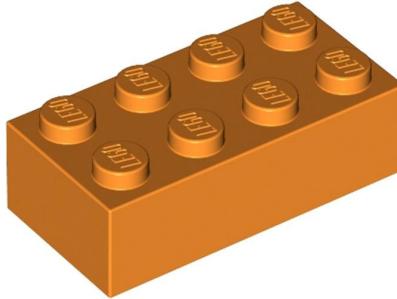




AUTODESK®
FUSION 360™



How to CAD almost anything!

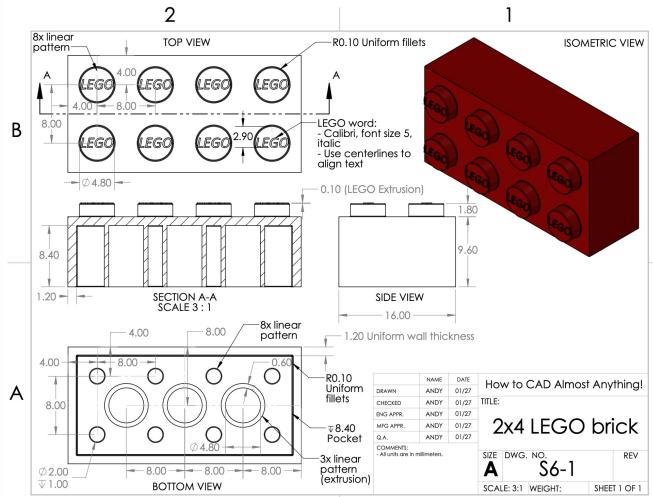
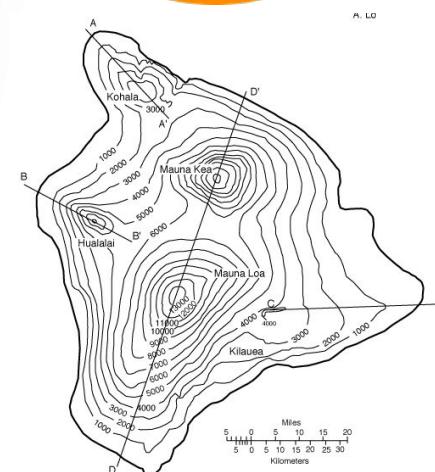


MIT HSSP – Spring 2024

Instructors: Andy & Nat



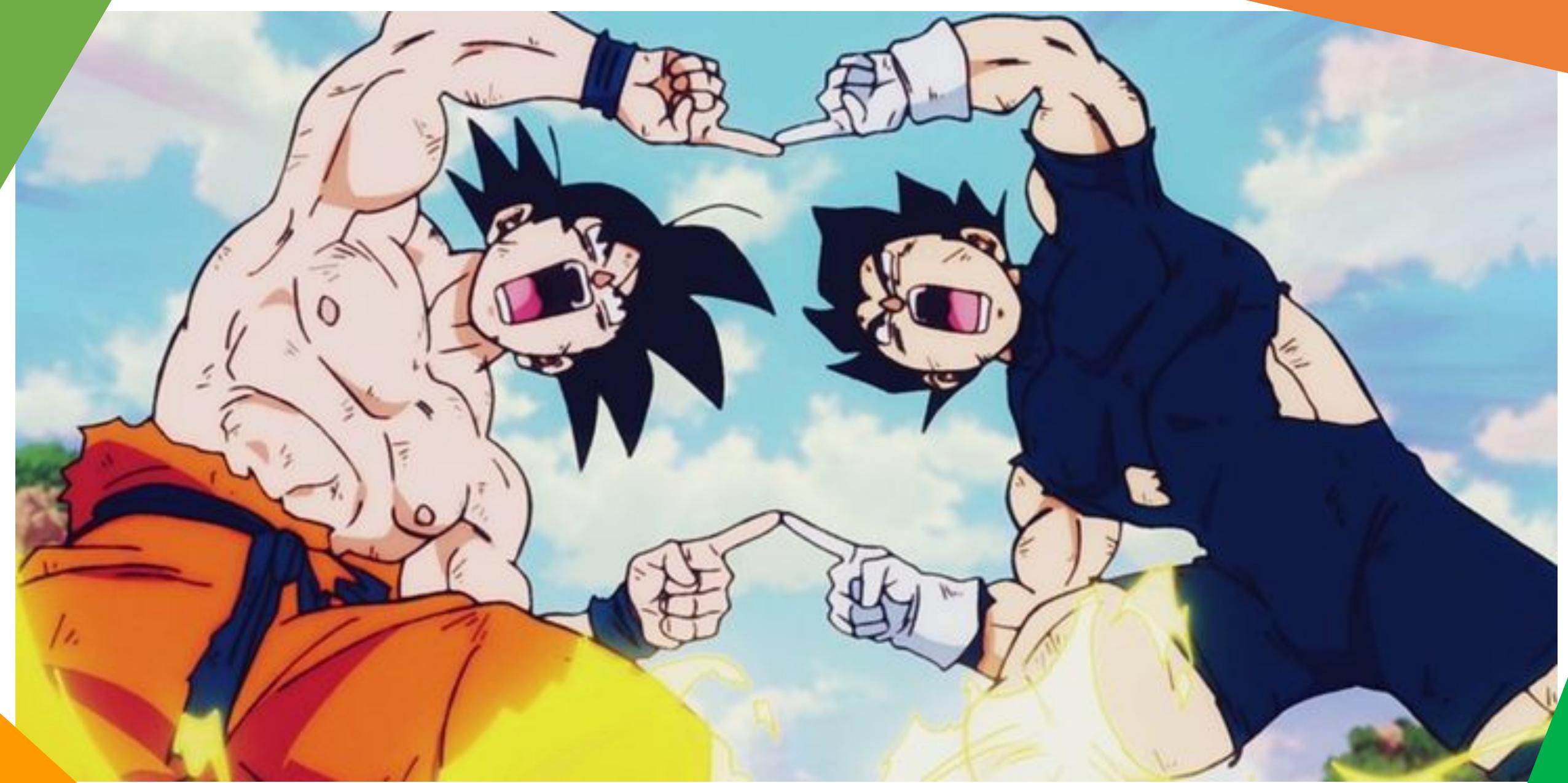
Week 1



Agenda

- Quick intros!
 - Why are you here?
- Class logistics and important info
 - Overview of sessions and projects
- Session 1:
 - Demo of the session's Fusion 360 commands:
sketches, plane selection, boss extrude/cut, fillet/chamfer, colors, material properties...
 - Demo of projects: cake, pencil
- Questions?
- Preview of Session 2





DBZ Fusion: <https://youtu.be/7qwy9k2memc?t=73>

Majin Boo
(i.e., your imagination)



Blast
(i.e., you, our
students!)



Kamehameha
(i.e., Fusion 360
knowledge)

**Gogeta (i.e.,
Andy & Nat)**

If you don't understand these references...

- you were probably not born in the 90s
- you should totally watch Dragon Ball!

Graphical representation of our class

Quick Intros!



Euphonium

Me
(Andy)

Mellophone
players

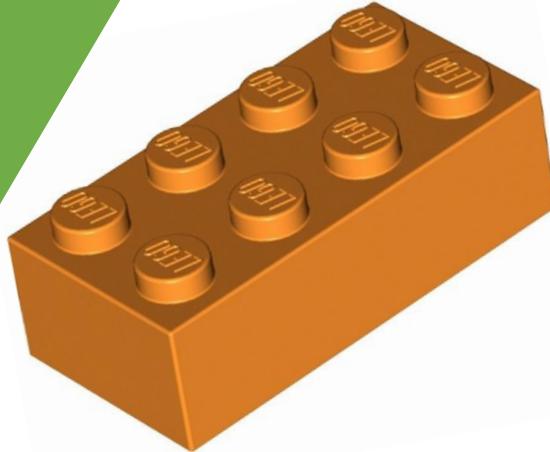
- 1) Name, major, year
 - Ex: Andy, AeroAstro, PhD Y1
- 2) Hometown
 - Ex: Buenos Aires, Argentina
- 3) Spirit animal
 - Ex: Angus Aberdeen cow
- 4) Why CAD almost anything?
 - Ex: I think it's cool to look at a random object and imagine how to cad it. Also, I love Solidworks.

Quick Intros!



Me Some Mt.
(Natasha) labmates Moosilauke

- 1) Name, major, year
 - Ex: Natasha, MechE, PhD Y1
- 2) Hometown
 - Ex: New York City
- 3) Spirit animal
 - Ex: American Pygmy goat
- 4) Why CAD almost anything?
 - Ex: It's cool turning ideas into real designs!

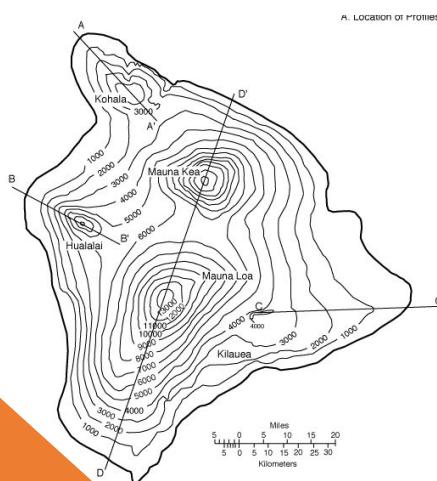


Welcome!

How to CAD almost

anything!

MIT HSSP '24



Workshop logistics

Class Schedule!

Session 1: 02/03		Session 2: 09/03		Session 3: 23/03	
Sketches, basic feature commands, editing and defining sketches, coloring parts, changing material properties	<ul style="list-style-type: none">• Cake• Pencil	Spline tool, sketch picture	<ul style="list-style-type: none">• Topographical map• Logo keychain	Symmetry, patterns, planes, revolve, mirroring	<ul style="list-style-type: none">• Fidget spinner• Cubesat!
Session 4: 30/03		Session 5: 06/04			
Loft and sweep!	<ul style="list-style-type: none">• Banana• Snowman	Assemblies, drawings	<ul style="list-style-type: none">• LEGO 2x4 brick• LEGO 20x20 plate• LEGO brick drawing• LEGO house		

Class site: <https://github.com/andyeske/How-to-CAD-Fusion-360>

Session 1:

- Sketches
- Features
- Coloring parts



Session 2:

- Splines
- Sketch pictures



Session 3:

- Symmetry
- Patterns
- Planes
- Revolve/mirror



Session 4:

- Loft
- Sweep



Session 5:

- Assemblies
- Drawings

Goal: to “collect” all “five” dragon balls (i.e., Fusion knowledge!)

Important info

- Two cohorts:
 - Cohort 1: 1:00pm – 2:30pm
 - Cohort 2: 2:30pm – 4:00pm
- DIRC Lab (Hayden Library)
 - Computers w/ Fusion 360
- Fusion 360:
 - You can [download it for free](#) with a student email.
- Questions:
 - Please ask them anytime!!!
 - And please don't be shy to email us!

How to CAD Almost Anything! – HS Edition

HSSP Spring 2024 – AeroAstro/MechE Workshop

A compressed yet rewarding introduction to the mechanical design software Fusion 360, for beginners (no experience at all) and pro-users alike. Come learn how to CAD (computer-aided design) essentially almost anything!



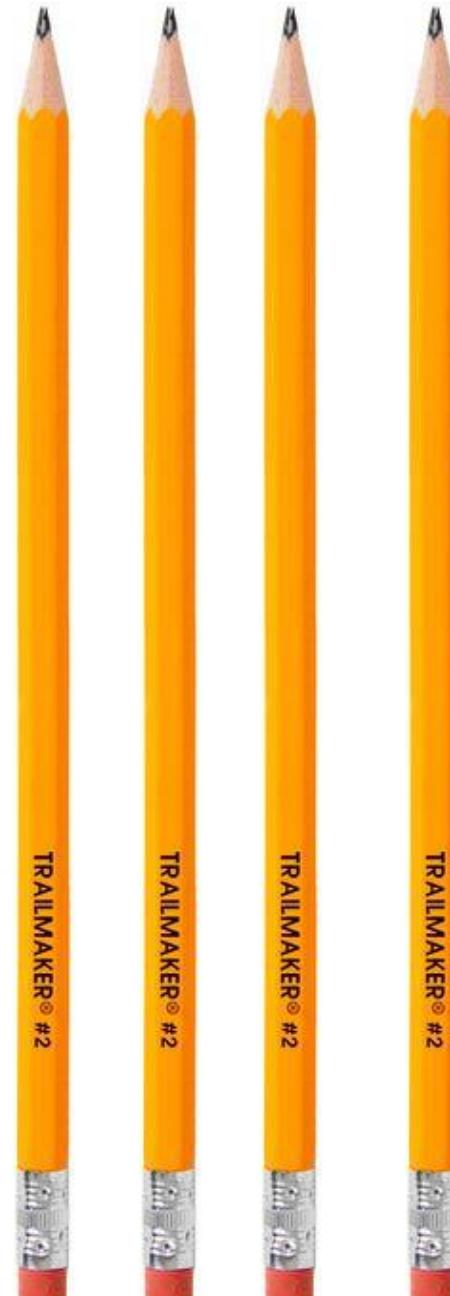
Yes, this could be YOU at the end of the workshop! You'll be equipped with the tools to design cool looking things such as a bicycle, a chess set, a Chinese violin (Er Hu), a model train, a mug and even a Trumpet!

Check out the syllabus if you have more questions!

Session 1



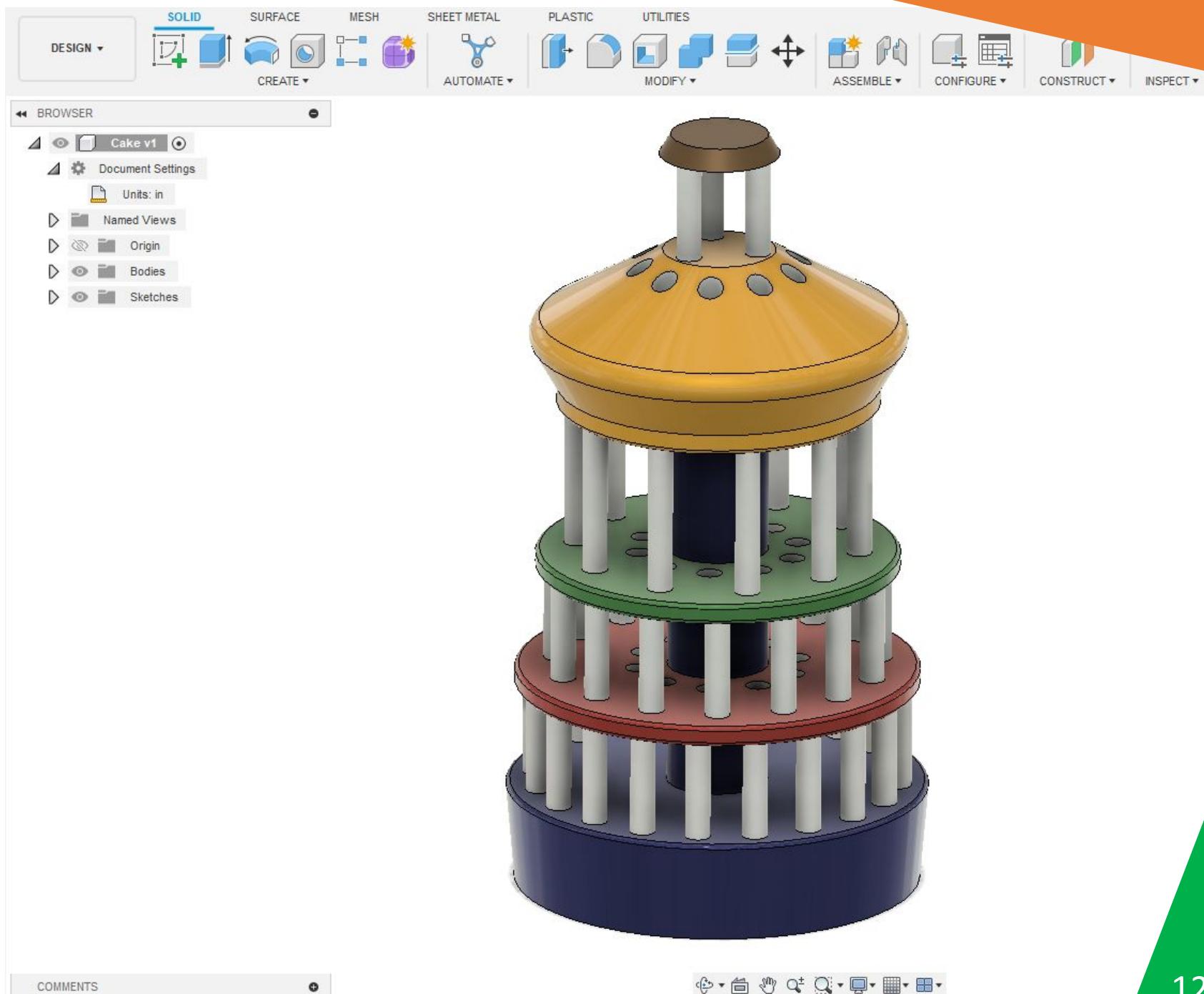
Cake



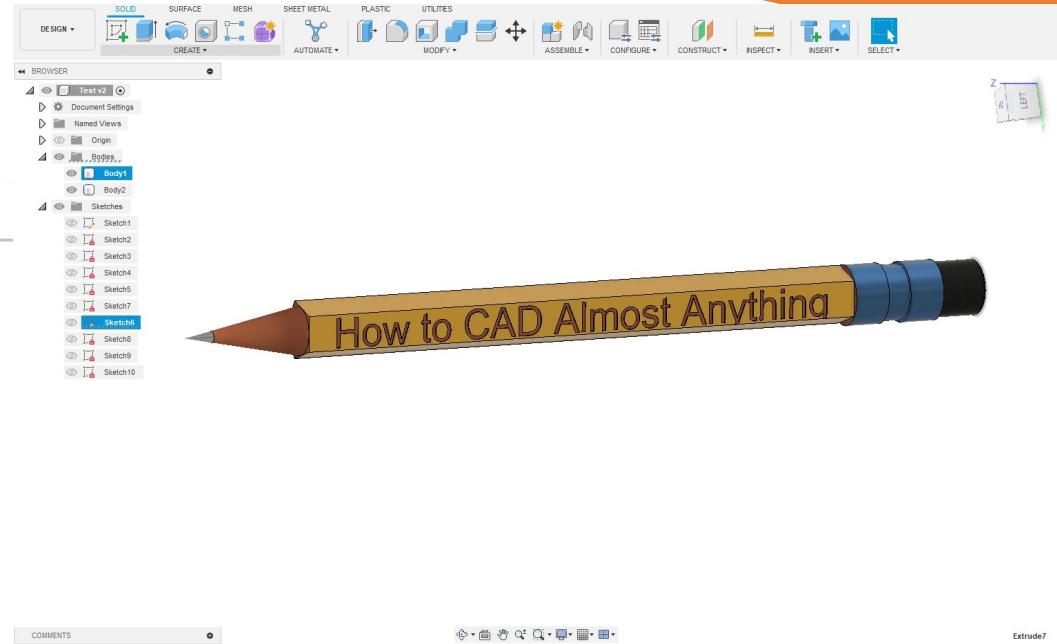
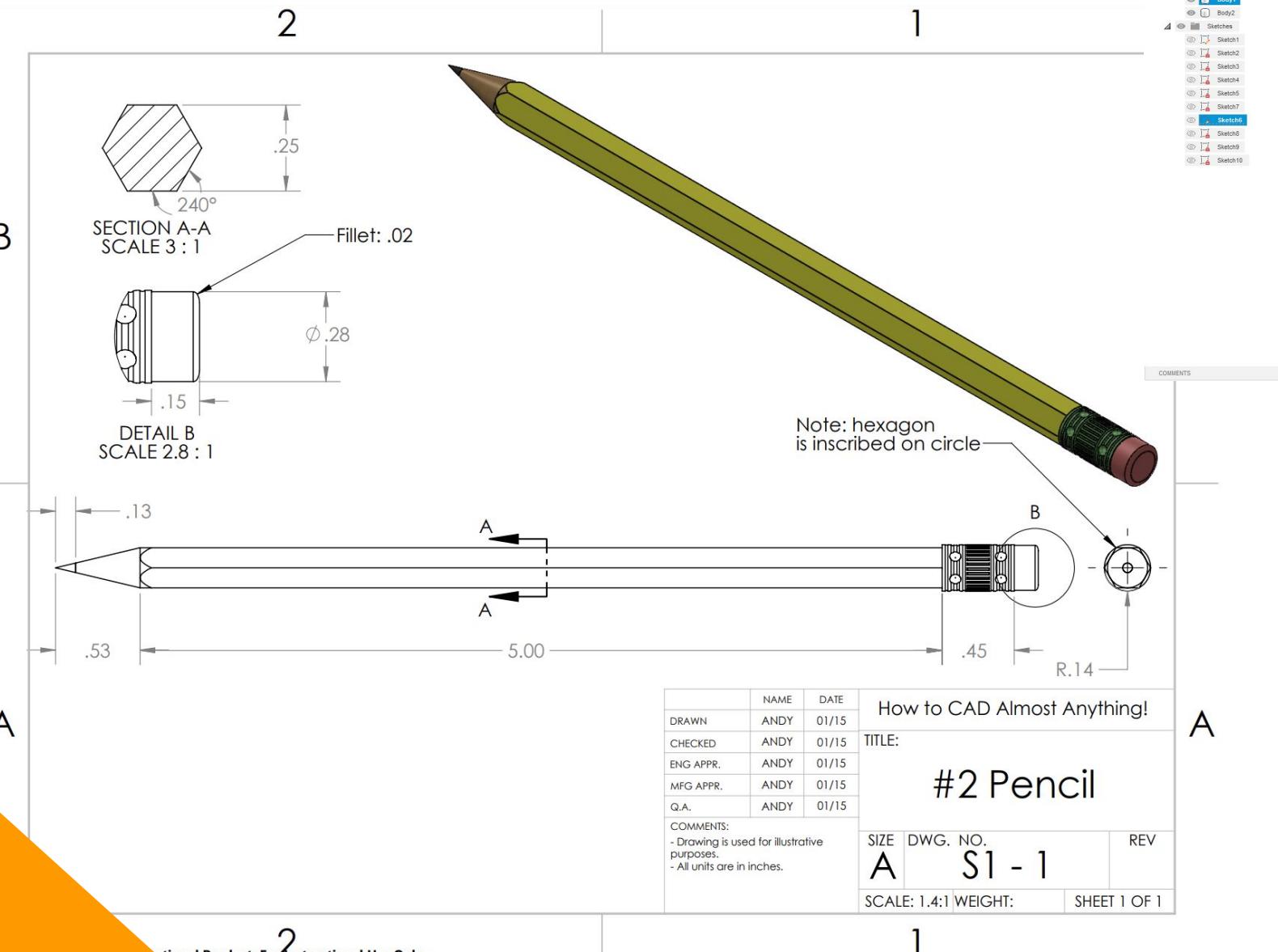
#2 Pencil

Cake

- Let's CAD a colorful cake!
 - Be creative
 - Make it 4 stories or more tall
 - Try to incorporate as many of the new commands as possible



#2 Pencil



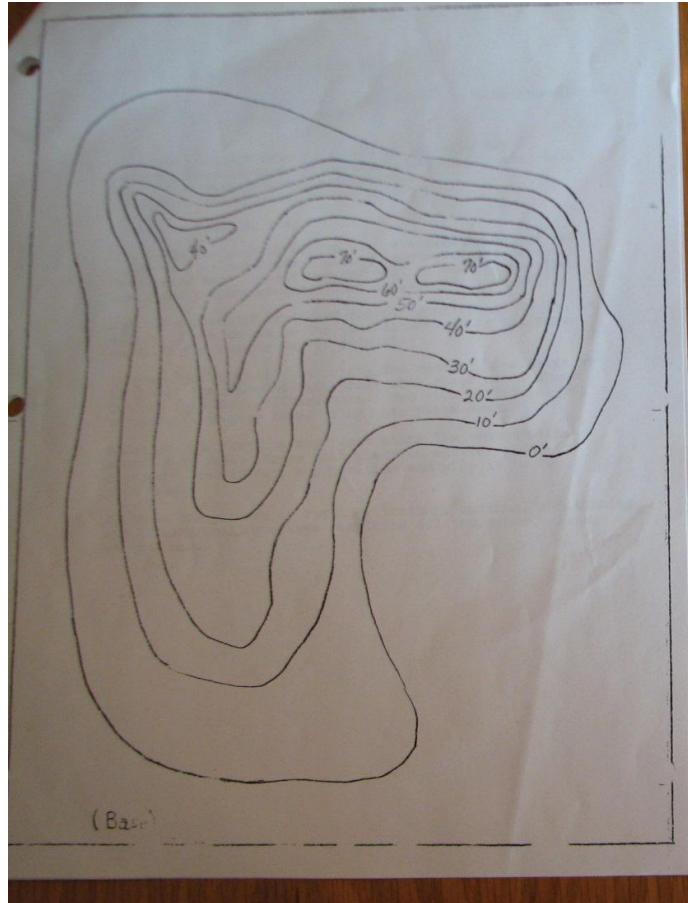
- Let's CAD the #2 Pencil
 - Use the engineering drawing available on the workshop's website

Questions?

Feel to send us an email anytime
during the week if you have any
questions!



Preview into Week 2



Topographical 3D model out of a map



Logo keychains

