Name: Robert Lefrandt	Grading Quarter: 3	Week Beginning: 02/24/2025
School Year: 2024-25	Subject: Fab Lab/Engineering	

Monday	Notes: Robotic Assemblies Mechtronic Engineer: ReEngineer Reverse Engineering Structural Chassis frame body Mechanical (Motion) Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed Mechtronic Electrical (Ohm's Law, Parallel/Serial Circuits) Chemical e-chem Physical Magnetism Batteries Software Block PLC ladder logic, CNC, Python, C++ Sensors touch, Dist Light, Camera	**Fab Lab/Engineering-** **Objective:** The Fab Lab/Engineering instructional program prepares students to apply basic engineering principles and technical skills in support of engineers engaged in a wide variety of projects. **Lesson Overview:** Students learn to apply Science Technology Engineering Math (STEM) concepts to current technologies and tools as they learn about the different disciplines and opportunities within the fields of engineering. **Blueprint for Instruction and Assessment** Engineering Math and Science Principles, Tools, Project Management, Address Needs in Global Society VersCAMM SP-300i 30" Eco-Solvent Injet PrinterCutter • Teacher Print – … Laser Engraving/Cutting: Cups, other….Ethan Gonzales(Stu. Council) 3D Printing- Competitions Prep: Robotics: • ***vr.vex.com: virtual Robotics-Coding: Block/Python Text-High Stakes*** Solar Go-kart: "Racing to the Sun" (Tuscon, AZ) 11/19 (Tues) sarsef.org/racing-the-sun/ sarsef.org/racing-the-sun/important-dates/ Anissa Alvarado (anissa@sarsef.org) • 2025 Other dates? ◦ **January 31** – – School Fees Due ▪ Talked w/Anissa -PO Sent-RTS creating invoice ▪ Feb 3-BRHS Check sent ▪ Motorcycle from Automotive/convert to EV ◦ March 29 – Test Day ◦ April 26 – Race Day • Purchase Roll-up, Coil, Door(s) ◦ Move EV -Solar Go Kart, Millennial Falcon, Scooter/motorcycle out of CNC Room • Talk w/Fish & Game about Creating IOT device • WorkForce Service -Webpage BRHS Students Code	Academic Standards: Arizona Department of Education Website: Program Description/ Industry Credentials/ Coherent Sequence/ https://www.azed.gov/cte/es/

| Tuesday | Notes:
Robotic Assemblies
Mechtronic

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3D Printing-
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sarsef.org/racing-the-sun/

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Notes Conti:
PhysComp Embedded smart, IIOT AI ,Data Collect Data Analyze Data MachinLearn Collaborate schools,

Industry Community |

Wednesday	Notes:	Fab Lab/Engineering	Academic Standards:

Notes:
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| Thursday | Notes:

Engineer:
ReEngineer
Reverse
Engineering
Structural
Chassis
frame body
Mechanical
(Motion)
Gear: Box,
train,
parallel
(linear)
stack
(vertical),
ratio,
torque
speed

Mechtronic

Electrical (
Ohm's Law,
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frame body
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PLC ladder
logic, CNC,
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touch, Dist
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