

technology



What is Technology??

Technology is the use of **practical** and **intellectual** resources to develop products (**technological outcomes**).

Addressing needs and find solutions.

Using Resources To Make an Outcome
(Product)

“Technological product”

a material in nature that exists in the world as a result of human design.

Nature products v's Technological Products??

What things are constructed by humans to benefit humans? How?



What are these things **made of?**

Which resources are **natural and which are man made?**

How do these products benefit humans?

What **problems do these things solve?**





What natural materials are these things made from?



What other resources are made by nature that we can use in technology?

Why Study Technology?

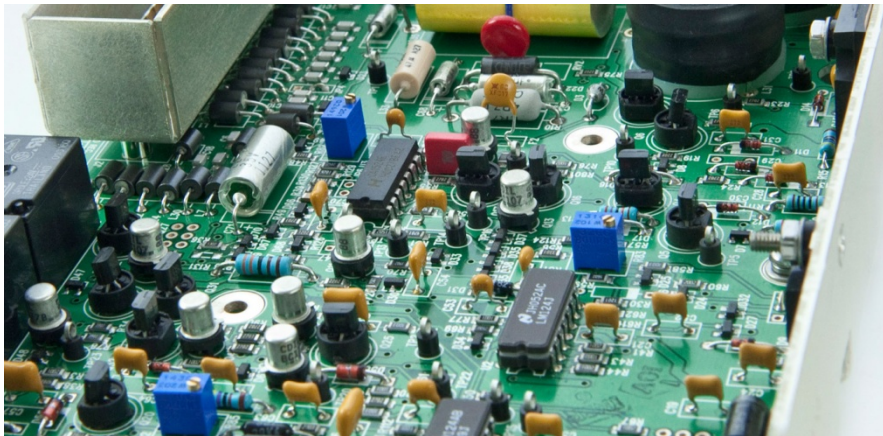
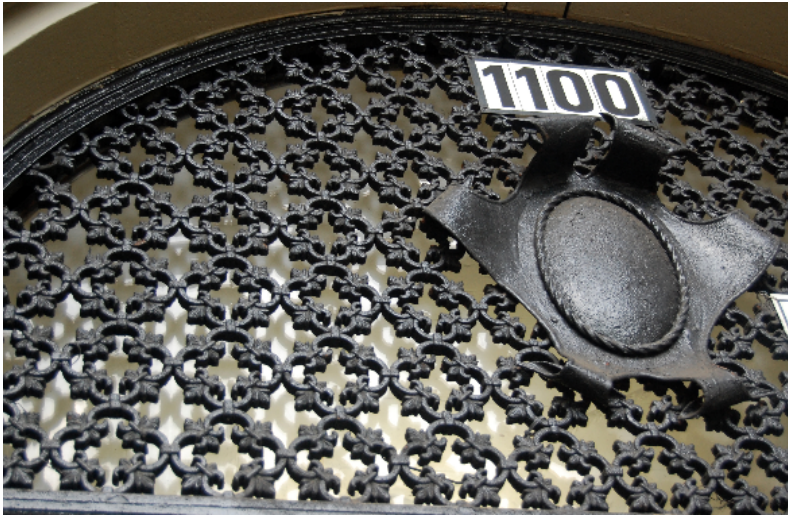


- **It helps us to learn and develop technological literacy .**
- **It helps us to participate in society as informed citizens.**
- **It gives us access to technology-related careers.**
- **It teaches us practical skills as we develop models, products, and systems.**

Soft technology sewing and design.



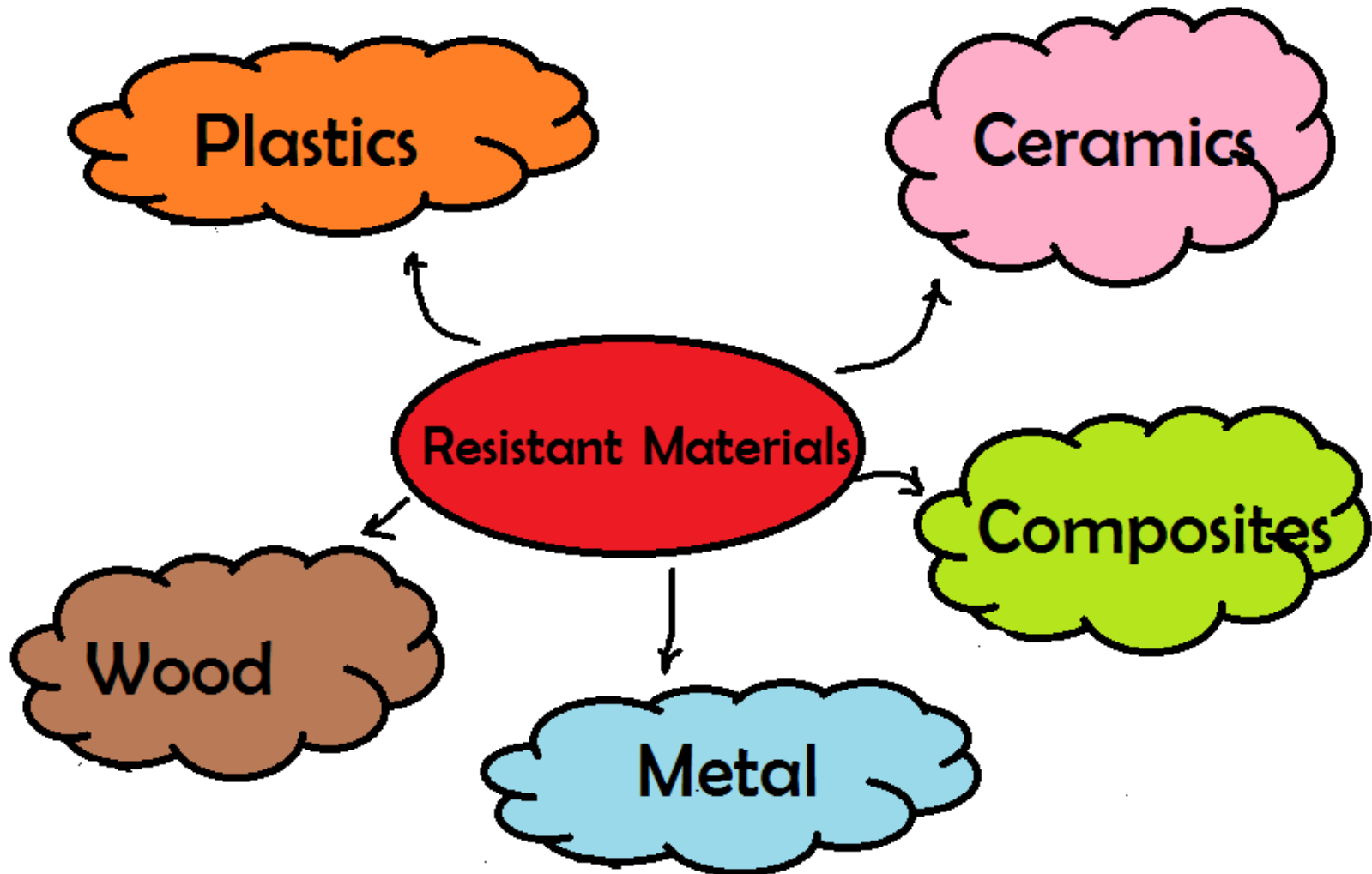
Hard technology – woodwork, metalwork, plastics and electronics



Food technology



Hard technology materials (Resistant Materials)



Wood (Timber)

**Soft
wood**



Hard wood



Metals

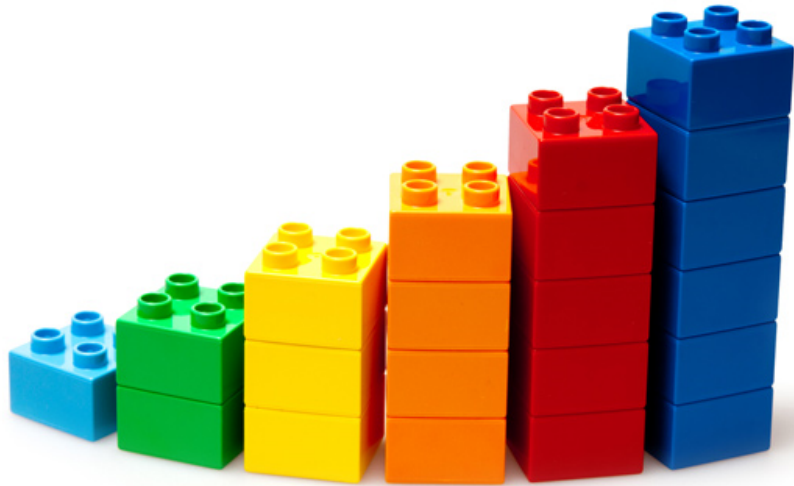
- **Ferrous metals**
cast iron, steel



Non- Ferrous metals
do not contain iron.
aluminium, copper,
zinc, brass and tin.



Plastics



Composite Materials

Made by combining a **reinforcing material** such as wood pulp, and a **bonding agent**, such as glue

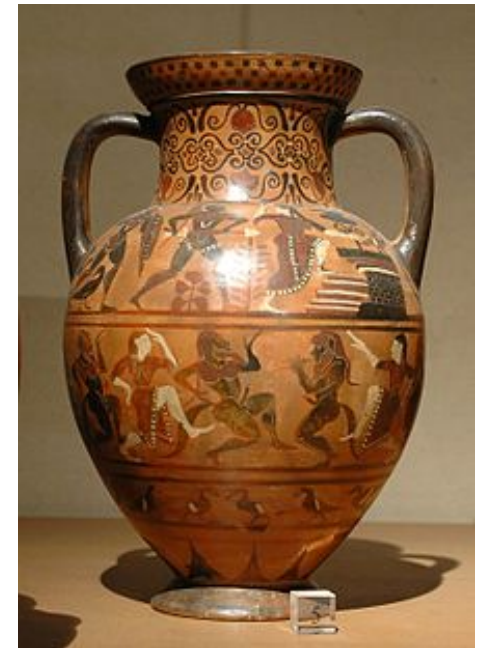
The wood pulp is made from the waste from cutting solid wood. MDF and GRP



Ceramics

Ceramics are made from **clay, sand & feldspar**.

These materials are ground to a fine powder, mixed together and fired at high temperatures (700-2000°C).



The Technological Process

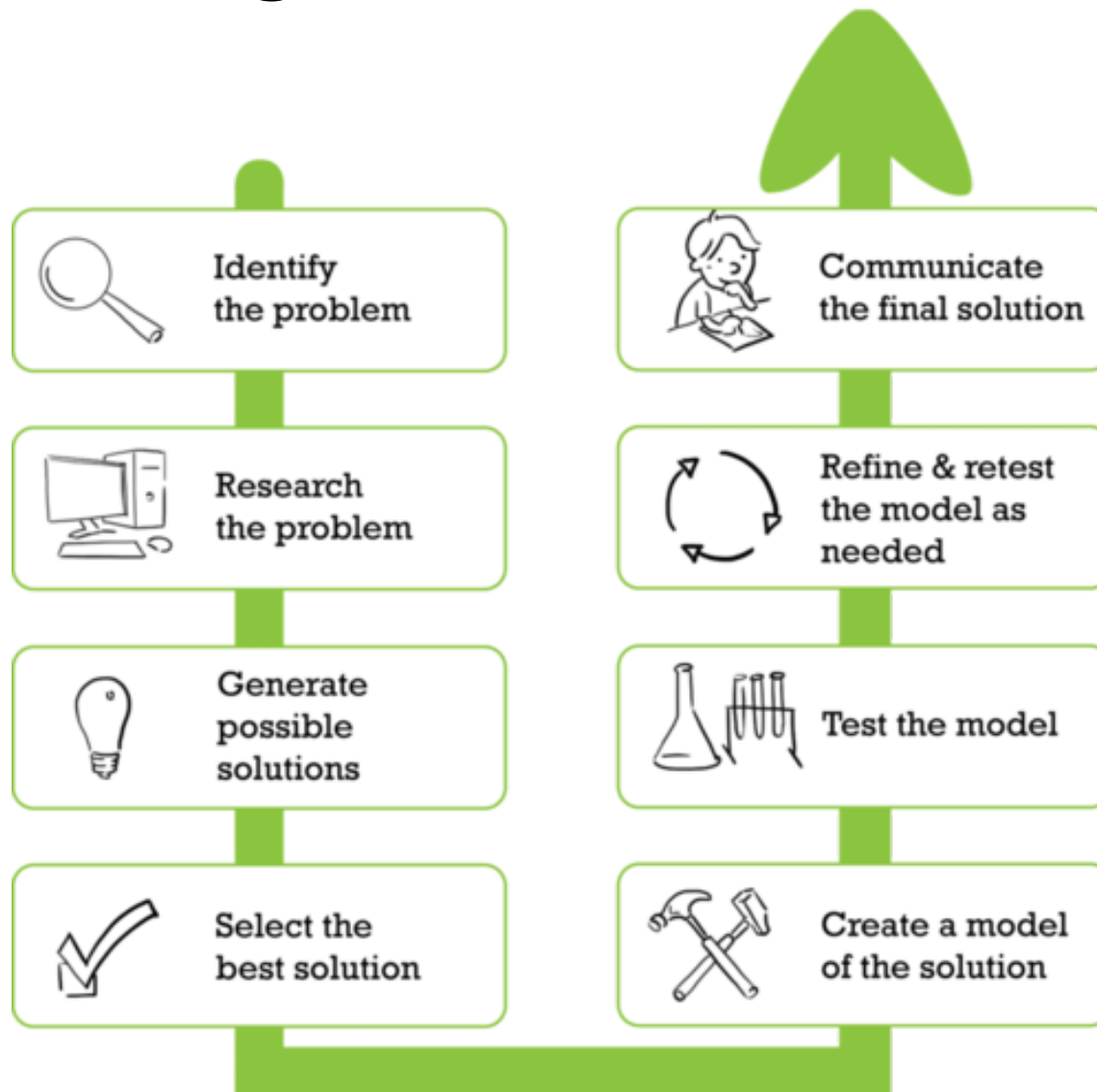
Why do we need a technological process?

The Technological Process

Planning is important so we get the right design...



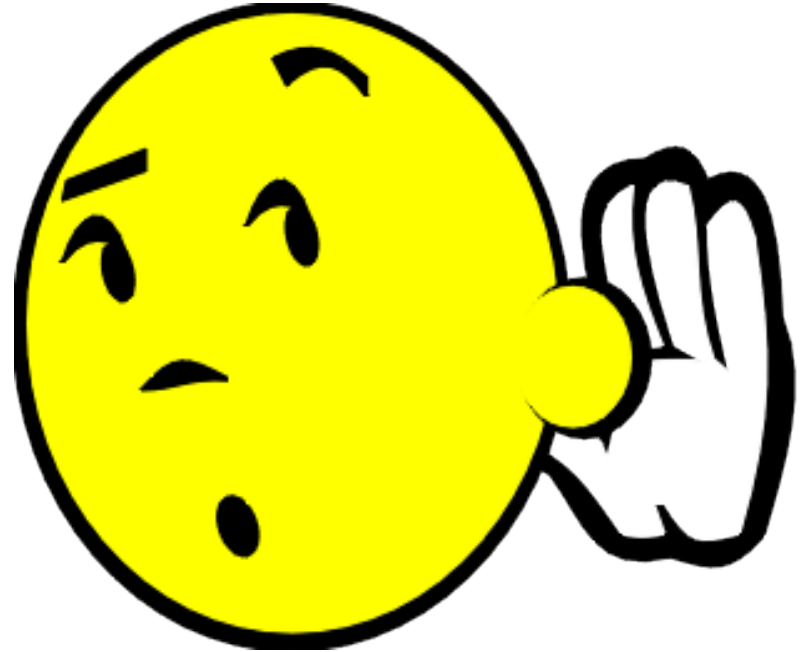
Technological Process



Safety in the workshop... Is it important??



1. Always listen carefully to the teacher and follow instructions.



Do not run in the workshop, you could 'bump' into another pupil and cause an accident.



4. Always wear an apron as it will protect your clothes and hold loose clothing such as ties in place.



5. Wear good strong shoes. training shoes are not suitable.



6. When attempting practical work all stools should be put away.



3. Know where the emergency stop buttons are positioned in the workshop. If you see an accident at the other side of the workshop you can use the emergency stop button to turn off all electrical power to machines.



7. **Bags** should not be brought into a workshop as people can trip over them.
8. When learning how to use a machine, **listen** very carefully to all the **instructions** given by the teacher. Ask questions, especially if you do not fully understand.
9. **Do not** use a machine if you have not been shown how to operate it safely by the teacher.
10. **Always** be patient, never rush in the workshop.

11. **Always** use a **guard** when working on a machine.

12. Keep **hands away** from moving/rotating machinery.

13. **Use hand tools carefully**, keeping both hands behind the cutting edge.

14. **Report** any damage to machines/equipment as this could cause an accident.