

MODULE: *Matter 1*

Activity Sheet 1.1: Briefing

Apprentice Asia – you have won the contest!



Your new boss welcomes you to your first day at work with this message:

“Learn fast – or you’re sacked!”

We’re going to change the manufacturing industry for all time.

Out will go the steel and concrete of the last century – we’re going to find new cheap materials sourced from our own region, so we will be self-sufficient.

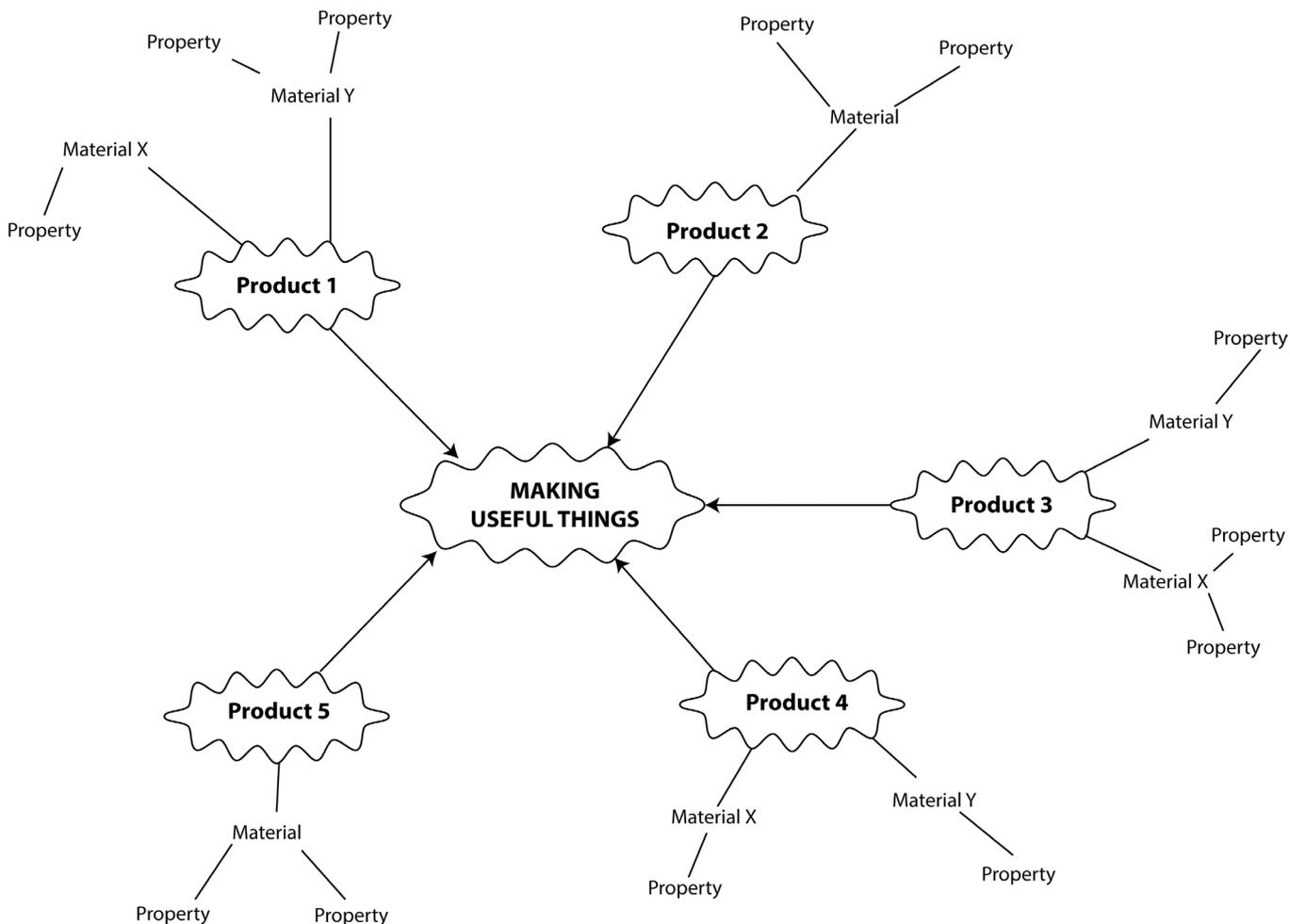
You’ll need to SORT THIS OUT if you are going to keep your job.

What do you know about these questions?

- Things are made of different stuff; so what is this ‘stuff’ at its most basic level?
- How do you get the stuff to make tyres, bodies, seats, engines and windows for cars. Or even stuff to make aeroplanes, mobile phones, nice buildings, stylish clothes?
- Why do we use these materials for these things? (For example, we don’t make car engines out of wood, as it would wear away too quickly, so we use metals.)

Your first task

Do some 'thinking on paper' – set out and organise your ideas. This is very important for a successful businessperson.



- Draw a concept map/ mind map/ spider diagram showing all the products listed above, grouping them according to the materials they are made from.
- Think of more products that you would choose yourself, and add them.
- Add the properties each material needs (see list below) to your concept map.
- Think of some different/ modern/ alternative materials to make these things, and add these to the map.

Here is a list of some properties you may decide your materials need:

Cheap and easy to obtain	Light in weight	Transparent	Flexible
Rigid	Squashy	Elastic (goes back into shape)	Waterproof
Airtight	Easy to clean	Easy to colour	Absorbent
Recyclable	Can be moulded	Electrical insulator	Electrical conductor

Some properties may need to be more clearly defined:

Tensile strength (strong when you pull it)	Compression strength (strong when you put things on it, or push it together)	Wear-resistant (strong when it is rubbed)	Scratch-resistant (strong when you mark the surface)
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- Research the materials, and add notes about where those materials can be sourced.