

An tSraith Shóisearach do Mhúinteoirí



# Junior Cycle Wood Technology Activities

Classroom activities for the physically distanced classroom in the school year 2020/2021

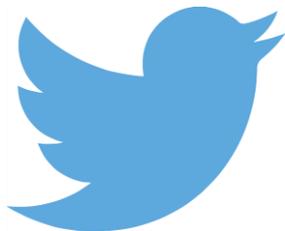


# Introduction



Junior Cycle for Teachers (JCT) is a dedicated continuing professional development (CPD) support service of the Department of Education and Skills. Junior Cycle for Teachers aims to inspire, support and empower teachers in the transformation of Junior Cycle education in Ireland. Responsibility for the four Junior Cycle Technologies subjects (Applied Technology, Engineering, Graphics and Wood Technology) within JCT lies with the dedicated Technologies team, commonly known as JCT4.

In the development of this resource, the JCT4 team aim to create rich learning experiences to complement the Junior Cycle specifications, particularly in the wider context of students and teachers returning to school with COVID-19 procedures in place. The resources created are not designed to be used in a linear fashion, but rather to support the creation of learning experiences that work for individual schools in their individual contexts. Potential links with other subjects and potential to explore these topics in other areas of learning within Junior Cycle are encouraged throughout and again, teachers would be encouraged to adapt and explore these links to suit their own students and school context.



As you explore this resource, you may identify potential links with other subjects and potential to explore these topics in other areas of learning within junior cycle. Please let us know your experience of using these resources on social media via **@JCT4ed** and **@JCforTeachers**

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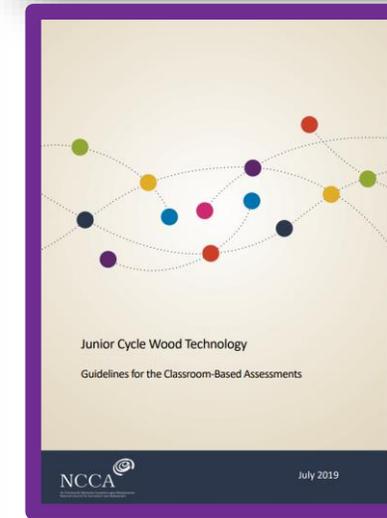
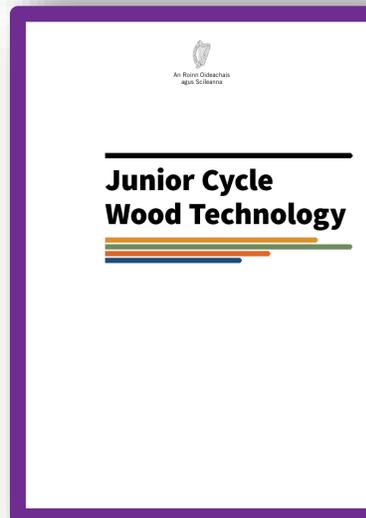
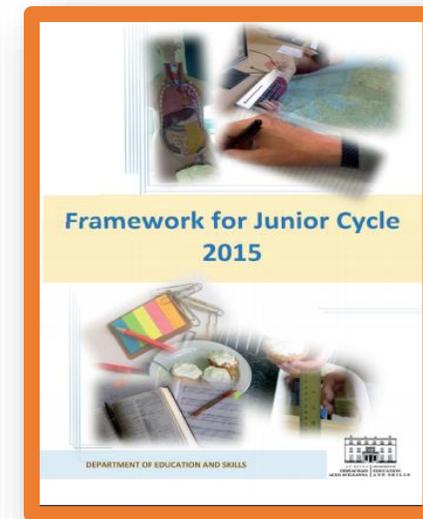
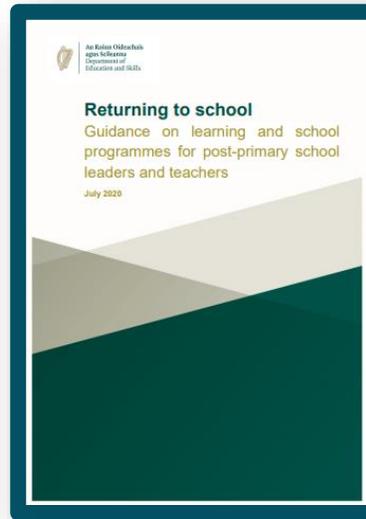
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**Key documents underpinning this resource**



# Identifying the starting points of learning

Students will have a variety of needs as they return to school and teachers will need to provide learning experiences to meet those needs. Accordingly, teachers will need to be alert to where their students are in their learning journey; they will need to take time to evaluate students' needs, and may need to and wish to consolidate previous learning before introducing new learning. Key to this is an approach which builds on students' strengths. In that regard, some important questions for schools or teachers/subject departments:



Adapted from pages 13 and 14

Have I reflected on the learning progress students have made?

Have I identified a range of formative assessment measures to assess the progress that students have made?

Have we as a subject department reviewed subject specifications and identified learning outcomes that are priorities for the return to school?

Have cross curricular learning opportunities been identified and planned collaboratively to maximise learner outcomes?



# Preparation for teaching and learning

Building on their assessment of students' learning as outlined above, teachers will make key decisions about what students learn, the sequence in which they learn, the pace at which they learn, and the activities and experiences through which they learn. Teachers and schools are best placed to make these decisions and to exercise the professional judgement and the autonomy they have in this context. The following questions may support teachers to reflect on their preparation for teaching and learning:

Has my lesson planning taken account of collaborative decisions about teaching and learning including decisions about essential learning, the sequencing of learning, the pace at which students learn and the activities and experiences through which they learn?

Do the planned learning experiences provide for social interaction and collaboration between students?

Do the planned tasks assess the learning outcomes or objectives that have been prioritised over a series of lessons?

Are planned learning tasks and activities accessible to all students, including those with special and additional educational needs?



Adapted from Pages 13 and 14

# Learning Approaches

It is essential that, right from the start of the school year, a broad range of active learning experiences is provided for all students. This should include:



*Adapted from pages 13 and 14*



Prioritising practical lessons to enable students to demonstrate skills and knowledge developed during engaging with learning from home



Providing learning experiences based on pair work and group work that support student interaction and engagement in meaning-making; this will help in achieving learning outcomes/objectives across the curriculum, particularly in the areas of language, mathematics, business, science and technology and the arts



Integrating digital technologies in a responsive and innovative way into teaching, learning and assessment



Questioning, tasks and student-teacher conferencing; these are practical and effective assessment approaches that will be helpful in identifying the priority areas in which students' learning needs to be progressed

# Key Skills

In light of the school closure and related health requirements, many schools have already adopted creative and innovative ways to introduce incoming first years to the school. Where students have not had the usual supports when moving from primary to post-primary school, the Key Skills of Junior Cycle such as Managing Myself, Managing Information and Thinking, and Staying Well should be prioritised through the school's induction and wellbeing programmes.



Adapted from Page 10

Managing Myself

Managing Information and  
Thinking

Staying Well

# Managing Myself

- Knowing myself
- Making considered decisions
- Setting and achieving personal goals
- Being able to reflect on my own learning
- Using digital technology to manage myself and my learning



# Managing Information and Thinking



- Being curious
- Gathering, recording, organising and evaluating information and data
- Thinking creatively and critically
- Reflecting on and evaluating my learning
- Using digital technology to access, manage and share content



# Staying Well



- Being healthy and physically active
- Being social
- Being safe
- Being spiritual
- Being confident
- Being positive about learning
- Being responsible, safe and ethical in using digital technology



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# Junior Cycle Wood Technology

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Click here for the Junior Cycle  
Wood Technology specification



The following classroom activities for Junior Cycle Wood Technology aim to develop the Key Skills of **Managing Myself, Managing Information and Thinking** and **Staying Well**. Teachers are best placed to adapt these activities to suit their students' prior learning, local context and needs.

The specification for Junior Cycle Wood Technology focuses on developing students' understanding of, and skills in the applications and impact of using wood as a resource in the world around them. This will be achieved through **three** interconnected contextual strands: **Principles and Practices, Design Thinking** and **Wood Science and Materials**.

Wood Technology uses an interdisciplinary approach which encourages the integration of the three strands in the teaching and learning of the subject. The achievement of learning outcomes should be planned in a way that is active and stimulating.

*- adapted from the Junior Cycle Wood Technology specification, page 9.*



# Tree identification, design project

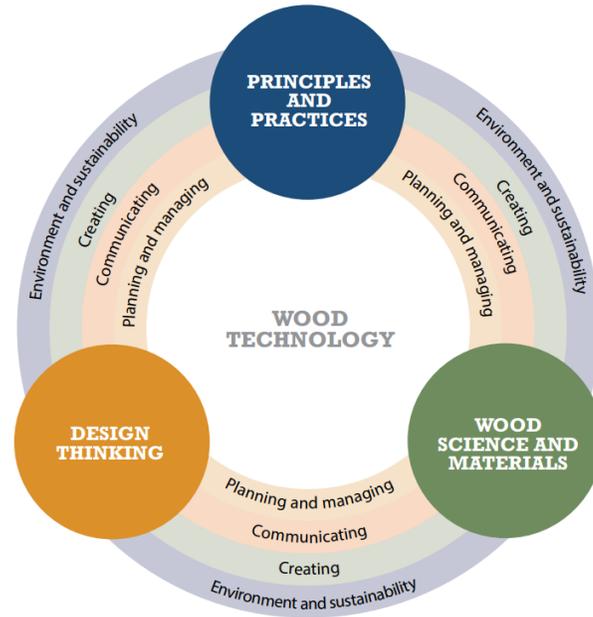
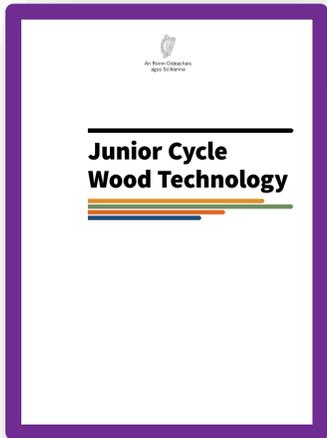
**Focus:** Introduction to research, design and processing skills, developing Key Skills of Managing Information and Thinking, Managing Myself & Staying Well

**Suggested Year Group:** First-year

# Resource 1

**Focus:** Introduction to research, design and processing skills, developing key skills of Managing Information and Thinking, Managing Myself & Staying Well

**Suggested Year Group:** First-Year



## Note to Teachers:

The following resource is designed to align with the Wood Technology specification and learning outcomes. Contained within the resource are suggestions for a range of possible learning experiences, developed across the three strands. The suggested activities can be used in isolation following a period of instruction or as a combination of activities. The depth and time allocated is dependant on a teacher's plan for learning and their students' prior knowledge and understanding. Teachers should consider the needs and context of their students in planning for teaching and learning.

Page 10

## Explore Strands and Elements:

Possible Strands and Elements which could be explored through these suggested activities are:

### Strands:

- Principles and Practices
- Design Thinking
- Wood Science and Materials

### Elements:

- Planning and Managing
- Creating
- Environment and Sustainability

When deciding on learning outcomes you should consider class context, focus of learning and the action verbs you would like to develop with your students. The above list is merely a suggestion of the strands and elements which are relevant to the outlined activities that follow.

## Introduction

Trees are one of our greatest natural resources. They play an important role in both local and global ecology. They provide us with the raw material for the projects we design and make.

## Task

Students will learn how to identify trees in their local environs and learn about the properties of trees in their gardens, roadside and on their street. They will explore the environmental benefits of trees. They will design and make an artefact to communicate their response to a design task.



- 1 Students could collect leaves, **identify** them, press and preserve them. **Evaluate** some of the properties and characteristics associated with the trees in their gardens roadsides or estate using primary research.

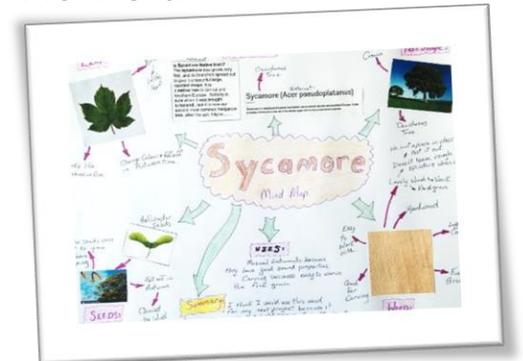


## Possible student activities

- 2 Engage in design tasks that incorporate aspects of their primary research as a stimulus to **create** their designs.



- 3 Using suitable presentation methods students get the opportunity to **discuss** and **communicate** the importance of trees in our environment.



1

### Note to Teachers:

The following are suggestions of possible learning experiences to develop student’s primary research skills. It is envisaged that experiencing the tactile nature of the leaves will promote student curiosity in this area and provide stimulus for further exploration now or at a later stage in their journey. The suggested tasks can be used in isolation following a period of instruction or as a combination of activities. The depth and time allocated is dependant on your plan for learning and students’ prior understanding in this area. When planning for teaching and learning, teachers should consider the needs and context of their students, in choosing Learning Outcomes (LOs) and the learning activities that will best support the learning. In planning teachers should also consider situations where students may need to engage with learning from home. If students are engaging with learning from home, assessment and reporting procedures may need to be reconfigured to reflect this circumstance.

## Tree Identification

- *What skills or knowledge do my students need to enable them to identify trees in their environment?*
- *What prior knowledge do my students have that may provide a starting point for discussion/direction?*
- *What characteristics of trees could be explored that would be of interest to my students?*
- *As a teacher what characteristics of trees am I going to focus on with my students?*
- *What activities could my students engage with to enable them to gain a deeper understanding of the characteristics that distinguish the different species and classification of trees? Worksheets, Microsoft Forms quiz, padlet etc*
- *Are there other ways I can bring these or other characteristics to life in my classroom?*



## Possible Activities

- Creating rubbings of collected leaves or preserving these leaves is one way students could explore and experience some characteristics of trees.
- There are multiple ways students could communicate information gained from this experience. Students may suggest their own ideas for presenting this information.
- A Classroom display could evolve from this with students displaying aspects of what they have learnt about characteristics of trees.

The QR code will direct you to a resource which may act as a stimulus.



*What Learning Outcomes can/did you identify that will support the Key Skills which are focussed on in this resource? Which activities will support those Learning Outcomes?*

2

**Note to Teachers:**

The following are suggestions of possible learning experiences to develop a student’s appreciation of the environment around them. It will broaden their craft base and provide them with a new embellishment technique which will be used in this project and could be embraced in future design tasks. The suggested tasks can be used in isolation following a period of instruction or as a combination of activities. The time allocated is dependant on your plan for learning and students’ prior understanding in this area. When planning for teaching and learning, teachers should consider the needs and context of their students, in choosing Learning Outcomes (LOs) and the learning activities that will best support the learning. In planning teachers should also consider situations where students may need to engage with learning from home. If students are engaging with learning from home, assessment and reporting procedures may need to be reconfigured to reflect this circumstance.

**‘Trees and wooden material have a unique relationship with nature and humankind’**

*Junior Cycle Wood Technology Specification, page 4*

***What ways could we incorporate this unique relationship into design and realisation tasks in our Wood Technology classrooms?***

**Possible Design tasks**

**Design and make a nameplate for your bedroom door.**

*What criteria are essential for this task to succeed?*

For example, one might be:

- ***Have at least one of the leaves that you have preserved mounted on your design***

**Design and make a decorative backboard for a key rack.**

*What criteria are essential for this task to succeed?*

For example, one might be:

- ***Use one of your preserved leaves to embellish the design***

Click here to download or view **My Design Guide.**




For similar activities and additional resources relating to design and realisation tasks that may be suitable for a first-year group, see materials associated with the 2018/2019 Wood Technology Webinar by scanning/clicking the QR code below.



The QR code will direct you to a resource which may act as a stimulus.



For similar activities and additional resources relating to design and realisation tasks that may be suitable for a first-year group, see materials associated with the 2019/2020 Wood Technology Cluster Day by scanning/clicking the QR code below.



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*What Learning Outcomes can/did you identify that will support the Key Skills which are focussed on in this resource? Which activities will support those Learning Outcomes?*

**Note to Teachers:**

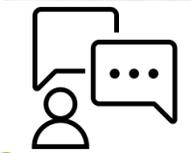
The following are suggestions of possible learning experiences to develop student's understanding and communication of properties associated with trees in their locality. The suggested tasks can be used in isolation following a period of instruction or as a combination of activities. The time allocated is dependant on your plan for learning and students' prior understanding in this area. When planning for teaching and learning, teachers should consider the needs and context of their students, in choosing Learning Outcomes (LOs) and the learning activities that will best support the learning. In planning teachers should also consider situations where students may need to engage with learning from home. If students are engaging with learning from home, assessment and reporting procedures may need to be reconfigured to reflect this circumstance.

**'the role of forestation and wood in terms of global and local ecology and sustainability'**

***What ways could we get our students to explore the benefits of trees to humankind, ecology and the environment?***

**Possible class discussion/research tasks**

- Deforestation around the world – percentage of trees harvested for commercial use/destroyed by fire/cleared for farmland – advantages and disadvantages – collage of deforested areas locally or globally – class poster to display this information
- How could we get our students to illustrate the benefits of trees to mankind and animals – method of communication?
- What we can do as students studying Wood Technology when selecting materials in our design realisation projects?



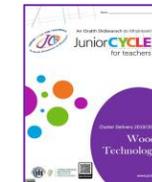
For similar activities and additional resources relating to research activities and other teaching strategies that may be suitable for a first-year group, see materials associated with the 2018/2019 Wood Technology Webinar by scanning/clicking the QR code below.



The QR code will direct you to a resource which may act as a stimulus.



For similar activities and additional resources relating to research and presentation tasks that may be suitable for a first-year group, see materials associated with the 2019/2020 Wood Technology Cluster Day by scanning/clicking the QR code below.



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*What Learning Outcomes can/did you identify that will support the Key Skills which are focussed on in this resource? Which activities will support those Learning Outcomes?*

# Design Realisation project

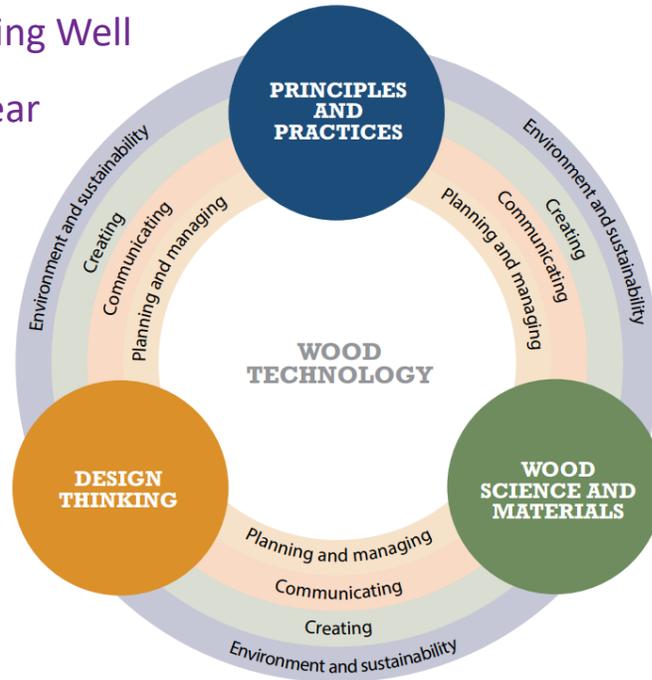
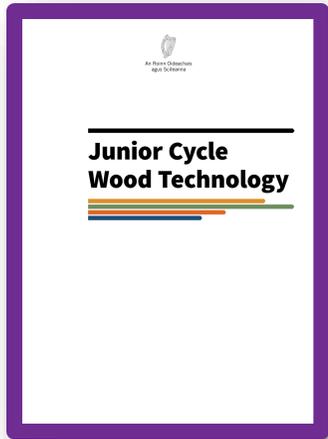
**Focus:** Design and processing skills, understanding of ergonomics, prototyping and model making, developing Key Skills of Managing Information and Thinking, Managing Myself & Staying Well

**Suggested Year Group:** Second-year

## Resource 2

**Focus:** Design and processing skills, understanding of ergonomics, prototyping and model making, developing Key Skills of Managing Information and Thinking, Managing Myself & Staying Well

**Suggested Year Group:** Second-Year



### Note to Teachers:

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### Explore Strands and Elements:

Possible Strands and Elements which could be explored for these suggested activities are:

#### Strands:

- Principles and Practices
- Design Thinking
- Wood Science and Materials

#### Elements:

- Planning and Managing
- Communicating
- Creating

When deciding on learning outcomes you should consider class context, focus of learning and the action verbs you would like to develop with your students. The above list is merely a suggestion of the strands and elements which are relevant to the outlined activities that follow.

## Note to Teachers:

The following are suggestions of possible learning experiences to develop a student's appreciation of their relationship with the physical environment around them. It will introduce them to the concept of ergonomics through interaction with a design and realisation task. The suggested tasks can be used in isolation following a period of instruction or as a combination of activities. The time allocated is dependant on your plan for learning and student's prior understanding in this area. When planning for teaching and learning, teachers should consider the needs and context of their students, in choosing Learning Outcomes (LOs) and the learning activities that will best support the learning. In planning teachers should also consider situations where students may need to engage with learning from home. If students are engaging with learning from home, assessment and reporting procedures may need to be reconfigured to reflect this circumstance.

## Introduction

'In Wood Technology, students will explore the natural and man-made world through the medium of design seeking out opportunities to creatively and innovatively apply the material/resource in making and shaping their environment'

*Junior Cycle Wood Technology Specification, page 4*

## Task

Students will learn how to identify the key design constraints within a design task. They will design and make an artefact to communicate their response to a design task.

**Theme** Remote learning/distance learning/healthy posture whilst viewing handheld electronic devices



1

**Explore** a design brief.

- Discuss areas that could be investigated or researched.

*What constitutes a good design?*

**or**

**Explore** a design problem presented using constraints.

Examples of constraints:

- material limits
- sustainable use of a hardwood

*Why use constraints?*

*What areas require research and investigation?*

**Communicate** their approach following a design process – example of a design process can be found in *My Design Guide*

**Page 17**



Click here to download or view *My Design Guide*.

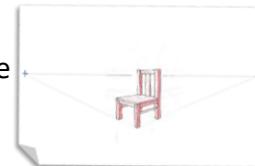
2

## Possible student activities

**Devise** a model/prototype using cardboard or other media. Click on the image across to access a useful resource to assist students with prototyping/modelling.



**Create** sketches/drawings to clearly communicate their design ideas. Click on the image to access a video to help with sketching design ideas.



Rendering or adding texture to your sketches help bring your drawings to life. This video tutorial has some helpful rendering techniques



3

Through the application of practical skills in the realisation of their design solutions, students further develop an understanding of the properties associated with the classification of hardwoods & softwoods...  
*...possible design constraint*

**Compile** a folio to communicate their design journey using any appropriate media



*What Learning Outcomes can/did you identify that will support the Key Skills which are focussed on in this resource? Which activities will support those Learning Outcomes?*



# Junior Cycle Wood Technology activities

Classroom activities for the physically distanced classroom in the school year 2020/2021

These resources were designed and collated in response to the [‘Returning to school - Guidance on learning and school programmes for post-primary school leaders and teachers’](#) and have a focus on the Junior Cycle Key Skills of Managing Myself, Managing Information and Thinking and Staying Well from the [‘The Framework for Junior Cycle 2015’](#).

These activities only offer, as a suggestion, some possible tasks which could be completed by students to engage with these Key Skills in the Wood Technology classroom.

Teachers’ knowledge of their own students’ context should inform their decisions around which activities would best engage their students.