

## Building Materials and their Properties

### Suggested Answers – matching job roles to materials (not an exhaustive list)

#### All Materials

- Buyer – finds the best price for all materials on a project
- Quantity Surveyor – works out the quantities needed and the number of people
- Other job roles include Procurement Officer/Manager; Materials Engineer; Senior Materials Engineer

#### Sand and Bricks/Blocks

- Bricklayers – use sand to mix mortar to bond bricks and blocks together when building walls (with water)
- Sand is also used to lay paving slabs and sets by a block paving specialist
- Sand is used to mix cement to make prefabricated sections of buildings, bridges and roads by those working in off-site manufacture
- Other job roles include Stone Mason, Cement Finisher, Wall and Floor tiler, General Construction Operative

#### Wood

- Bench joiners – use wood to make window and door frames, or even staircases. This is part of off-site manufacture
- Carpenters & Joiners fit the door and window frames into new properties – or repair old ones. They may also fit kitchens or shops out with cabinets – but there are also specialists who do this. Shopfitters and Kitchen Fitters
- Sometimes Carpenters make pieces of furniture and may be called Cabinet Makers
- Wood is also used for fencing and hoardings around building sites to keep the site safe
- Other job roles include Formworker, Maintenance Operative

#### Plastic

- Most pipes/tubing used in the construction industry is plastic
- Plumbers can use plastic pipes to install water supplies and radiators
- Housebuilders use plastic guttering, fall pipe and drain covers to take away rain water
- Housebuilders use plastic sheeting to form Damp Proofing to buildings
- Many windows and doors used in new buildings are made of reinforced plastic so may be fitted by Joiners or specialists
- Other job roles include Damp Proof Specialist, Sealant Specialist, Roofer

## Metal

- Scaffolders use metal tubing to create sometimes very complex scaffold structures. Scaffolding tube can be either steel or aluminium
- Plumbers and Gas Service Installers use copper pipe to fit heating sources in buildings – may also be used for water pipe
- Drain covers in roads are made of metal as they take a lot of weight – these are fitted by Highways Engineers
- Many bridges are made with a metal frame and so are a lot of larger buildings such as sports halls and warehouses. Structural Engineers design these structures for strength. Steel Erectors, Welder Fabricators and Welding Engineers will help to assemble these structures
- Other job roles include Drainage Engineers, Highways Operatives

## Glass

- Glass is used in windows and sometimes in doors to let light into a building. A specialist is called a Glazier.
- Not all glass is transparent. Some is obscured glass used in bathrooms and toilets and other areas where some privacy is needed
- Glass blocks are sometimes used over small areas, instead of bricks/blocks to add interest to a building
- Reinforced glass can be used as barriers on balconies or viewing platforms to allow people to view things safely
- Other job roles include joiners, Maintenance Operatives