



Revision _Unit 1&2_ Grade 8

Design & Technology

Activity 1: True or False

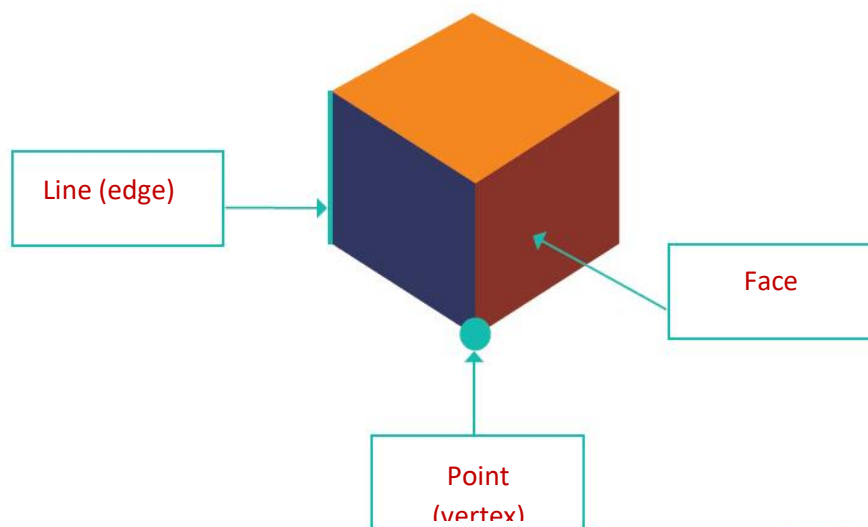
Question	True or False
1 When you work with 3D design and printing, you design and create objects that have 3 dimensions.	✓
2 A polygon is a closed figure that has two or more, usually straight, line segments.	✓
3 When you watch a movie, the picture seems to be flat. This means it has 1 dimension only.	✗
4 Polygons are the basic shapes used in 3D; they are used to build shapes in the 3D workspace.	✓
5 A triangle has 2 sides.	✗

Fill the boxes using the correct words that describe each.

Face

Line

Point

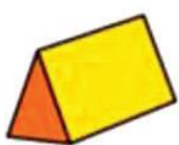


Activity 3: True or False

	Question	True or False
1	A perspective view is often used by engineers and draftsmen to show the specifications of an object, i.e. the size, shape and measurements	✓
2	One-point perspective is a way of drawing that shows how things appear to get smaller as they get further away.	✓
3	Objects that are neither above nor below the horizon line are drawn as if you are looking directly at them.	✗
4	In one-point perspective, surfaces that face the viewer appear as their true shape, without any distortion.	✗
5	Three-point perspective has one vanishing point.	✗

Why is a Polygon Important?

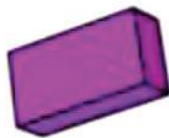
Polygons are the basic shape used in 3D; they are used to build shapes in the 3D workspace. The original shape can be moulded, pushed, pulled, trimmed, merged and attached to others to create new shapes.



Triangular Prism



square Prism



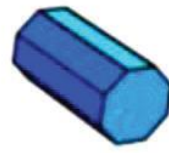
rectangular Prism



pentagonal Prism



hexagonal Prism



octagonal Prism



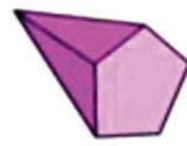
Triangular pyramid



square pyramid



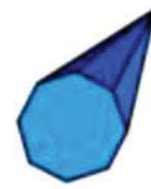
rectangular pyramid



pentagonal pyramid

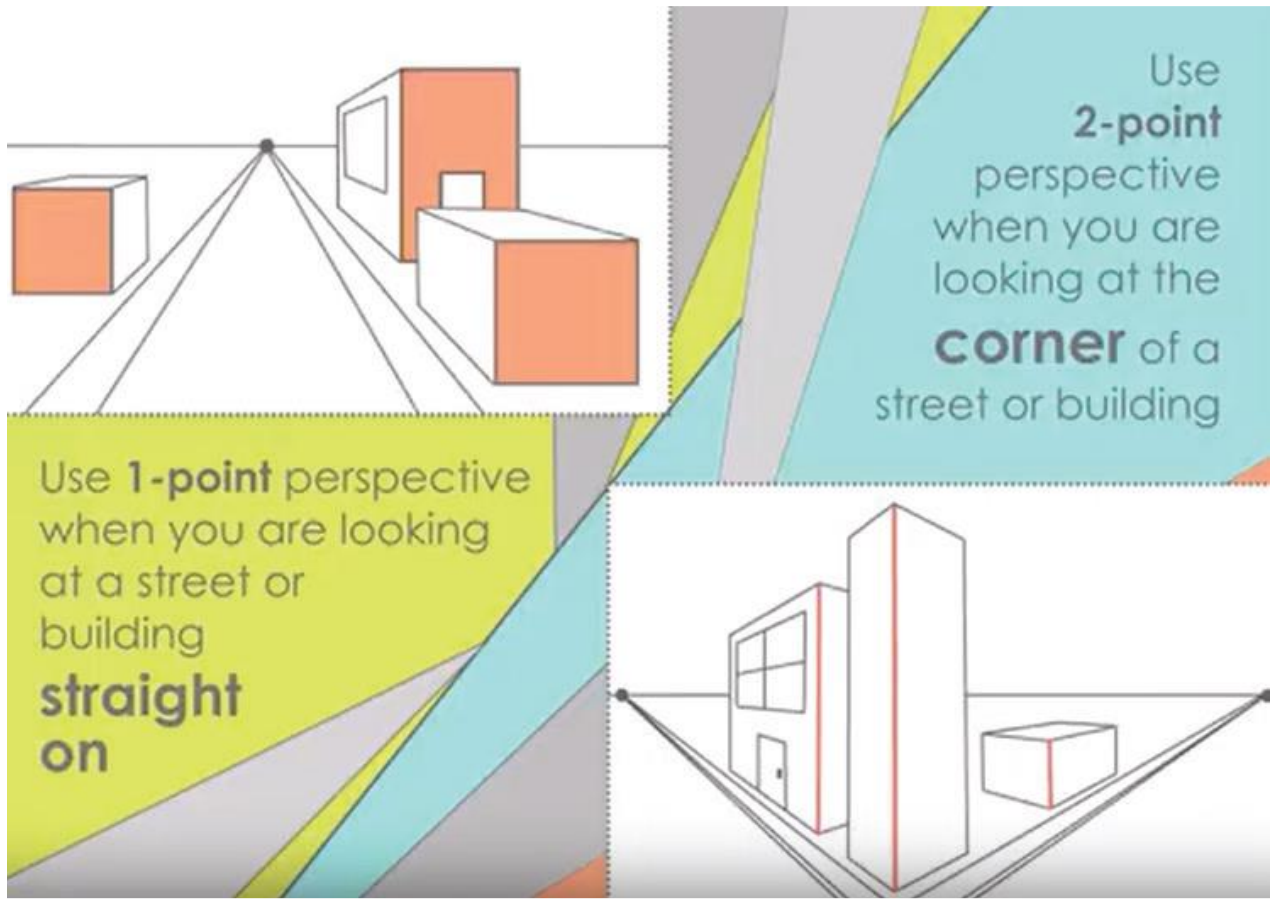


hexagonal pyramid

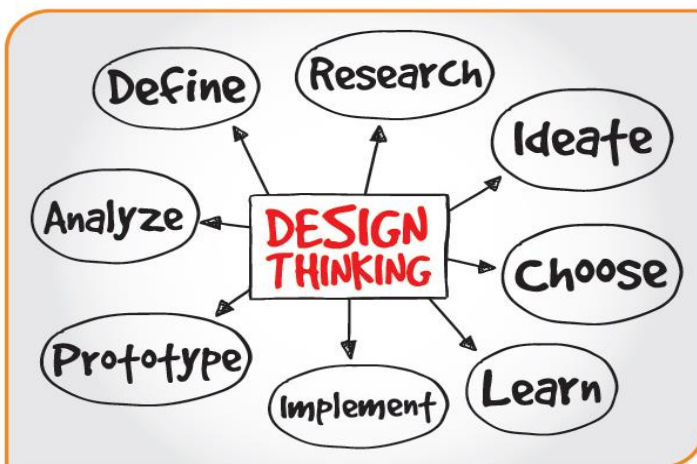


octagonal pyramid

Suggested uses of one and two-point perspective drawing:



- I Have an Idea! What Is Design Thinking?



You can use these steps to solve any problem.

Some of the biggest brands in the world like Apple, Google and Samsung use the Design Thinking Process.

Important definitions:

What is a Polygon?

A *polygon* is a closed figure that has three or more, usually straight, *line segments*.

The segments are called its *edges* or *sides*, and the points where two edges meet are the polygon's *vertices* (singular: vertex) or *corner*.

Edge

An edge joins one vertex with another.

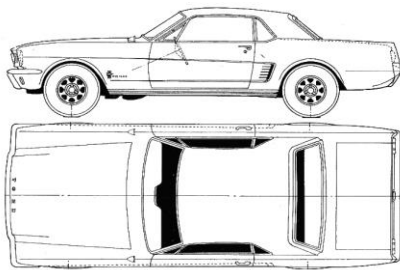


The face is the surface of the solid.

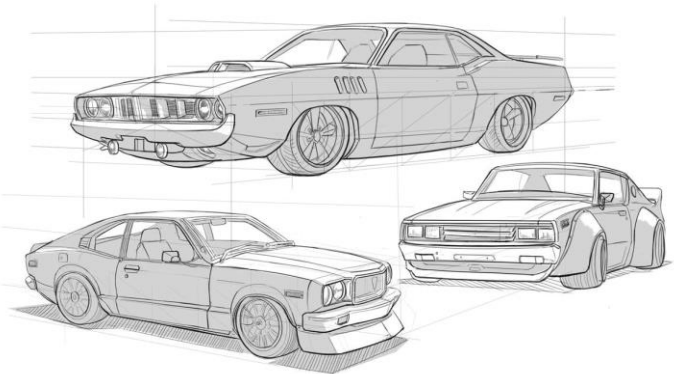
Vertex

A vertex (plural: vertices) is a point where two or more straight lines [edges] meet. It is the corner!

- Orthographic & perspective views:



Orthographic



Perspective

1- Orthographic image:

- it is not a real-world view
- it often used by engineers and draftsmen to show the specifications of an object, i.e. the size, shape and measurements
- you cannot zoom in or out
- there is no distance from the imagined camera

2- Perspective image:

- it is the real-world view which can change depending on from where you are looking
- it is the view from your eyes and from a camera
- images further away from you will appear smaller
- you can zoom in and out



Orthographic



Perspective