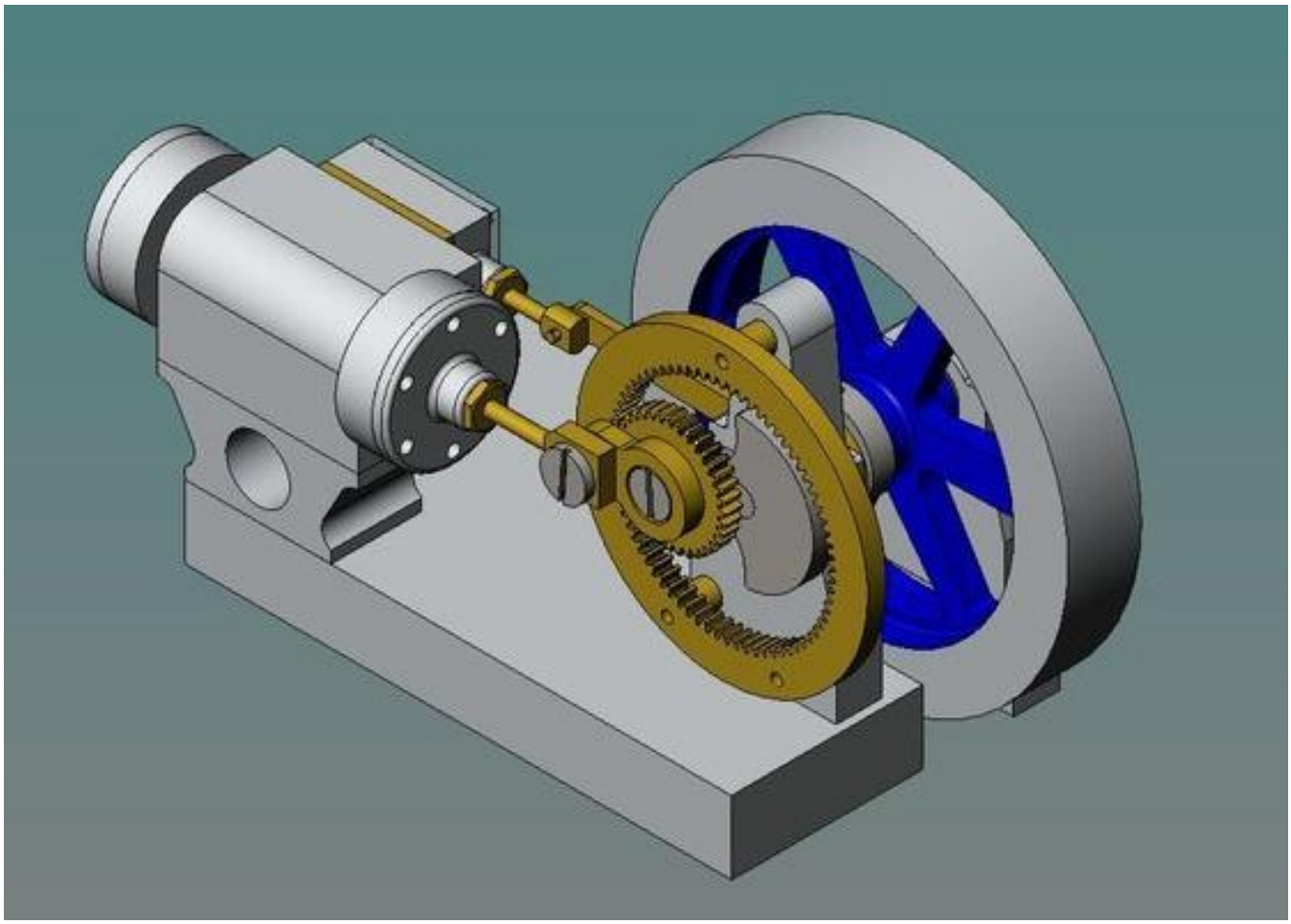
2011 Regional Heat
MECHANICAL ENGINEERING CAD
Modelling from Detail Drawings & Creating Assemblies



Produced by:
Matthew Bell
CAD Skills UK Ltd | "modelling your future"
Specialists in CAD Design, Training, Education & Competitions.

UK Skills Training Manager - Mech. Eng. CAD
Worldskills Deputy Chief Expert – Mech. Eng. CAD

T: +44 (0) 7525 369622
E: matthew.bell@cadskillsuk.com
W: www.cadskillsuk.com

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TASK: Modelling from Detail Drawings & Creating Assemblies

Time: 6.0 hours

Given: Part Drawings, Assembly Drawing, Parts

Task:

Advanced and Higher

1. Create 3D models for all of the parts shown on the 2D detail drawings (10 in total)

2. Assemble the Geared Steam Engine in the correct assembly sequence.

3. Reproduce the given 2D-Assembly drawing with a parts list on one piece of A2 paper.

4. Produce an exploded view drawing on A1 paper which clearly shows all components and title this Geared Steam Engine Exploded View. Include in this a full parts list.

Higher Only

5. Produce an AVI file to demonstrate the full Physical Simulation of the Geared Steam Engine.

6. Produce an AVI file to demonstrate the Geared Steam Engine exploding and collapsing.

Save your files according to the Competition Instructions.

USE OF COMPUTER:

Use of the computer is allowed from the beginning of the competition time.

OUTPUT

- Software Modeled Parts, Assemblies and Drawing Files.

NOTES

- All marks are to be taken from digital files and printing is not required.

MARKING

- All Marking is Objective and broken down as follows:

ADVANCED

Marking Aspect	Sum of Max Mark
Part Modelling	40
Assembly of Geared Steam Engine	15
Assembly Drawing of Geared Steam Engine	15
Exploded View Drawing of Geared Steam Engine	10
Grand Total	**80**

HIGHER

Marking Aspect	Sum of Max Mark
Part Modelling	40
Assembly of Geared Steam Engine	15
Assembly Drawing of Geared Steam Engine	15
Exploded View Drawing of Geared Steam Engine	10
AVI Files	20
Grand Total	**100**