

How gay



**ASSIGN
BUSTER**

Laser Level: Is a tool that is used for creating a reference plane through having a laser transmitter and a receiver. A laser level is fixed to a tripod which then sends out a laser signal at 360 degrees, the laser receiver is placed on a staff and picks up the signal, it tells if the receiver is either below or above the laser signal. It can be used for finding the reduced level of a site or for landscaping by telling if the land is generally flat. The transmitter and receiver need to be kept clean so that the signal is sent and received properly, they need to be handled carefully so they do not break, the battery needs to be changed regularly. Spirit Level: Is an instrument used to tell whether a surface is level or plumb. It is a long rectangular shape that is straight, it has one vial in the middle of the level for levelling, and one vial up the top 90 degrees to the levelling vial. It shows that something is level or plumb by indicating with a bubble being in between to lines on the vial.

The vial has a really slight concave in it so the bubble will always try and go in the middle of this, when the bubble is not in the middle of the two lines the surface is not plumb or level. It can be used for making sure timber frames are vertical or plumb, helping to find the reduced level of a slope. It needs to be handled carefully and not thrown around because then the level will bend and not give completely accurate readings, the vials need to be kept clean so that they are always visible. Line Level: A vial in a plastic case that can be attached to a string line. It works the same as a spirit level but the string becomes the main body of it, the line level can tell the level of greater distances because only the string has to be longer to do this. It can be used to tell the level of long distances. It needs to be kept fairly clean so that the vial is visible.

Water/hydrostatic level: A long plastic tube filled about 4/5th with water that is used for telling the levels of two different objects, areas. It works by holding up each end of the plastic tube to the level that needs to be marked or known, the water at each end will be in line. It works on the laws of gravity. It can be used to know if two brick piers are in level with each other and how much packing is needed to bring each bearer above it into level, or for finding level marks around corners that dumpy levels or laser levels cannot get around. The tube needs to be handled correctly otherwise cuts or cracks will form and the water will leak out. Boning Rods: Consists of three T shaped sticks to determine heights or elevations.

The boning rods are used by placing the two outer rods on known heights. Using a line of sight the third boning rod is placed at different intervals along the line of sight. The distance between the line of site and the ground can be measured in addition to the length of the middle rod's foot length. This could be done above and below the line of sight. They are mostly used on slopes to determine certain heights of the ground, which can then be used for finding out how much ground needs to be removed. Automatic/Dumpy Level & Levelling Staff: A telescope on the top of a tripod that is set level to look at a measurement on a levelling staff which determines the reduced level from different points of the site. The level instrument is set up on a tripod set to a levelled condition.

The operator looks through the eyepiece of the telescope while someone else holds a staff vertical at the point that needs to be measured.

Measurement starts from a benchmark with a known height determined by a previous survey, or an arbitrary point with an assumed height.