

Semester 1 Study Guide



Best Way to Study

- Review Activities and Project

Unit 1.1 Simple and Compound Machines

What's going to be on the test

- Engineering Notebook
- Design Process
- Lever, Wheel and Axle, and Pulley
- Inclined Plane, Wedge, and Screw
- Gears, Pulley Drives, and Sprockets (include Compound Machines)

This Simple Machine [Overview](#) might be helpful.

Unit 3.2 Fluids

Best Way to Study

- Go through [MyPLTW 3.2 – Fluid Power](#)
 - Review Slide and Websites (see below for the links)
- Review Activities/Problems
 - [Activity 3.2.1 Under Pressure](#)
 - [Activity 3.2.1 Pneumatics](#)
 - [Activity 3.2.2 Fluid Power Practice Problems](#)

What's going to be on the test

- [Fluids](#)
- [Pneumatics](#)
- [Hydraulics](#)
- [VEX – Understanding The Pneumatic Kit Components](#)
- [VEX – Example V5 Pneumatic Kit Configurations](#)

Unit 4.1 Statics

Best Way to Study

- Go through myPLTW:
 - [Lesson 4.1.3 Free Body Diagrams and Force Vectors](#)
 - [Lesson 4.1.4 Stressed and Strained](#)
 - [Lesson 4.1.6 Moments](#)
 - [Lesson 4.1.7 Method of Joints](#)

What's going to be on the test

- General Statics
- Free Body Diagrams
- Force Vectors
- Moments
- Truss Systems

See Unit 4 in learn.vcs for slides and activities.

The [Engineering Formula Sheet](#) will be provided.