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|   | Concept Assignment 5 SubmissionPLTW Engineering Introduction to Engineering Design Core Training |

# Modeling Skills

**Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_**

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|  | Part 4.2: Model Creation |

Did you see the two videos: \_\_\_\_\_Name the video#1\_\_\_\_\_\_\_\_\_\_ Name the video #2\_\_\_\_\_\_\_\_

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|  | Part 1: Concept Modeling |

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| Insert an image of your model 1 from your computer drawing and iProperties from inventor, like the examples. |
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1. Create a 3D solid model of the object above using the most efficient method.
2. Which method (additive, subtractive, or a combination of additive and subtractive) did you use? Why do you feel it was most efficient?

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|  | Part 2: Concept Modeling  |
| Insert an image of your model 2 from your computer drawing and iProperties from inventor, like the examples. |
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1. Create a 3D solid model of the object above using the most efficient method possible.
2. Describe the method you used to model the object. Why do you feel it was most efficient?

**Part 3: Concept Modeling**

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| Insert an image of your model 3 from your computer drawing and iProperties from inventor, like the examples. |
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1. Create a 3D solid model of the object above using only additive procedures.
2. Create a 3D solid model of the object using only subtractive procedures.
3. Which method (additive, subtractive, or a combination of additive and subtractive) do you feel would be the most efficient method for creating the object? Why?

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|  | Part 4: Concept Modeling |

Insert an image of your model 4 from your computer drawing and iProperties General and Physical, from inventor, like the examples.





1. Describe the method you used to create the object.
2. Explain the most efficient procedure using a single extrusion to create this 3D solid model.

Insert an image of your model 4 iProperties Physical,



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|  | Conclusion questions: |

1. **Why is it important to consider efficiency when planning your method of creation before you begin to model an object in CAD?**
2. **How can the information provided in the browser of the CAD software help you compare the efficiency of two different methods of modeling the same object?**

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