

## Building Guide

### Building

Build, breakdown, and rebuild again

LEGO is a prototyping platform that takes the place of CAD later on

### Building Resources on the Web

You can find a lot of neat build at NXT Program site:

<http://www.nxtprograms.com/>

LEGO Engineering is at Tufts <http://www.legoengineering.com/>

This site is for Technic builds. You will not be able to make any of these

unless you purchase them but it is good for ideas: <http://technic.lego.com/>

Robotics Academy at Carnegie Mellon <http://www.education.rec.ri.cmu.edu/>

Computer Science Student Network <http://www.cs2n.org/apps/robots-in-motion>

TechBrick website <http://www.techbrick.com/>

### Parts Guide

Parts and Uses of parts

Organization of parts

### Basic Connections

Spacing

Pegs

Axles

Turning the corner

Statics—Two point rule

### LEGO Geometry

Two point rule—define a line

Two connections on beams

Two points of contact for axles

Two points make a straight line

Three Points—Define a plane

Triangle

Three point chassis

### Chassis

Go straight

Beams provide stable body

Road Clearance

Good Turning

Hold the NXT and motors

### Wheels

Directional

2, 3 wheels, a ball or skids

4 wheels, two rims  
Treads