



Weekly Lesson Plans



Course: Intro. To Engineering

Period(s): 2,4

Teacher(s): Brian Owens

If you have questions, please feel free to email me: bowens@greenville.k12.sc.us or leave me a message at 355-6536

Quarter 1		Quarter 2	
Week 1 Aug 11 - 15	Week 6 Sept 15 - 19	Week 10 Oct 13 - 17	Week 15 Nov 17 - 21
Week 2 Aug 18 - 22	Week 7 Sept 22 - 26	Week 11 Oct 20 - 24	Week 16 Nov 24 - 28
Week 3 Aug 25 - 29	Week 8 Sept 29 - Oct 3	Week 12 Oct 27 - Oct 31	Week 17 Dec 1 - 5
Week 4 Sept 1 - 5	Week 9 Oct 6 -10	Week 13 Nov 3 - 7	Week 18 Dec 8 - 12
Week 5 Sept 8 - 12		Week 14 Nov 10 - 14	Dec 15 - 19

Week: Aug 11 - 15

Unit(s): Class Orientation/Sketching/Brainstorming

	Monday	Tuesday	Wednesday	Thursday	Friday
Agenda	First day basics/rules/procedures/etc First day ice breaker	-Brainstorming, sketching, engineering notebooks -Engineering disciplines	Log on to Autodesk Inventor Software Create basic part file on AI	engineering notebooks	Brainstorming, sketching, engineering notebooks
Work to Submit					
Learning Target	I can name at least two people in class and describe an activity they like or participated in	I can sketch objects using proportion and shading	I can log onto the AI software and can create a basic part file.	I can sketch objects using proportion and shading	I can sketch objects using proportion and shading

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Week: Aug 18 - 22

Unit(s): Design Process/Product Evolution

	Monday	Tuesday	Wednesday	Thursday	Friday
Agenda	design process, deep dive video and creating a design brief	product improvement activity	Watch Ideo video Answer questions	Students will learn coil and pattern features on AI software. Nature Innovation activity	Finish Nature Innovation activity—get checked off Sketching notes and practice in NB
Work to Submit			deep dive video and creating a design brief	Innovation activity recorded in engineering nb	Nature Innovation Check off Sketching Practice AI skills
Learning Target	I can list the steps of the design process and can write a basic design brief	I can find and describe improvements on a product to make it more marketable.	I can create a design brief given a design challenge scenario	I can list innovations directly copied from nature and used by modern engineers today.	I can research an products history and list its evolution from its invention to current innovation.

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Week: Aug 25 - 29

Unit(s): Product Evolution/Sketching

	Monday	Tuesday	Wednesday	Thursday	Friday
Agenda	Finish Nature Innovation activity—get checked off Sketching notes and practice in NB	Begin work on product evolution activity AI skills	work on product evolution activity	Students will finish evolution project.	Students will present evolution projects and then sketch puzzle cube combos
Work to Submit	Nature Innovation Check off Sketching Practice AI skills	Work on evolution project	work on product evolution activity	Evolution Project Presentations for those who are finished	Presentations Sketches
Learning Target	I can research an products history and list its evolution from its invention to current innovation.	I can research an products history and list its evolution from its invention to current innovation.	I can research an products history and list its evolution from its invention to current innovation.	I can research an products history and list its evolution from its invention to current innovation.	I can use the design process to design, draw, and build a puzzle cube toy.

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Week: Sept 1 - 5	Unit(s):Design process/Puzzle Cube
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	Monday School Holiday	Tuesday	Wednesday	Thursday	Friday
Agenda		Start Puzzle Cube project Sketch 3-6 cube combinations	PC Use cm cubes to design PC pieces—sketch and color solution and pieces in ENB	Make cube pieces in AI	Drawing files of PC pieces
Work to Submit					
Learning Target		I can use the design process to design, draw, and build a puzzle cube toy.	I can use the design process to design, draw, and build a puzzle cube toy.	I can use the design process to design, draw, and build a puzzle cube toy.	I can use the design process to design, draw, and build a puzzle cube toy.
Standards for the Week					

Week: Sept 8 - 12

Unit(s):Design process/Puzzle Cube

	Monday	Tuesday	Wednesday	Thursday	Friday
Agenda	Assembly Files Assemble puzzle pieces in AI	Presentation files PC	Final Puzzle cube solution cube on IDW	Glue puzzle cube together	Finish all work on PC Shell Feature Begin using Dial Calipers to measure Notes and Practice
Work to Submit					
Learning Target	I can use the design process to design, draw, and build a puzzle cube toy.	I can use the design process to design, draw, and build a puzzle cube toy.	I can use the design process to design, draw, and build a puzzle cube toy.	I can use the design process to design, draw, and build a puzzle cube toy.	Students will learn the importance of accurate measurements by using Dial Calipers to create Lego parts..

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Week: Sept 15 - 19

Unit(s):

	Monday	Tuesday	Wednesday	Thursday	Friday
Agenda	Sketch Lego Part Begin measurements with dial caliper	Create Lego parts	Create 3 Lego Parts – put on IDW to turn in	Create 3 Lego Parts – put on IDW to turn in	Create Lego Assembly IDW—labels and BOM Create Lego Presentation
Work to Submit					
Learning Target	Students will learn the importance of accurate measurements by using Dial Calipers to create Lego parts.	Students will learn the importance of accurate measurements by using Dial Calipers to create Lego parts.	Students will learn the importance of accurate measurements by using Dial Calipers to create Lego parts.	Students will learn the importance of accurate measurements by using Dial Calipers to create Lego parts.	Students will learn the importance of accurate measurements by using Dial Calipers to create Lego parts.

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Week: Sept 22 - 26

Unit(s): Parametric Modeling / Assembly Constraints

	Monday	Tuesday	Wednesday	Thursday	Friday
Agenda	Finish and turn in Lego Project. Assign Pen project-teams	Lego	Parametric modeling-8.2 Parametric Constraints part	Assembly Constraints Angle Tangent Insert Decal - Thread	Geometric Constraints
Work to Submit					
Learning Target	Students will learn the importance of accurate measurements by using Dial Calipers to create Lego parts.	Students will learn the importance of accurate measurements by using Dial Calipers to create Lego parts.	Students will learn the importance of accurate measurements by using Dial Calipers to create Lego parts.	Students will learn the importance of accurate measurements by using Dial Calipers to create Lego parts.	Students will learn the importance of accurate measurements by using Dial Calipers to create Lego parts.
Standards for the Week					

Week: Sept 29 - Oct 3	Unit(s):
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Agenda Work to Submit Learning Target	Monday	Tuesday	Wednesday	Thursday	Friday
	Holes--hole block creation	Cell Project	Cell Project	Cell Project	Cell Project
	Students will demonstrate an understanding of hole dimensioning by create different hole types on the 3D software.	Students will use their knowledge of 3D modeling to create a model of an animal cell.	Students will use their knowledge of 3D modeling to create a model of an animal cell.	Students will use their knowledge of 3D modeling to create a model of an animal cell.	Students will use their knowledge of 3D modeling to create a model of an animal cell.

Week: Oct 6 -10	Unit(s):
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Agenda Work to Submit Learning Target	Monday	Tuesday	Wednesday	Thursday	Friday End of Q1 Grading Period
	Avatar Project	Avatar Project	Avatar Project	Avatar Project	Avatar Project

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Week: Oct 13 - 17	Unit(s):Motion Constraints/Parametric
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Agenda Work to Submit Learning Target	Monday	Tuesday	Wednesday	Thursday	Friday
	Teacher Workday	Clock Project	Clock Project	Clock Project	Clock Project

Week: Oct 20 - 24	Unit(s):
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Monday Q1 Report Card	Tuesday	Wednesday	Thursday	Friday
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Agenda Work to Submit Learning Target	Begin Reverse engineering project	Reverse Engineeing Project	Reverse Engineeing Project	Reverse Engineeing Project	Reverse Engineeing Project
	I will use reverse engineering to replicate an object with my group on AI.	I will use reverse engineering to replicate an object with my group on AI.	I will use reverse engineering to replicate an object with my group on AI.	I will use reverse engineering to replicate an object with my group on AI.	I will use reverse engineering to replicate an object with my group on AI.

Week: Oct 27 - Oct 31	Unit(s):
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Monday	Tuesday	Wednesday	Thursday	Friday
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Agenda Work to Submit Learning Target	Turkey Project	Turkey Project	Turkey Project	Turkey Project	Turkey Project
Standards for the Week					

Week: Nov 3 - 7

Unit(s):

Agenda Work to Submit Learning Target	Monday	Tuesday	Wednesday	Thursday	Friday
	Electricity Basics	Electricity Basics	Electricity Basics	Electricity Basics	Electricity Basics
Standards for the Week					

	Monday	Tuesday	Wednesday	Thursday	Friday
Agenda	Historical Engineering Project	Historical Engineering Project	Historical Engineering Project	Historical Engineering Project	Historical Engineering Project
Work to Submit					
Learning Target					
Standards for the Week					

Week: Nov 17 - 21

Unit(s):

	Monday	Tuesday	Wednesday	Thursday	Friday
Agenda	Excel and Stats	Excel and Stats	Excel and Stats	ISOs #1-10	ISOs #1-10
Work to Submit					
Learning Target					
Standards for the Week					

Week: Nov 24 - 28

Unit(s):

	Monday	Tuesday	Wednesday School Holiday	Thursday School Holiday	Friday School Holiday
Agenda	ISOs #1-10	ISOs #1-10			
Work to Submit					
Learning Target					
Standards for the Week					

Week: Dec 1 - 5

Unit(s):

	Monday	Tuesday	Wednesday	Thursday	Friday
Agenda					
Work to Submit					
Learning Target					
Standards for the Week					

Week: Dec 8 - 12

Unit(s):

	Monday	Tuesday	Wednesday	Thursday	Friday
Agenda					
Work to Submit					
Learning Target					
Standards for the Week					

Week: Dec 15 - 19

Unit(s):

Standards for the Week	Monday	Tuesday	Wednesday	Thursday	Friday End of Q2 Grading Period Half Day for Students
	Agenda				
	Work to Submit				
	Learning Target				