

# Making a Wooden Tree

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With Sean Hellman



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# Introduction

In this video Sean demonstrates teaching you how to make a wooden Ball & Hoop toy.

It's important to refer to the accompanying instructional video:

<https://youtu.be/jrDXZsJcPdc>



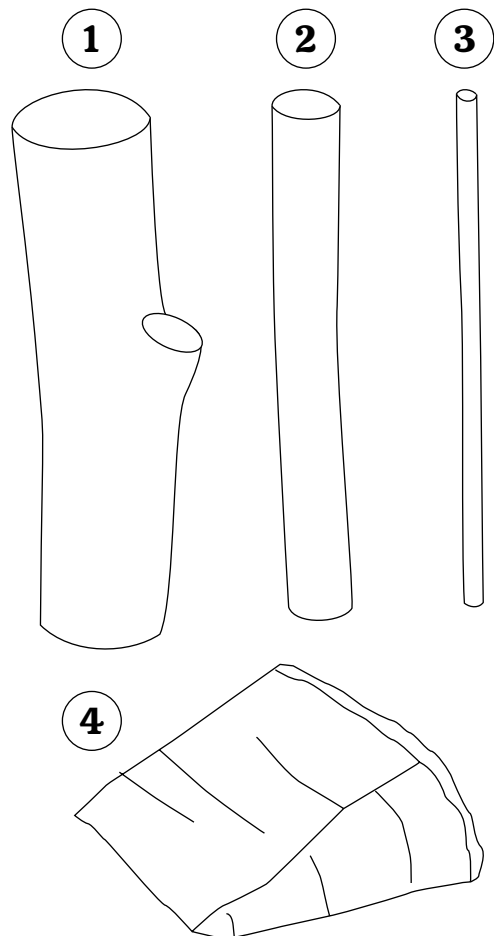
## Materials

All materials and tools are available from Sean Hellman.

Contact him through his website for further info: [www.seanhellman.com](http://www.seanhellman.com)

Materials you will need for this class:

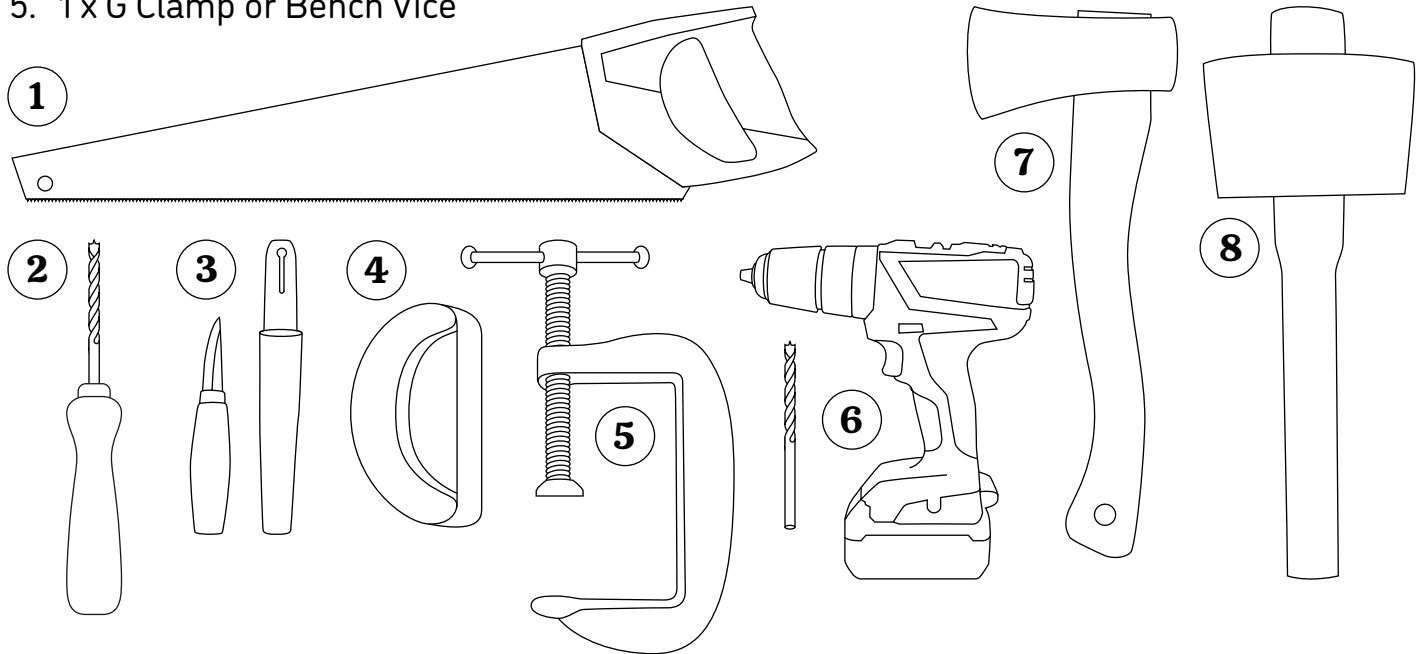
1. 1 x large round piece of wood - minimum 10cm diameter
2. 1 x small round piece of wood - approx 5cm diameter
3. 1 x willow, hazel or thin stick - approx 10mm diameter
4. 1 x wedge piece of ordinary firewood.



# Tools

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1. 1 x Handsaw
2. 1 x Hand Drill (8-12mm bit)
3. 1 x Wood Carving Knife / Craft Knife
4. 1 x Sandpaper / hand-sander
5. 1 x G Clamp or Bench Vice
6. 1 x Cordless drill with 8-12mm flat bit (optional)
7. 1 x Hatchet Axe
8. 1 x Mallet



# Safety

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## Hand Saw Safety

Refer to this video:  
<https://youtu.be/U0ojpdruvqg>

## Craft Knife Safety

Refer to this video:  
<https://youtu.be/wd-IJS0sEqA>

## Axe Safety

Refer to this video:  
[https://youtu.be/ggtKY\\_0Hj10](https://youtu.be/ggtKY_0Hj10)

# Safety Questions

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Q: What level of manual skill is needed?

A: Due to the use of heavier tools (axe, mallet) this project is better suited to upper primary and above.

Q: What level of supervision is needed for each process?

A: Each stage i.e. sawing the base, splitting the wood for the tree shape and cutting the trunk with a craft knife needs an adult to supervise. Technical skill and safe handling of the tools can be taught for each process to a small supervised group.



# Instructions

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## Step 1 - Make the base

Secure the smaller piece of wood in a vice or G Clamp.

Use the handsaw to cut a base disc from the smaller piece of wood approx 15mm in depth.



## Step 2 - Make the tree top - Method 1

Secure the larger piece of wood with the vice or G-clamp.

Using the handsaw, cut a disc approx 15-20mm in depth.



## Step 3 - Split the disc

Now we are going to use the axe and mallet to split the disc into triangular tree-shaped quarters. Place the disc on a chopping block or bench. Always place the blade of the axe across the pith in the very centre of the log.



Using the mallet apply a soft tap to make a groove. Then hit harder to split the disc in half. Take each half and again split each one in half. This will give you four quarters, so four tree tops.



When working with younger children, one child can hold the axe onto the disc while the other child uses the mallet.



Alternatively If you do not have an axe and mallet you can use a piece of wood and a craft knife to do the same process. To do this place the knife with the blade across the disc and tap it with the piece of wood until the knife slices through the disc.



## Step 4 - Make the tree top - Method 2

With this method we will use the hand saw to cut our triangular tree top shape from the end of a wedged piece of ordinary firewood approx 15-20mm in depth.



Attach the piece of firewood to the edge of your table or bench with a G-clamp or secure it in a vice. Now saw off your 15-20mm tree shape slice.



Both method 1 and 2 give you a choice of different style of tree tops to use.



## Step 5 - Make the tree trunk

Lay your willow, hazel or found stick across a chopping block.



Select a section of approx 10cm and place the craft knife on top of the stick on the chopping block. Push down with the craft knife and twist the other end of the stick at the same time. This will make a clean cut. You can choose a thinner or thicker trunk as you like.



## Step 6 - Fit the base to the trunk

Match the size of your chosen trunk to a drill bit. It is better if the trunk is slightly wider than the drill bit.



Use a hand drill to drill a hole three quarters of the way through the centre of the base disc. Push down and twist.





## Step 7 - Whittle the trunk to fit the hole

Using the craft knife, we are going to go whittle the end of the trunk so it's slightly tapered and can fit snugly into the wooden base.

Place the end of the trunk on the edge of the chopping block. Cut downwards into the block with your cutting hand overhanging the side.



If you happen to whittle off too much and the trunk is now too small, cut off a small piece of the tapered end of the stick using the knife or a saw. Again start to whittle to find the snug fit we're looking for.



## Step 8 - Fit the trunk to tree top

Secure your tree top upside down in a vice or clamp and drill a hole in the centre of the curved bottom with a palm drill.



You can also use an electric drill to do this to. Clamp the tree top firmly on its side to your bench, then drill the hole. Make sure you line up the drill to avoid miss-hitting the clamp or bench.



Next use the same process as before to adjust the top of the tree trunk to fit the hole in the tree shape tightly.



Once the trunk is fitted into the tree shape tightly attach the tree and trunk to the base disc.



## Step 7 - Finishing off

If all the parts are fitting together tightly it's time to finish off the tree. Remove the tree shape and trunk from the base and sand off the edges of the tree until they are slightly rounded and smoother.



Replace the tree and trunk into the base and you are finished!



# Key Vocabulary

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## Whittling

Whittling is the art of carving shapes out of raw wood using a knife or the process of repeatedly shaving slivers from a piece of wood. It is used by many as a pastime, or as a way to make artistic creations.



## Hand saw

Hand saws are used to cut pieces of wood into different shapes. They are operated with one hand and usually cut on both forward and backward strokes.



## Palm drill

A palm drill is a simple tool consisting of a wooden handle and a drill bit. It can be used to gently and precisely drill a hole using only your hands. Sizes vary and make different size holes.



## Wood carving knife

Is a specialised knife used to pare, cut, and smooth wood.



## Hand sander

A curved piece of wood with a band of sand paper wrapped around it used for smoothing rough edges to wood. Using the curved side will give a hard surface to use when applying pressure. The loose side will apply softer pressure and allows the user the smooth corners more easily.



## G-clamp

A G-clamp is a device used to securely hold a piece of wood while working with it. It can be easily attached and detached from a table.



## Bench vice

Another device used to keep a piece of wood securely held in place to make it easier to work with other tools on the wood. The vice is usually permanently attached to the work bench.



## Cordless drill

A cordless drill, as you can probably tell from the name, is simply a power drill that works without a cord. You can use a cordless drill driver to drill holes on walls, assemble furniture, and woodworking.



## Hatchet axe

A hatchet is a single-handed striking tool with a sharp blade on one side used to cut and split wood, and a hammerhead on the other side.



## Mallet

A mallet is a kind of hammer, in this case made of wood but often made of rubber.



# D&T Skills Audit

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## Pre-Project Questions

1. How confident are you about teaching D&T?

(not at all)                      1                      2                      3                      4                      (very)

2. How do you rate your skills?

(not at all)                      1                      2                      3                      4                      (highly)

3. Are there any particular skills you would like to learn?

4. How confident are you teaching children to use tools safely?

(not at all)                      1                      2                      3                      4                      (very)

5. How do you rate your access to resources?

(poor)                      1                      2                      3                      4                      (good)

6. Any special requirements or concerns?

7. How did you hear about Old Skills New Ways?



# Post-Project Questions

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1. How confident are you about teaching D&T?

(not at all)                      1                      2                      3                      4                      (very)

2. How do you rate your skills?

(not at all)                      1                      2                      3                      4                      (highly)

3. What did you learn?

4. What worked well/did not work well?

5. What future learning and skill areas would you be interested in developing?

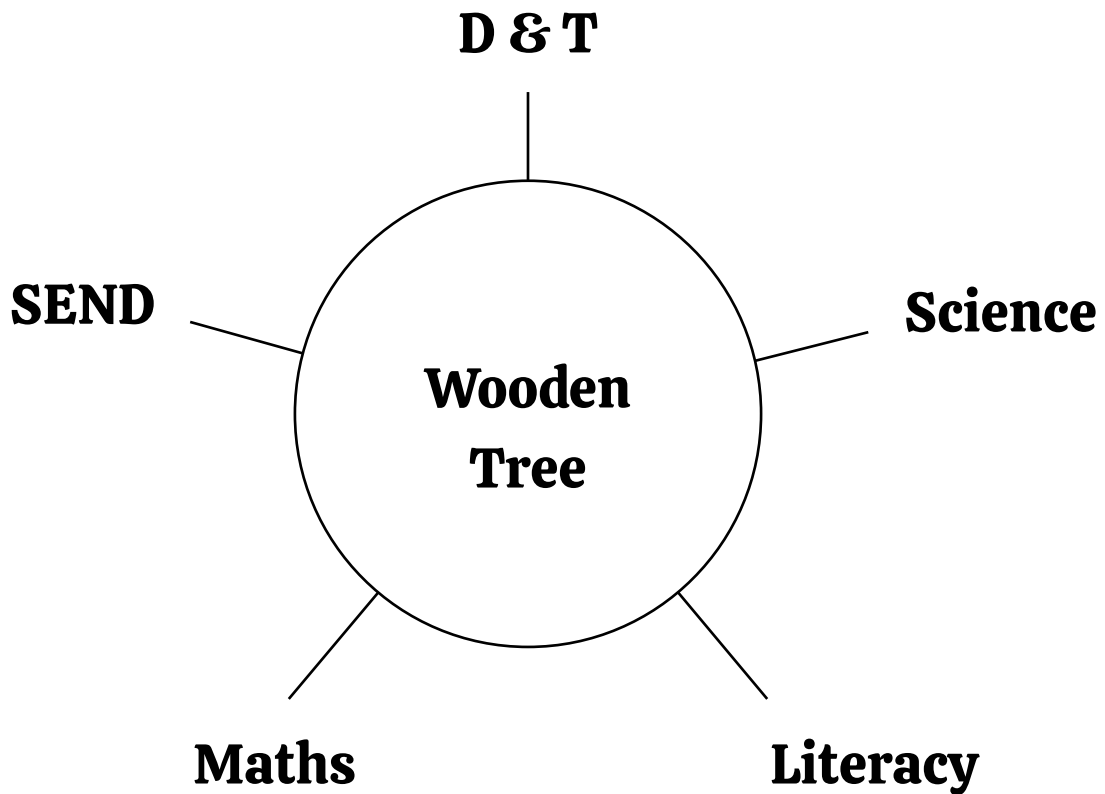
6. Would you recommend OSNW to other schools?

Yes                      No



# Curriculum Links

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## **Design and Technology**

Designing , making and evaluating.

## **Science**

Properties of materials; Trees in the environment.

## **Literacy**

Myths and stories about trees.

## **Maths**

Measurement.

## **Special Education Needs and Disability**

Development of motor control.

