols, colour and notes to graphically
communicate your thoughts.



Individually



10 minutes



Engage with the
activity

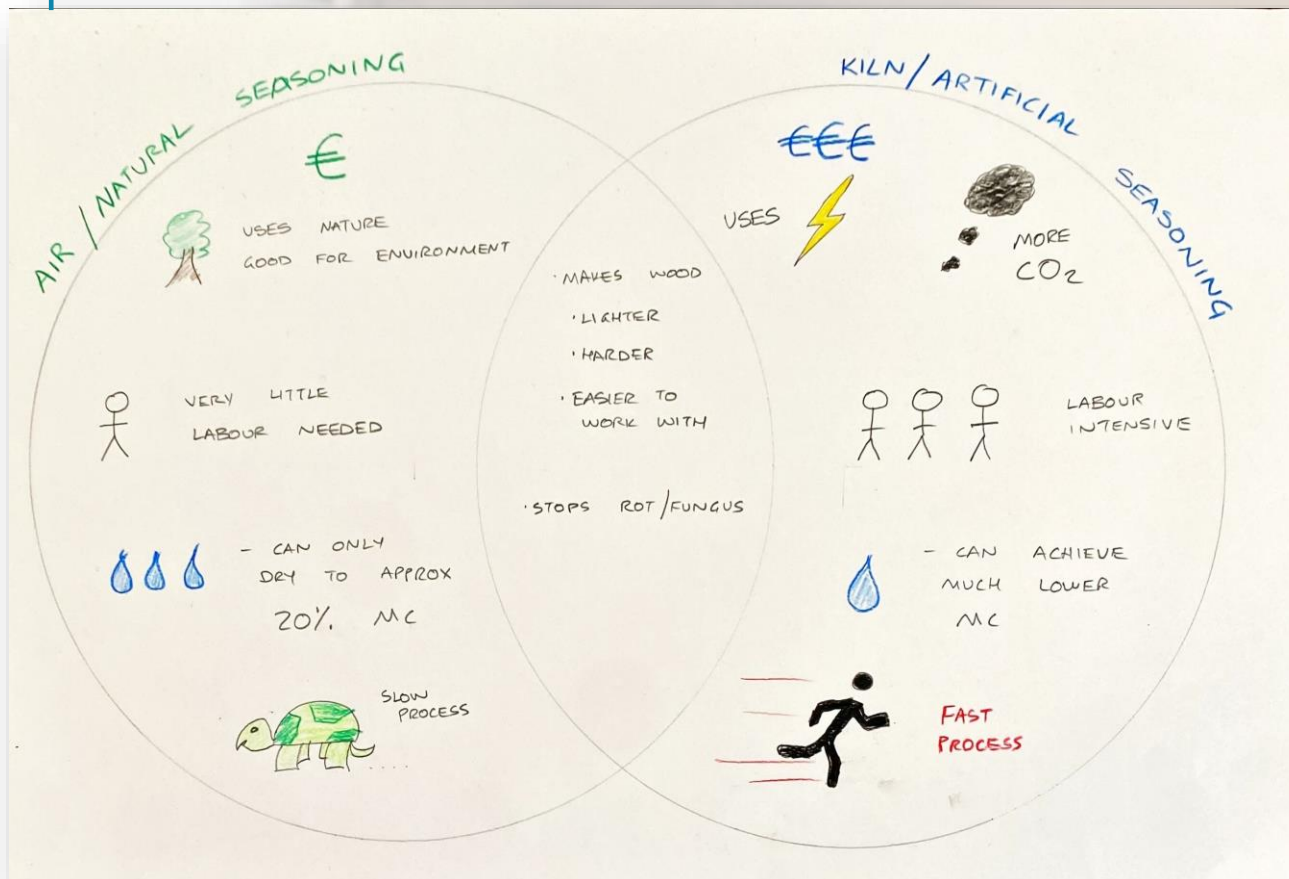


Reflect on your
practice



Student-Centred Learning Experience

Consider what aspects of student-centred learning are evident in this learning experience?



How could this approach be adapted for your student context?



Individually



3 minutes



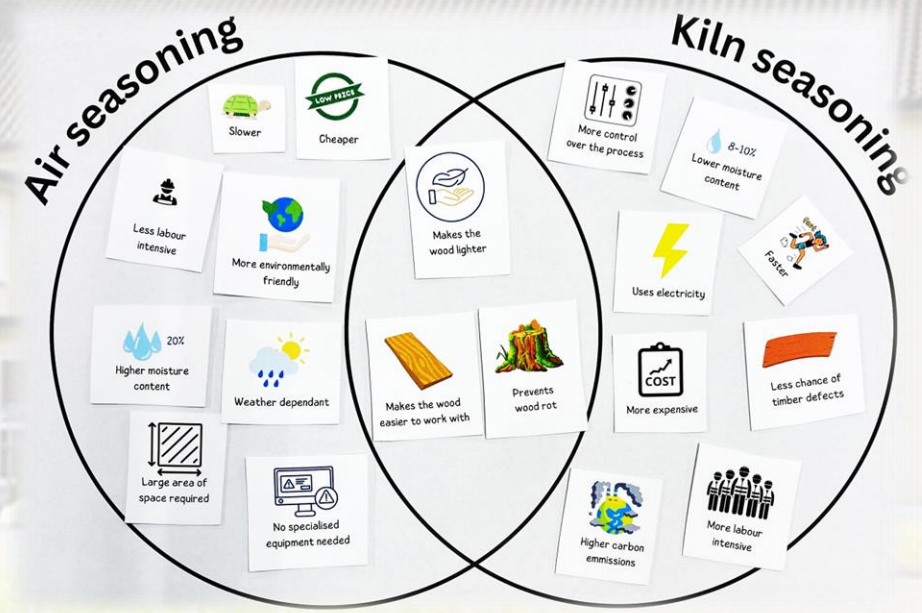
Share your thoughts



Student-Centred Learning Experience



1st Year group,
Balla Secondary School,
Co. Mayo.



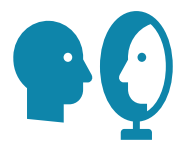
Individually



3 minutes



Watch the video



Reflect on your practice



Student-Centred Learning Experience

Seasoning Methods Venn Diagram Activity



Oide



[Watch the video](#)

Planning Student-centred Learning Experiences



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Subject Department Activity:

Consider how some of the strategies shared earlier could be adapted and modified to suit your class group.



Create an active, student-centred learning experience that you could engage your students with upon your return to school.



Subject
Department



10 minutes



Capture ideas on
flipchart paper



Share

Planning Student-Centred Learning Experiences



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An Roinn Oideachais
agus Scileanna

Junior Cycle Wood Technology

‘Learning in this subject will be active and student centred, with learners collaborating in the pursuit of knowledge’

NCCA, Wood Technology Specification, Rationale, page 4.



Looking back, we...



Explored the incremental development of craft skills



Collaboratively planned a unit of learning having considered student context



Explored learning experiences that are active and student centred



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Tacú leis an bhFoghlaim
Ghairmiúil i measc Ceannairí
Scoile agus Múinteoirí

Supporting the Professional
Learning of School Leaders
and Teachers

Wood Technology

PLE 2023/2024

Thank you for participating

