Notes Three-Dimensional Figures

How Can You Classify Three-Dimensional Figures?
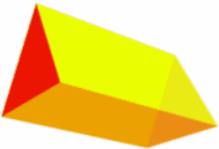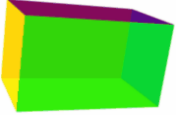
You can classify three-dimensional figures based on information about their faces, bases, edges, and vertices. Three-dimensional figures include prisms and pyramids, as well as figures with curved surfaces.

A **prism** is a three-dimensional figure with two parallel, congruent bases. The bases, which are also two of the faces, can be any polygon. The other faces are rectangles. A prism is named according to the shape of its bases.

A **pyramid** is a three-dimensional figure with only one base. The base can be any polygon. The other faces are triangles. A pyramid is named according to the shape of its base.

Here are some three-dimensional figures with which you should be familiar:

Prisms & Pyramids

Type	Examples	Properties
Triangular Prism		● 5 faces 2 triangular bases 3 rectangular faces ● 9 edges ● 6 vertices
Rectangular Prism		● 6 faces 2 rectangular bases 4 rectangular faces ● 12 edges ● 8 vertices
Cube		● 6 faces 2 square bases 4 square faces ● 12 edges ● 8 vertices
Square Pyramid		● 5 faces 1 square base 4 triangular faces ● 8 edges ● 5 vertices
Triangular Pyramid		● 4 faces 1 triangular base 3 triangular faces ● 6 edges ● 4 vertices

You should also be familiar with three-dimensional figures that have curved surfaces. These figures include cylinders, cones, and spheres. You can classify these three-dimensional figures based on information about their bases and surfaces.

Three Dimensional Figures with Curved Surfaces

Type	Example	Properties
Cylinder		● 2 circular bases ● 1 curved surface
Cone		● 1 circular base ● 1 curved surface ● 1 vertex
Sphere		● 1 curved surface