



Treknow Woodturning Club

Foundation Course

Compiled by John Brooks

Treknow Woodturning Club

Foundation Course

Section 1

Module 1.1 Equipment

- A. Lathe – Identify parts and describe functions.
- B. Tools – Identify tools and their uses.

Module 1.2 Health and Safety

- A. Health
- B. Safety

Module 1.3 Sharpening

- A. Type of equipment
- B. Safety when grinding
- C. Bevels/angles on each tool
- D. Honing and buffing

Module 1.4 Spindle Work (Between Centres)

- A. Roughing out – Square to round
- B. Vee cut with Skew
- C. Coves
- D. Beads
- E. Square section to round
- F. # TEST PIECE#

Module 1.5 Face Plate Work

- A. Holding items on the lathe
- B. Working with the grain
- C. Bowl /Platter
- D. #TEST PIECE#

Module 1.6 Finishing

- A. Abrasives
- B. Sealers
- C. Wax finish
- D. Oil finish

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Section 2

Module 2.1 Wood Technology

- A. Tree Identification
- B. Tree parts and functions
- C. Wood Identification
- D. Wood seasoning

Module 2.2 Drilling and boring on the lathe

- A. Tools for drilling and boring
- B. Safety aspects in drilling/boring
- C. Methods in drilling/boring

Module 2.3 Hollowing

- A. Tools and equipment
- B. Safety aspects in Hollowing
- C. Technique

Module 2.4 Texturing

- A. Tools and equipment
- B. Safety aspects in texturing
- C. Technique

Module 2.5 Colouring

- A. Safety when using chemicals
- B. Types of colouring material
- C. Technique

Module 2.6 Threading

- A. Tools and equipment
- B. Technique

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Module 1.1 Equipment

- A. Lathe – Identify parts and describe functions.
- B. Tools – Identify tools and their uses.

Subject	<u>Evidence of understanding</u>	<u>Trainer's Initials</u>	<u>Date</u>
Identify and name the lathe components.			
Describe the function of the lathe components.			
Identify and name the lathe accessories including: drive centres, tail centres, faceplates, screw chuck, Long hole boring sets, and various types of scroll chucks.			
Explain the function of each lathe accessory.			
Explain the importance of maintaining the lathe and its accessories in relation to the manufacturer's instructions.			
Identify and name woodturning tools including: various gouges, skew chisels, parting tools, and scrapers.			
Explain the use of each woodturning tool.			

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Module 1.2 Health and Safety

A. Health

B. Safety

Subject	<u>Evidence of understanding</u>	<u>Trainer's Initials</u>	<u>Date</u>
List the different types of personal protective equipment available.			
Explain the purposes of the personal protective equipment.			
Explain the checks to be carried out before switching on the lathe.			
Explain the acronym S.A.F.E.R.			
Explain the difference between a hazard and a risk.			
Explain the steps in a simple workshop risk assessment.			

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Module 1.3 Sharpening

- A. Type of equipment
- B. Safety when grinding
- C. Bevels/angles on each tool
- D. Honing and buffing

Subject	<u>Evidence of understanding</u>	<u>Trainer's Initials</u>	<u>Date</u>
Describe the different types of sharpening equipment.			
What are the drawbacks with each type of equipment?			
State the safety requirements when using a bench grinder.			
Why use a 'jig' for sharpening?			
Identify the 'Bevel' on the tools on display.			
Use a bench grinder to sharpen each woodturning tool to the correct profile.			
Describe the process and benefits of honing and buffing.			

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Module 1.4 Spindle Work (Between Centres)

- A. Roughing out – Square to round
- B. Vee cut with Skew
- C. Coves
- D. Beads
- E. Square section to round
- F. # TEST PIECE#

Subject	<u>Evidence of understanding</u>	<u>Trainer's Initials</u>	<u>Date</u>
Identify the tools for spindle work.			
Rough turn a square blank to round.			
Turn a series of vee cuts.			
Turn a series of beads.			
Turn a series of coves.			
Turn a series of parting cuts			
Produce a Test piece to include: beads, coves, and fillets.			
Produce a Test piece to include: beads, coves, and fillets, incorporating a square section to round.			

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Module 1.5 Face Plate Work

- A. Holding items on the lathe
- B. Working with the grain
- C. Bowl/ Platter
- D. #TEST PIECE#

Subject	<u>Evidence of understanding</u>	<u>Trainer's Initials</u>	<u>Date</u>
Identify the tools for face plate work.			
Details the methods of holding the work on the lathe.			
How many times do you encounter end grain when turning the outside of a bowl?			
Explain , with respect to grain: 1) External work-large to small 2) Internal work-small to large			
Produce a Test piece of either a bowl or platter.			

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Module1.6 Finishing

- A. Abrasives
- B. Sealers
- C. Wax finish
- D. Oil finish

Subject	<u>Evidence of understanding</u>	<u>Trainer's Initials</u>	<u>Date</u>
What is the most hazardous aspect of sanding?			
How can the hazard be mitigated?			
Identify and name various types of abrasive material.			
What is meant by going through the grits?			
Use appropriate safe methods of sanding on various wood turned items.			
Identify and explain various types of finishing products.			
Apply various types of finish including: different types of sealer, oils, wax, and polish.			

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Module 2.1 Wood Technology

- A. Tree Identification
- B. Tree parts and functions
- C. Wood Identification
- D. Wood seasoning

Subject	<u>Evidence of understanding</u>	<u>Trainer's Initials</u>	<u>Date</u>
Identify the main tree parts and their functions.			
Identify ten home grown trees.			
Identify the ten timbers on display and state if they are Hardwood or softwood..			
Describe how wood dries, and the effect.			
Explain the terms 'Moisture content' 'Relative humidity' 'Conditioning'			
Describe the methods of seasoning timber.			

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Module 2.2 Drilling and boring on the lathe

- A. Tools for drilling and boring
- B. Safety aspects in drilling/boring
- C. Methods in drilling/boring

Subject	<u>Evidence of understanding</u>	<u>Trainer's Initials</u>	<u>Date</u>
Identify the tools for drilling/boring.			
Indicate the speed you should use when drilling and boring on the lathe.			
Describe and demonstrate how you would drill a 7mm hole in the end grain of a square section piece of timber.			
Describe and demonstrate how you would drill a 25mm hole in the end grain of a round section piece of timber ready for hollowing.			

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Module 2.3 Hollowing

- A. Tools and equipment
- B. Safety aspects in Hollowing
- C. Technique

Subject	<u>Evidence of understanding</u>	<u>Trainer's Initials</u>	<u>Date</u>
Identify the tools for hollowing.			
What are the safety aspects when hollowing?			
Describe the process of hollowing.			
What is the difference in hollowing from turning a bowl?			

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Module 2.4 Texturing

- A. Tools and equipment
- B. Safety aspects in texturing
- C. Technique

Subject	<u>Evidence of understanding</u>	<u>Trainer's Initials</u>	<u>Date</u>
Identify the tools for texturing.			
What are the safety aspects in texturing?			
Texture a piece using a chatter tool.			
Texture a piece using a texturing tool.			

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Module 2.5 Colouring

- A. Safety when using chemicals
- B. Types of colouring material
- C. Technique

Subject	<u>Evidence of understanding</u>	<u>Trainer's Initials</u>	<u>Date</u>
What are the safety precautions when using colouring agents?			
Name the types of colouring agents that are commonly used.			
Demonstrate the method and precautions used in colouring a platter.			

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Module 2.6 Threading

A. Tools and equipment

B. Technique

Subject	<u>Evidence of understanding</u>	<u>Trainer's Initials</u>	<u>Date</u>
Describe the tools that are used in threading.			
Cut an external thread by hand.			
Cut an internal thread by hand.			
Cut an external thread using a thread cutting jig.			
Cut an internal thread using a thread cutting jig.			

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- Law 1** The speed of the lathe **must** be compatible with the size, weight and length of timber to be turned.
- Law2** The tool **must** be on the rest before the revolving timber is engaged, and must remain so whenever the tool is in contact.
- Law3** The bevel (grinding angle) of the cutting tool **must** rub the timber behind the cut.
- Law4** The only part of the tool that should be in contact with the timber is that part of the tool that is receiving direct support from the tool rest.
- Law 5** Always cut 'downhill', or with the grain.
- Law 6** Scrapers must be kept perfectly flat (in section) on the tool rest and be presented in a 'trailing' mode, that is with the tool handle higher than the tool edge.

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