Name: Robert Lefrandt	Grading Quarter: 2	Week Beginning: 10 12/18/2023
School Year: 2023-24	Subject: Robotics	

Monday

Notes:
12/18/2023
Check for VEX Game Elements arrival/Register

Robotic Assemblies Mechtronics

Engineering: ReEngineering Reverse Engineering

Structural Chassis frame body

Mechanical (Motion) Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed

Electrical Chemical electrochemical

Physical Magnetism Batteries

Software Block PLC ladder logic, CNC, Python, C++,

Sensors Bump/touchDistance Light Camera

Physical Computing

AI Data Collect DataAnalyze

Collaborate with schools, 'Industry ProfessionalCommunity

BRHS Finals Schedule

Monday, 12/18
Finals for Blocks 1 and 3

Block 1: 8:25 – 10:29 am
1A: 8:25 - 9:24
1B: 9:30 - 10:29
Block 2: 10:36 – 11:35 am
2A: 10:36 - 11:02
2B: 11:08 - 11:35
Lunch: 11:35 am – 12:15 pm
Block 3: 12:15 – 2:19 pm
3A: 12:15 - 1:14
3B: 1:20 - 2:19
Block 4: 2:25 – 3:30 pm
4A: 2:25 - 2:52
4B: 2:58 - 3:30

Tuesday, 12/19
Finals for Blocks 2 and 4

Block 1: 8:25 – 9:25 am
1A: 8:25 - 8:52
1B: 8:58 – 9:25
Block 2: 9:32 – 11:35 am
2A: 9:32 – 10:30
2B: 10:36 - 11:35
Lunch: 11:35 am – 12:15 pm
Block 3: 12:15 – 1:15 pm
3A: 12:15 - 12:42
3B: 12:48 - 1:15
Block 4: 1:22 – 3:30 pm
4A: 1:22 - 2:21
4B: 2:27 - 3:30

Academic Standards:

AZ_CTE

Automation & Robotics Tech-Standards

STANDARD 2.0 PERFORM ELECTRICAL AND ELECTRONIC TASKS

STANDARD 4.0 ANALYZE PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEMS

STANDARD 7.0 PERFORM DRAFTING TASKS
7.5 Make dimensional CAD drawings (e.g., 2D and 3D)

STANDARD 5.0 DESCRIBE THE OPERATION AND USE OF VARIOUS FORMS OR ELECTRICAL MOTORS

5.2 Explain the operation and use of DC motors in automation controls

STANDARD 6.0 PERFORM MECHANICAL SYSTEMS LINKAGES TASKS
STANDARD 10.0 APPLY SENSOR SOLUTIONS

STANDARD 13.0 DEMONSTRATE SAFE AND PROPER USE OF ELECTRONIC AND OTHER LABORATORY EQUIPMENT, TOOLS, AND MATERIALS

Tuesday

Notes:
12/19/2023

Robotic Assemblies
Mechatronics

Engineering:
Re-Engineering
Reverse Engineering

Structural
Chassis frame body

Mechanical (Motion)
Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed

Electrical
Chemical
electrochemical

Chemical
Batteries
Magnetism

Computer Sci.
Hardware/Software
Block
PLC ladder logic, CNC, Python, C++,

Sensors
Bump/touch
Distance
Light
Camera

Physical Computing
AI
Data Collect
DataAnalyze

Collaborate with schools, 'Industry
Professional-Community

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AZ_CTE

Automation & Robotics
Tech-Standards

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Wednesday	Notes: 12/20/2023 Robotic Assemblies Mechtronics Engineering: ReEngineering Reverse Engineering Structural Chassis frame body Mechanical (Motion) Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed Electrical Chemical electrochemical Physical Magnetism Batteries Software Block PLC ladder logic, CNC, Python, C++, Sensors Bump/touchDistance Light Camera Physical Computing AI Data Collect DataAnalyze Collaborate with schools, 'Industry ProfessionalsCommunity	**End 1st Semester**	

Thursday	Notes: 12/21/2023 Robotic Assemblies Mechtronics Engineering: ReEngineering Reverse Engineering Structural Chassis frame body Mechanical (Motion) Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed Electrical Chemical electrochemical Physical Magnetism Batteries Software Block PLC ladder logic, CNC, Python, C++, Sensors Bump/touchDistance Light Camera Physical Computing AI Data Collect DataAnalyze Collaborate with schools, 'Industry ProfessionalsCommunity	**Winter Break** **Winter Break thru January 5 - District Closed**	Academic Standards: AZ_CTE Automation & Robotics Tech-Standards STANDARD 2.0 PERFORM ELECTRICAL AND ELECTRONIC TASKS STANDARD 4.0 ANALYZE PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEMS STANDARD 7.0 PERFORM DRAFTING TASKS 7.5 Make dimensional CAD drawings (e.g., 2D and 3D) STANDARD 5.0 DESCRIBE THE OPERATION AND USE OF VARIOUS FORMS OR ELECTRICAL MOTORS 5.2 Explain the operation and use of DC motors in automation controls STANDARD 6.0 PERFORM MECHANICAL SYSTEMS LINKAGES TASKS STANDARD 10.0 APPLY SENSOR SOLUTIONS STANDARD 13.0 DEMONSTRATE SAFE AND PROPER USE OF ELECTRONIC AND OTHER LABORATORY EQUIPMENT, TOOLS, AND MATERIAL

Friday	Notes: 12/22/2023 Robotic Assemblies Mechtronics Engineering: ReEngineering Reverse Engineering Structural Chassis frame body Mechanical (Motion) Gear: Box, train, parallel (linear) stack (vertical), ratio, torque speed Electrical Chemical electrochemical Physical Magnetism Batteries Software Block PLC ladder logic, CNC, Python, C++, Sensors Bump/touchDistance Light Camera Physical Computing AI Data Collect DataAnalyze Collaborate with schools, 'Industry ProfessionalsCommunity	**Winter Break** **Winter Break thru January 5 - District Closed**	Academic Standards: AZ_CTE Automation & Robotics Tech-Standards STANDARD 2.0 PERFORM ELECTRICAL AND ELECTRONIC TASKS STANDARD 4.0 ANALYZE PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEMS STANDARD 7.0 PERFORM DRAFTING TASKS 7.5 Make dimensional CAD drawings (e.g., 2D and 3D) STANDARD 5.0 DESCRIBE THE OPERATION AND USE OF VARIOUS FORMS OR ELECTRICAL MOTORS 5.2 Explain the operation and use of DC motors in automation controls STANDARD 6.0 PERFORM MECHANICAL SYSTEMS LINKAGES TASKS STANDARD 10.0 APPLY SENSOR SOLUTIONS STANDARD 13.0 DEMONSTRATE SAFE AND PROPER USE OF ELECTRONIC AND OTHER LABORATORY EQUIPMENT, TOOLS, AND MATERIAL