

UNIT GUIDE WITH ALL PROJECTS

Westside High School - Weekly Plan to Align Lessons (Week At a Glance) – SY 25-26

Teacher: Mr. Blakley Subject: Engineering Course: Concepts Grade: 10-12 Date(s): 9/15-9/19

Standard: stem ec 3.12

	Pre-Teaching	Activation of Learning <i>(5 min)</i>	Focused Instruction <i>(10 min)</i> *I DO	Guided Instruction <i>(10 min)</i> *WE DO	Collaborative Learning <i>(10 min)</i> *Y'ALL DO	Independent Learning <i>(10 min)</i> *YOU DO	Closing <i>(5 min)</i>
	 Learning Target  Success Criteria 1  Success Criteria 2	<ul style="list-style-type: none"> • Do Now • Quick Write* • Think/Pair/Share • Polls • Notice/Wonder • Number Talks • Engaging Video • Open-Ended Question 	<ul style="list-style-type: none"> • Think Aloud • Visuals • Demonstration • Analogies* • Worked Examples • Nearpod Activity • Mnemonic Devices* 	<ul style="list-style-type: none"> • Socratic Seminar * • Call/Response • Probing Questions • Graphic Organizer • Nearpod Activity • Digital Whiteboard 	<ul style="list-style-type: none"> • Jigsaw* • Discussions* • Expert Groups • Labs • Stations • Think/Pair/Share • Create Visuals • Gallery Walk 	<ul style="list-style-type: none"> • Written Response* • Digital Portfolio • Presentation • Canvas Assignment • Choice Board • Independent Project • Portfolio 	<ul style="list-style-type: none"> • Group Discussion • Exit Ticket • 3-2-1 • Parking Lot • Journaling* • Nearpod
Monday						Login to Tinkercad go to 'classes' Complete these activities (part of major grade) Ohms Law Series and Parallel Circuits	

<p>Tuesday</p>					<p>all assignments from 9/9 to 9/11 are towards a major grade</p> <p>Login to Tinkercad go to 'classes' Complete and hand in these activities (part of major grade)</p> <p>RGB LED Color Mixing Fading LED With Analog Output Multiple LEDs & Breadboards Blink an LED With Digital Output</p>	
<p>Wednesday</p>					<p>Login to Tinkercad go to 'classes' Complete and hand in these activities (part of major grade)</p> <p>Digital Input/Analog Input Pushbutton Digital Input Potentiometer Analog input Using the Serial Monitor PIR Motion Sensor Digital Input</p>	

Thursday						Login to Tinkercad go to 'classes' Complete and hand in these activities (part of major grade) Photoresistor analog input Temperature Sensor analog input Ultrasonic Distance Sensor Free Choice	
Friday						Tinkercad review	

Westside High School - Weekly Plan to Align Lessons (Week At a Glance) – SY 25-26

Teacher: Mr. Blakley Subject: Engineering Course: Concepts Grade: 10-12 Date(s): 9/8-9/12

Standard: stem ec 3.12

	Pre-Teaching	Activation of Learning (5 min)	Focused Instruction (10 min) *I DO	Guided Instruction (10 min) *WE DO	Collaborative Learning (10 min) *Y'ALL DO	Independent Learning (10 min) *YOU DO	Closing (5 min)
	 Learning Target  Success Criteria 1  Success Criteria 2	<ul style="list-style-type: none"> • Do Now • Quick Write* • Think/Pair/Share • Polls • Notice/Wonder • Number Talks • Engaging Video • Open-Ended Question 	<ul style="list-style-type: none"> • Think Aloud • Visuals • Demonstration • Analogies* • Worked Examples • Nearpod Activity • Mnemonic Devices* 	<ul style="list-style-type: none"> • Socratic Seminar * • Call/Response • Probing Questions • Graphic Organizer • Nearpod Activity • Digital Whiteboard 	<ul style="list-style-type: none"> • Jigsaw* • Discussions* • Expert Groups • Labs • Stations • Think/Pair/Share • Create Visuals • Gallery Walk 	<ul style="list-style-type: none"> • Written Response* • Digital Portfolio • Presentation • Canvas Assignment • Choice Board • Independent Project • Portfolio 	<ul style="list-style-type: none"> • Group Discussion • Exit Ticket • 3-2-1 • Parking Lot • Journaling* • Nearpod

Monday			Watch this video			Tinkercad	
Tuesday			Watch this video			tinkercad day 2	
Wednesday						tinkercad day 3	
Thursday							
Friday							

Westside High School - Weekly Plan to Align Lessons (Week At a Glance) – SY 25-26

Teacher: Mr. Blakley Subject: Engineering Course: Concepts Grade: 10-12 Date(s): 8/25-8/29

Standard: stem ec 3.12

	Pre-Teaching	Activation of Learning (5 min)	Focused Instruction (10 min) <i>*I DO</i>	Guided Instruction (10 min) <i>*WE DO</i>	Collaborative Learning (10 min) <i>*Y'ALL DO</i>	Independent Learning (10 min) <i>*YOU DO</i>	Closing (5 min)
 Learning Target  Success Criteria 1  Success Criteria 2	<ul style="list-style-type: none"> • Do Now • Quick Write* • Think/Pair/Share • Polls • Notice/Wonder • Number Talks • Engaging Video • Open-Ended Question 	<ul style="list-style-type: none"> • Think Aloud • Visuals • Demonstration • Analogies* • Worked Examples • Nearpod Activity • Mnemonic Devices* 	<ul style="list-style-type: none"> • Socratic Seminar * • Call/Response • Probing Questions • Graphic Organizer • Nearpod Activity • Digital Whiteboard 	<ul style="list-style-type: none"> • Jigsaw* • Discussions* • Expert Groups • Labs • Stations • Think/Pair/Share • Create Visuals • Gallery Walk 	<ul style="list-style-type: none"> • Written Response* • Digital Portfolio • Presentation • Canvas Assignment • Choice Board • Independent Project • Portfolio 	<ul style="list-style-type: none"> • Group Discussion • Exit Ticket • 3-2-1 • Parking Lot • Journaling* • Nearpod 	

Monday		what is systems engineering?				 systems mo...  Presentation...  parts of a sy...	
Tuesday		What are core technologies?				 File 4.2.1 ...  File 4.1.4 Giv...  File 4.2.2 ...	
Wednesday		How do you identify simple machines?				 File 4.3.1 ...  File 4.3.2 ...  Presentati...	
Thursday		How can the mechanical advantage be calculated?				 Mechanic...  Presentati...	
Friday							

Westside High School - Weekly Plan to Align Lessons (Week At a Glance) – SY 25-26

Teacher: Mr. Blakley Subject: Engineering Course: Concepts Grade: 10-12 Date(s): 8/18-8/22

Standard: stem ec 3.12

	Pre-Teaching	Activation of Learning (5 min)	Focused Instruction (10 min) <i>*I DO</i>	Guided Instruction (10 min) <i>*WE DO</i>	Collaborative Learning (10 min) <i>*Y'ALL DO</i>	Independent Learning (10 min) <i>*YOU DO</i>	Closing (5 min)
	 Learning Target  Success Criteria 1  Success Criteria 2	<ul style="list-style-type: none"> • Do Now • Quick Write* • Think/Pair/Share • Polls • Notice/Wonder • Number Talks • Engaging Video 	<ul style="list-style-type: none"> • Think Aloud • Visuals • Demonstration • Analogies* • Worked Examples • Nearpod Activity • Mnemonic Devices* 	<ul style="list-style-type: none"> • Socratic Seminar * • Call/Response • Probing Questions • Graphic Organizer • Nearpod Activity • Digital Whiteboard 	<ul style="list-style-type: none"> • Jigsaw* • Discussions* • Expert Groups • Labs • Stations • Think/Pair/Share • Create Visuals 	<ul style="list-style-type: none"> • Written Response* • Digital Portfolio • Presentation • Canvas Assignment • Choice Board • Independent Project • Portfolio 	<ul style="list-style-type: none"> • Group Discussion • Exit Ticket • 3-2-1 • Parking Lot • Journaling* • Nearpod

		• Open-Ended Question			• Gallery Walk		
Monday	this discussion is about the phones and a problem solving mindset	what is agi and how will it impact your future job?	elon musk and china video	note taking of at least 5 things of interest/questions you have	ground discussion about their responses	AGI discussion participation	
Tuesday		how do you draw in 3 dimensions	isometric/orthographic video	isometric/orthographic handouts	think pair share	continue working on worksheets	
Wednesday		Isometric drawing continued		on board, counting triangles and angles to complete drawings	students teaching students who need help	10 isometric drawings on grid paper	
Thursday		day 3 isometric drawings	review counting technique		complete isometric drawings with measurements and orthographic		
Friday		What is the difference between isometric and orthographic projection?			expert groups students helping other students with isometric drawing	complete prototype and models quiz	

Westside High School - Weekly Plan to Align Lessons (Week At a Glance) – SY 25-26

Teacher: Mr. Blakley

Subject: Engineering

Course: Concepts

Grade: 10-12

Date(s): 8/11-8/15

Standard:

	Pre-Teaching	Activation of Learning (5 min)	Focused Instruction (10 min) <i>*I DO</i>	Guided Instruction (10 min) <i>*WE DO</i>	Collaborative Learning (10 min) <i>*Y'ALL DO</i>	Independent Learning (10 min) <i>*YOU DO</i>	Closing (5 min)
	 Learning Target  Success Criteria 1  Success Criteria 2	<ul style="list-style-type: none"> • Do Now • Quick Write* • Think/Pair/Share • Polls • Notice/Wonder • Number Talks • Engaging Video 	<ul style="list-style-type: none"> • Think Aloud • Visuals • Demonstration • Analogies* • Worked Examples • Nearpod Activity 	<ul style="list-style-type: none"> • Socratic Seminar * • Call/Response • Probing Questions • Graphic Organizer • Nearpod Activity • Digital Whiteboard 	<ul style="list-style-type: none"> • Jigsaw* • Discussions* • Expert Groups • Labs • Stations • Think/Pair/Share • Create Visuals 	<ul style="list-style-type: none"> • Written Response* • Digital Portfolio • Presentation • Canvas Assignment • Choice Board • Independent Project 	<ul style="list-style-type: none"> • Group Discussion • Exit Ticket • 3-2-1 • Parking Lot • Journaling* • Nearpod

		• Open-Ended Question	• Mnemonic Devices*		• Gallery Walk	• Portfolio	
Monday						☰ 24082_E-EC Cr...	
Tuesday						☰ 24086_E-EC Pr...	
Wednesday						☰ Product Desi...	
Thursday						☰ File FFD.5.1 R...	
Friday						finish pizza box and unfinished work. Work on design journal	