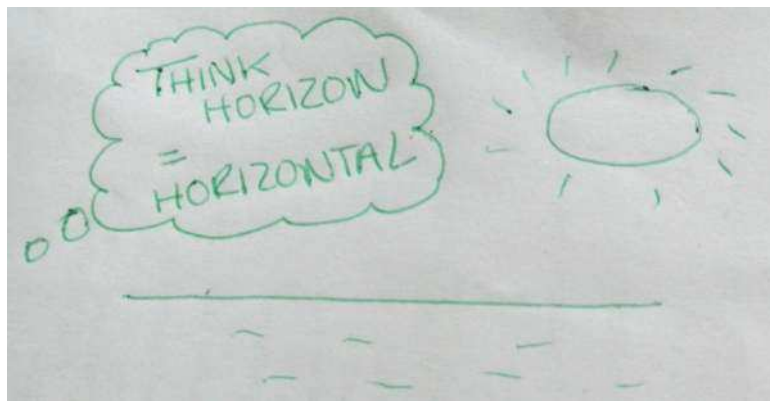
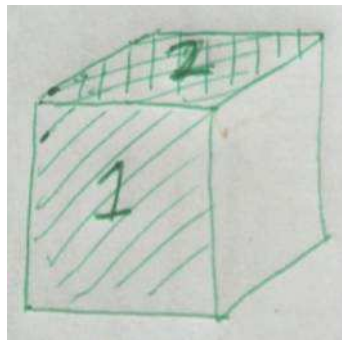


# Tools needed

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## Tools

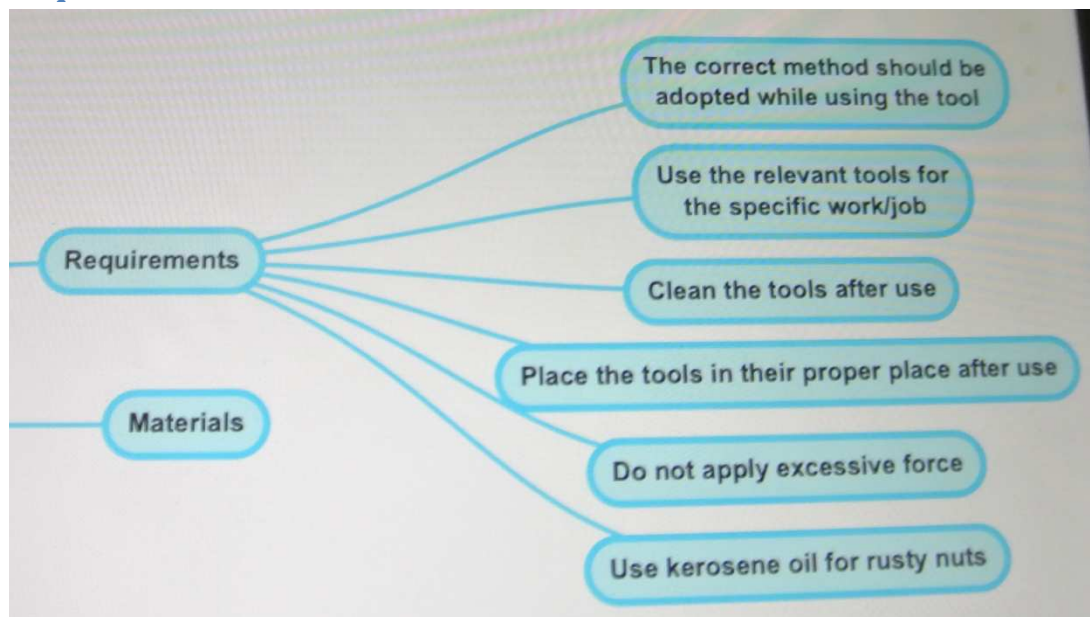
Firstly, can you tell me which of these two surfaces, 1 or 2, is horizontal and which one is vertical?



Answer 1 = Vertical, 2 = Horizontal

**Discuss with a friend:** Why do we need to make sure we have the correct tools? What requirements should we be responsible for when using tools?

## Requirements for all tools:



## Essential tools

**Group Activity 1:** Lay all the tools out on the table and take it in turns to pick up a tool and teach the rest of the group what the purpose of a tool is, when it can be used and most importantly how it is used. If you are not sure you can use these following notes to help:

### Sprit Level



Spirit levels are used to determine whether a surface is correctly vertical or horizontal. A surface is correct when the bubble is between the two black lines.

The green circle is the bubble to look at when checking a horizontal surface.

The red circles represent the correct bubbles to look at when checking a vertical surface.



Another way to check the vertical surface is by using a plumb-bob. A plumb is a weight usually with a pointed tip on the bottom that is suspended from a string. It is used as a reference line for levelling vertical length. This method is used to ensure that the construction is perfectly upright. Double click



tile 1.wmv

on link to see a plumb-bob in action.

### Hammer

Hammer used for striking/ hammering



### Try Square

This is used for maintaining a right angle whenever required when laying down pipes and checking for flatness.

### Hand Hacksaw

Hand hacksaw is used to cut the pipes, and angle irons etc.





### Trowel



### Spanner set

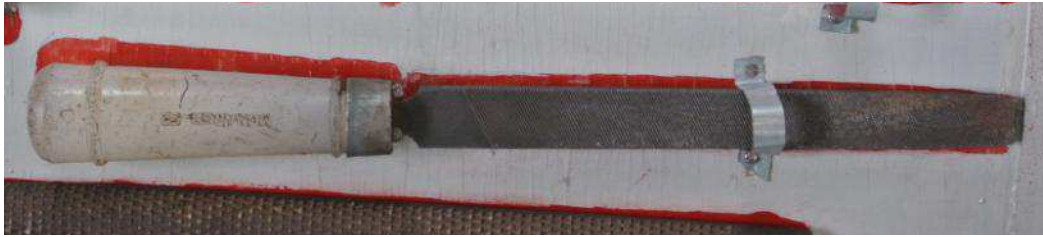


### Tap Wrench and taps



### Files

These are used for removing sharp edges, burns and material from unsmoothed flat and curved surfaces.



### Chisels

They are used for making holds, doing carving work, moulding work, and other types of works.



### Screw driver



### Steel measuring tape



### Bench Grip

Used to hold materials steady on bench for cutting.



### Bench Vice

This is used for cutting. Make sure the flat surface is resting upon the material in which you are cutting. Keep fingers away from cutter and do not have water nearby.



### Desirable

#### Pipe wrench

Pipe wrench is used for holding and tightening of pipes. Chain wrench used for holding, gripping and turning pipes of larger diameters i.e. 2" dia or above.



#### Pipe die stock

This is used for cutting/ making threads on the pipe.

#### Pipe vice

This is used for holding the pipe so that it can be cut properly and pipe – threads may cut by pipe die.

#### Pliers

These are used for holding, gripping, cutting and removing of the item. These are available in different sizes.



### Calliper

Used for measurement and marking

**Group activity 2:** Take it in turns to pick up the same tool again but this time ask the rest of the group what the purpose of each tool. This time the group is not allowed to look at the notes.

You should now be able to complete your plumbing using the correct tools in the correct way.

