

**Aspley State High School**  
**Production Graphics (Engineering)**      **Assessment 6**  
Content- Based Folio

Year 12

Name: \_\_\_\_\_ Form: \_\_\_\_\_

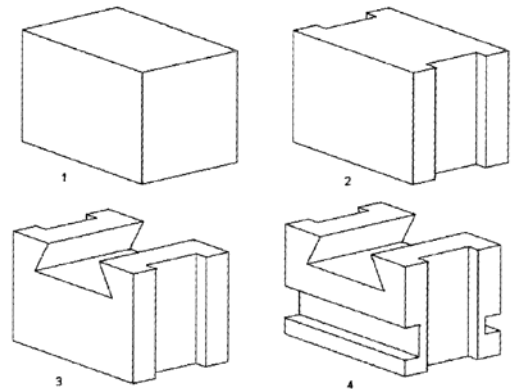
Time: 8 weeks

**PROBLEM :**

You are to draw a mechanical or engineering device of your own choice. The device must have at least 5 different components. The device can be an existing product or one you have designed for a purpose. Check with your teacher to ensure your choice is suitable.

**Part A – Planning Due: 18<sup>th</sup> March, 2009**

- Give a brief description of the mechanical device that you are drawing
- Draw a neat **pictorial** sketch of the assembled mechanical device
- Neatly sketch **each** component showing **all** measurements
- Sketch and describe the process of making each component. This will include a number of sketches for each component. See Dovetail slide Fig 2. Use comments to assist the process.



**Fig. 2 Dovetail Slide Modeling Process**

**Part B – Drawings on CAD Due: 1 May, 2009**

- Draw a 3D model of **each component using Autodesk Inventor**
- **Assemble** each component to show the complete 3D model of the mechanical device. Printout required.
- Orthographic: Draw an **orthographic** projection of the assembled mechanical device. **Subtitle** each view and show most dimensions. Show an extra feature in the drawing eg., detailed view; auxiliary view etc.
- Show a sectional view and material list of the mechanical device.
- Display a rendered 3D Model. You may either render by hand or on computer. Computer rendering must be printed to a high quality. Consider Texture, Tone, Contrast, Colour and shadow.
- **Use all AS1100 standards:** Borders, Lines, Titles, Lettering, etc. Use correct printing sizes
- Create and print an **Open in line for assembly:** Position each 3D component in line.
- Animate the open and in line for assembly drawing and save as an animated file.

Drawings should include:

1. 3D model – Rendered
2. Orthographic views with extra feature – dimensioned and subtitled.
3. Sectional view and material list
4. Open and in line for assembly
5. Animated assembly drawing

**Name:** \_\_\_\_\_ **Form:** \_\_\_\_\_

**Knowledge & Understanding**

Area of Study Criteria	A Accurate and comprehensive	B Substantial	C Basic	D Restricted	E Very Restricted
Part A: Description of mechanical device					
Part A: Sketches of all components					
Part A: Pictorial sketch					
Part B: 3D drawing of each component					
Part B: 3D model - assembled components					
<b>Result</b>					

**Reasoning**

Area of Study Criteria	A Independent, Initiative and consistent, accurate	B Reasonably Proficient	C Reasonable ability and success	D Restricted ability, little success	E very limited ability, little success
Part A: All dimensions on sketches					
Part A: Sketches with description of process to produce each component					
Part B: Orthographic projection including measurements, extra feature and subtitles					
Part B: Sectional view and material list					
Part B: Open and in line for assembly					
Part B: Animation of project					
<b>Result</b>					

**Presentation**

Area of Study Criteria	A Very High quality	B High quality	C Variable in Quality	D Lacking quality	E Poor quality
Rendering of model					
AS1100 standards: lines, lettering, dimensions etc.					
Layout & Presentation					
<b>Result</b>					

**Note:** Animation is to be shown working on computer to the teacher.