Unit 108: Wood occupations

# Worksheet 7: Fixings and adhesives (tutor)

1. List the qualities and limitations of the following types of fixing:

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| **Type of fixing:** | **Qualities:** | **Limitations:** |
| Pozidriv screws | Countersunk with star-shaped recess to give a good amount of torque without slipping | Can round off if mis/overused. Difficult to remove if over-recessed or bent. Quality varies |
| Oval nails | Cheap oval-shaped nails to prevent twisting. Heads can be hidden | Can bend when fixing. Can pull away under force. Can rust away if used externally |
| Masonry screws | Large, one-piece, direct fixing into masonry. Thread designed to pull into masonry | Not suitable for loose or unstable masonry. Creates a larger hole than frame fixings |
| Coach bolts | Strong and durable fixings with a square flange in the head that digs into timber or through fixings. Good for security | Iron-based fixings can cause oak to rot and degrade over time. Can be difficult to remove if thread rusts |
| Frame fixings | Screw and punch fixings which provide a secure fixing without disruption | Not suitable for loose or unstable masonry. Difficult to remove plugs and screws. Often used in conjunction with mastic |
| Twist nails | Strong and durable twist shank nails provide a strong and permanent fixing | Can split timber. Difficult to remove. Can cause iron rot to some timber. |

1. List the qualities and limitations of the following types of adhesive:

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| **Type of adhesive:** | **Qualities:** | **Limitations:** |
| PVA | Good multi-purpose water-based glue. Easy application and clean up. Non toxic | Not much initial tack. Long cramping time. Takes 24 hours for full bond. Not good for resinous/oily timber |
| Polyurethane glue | Glues most materials as well as timber. Quick cramping time. Waterproof joint. Expanding and gap filling. Easy to sand | Toxic. Difficult to remove from some surfaces. Can be too fast and go off before assembly.  More expensive than PVA |
| Water-based resin | Better initial tack than PVA with easy clean up. Stronger joint than PVA with better water resistance when cured | Not suitable for all materials. Can be difficult to clean when cured. More expensive than PVA |