Introduction to different wood joints- Fact sheet

You will be using these **four** different **wood joints**.

They are Lap joint, Mitre joint, Butt joint and Dowel joint.

Lap joint

One part over laps or sits on the lap of the other piece of wood.

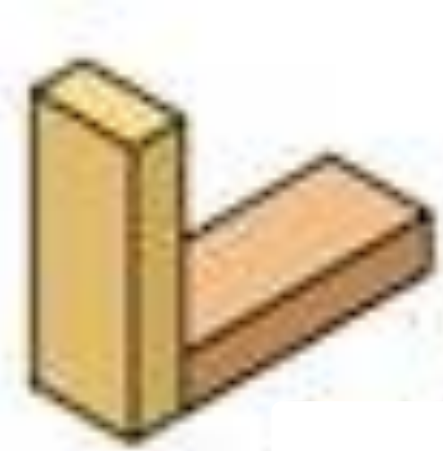
Mitre joint

A picture frame joint

Dowel Joint

To pieces of dowel are used to connect to another piece of wood.

Used in flat pack furniture.



A Butt joint

Each piece of wood touches the other one.

Task

Design a small box using one of the joints you have researched into.

Present to the rest of the class

1. Draw your box design including the wood joints you are going to use.
2. Decorate your box design- your choice.
3. Describe the wood joints you are going to use.
4. Tools and equipment that you have used.
5. Explain three health and safety rules you must follow.
6. Describe the material you have used.
7. List a positive and negative issue when using this material.

The joint and material you will use depends on how success a designer you want to be.

<u>BG 1-3 apprentice designer</u>
Use a butt joint and MDF.
<u>BG 4-6 junior designer</u>
a mitre joint and plywood
<u>BG 7-9 professional designer</u>
Use a lap joint and plywood.

What can you use to help you with your presentation?

Oasis Academy Brislington

Help sheet

Draw and name the different hand tools and equipment you used

What wood joint have you used?

What material have you used?

What are the positives?

What are the negatives?

List three health and safety rules you must follow

Word Bank

Durable – hard wearing and long lasting
Thickness – of material always measured in MM
Knots- where branches have grown
Grain – rings within the wood
Sturdy – stable will not break
Coping Saw
Tenon Saw
Pillar drill
Chisel
Hack Saw
Tri Square
Pencil
Metal rule
Wood veneer
Laser cutter
Plywood
MDF
Acrylic
Aesthetics
Mitre joint
Dowel wood joint
Butt joint
Lap joint

Task
Design a poster on materials used within 3D.

<u>Success criteria</u>
Wood materials to research

- Plywood
- MDF
- Beech
- Oak

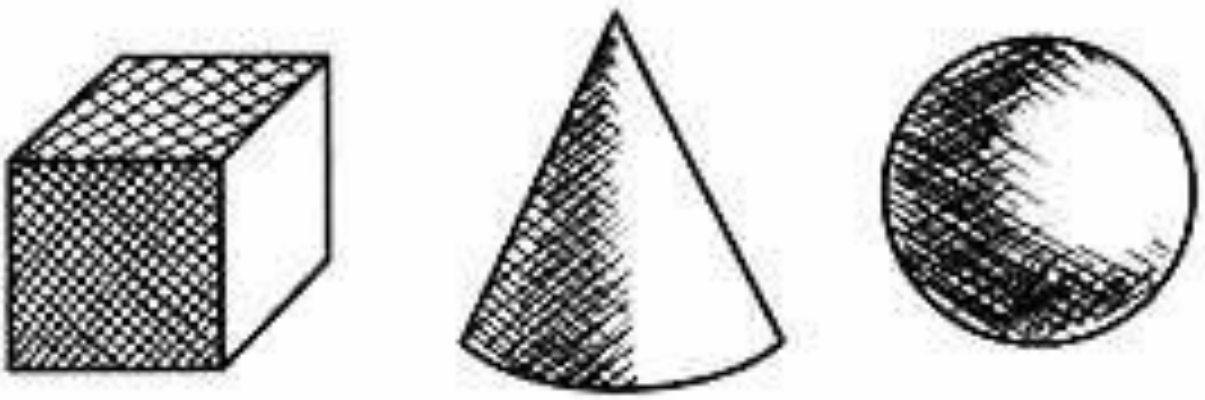
Make a create and informative poster

1. Draw the wood material
2. Use colouring pencils
3. Explain the purpose of each material
4. What hand tools are used to cut them?
5. Draw and colour the hand tools.

Answer the questions
What is sustainability?
Are these materials sustainable, explain your answer?
Explain the health and safety tips when using a Tenon saw.
What health and safety rules must you follow when using these tools?

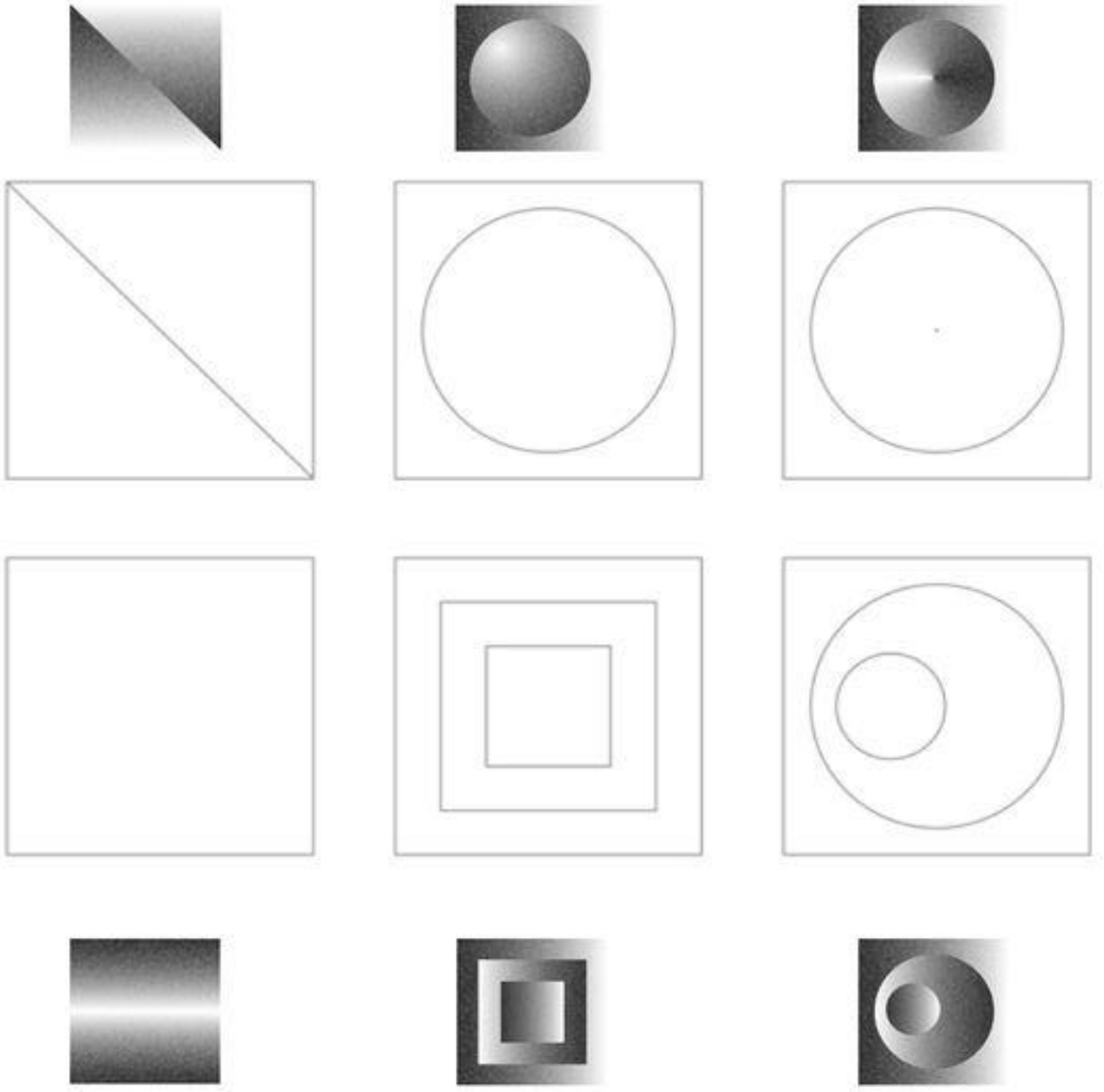
Hatching

Crosshatching



Blending

Stippling

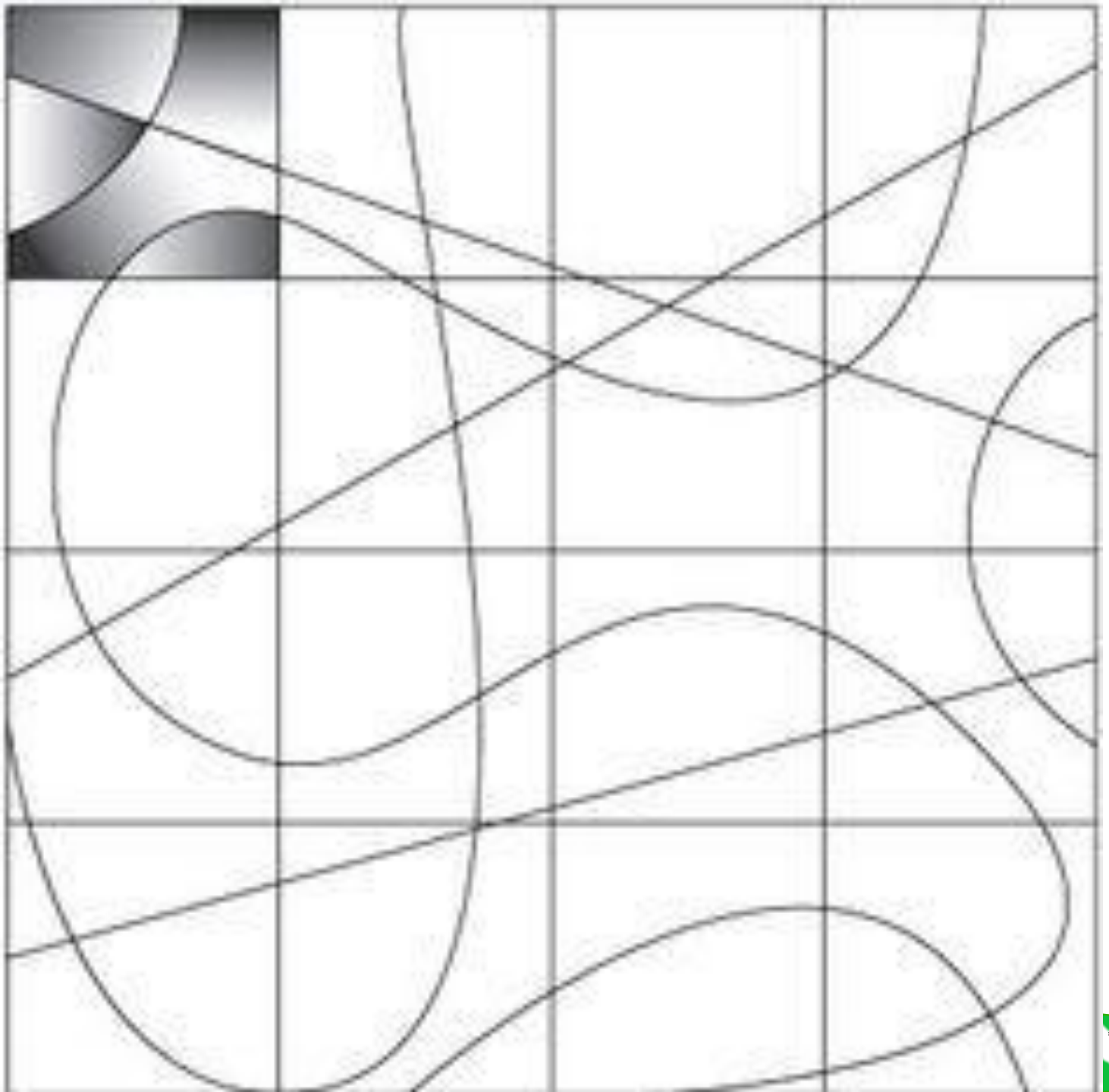


3D design Homework

Miss Hudson
Worksheet 1

Add tone to the images using the examples to help you

Homework due 22nd November 2017

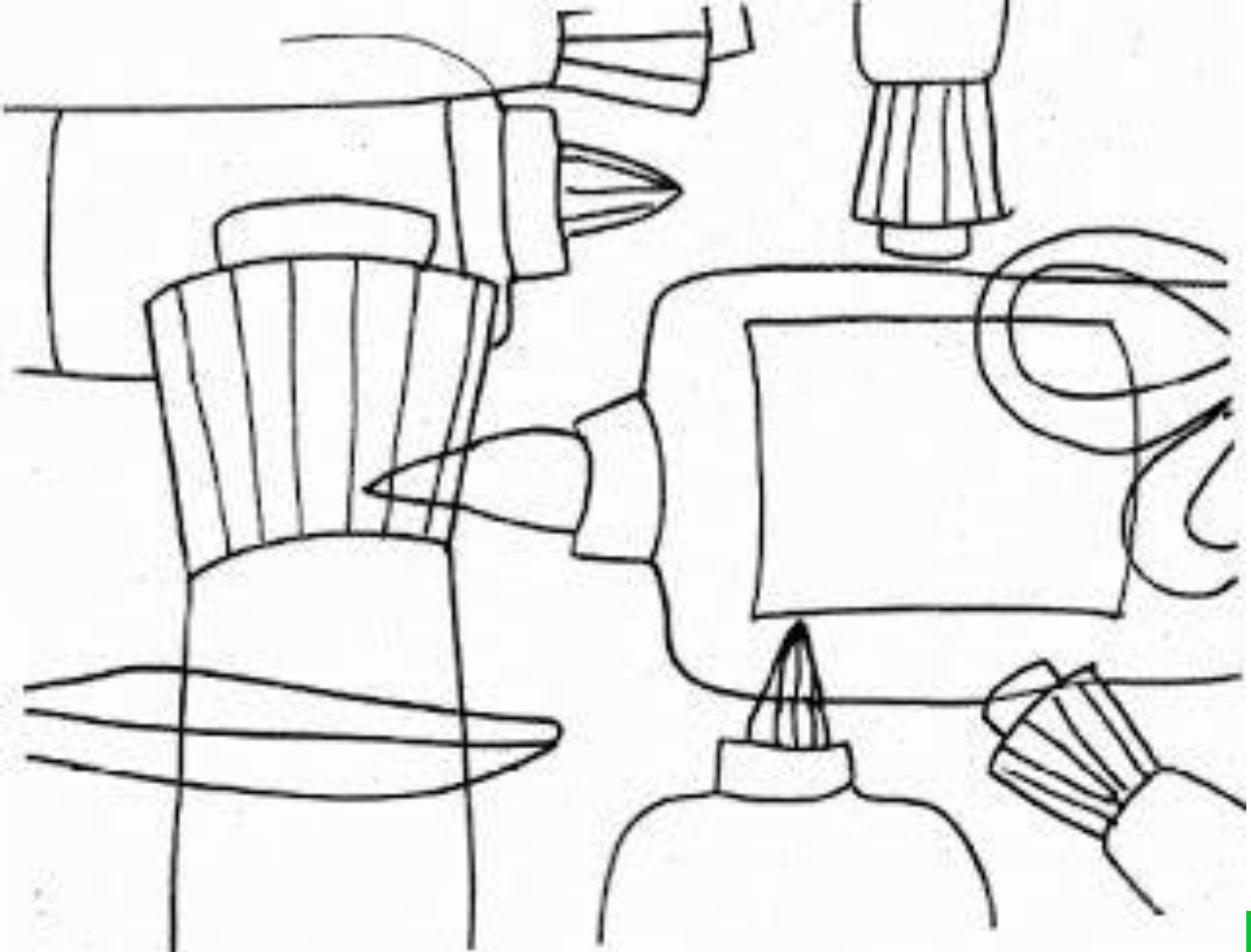


3D design Homework

Miss Hudson
Worksheet 2

Add tone to the images using the example to help you

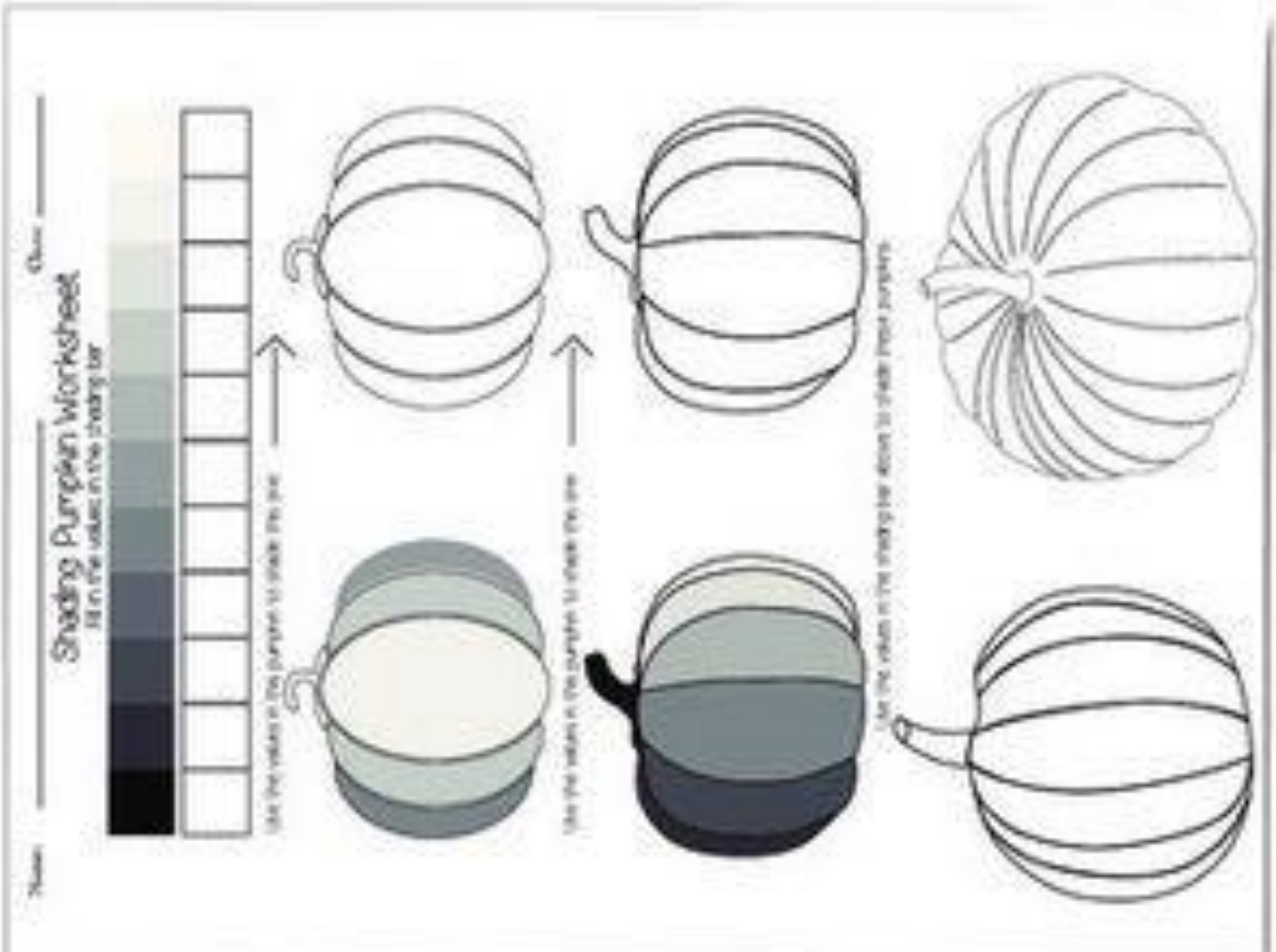
Homework due 6th December 2017



3D design
Homework
Miss Hudson
Worksheet 3

Add tone to this image, chose your own light direction

Homework due 20th December 2017



3D design
Homework
Miss Hudson
Worksheet 4

Add tone to these images, use examples to help you.

Homework due 17th January 2017

Using a 2B or HB pencil copy the cactus into the big grid.
Use the picture to help you see what lines go in which box
Use the picture to also help you see where the light and dark areas should be and add TONE

Write down some words that describe the cactus in the space below

3D design
Homework
Miss Hudson
Worksheet 5

Add tone to this images, follow the instructions.

Homework due 31st January 2017

Tools and machines found within a practical classroom

Stretch Task
Using a ruler draw a line to link each piece of equipment to the correct materials and correct health and safety practises. Fill in the blanks.

Equipment Draw the piece pf equipment	Description and the materials it can be used on	Hand tool health and safety practise

Tri- s_____

M_____t_____

Apron

G_____

C_____Saw___

- _____ _____.
- To draw lines on a 90 degree angle. The wooden handle must rest along a straight line. It can be used on all materials; wood, metals and plastics.
- _____ _____.
- Used to draw or paint along straight lines or to protect areas of your work. Can be used on wood, paper, metals and plastics
- _____ _____.

- When you are using this piece of equipment no other sharp tools must be in your work area. The metal edge is sharp be careful of cutting fingers.
- M_____ T_____ should be _____.
- An a_____ must be warn at all times, must be tied up and _____.
- Must be warn at all times when cutting materials within a practical classroom. As _____can go into the eye which can be_____.
- Must be counted out and in after every practical lesson. You must be shown how to use this piece of equipment first, you must take your time when using it.

Tools and machines found within a practical classroom

Task
Using a ruler draw a line to link each piece of equipment to the correct materials and correct health and safety practises. Fill in the blanks.

Equipment
Draw the piece pf equipment

H_____ S_____

T_____ S_____

Pillar d_____

B____ Saw

L_____ _____

Description and the materials it can be used on

- Is a drilling machine that can drill holes _____.
- Is a machine that has a large saw in a shape of a rubber band which runs through the whole machine. Can cut_____.
- Is a hand tool that can only be used to cut metal along a straight edge.
- Is a machine run by a piece of computer software. It cuts with a _____ and can cut _____. It can cut _____.
- Is a hand tool that can cut along straight lines only. Can be used on wood and plastics only.

Hand tool health and safety practise

Safety googles and an apron must be warn at all times, you must stand in the yellow box and be shown how to use it first. You must know where the emergency stop buttons are.

Is a hand tool_____ _____.

This machine you will never use because it is too dangerous. The technician or Myself are the only adults who can use this machine.

Is a hand tool _____ _____.

This machine can only be used by the technician or myself, the extractor fan must be on and the lid must be closed at all times.

Task

To link the different materials to a description, a positive and negative comment about the material and the equipment that can be used to cut them. Use the description of each material to list one positive and one negative. I have helped to show you the different **positives** and **negatives** of each material but how have I done this?

Materials	Description	Two positive	Two negative
Ply wood	This material is also **manmade. The positive** to using this material is- **it** is a useful, clear plastic that resembles glass, but has properties that make it superior to glass in many ways. It is very strong and durable and comes in many different colours and thicknesses. **Negative** is once it is cracked or chipped it cannot be repaired.		
Acrylic plastic	This material is called medium density fibre board and I a manmade board. **Positive** to using this material is- Very strong and durable. It is environmentally friendly because it is recycled. **Negative** to using this material is- If this material is chipped or cracked it cannot be repaired.		
MDF	Is a man made material that contains layers of wood veneer. **Positive** to this material is- it is cheap to buy and durable. It cuts easily and it comes in different thickness. **Negative** to using this material is- It is not a natural material which does always appeal to some clients and is more affected by water damage.		

Equipment

Hand draw the equipment that can be used to cut this material.