

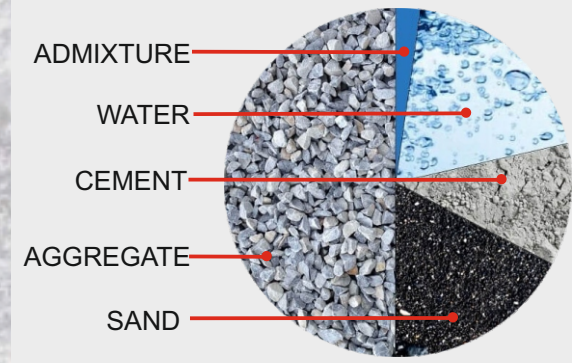
FOR MORE DETAIL AND EXERCISES ON CONCRETE, GO TO:
<http://www.technologystudent.com/joints/concret1.html>
<http://www.technologystudent.com/joints/reinforc1.html>

WHAT IS CONCRETE?

WORLD ASSOCIATION OF TECHNOLOGY TEACHERS <https://www.facebook.com/groups/254963448192823/> www.technologystudent.com © 2018 V.Ryan © 2018

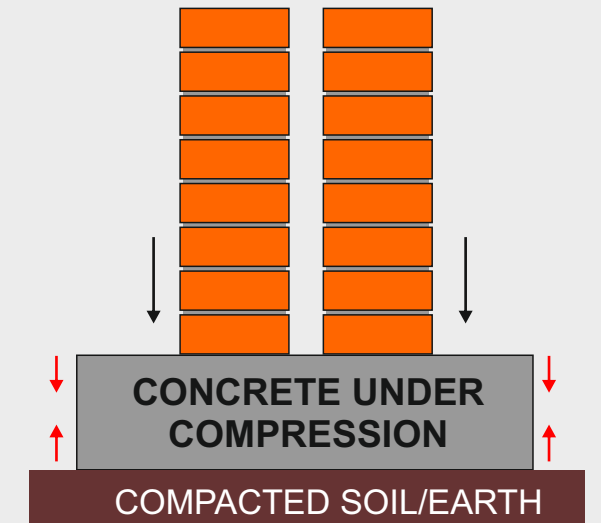
CONCRETE IS A VERSATILE AND CHEAP MATERIAL, WITH A VAST RANGE OF APPLICATIONS AROUND THE HOME. BRICK LAYING, CONSTRUCTING PATHS AND DRIVEWAYS, FOUNDATIONS TO BUILDINGS AND WALLS, ARE SOME OF THE PRACTICAL APPLICATIONS. CONCRETE HAS A WIDE AND VARIED RANGE OF INDUSTRIAL APPLICATIONS. THESE INCLUDE; BRIDGE CONSTRUCTION, MOTORWAYS, CURBS, WALKWAYS AND FOUNDATIONS TO ENTIRE FACTORIES AND INDUSTRIAL SITES.

CONCRETE IS REGARDED AS A COMPOSITE MATERIAL, BECAUSE IT IS COMPOSED OF A NUMBER OF MATERIALS. MOST CONCRETE IS MADE UP OF PORTLAND CEMENT, AGGREGATES (GRAVEL, CRUSHED STONES) AND SAND. WATER IS ADDED TO THE MIX. THE ADMIXTURE, HELPS TO CONTROL THE SETTING TIME AND WATERPROOFS THE FINISHED CONCRETE.

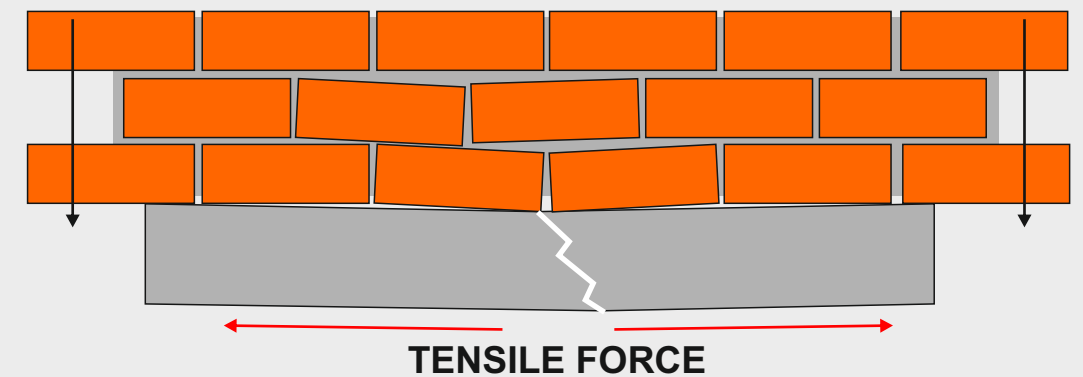


WORLD ASSOCIATION OF TECHNOLOGY TEACHERS <https://www.facebook.com/groups/254963448192823/> www.technologystudent.com © 2018 V.Ryan © 2018

CONCRETE IS STRONG WHEN UNDER A COMPRESSIVE FORCE.



HOWEVER, CONCRETE IS VERY WEAK WHEN UNDER TENSION (ALSO KNOWN AS A TENSILE FORCE).

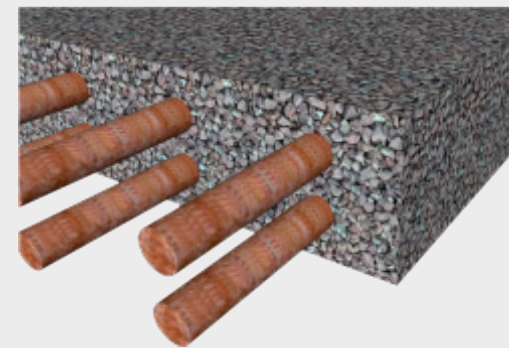
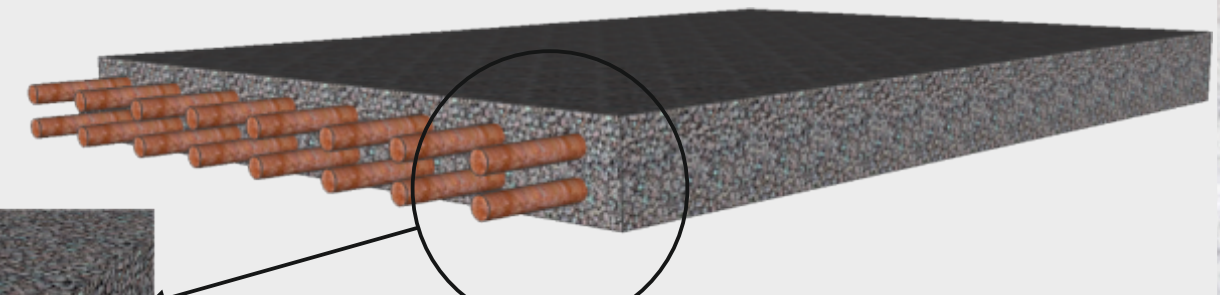
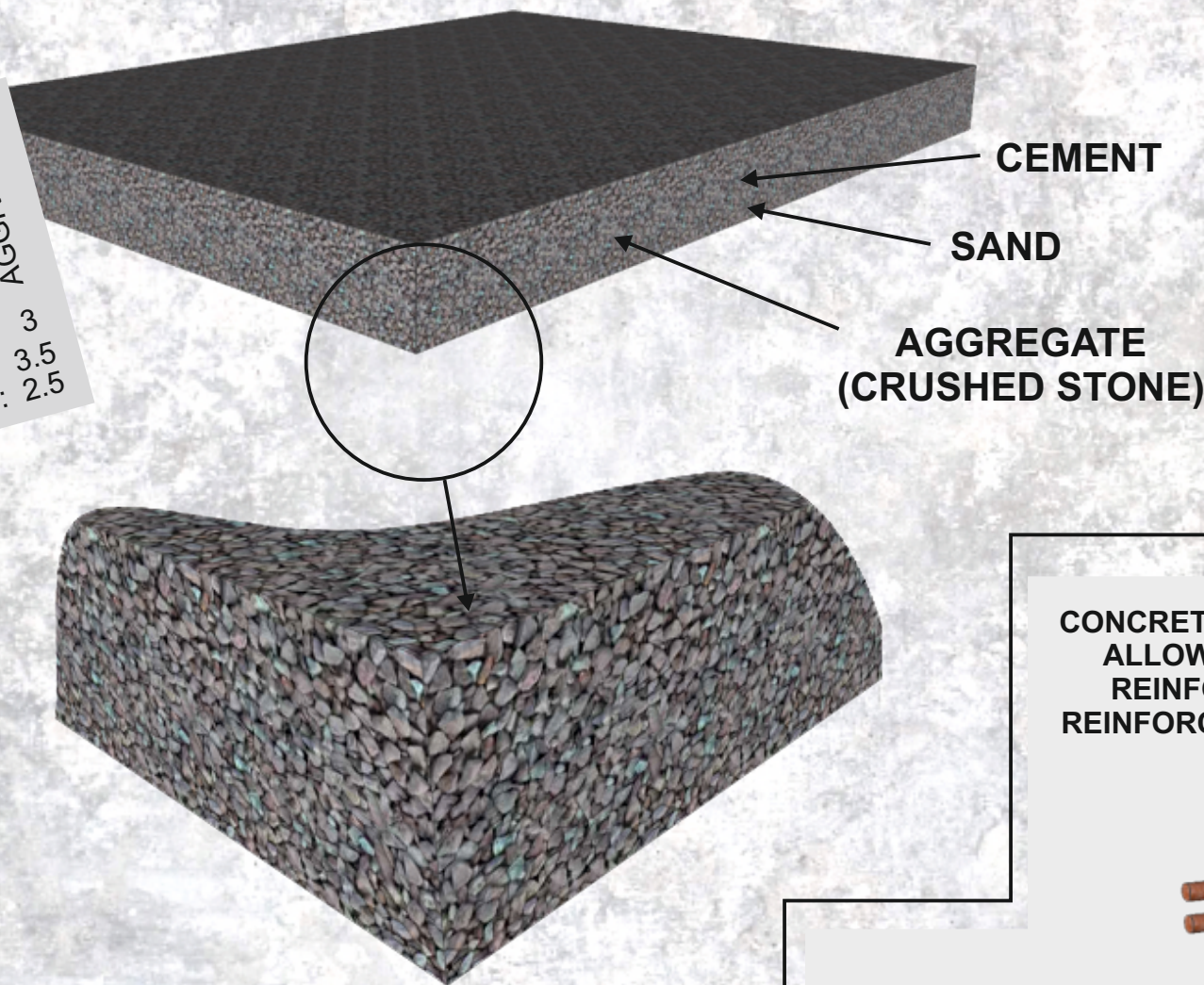


CONCRETE CAN BE REINFORCED BY ADDING STEEL RODS TO THE MIXTURE AND ALLOWING THE CONCRETE TO SET SOLID. THE STEEL RODS ENSURE THAT REINFORCED CONCRETE CAN WITHSTAND TENSILE FORCES. THIS MAKES REINFORCED CONCRETE A COMPOSITE MATERIAL, THAT IS USED WIDELY IN THE CONSTRUCTION INDUSTRY.

MIXING CONCRETE

General Purpose Concrete: 1 : 2 : 3
 Foundation Concrete: 1 : 2.5 : 3.5
 Paving Concrete: 1 : 1.5 : 2.5

CEMENT
 SAND
 AGGREGATE



WORLD ASSOCIATION OF TECHNOLOGY TEACHERS <https://www.facebook.com/groups/254963448192823/> www.technologystudent.com © 2018 V.Ryan © 2018