Plan for concrete — tutor notes

In this section, students:

- work out the size and thickness of concrete they need for a job
- identify the need for reinforcement
- estimate the amount of concrete needed for a job

Work with students through each part of the section.

In addition — talk about:

The need for advice and assistance

It is **very** important that students understand the limits of what they learn on this course. They learn only about simple, small-scale concreting jobs such as paths, drives and small slabs and footings.

Larger scale or commercial jobs **need expert knowledge and skill** to calculate the loads and stresses involved and to decide on the correct concrete mixture and construction.

Engineering plans are needed for any house or structural concrete work.

Make sure students understand that they need expert assistance for any larger or safety related work.

Talk about the types and requirements of any Local, Council or Island building regulations or permits or approvals that are needed in your area. Explain what is needed— and how to go about meeting the requirements or getting permits.

Very small jobs are easy and only need a little planning, but for larger or more important jobs, you need to think about things more.

Reinforcing

The section on reinforcing is very simple. Talk to the students about reinforcing steel — rods and mesh — and what they do.

The design and placement of steel reinforcing in a structure needs expert and/or engineering advice that is outside the scope of this course.

Make sure the students understand the need for reinforcing in structural work, house slabs or foundations and in any safety related building work. They **must** have expert assistance and plans.

Show students

Some existing concrete structures.

You could take students to look at some local paths, roads and other concrete work.

- Look at the size and how deep they are.
- Do they have steel reinforcing?
- What is the earth or ground like?

Help students with estimating amounts of materials

Work through the concrete calculations with students.

The numbers do not have to be accurate, but they should give students a good guide to how much concrete and materials they will need for a job.

One example is given in the workbook, but you could work through other examples of your own as well.

The activity gets students to work out another example — and then work together to estimate the concrete they need for their project.