

Safe in the workshop.

The workshop is full of sharp tools and powerful machines. Learn to read safety signs, spot hazards and control risks before you start making your feeder.



name:

teacher/class:

date:

WE ARE LEARNING TO

- understand what UK safety signs mean
- identify hazards and control risks in the workshop
- use the pillar drill safely

I CAN

- ☐ explain how a sign's shape and colour show its meaning
- ☐ say what common workshop signs mean
- ☐ suggest a control for a hazard
- ☐ name the parts of a pillar drill and follow its safety rules

01 Read the signs

UK safety signs follow the same rules everywhere: in your workshop, on building sites, in factories. **Shape** and **colour** tell you what type of message a sign gives before you even look at the picture. Signs use pictures, not words, so anyone can understand them, whatever language they speak.

1a Match each type of sign to its message. Write the message in the box. Use the word bank.

(5 marks)

You MUST do this

You must NOT do this

Danger! Take care

Safe place, exit or help is here

Fire-fighting equipment is here

Sign	Type	Shape and colour	Message
	Prohibition	Red circle with a diagonal bar	
	Mandatory	Blue filled circle	
	Warning	Yellow triangle with black border	
	Safe condition	Green square or rectangle	
	Fire equipment	Red square or rectangle	

1b What does each sign mean? Write a short meaning under each sign.

(10 marks)

A  	B  	C  	D  	E 
F  	G  	H  	I  	J 

1c **Design a sign.** Pupils keep forgetting to **remove the chuck key** from the pillar drill before they switch it on. Design a sign to go on the drill.

(4 marks)

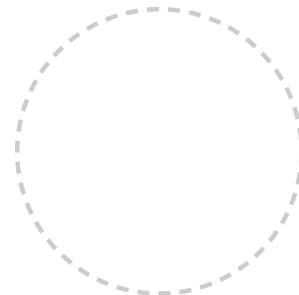
Your design must:

- use the correct **type** of sign (shape and colour)
- have a **simple, bold** picture that is easy to understand
- have a short supporting **text** panel underneath

WHICH TYPE OF SIGN DID YOU CHOOSE AND WHY?

SUPPORTING TEXT ON YOUR SIGN

DRAW YOUR SIGN HERE



Graphic designers use **contrast** (dark against light) and **simple shapes** so a sign can be read from across the room. Keep your picture bold.

02 Hazard, risk and control

HAZARD

Something that **could cause harm**.
Example: a sharp chisel.

RISK

How **likely** it is that someone gets hurt, and how **badly**. Example: chiselling towards your hand is high risk.

CONTROL

What you do to **make it safer**.
Example: keep both hands behind the cutting edge and clamp the work.

- 2a** Each pupil below is making their bird feeder. For each one, describe the **hazard** (what could go wrong) and a **control** (how to make it safe). (12 marks)

Situation	Hazard: what could go wrong?	Control: how to make it safe
Ava is holding her piece of wood in her hand while she drills the Ø16 hole on the pillar drill.		
Zain has left his school bag on the floor next to his workbench.		
Mia has long, loose hair and is leaning over the pillar drill to watch the drill bit.		
Leo is chiselling out the housing joint with his other hand in front of the chisel.		
Erin tightened the drill bit but left the chuck key in the chuck.		
Kai is sawing his wood on top of the bench without a bench hook or vice. The wood keeps sliding.		

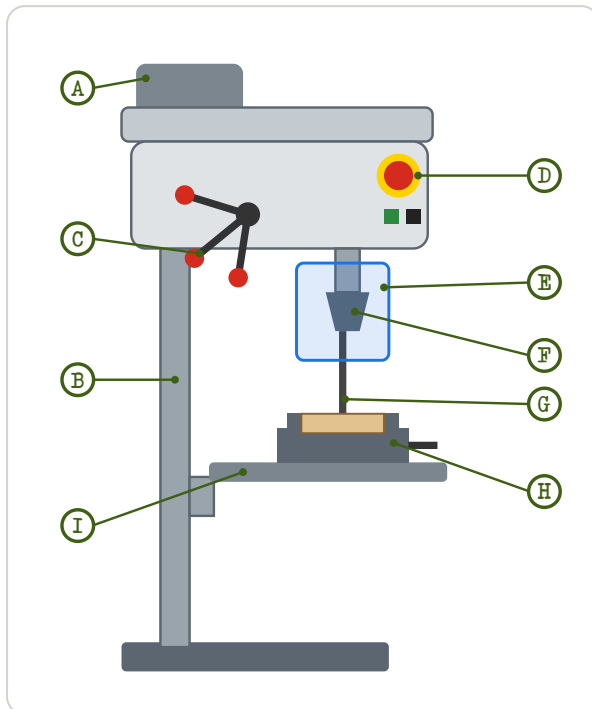
Report it! If you spot a hazard, such as a damaged tool, a frayed cable or a spill, **tell your teacher straight away**. Never try to fix a machine yourself.

03 Using the pillar drill

You will use the pillar drill to drill the holes in your feeder. Know its parts and its rules **before** you use it.

3a Label the parts of the pillar drill. Write the letter next to each part name.

(8 marks)



Part	Letter
Chuck	
Drill bit	
Chuck guard	
Emergency stop	
Machine vice	
Table	
Column	
Feed handle	

Letter A (the motor) is not used.

3b Tick the **six** safe rules for using the pillar drill. Do **not** tick the unsafe ones.

(6 marks)

- | | |
|---|---|
| ☐ Wear safety goggles. | ☐ Hold small pieces firmly in your hand. |
| ☐ Clamp the work in a machine vice or to the table. | ☐ Wear gloves to protect your hands from the drill bit. |
| ☐ Remove the chuck key before switching on. | ☐ Lower the chuck guard before drilling. |
| ☐ Brush away swarf (chippings) with your fingers while drilling. | ☐ Tie back long hair and tuck in ties and loose clothing. |
| ☐ Ask a friend to hold the wood while you drill. | ☐ Wait until the chuck has stopped before you remove the work. |

04 In an emergency

4a What should you do in each situation?

(3 marks)

You see another pupil's sleeve get caught in a machine.

You cut your finger on a chisel.

You notice the cable on the disc sander is split.

Total: ____ / 48