

Name: Robert Lefrandt	Grading Quarter: 3	Week Beginning: 02/17/2025
School Year: 2024-25	Subject: Fab Lab/Engineering	

Monday	<p><u>Notes:</u></p> <p>Robotic Assemblies Mechtronic</p> <p>Engineer: ReEngineer Reverse Engineering Structural Chassis frame body Mechanical (Motion) Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed</p> <p>Mechtronic</p> <p>Electrical ( Ohm's Law, Parallel/Seri al Circuits) Chemical e-chem Physical Magnetism Batteries Software</p> <p>Block PLC ladder logic, CNC, Python, C++ Sensors touch, Dist Light, Camera</p>	<p><b>Fab Lab/Engineering-</b></p> <p><b>Objective:</b> 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.</p> <p><b>Lesson Overview:</b> 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.</p> <p><b>Blueprint for Instruction and Assessment</b> Engineering Math and Science Principles, Tools, Project Management, Address Needs in Global Society VersCAMM SP-300i 30" Eco-Solvent Injet PrinterCutter</p> <ul style="list-style-type: none"> <li>Teacher Print – ...</li> </ul> <p>Laser Engraving/Cutting: Cups, other....Ethan Gonzales(Stu. Council) 3D Printing- Competitions Prep: Robotics:</p> <ul style="list-style-type: none"> <li><b>vr.vex.com: virtual Robotics-Coding: Block/Python Text-High Stakes</b></li> </ul> <p>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)</p> <ul style="list-style-type: none"> <li>2025 <b>Other dates?</b> <ul style="list-style-type: none"> <li><b>January 31 – School Fees Due</b> <ul style="list-style-type: none"> <li><b>Talked w/Anissa -PO Sent-RTS creating invoice</b></li> <li>Feb 3-BRHS Check sent</li> <li>Motorcycle from Automotive/convert to EV</li> </ul> </li> <li>March 29 – Test Day</li> <li>April 26 – Race Day</li> </ul> </li> <li>Purchase Roll-up, Coil, Door(s) <ul style="list-style-type: none"> <li>Move EV -Solar Go Kart, Millennial Falcon, Scooter/motorocycle out of CNC Room</li> </ul> </li> <li>Talk w/Fish &amp; Game about Creating IOT device</li> <li>WorkForce Service -Webpage BRHS Students Code</li> </ul>	<p>Academic Standards:</p> <p>Arizona Department of Education Website:</p> <p>Program Description/ Industry Credentials/ Coherent Sequence/</p> <p><a href="https://www.azed.gov/cte/es/">https://www.azed.gov/cte/es/</a></p>
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