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WEEKLY HOME STUDY PACKAGE - WEEK 2 (12/07/21 – 16/07/21)

Subject : Applied Technology Year -11

Strand	Engineering Material
Sub Strand	Concrete
Content Learning Outcome	• Understand the difference between concrete and cement • Identifying the methods of mixing and doing slump test.

LESSON NOTES

Concrete is a construction material composed of cement, fine aggregates (sand) and coarse aggregates mixed with water which hardens with time.

Cement is a material in powder form manufactured from a mixture of substances that are found in limestone and silica sand.

Aggregate consists of stone material for example, gravel (coarse aggregate) and sand (fine aggregate).

Proportion of aggregate and cement

The most commonly used mix by volume is 1:2:4

a) 1 Measure of cement
b) 2 Measures of sand
c) 4 measures of coarse aggregate

Method of mixing

Mixing by hand involves shoveling the aggregate and cement on a flat, clean platform. Mixing by machine involves a drum rotated on a framework to mix the materials.

Testing the concrete.

The concrete slump test is a test that measures the workability of concrete. It measures the consistency of the concrete.

ACTIVITY **(7 marks)**

1. Define concrete
2. What does aggregate consist of?
3. What is the difference between concrete and cement?
4. What does the ratio of mixing concrete 1:2:4 mean?
5. State two methods of mixing concrete.
6. Name the method of testing concrete.
7. What is the purpose of slump test?