3D Design: Level II
Suitable for: G7 - G10

Prerequisite: 3D Design: Level I
Duration: 15 Weeks
Classes per Week: 1 class (45 minutes each)

Course Overview:
This advanced course builds on the foundations of 3D design, focusing on more intricate and complex designs using Tinkercad. Students will work on detailed models, learning advanced techniques and gaining confidence in creating realistic and functional 3D objects. By the end of the course, students will have a portfolio of advanced 3D projects and be proficient in Tinkercad's more complex features.

Covered Topics

Unit 1: Review and Advanced Tooling in Tinkercad

- Review of basic 3D design concepts
- Introduction to advanced tools and features in Tinkercad
- Understanding project planning and design for complex models

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Unit 2: Detailed 3D Models and Keychains

- Creating functional objects like a cell phone and panda keychain
- Focusing on fine details to create realistic designs
- Practicing scaling and dimension control for precision

Unit 3: Animal and Fantasy Models

- Designing models like a seal, bicycle, and cat
- Experimenting with organic shapes for animals and fictional characters
- Enhancing creativity with detailed 3D animal models

Unit 4: Mechanical and Functional Objects

- Building complex models like a rocket, X-Wing, and Slot Pig bank
- Understanding the use of layers and parts in mechanical design
- Creating functional models with interactive elements

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Unit 5: Final Project and Mastery

- Developing a unique, complex model such as a Minion or custom character
- Applying all learned skills to complete a detailed 3D project
- Course completion and preparation for more advanced 3D platforms

Materials Needed:

- Access to a computer or tablet
- Internet connection
- Chrome browser
- Access to Thinkercad

Certification

A certificate of completion will be awarded to students who successfully complete the course, recognizing their proficiency in advanced 3D design.