

True or False Worksheet

1. You should always wear gloves around spinning machinery.
☐ True ☐ False
2. A try square is used to check 90° angles.
☐ True ☐ False
3. Face side and face edge markings help ensure accurate measurements.
☐ True ☐ False
4. You only need hearing protection when others are using noisy tools.
☐ True ☐ False
5. Box-pin joints are known for their mechanical strength even without glue.
☐ True ☐ False
6. Dust masks should be worn when sanding or cutting timber.
☐ True ☐ False
7. Safety glasses are optional when working with hand tools only.
☐ True ☐ False
8. A marking gauge is used to mark parallel lines to an edge.
☐ True ☐ False
9. Tools should always be left on the floor for easy access.
☐ True ☐ False
10. A dovetail joint has angled tails and pins that interlock.
☐ True ☐ False

Safety & PPE Word Search

P	S	C	W	G	A	P	R	O	N	Z	Y	I	A	K
O	S	J	U	L	P	E	T	G	Y	Y	J	O	S	S
L	G	W	M	A	I	U	A	A	O	N	P	H	Y	G
X	H	S	H	S	W	W	W	R	N	G	I	P	N	F
C	L	B	F	S	Q	Z	P	O	M	E	G	Z	V	M
H	D	E	X	E	W	D	I	F	L	U	I	L	M	R
E	V	V	A	S	N	T	R	D	Q	S	F	Z	E	E
C	X	N	C	T	C	S	A	F	E	T	Y	F	H	S
A	Z	M	S	E	H	M	K	V	L	M	G	W	S	P
F	N	H	T	R	L	E	X	B	X	K	N	Y	B	I
O	E	O	T	Q	H	C	R	F	W	Q	I	H	Z	R
G	R	S	V	Z	S	U	U	Y	C	M	R	W	P	A
P	U	G	G	L	O	V	E	S	A	R	A	V	Z	T
D	V	S	H	O	E	S	O	S	Y	E	E	S	P	O
Z	W	M	M	Y	U	G	K	H	J	I	H	T	J	R

SAFETY
GLASSES
HEARING
PROTECTION
DUST
MASK
LEATHER
SHOES

FACE
SHIELD
GOGGLES
EARMUFFS
APRON
RESPIRATOR
GLOVES

Joinery Types Word Search

P	V	C	H	O	U	S	I	N	G	N	N	P	G	D
W	E	B	G	Z	F	E	N	C	P	M	O	K	H	W
G	M	Y	O	A	P	X	Z	I	U	E	K	N	S	M
U	Q	S	H	A	L	F	L	A	P	S	X	A	E	V
N	W	Q	O	H	Q	Y	B	X	J	M	W	C	S	T
M	N	S	L	O	U	O	B	L	V	A	K	T	L	K
Z	N	R	X	W	V	O	U	D	E	U	Y	Y	A	J
R	F	L	V	S	C	R	T	O	B	W	V	E	P	Q
J	O	I	N	T	D	E	T	V	J	H	O	K	J	U
F	W	C	N	F	B	G	J	E	N	O	O	D	O	X
R	P	A	V	M	R	N	O	T	I	E	Y	D	I	M
R	Y	B	P	P	V	I	I	A	P	Z	B	Y	N	U
D	V	Y	W	E	V	F	N	I	X	V	O	X	T	H
V	G	M	D	X	G	M	T	L	O	X	S	J	Y	N
W	M	O	R	T	I	S	E	E	B	K	N	Y	W	O

DOVETAIL
BOXPIN
FINGER
JOINT
DOWEL
MORTISE

TENON
LAPJOINT
BUTTJOINT
HALFLAP
HOUSING

Tools & Machines Word Search

J	W	T	P	P	C	Z	H	N	G	G	F	O	G	A
C	W	S	M	M	E	H	N	O	C	M	O	Q	O	T
B	D	A	X	L	S	T	W	R	M	W	X	O	A	U
K	L	D	I	R	Y	D	Y	O	A	A	S	J	A	R
C	L	F	R	T	E	B	A	S	L	T	L	A	Y	A
O	M	D	D	I	E	D	D	X	R	E	K	L	W	Y
L	J	V	I	Q	L	N	N	H	M	I	S	T	E	M
B	L	J	G	S	A	L	A	A	S	S	L	I	W	T
G	Y	L	A	B	C	G	P	L	S	Y	E	V	H	H
N	H	C	L	H	G	S	J	R	P	T	I	H	A	C
I	A	J	A	I	G	Y	A	Q	E	Z	L	R	I	Q
D	M	A	P	A	L	S	Z	N	I	S	M	E	V	F
N	M	Z	R	M	X	L	A	I	D	J	S	O	B	T
A	E	E	P	X	N	T	O	L	W	E	A	B	O	T
S	R	S	A	Z	W	O	T	T	A	M	R	D	M	D

BANDSAW
DISCSANDER
BELTSANDER
DRILLPRESS
CHISEL
PLANE

MALLET
SAW
HAMMER
FILE
CLAMP
SANDINGBLOCK

Workshop Terms Word Search

R	B	H	D	I	M	R	J	N	Q	L	D	R	C	T
L	K	X	W	T	G	D	X	G	U	W	Y	F	S	N
E	G	D	E	E	C	A	F	C	N	E	B	M	T	I
S	U	R	F	A	C	E	S	H	R	G	C	B	U	R
B	E	D	I	S	E	C	A	F	E	U	U	P	C	P
A	O	N	C	E	J	W	G	P	F	A	T	U	F	E
G	Y	U	N	U	U	C	N	E	E	G	C	N	F	U
A	N	G	I	S	E	D	R	O	R	G	W	A	O	L
L	F	D	Q	P	E	A	U	P	E	N	M	S	U	B
K	G	E	Q	D	U	Q	B	A	N	I	L	Y	N	D
C	E	O	S	Q	Z	Y	A	Q	C	K	K	L	O	X
S	F	C	S	N	C	R	Q	H	E	R	B	O	I	Q
X	J	Y	I	P	B	E	R	U	S	A	E	M	Z	W
A	R	B	T	W	B	E	N	C	H	M	H	L	C	O
T	H	K	C	F	T	A	W	J	G	Y	W	F	Z	A

FACESIDE
 FACEEDGE
 REFERENCE
 SURFACES
 MARKINGGAUGE
 TRYSQUARE
 MEASURE

TWICE
 CUT
 ONCE
 OFFCUTS
 BENCH
 BLUEPRINT
 DESIGN

Unscramble Safety Terms

TAESFY

AEGSLSS

RFEFSAMU

USMADSTK

GOLVES

RPAREIRTSO

ESAIDFHLCE

RGEINHA

TRPN00IETC

EOHEELARTSHS

AONRP

GOELSGG

Unscramble Joinery & Tools

EVTOILDA

EGINFR

INJTO

BPNIOX

OMITRES

NTONE

EDWLO

NPALITJO

NUJITTTOB

MREIT

GUNHOIS

EAUTQRYRS

RMANAEGKGIGU

Tools & Functions Matching

Match each tool (1-8) with the correct description (A-H).

1. Band saw

2. Clamp

3. Hand plane

4. Disc sander

5. Marking gauge

6. Mallet

7. Chisel

8. Try square

A. Marks parallel lines at a set distance

B. Drives chisels without damaging handle

C. Flattens and smooths wood surface

D. Holds workpieces securely together

E. Used for marking and checking 90°

F. Cuts and pares away wood for joints

G. Machine that cuts curves and straight

H. Machine for sanding ends and edges

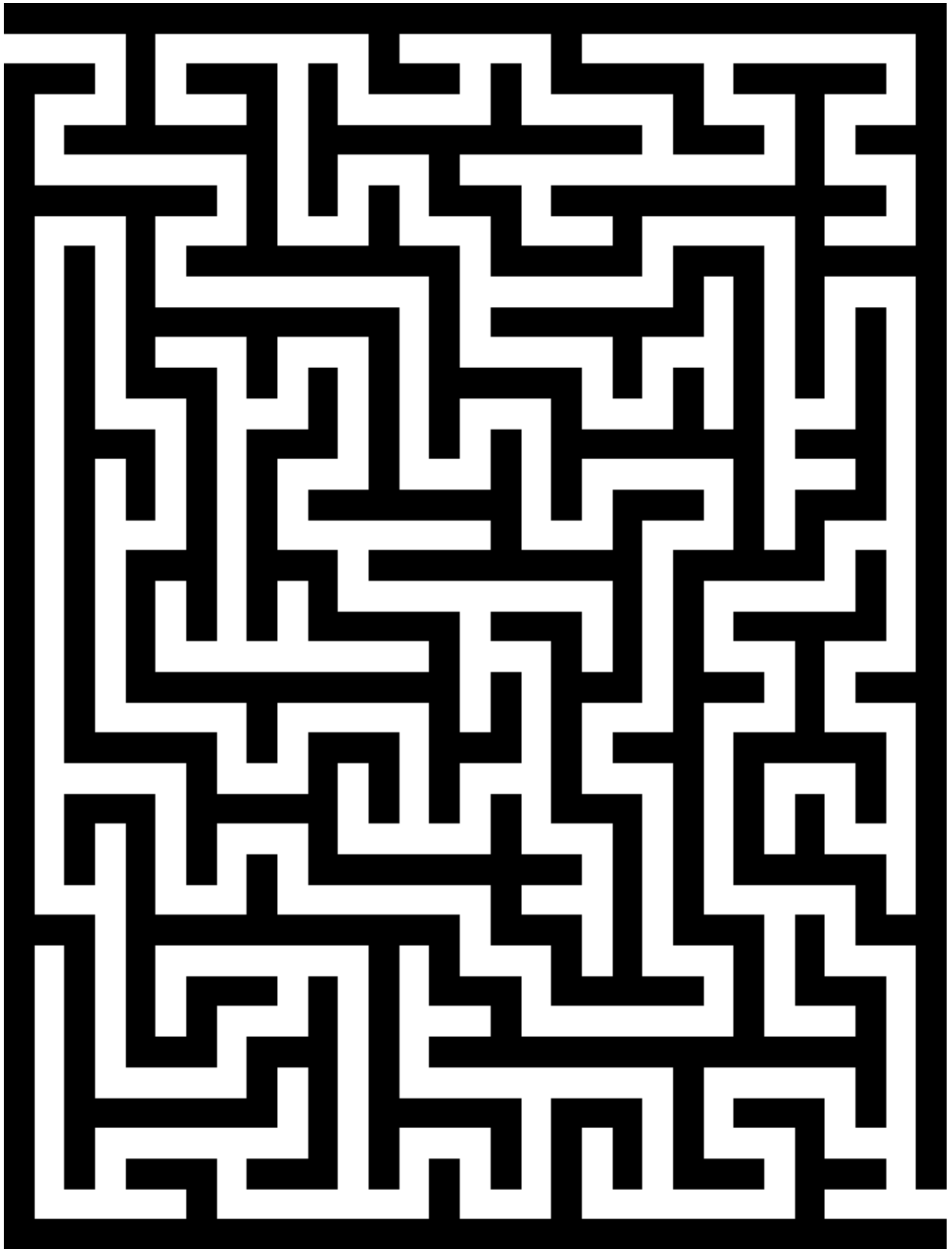
Fill in the Blanks

1. Always wear _____ to protect your eyes when in the workshop.
2. Keep long hair _____ and avoid loose clothing.
3. The two reference surfaces on prepared timber are the face _____ and f _____.
4. Use a _____ to mark lines parallel to an edge.
5. Use a _____ for drawing 90° lines on your work.
6. Remember to _____ twice and _____ once.
7. Dovetail and box-pin joints are both types of _____ joints.
8. Tools left on benches or the floor are a _____ hazard.
9. Wear a _____ when sanding or sawing to avoid inhaling dust.
10. When using noisy tools, protect your ears with _____.

Multiple Choice Quiz

1. What is the most important safety device in the workshop?
 - A. The emergency stop button
 - B. Your safety glasses
 - C. The instructor
 - D. Your brain
2. When must you wear safety glasses in the workshop?
 - A. Only when using power tools
 - B. Only if you forget your prescription glasses
 - C. At all times, even when watching others work
 - D. Only when cutting timber
3. Why is it dangerous to wear gloves while using spinning machinery?
 - A. They look unprofessional
 - B. They can get caught in moving parts
 - C. They make your hands sweaty
 - D. They damage the machine
4. What does a marking gauge do?
 - A. Measures the moisture content of wood
 - B. Marks parallel lines at a set distance from an edge
 - C. Checks right angles
 - D. Sharpens chisels
5. Which joint features interlocking angled pins and tails?
 - A. Box-pin joint
 - B. Mortise and tenon joint
 - C. Dovetail joint

Maze Puzzle



Workshop Safety - Multiple Choice

1. When operating a bandsaw, which personal protective equipment is essential?

- (A) Safety glasses only
- (B) Hearing protection and gloves
- (C) Safety glasses and hearing protection
- (D) No protection required

2. Before using any power tool, what should you check first?

- (A) That it is plugged in
- (B) That it belongs to you
- (C) That guards and safety features are in place
- (D) Its colour matches your clothes

3. Loose clothing and jewellery should be removed because they:

- (A) Could get caught in moving parts
- (B) Look unprofessional
- (C) Collect dust
- (D) Provide extra warmth

4. When sawing timber by hand, how should you secure the work?

- (A) Hold it with your free hand
- (B) Place it on your lap
- (C) Use a vice or clamp
- (D) You don't need to secure it

5. What is the purpose of a dust mask?

- (A) To keep warm
- (B) To protect against inhaling sawdust
- (C) To look fashionable
- (D) To improve vision

6. If a tool or machine is damaged, you should:

Page 1

- (A) Keep using it carefully
- (B) Tell your teacher immediately
- (C) Try to fix it yourself
- (D) Hide it

7. Hearing protection should be worn when noise levels exceed:

Wood Joints - Match Each Name to Its Description

Draw lines or write letters to match each joint with its description.

- | | |
|-----------------------|--|
| 1. Dovetail joint | A. A joint using interlocking wedge-shaped tails and pins, often used in drawers |
| 2. Mortise & tenon | B. A simple overlapping joint often used for frames and carcase construction |
| 3. Finger (box) joint | C. A joint where a square or rectangular tongue fits into a matching hole |
| 4. Dowel joint | D. A joint formed by cutting matching rows of square 'fingers' and 'pins' |
| 5. Lap joint | E. A joint where a cylindrical rod secures two boards together |
| 6. Housing joint | F. A joint created by cutting a slot in one member to receive the end of another |

Wood Adhesives - Uses and Properties

For each adhesive type listed below, describe its typical use in timber work, its setting time and any special precautions required.

Adhesive	Typical use
PVA (white glue)	<hr/>
Epoxy	<hr/>
Contact cement	<hr/>
Polyurethane glue	<hr/>
Animal (hide) glue	<hr/>
Cyanoacrylate (super glue)	<hr/>

Project Finishing - Put the Steps in Order

Below are the typical steps to finish a small timber project. They are jumbled. Write numbers 1-6 beside each step to indicate the correct order from start to finish.

- [] Remove any pencil marks and final wipe down
- [] Prepare your workspace and ensure all tools are clean
- [] Allow the finish to dry and apply subsequent coats as required
- [] Apply your chosen finish (e.g. oil, varnish or wax)
- [] Sand all surfaces progressively with finer grits
- [] Inspect the surface for blemishes and dust off

Design Elements & Principles - Fill in the Blanks

Fill in the correct element or principle of design that matches each definition. Elements: line, direction, style, shape, size, colour, texture. Principles: proportion, balance, pattern, rhythm, emphasis, contrast, harmony, unity.

1. Can be either straight or curved, thick or thin

Answer: _____

2. Is either horizontal, vertical or diagonal

Answer: _____

3. A particular kind, sort or type, e.g., Colonial

Answer: _____

4. An object has this if it is solid (3-D)

Answer: _____

5. Can be large or small, long or short, thick or thin

Answer: _____

6. Can be either cool or warm, dark or light

Answer: _____

7. It is the surface quality – it can be rough or smooth, hard or soft

Answer: _____

8. Involves the relationship between sizes – scale; size of part to whole

Answer: _____

9. Involves the distribution of elements; can be symmetrical or asymmetrical

Answer: _____

10. A repeated design element

Answer: _____

Material Cost Calculation

Use the dimensions provided to calculate the volume of each piece of timber and then determine the cost if the price of timber is \$0.45 per 1000 cubic centimetres. Show your work.

Piece	Length (mm)	Width (mm)	Thickness (mm)	Cost (\$)
A	1200	90	19	_____
B	800	120	25	_____
C	600	150	32	_____

Show your calculations below:

Hardwood vs Softwood - Compare and Contrast

Complete the table below to compare hardwoods and softwoods. Consider characteristics like density, growth rate, common uses and give at least two examples of each type.

Characteristic	Hardwood	Softwood
Density / Weight	_____	_____
Growth rate	_____	_____
Typical uses	_____	_____
Examples	_____	_____

Tools & Safety - True or False

1. A sharp tool is safer than a dull one. []
2. You should always carry chisels with the cutting edge pointing forward. []
3. Never leave a clamp tightened on a workpiece when not in use. []
4. It is acceptable to use a screwdriver as a chisel. []
5. Files should be used without handles for greater control. []
6. Always cut away from your body when using a knife or chisel. []
7. You can safely remove guards from machinery if they block your view. []
8. When drilling, always secure the material in a vice or clamp. []
9. Use pliers to hold small nails while hammering to protect fingers. []
10. Always unplug power tools before changing blades or bits. []

Joinery Word Scramble

Unscramble the letters to reveal types of wood joints.

- | | |
|----------------|---------------|
| 1. ITAVDEOL | Answer: _____ |
| 2. ETMOSRI | Answer: _____ |
| 3. NNTOE | Answer: _____ |
| 4. JTONIPLA | Answer: _____ |
| 5. IJNRGNEOITF | Answer: _____ |
| 6. UBNITOTTJ | Answer: _____ |
| 7. WLEDO | Answer: _____ |
| 8. IHNUGSO | Answer: _____ |

Make a Box - Sequence the Steps

Below are some steps involved in constructing a simple timber box. They are out of order. Write numbers 1–6 beside each to put them in the correct sequence.

- [] Cut the sides to length and mark out joinery
- [] Design and measure each side piece
- [] Apply a finish and let it dry
- [] Cut the base and lid to size
- [] Sand all surfaces smooth after assembly
- [] Assemble the sides using your chosen joints and apply clamps

Workshop Hazards - Identify and Prevent

List at least five potential hazards in a wood workshop and describe a safe practice or equipment that would minimise each risk.

Hazard	Prevention / Safe practice
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____

Sustainability - Plantation vs Old-Growth Timber

Discuss the environmental and economic pros and cons of using plantation timber versus old-growth timber. Complete the table below with at least three points in each column.

Aspect	Plantation timber	Old-growth timber
Availability		
Environmental impact		
Cost		
Quality / Appearance		

Adhesives & Finishes Word Search

Find the following words hidden in the grid. Words may run horizontally, vertically or diagonally.

PVA
EPOXY
CONTACT
POLYURETHANE
HIDEGLU
OIL
VARNISH
SHELLAC
WAX
STAIN

G	V	A	R	N	I	S	H	K	J	F	Z
X	E	O	O	I	L	R	L	A	X	G	O
M	T	A	D	P	W	P	G	L	U	H	P
S	T	A	I	N	V	D	U	R	W	X	X
S	H	A	X	H	D	A	K	B	C	C	B
A	H	I	C	O	N	T	A	C	T	S	Y
O	S	E	D	T	D	R	R	W	C	U	E
S	L	G	L	E	Y	W	E	Q	S	I	P
D	W	X	F	L	G	A	A	U	P	P	O
R	A	B	Q	T	A	L	I	X	A	G	X
K	L	V	C	D	O	C	U	H	R	D	Y
H	L	B	Q	K	X	F	V	E	Z	R	I

Project Planning - Match the Stage to Its Description

Match each stage of the design process with its description.

- | | |
|-----------------|--|
| 1. Design brief | A. Testing ideas using mock-ups or models to determine feasibility |
| 2. Research | B. A concise statement outlining the problem to solve or goal to achieve |
| 3. Ideation | C. Collecting information on materials, techniques and user requirements |
| 4. Prototyping | D. Generating a range of possible solutions and sketches |
| 5. Evaluation | E. Reviewing the finished product and process to identify improvements |

Timber Defects - Match and Describe

Match each timber defect with its description. Then, on the right, sketch a small diagram to illustrate the defect.

- | | |
|----------|---|
| 1. Knot | A. A separation of wood fibres along the grain, often at the ends |
| 2. Split | B. A piece where the surface curves across the width of the board |
| 3. Warp | C. A hole or ring caused by a branch base |
| 4. Shake | D. A distortion causing the board to curve lengthwise |
| 5. Cup | E. Absence of wood along the edge or corner of a board |
| 6. Bow | F. A separation between annual rings or along the grain inside the wood |
| 7. Wane | G. A distortion where the board twists along its length |

Rank the Joints - Strength and Use

Rank the following joints from 1 (strongest) to 5 (weakest) based on mechanical strength. Then give one typical use for each.

Dovetail Rank: ____ Typical use: _____

Mortise & tenon Rank: ____ Typical use: _____

Finger (box) Rank: ____ Typical use: _____

Dowel Rank: ____ Typical use: _____

Butt Rank: ____ Typical use: _____

Self-Assessment & Reflection

Reflect on your learning in this unit. Answer the questions below in complete sentences.

What is one safety practice you will always remember to follow in the workshop?

Which tool have you become more confident using and why?

Describe a joint or process you found challenging and how you overcame that challenge.

How will understanding design principles help you in future projects?

What could you do differently next time to improve the quality of your work?
