UNIT 01

1. What are the key concepts involved in Brainstorming?

2. What are the 6 steps of the design process as used in PLTW: IED?

3. What is Engineering / an Engineer?

4. Why do Engineers create sketches?

5. What are inventions and innovations?

6. What are criteria and constraints?

7. What is a prototype?

8. What are the Principles of Design and Design Elements?

9. What is a Design Brief?

UNIT 02

1. How do you create an Isometric sketch?

2. How do you create an Oblique sketch?

3. How do you create the different Perspective sketches?

4. What are the different line types?

5. How do you create a Multi-view sketch (which views)?

6. What is tonal shading?

7. What are the 3 dimensions given in a Multi-view sketch?

10. What is an annotated sketch?

11. Why are Multi-view drawings good for manufacturing?
UNIT 03

1. What are typical dimensioning standards?

2. What is ANSI?

3. What are Dial Calipers and how do we use them?

4. How do you read a ruler in metric and SI?

5. How do you complete unit conversions?

6. How do you properly read dimensions on a drawing?

7. What are datum and chain dimensioning?

8. What are Mean, Median, Mode and Range?

UNIT 04

1. What is an exploded view?

2. What is a Detail Drawing?

3. What are balloons and parts lists?

4. What are Base Components and why are they “grounded”?

5. What are additive and subtractive modeling in Revit?

6. What are title blocks and page borders?

7. How many Degrees of Freedom are there?

8. What is a Decision Matrix?

Unit 05

1. How do you calculate volume of basic 3D forms?