# Unit 112: Construction operations and civil engineering operations

# Worksheet 29: Concrete mixing 1 (tutor)

Concrete can be made in different ways.

**Task 1**

Complete the table below for concrete mixing by hand and by mixer.

|  |  |
| --- | --- |
| Mixing by hand | |
| Advantages | **Disadvantages** |
| Simple / easy    Almost anyone can do it  Quite safe  No power / fuel needed  Can be done next to the job | Can be hard work  Not guaranteed the same mix  If a large amount is required, it can be time consuming |

|  |  |
| --- | --- |
| Mixer | |
| Advantages | **Disadvantages** |
| Saves time  Simple / easy    Almost anyone can do it  Can be done next to the job | Can be hard work compared to ready mix concrete.  Not guaranteed the same mix compared to ready mix concrete.  If a large amount is required, it can be time consuming compared to ready mix concrete. |

**Task 2**

Imagine you are going to make a batch of concrete using a mixer. Complete the table below identifying what PPE, tools, equipment and materials are needed to complete the task.

|  |  |  |
| --- | --- | --- |
| PPE | Tools / Equipment | Materials |
| Gloves  Overalls  Dust mask  Boots  Barrier cream  Goggles / glasses | Shovel  Mixer  Bucket  Mixing board  Wheelbarrow  Visqueen (DPM) | Sharp sand  Cement  Gravel  Water |

Points to remember when concreting:

* It only takes a small amount of water for hydration to take place when mixed with cement.
* Choose the correct mix.
* Do not over-mix concrete in a mixer.
* Do not transport concrete over long distances.
* Always protect finished concrete against physical damage and contamination.

**ALWAYS CLEAN ALL EQUIPMENT AND TOOLS AFTER USE**