

Unit D: Factory of Tomorrow

Classroom

Topic	Format	Learning Aids	Preparation
THE FACTORY OF TOMORROW	Discussion	Factory of Tomorrow (PPTX) ↓	Print speaker notes.
	Imagine the world after the Third Industrial Revolution. Discuss philosophy and ideas related to these questions: What will the real social impact be? What will factories look like in the future? How will the supply chain be different from how it is today? What new services may be offered to consumers? What will the role of service bureaus be?		
	Think about familiar services we use today (e.g., laundromats, copy centers) and consider how new services could be modeled after these. Also try to imagine entirely new service models.		

Computer Lab

Topic	Format	Learning Aids	Preparation
WRITTEN ASSIGNMENT	Written assignment	Factory of Tomorrow assignment	
	Students will continue to refine their 3D models for their final project. Use lab time to aid and advise students as needed, encouraging model complexity. Encourage them to use information they have learned from their case study research or from other student presentations.		

* If you have an amazing lesson plan you'd like to share with the Stratasys Education Community, tell us. If we add it to our curriculum, you'll be eligible to receive free FDM or PolyJet materials for your 3D printers.

Assignment: Factory of Tomorrow

This assignment reinforces and extends the classroom learning for **Unit D**. Students will design a product with marketability in mind.

Deliverables

Requirements

3D PRINTED OBJECT OR STL

1. Use Design Thinking to identify a problem and generate a fresh idea to solve that problem.
2. Open a shop on ShapeWays with the goal of selling your product to 10 or more people outside your region.
3. Document your design process.

PRESENTATION & DOCUMENTATION

Your presentation should demonstrate use of Design Thinking. As you work, be sure to address your problems, challenges and lessons learned. Include the following:

Material use: What design challenges have you encountered as a result of your material? If you could have chosen another material, what would you have chosen?

Technology: What design challenges have you encountered as a result of your 3D printing technology? If you had access to other fabrication technology, what would you have chosen? Why?

Wall thickness: Have you encountered problems with thin areas in your model? Were any supporting parts affected? How did you fix this?

Details: Does your design contain areas with small embossed or engraved features? Are they necessary for your design to function? Have you encountered issues with details getting lost?

Holes and Gaps: Have you encountered any tiny holes or gaps? How did you fix this?

Scaling: Have you been able to resolve some of your issues by increasing the scale of your model? Or have you had to significantly alter your design?

WRITTEN ASSIGNMENT

Write a persuasive essay supporting your vision for the factory of tomorrow. Explain what you believe tomorrow's factory will look like and what its social, economic and environmental implications will be. Include research and cite at least three sources.

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