Summary:	STEM Labs are fun STEM engagements that align to educational standards. All STEM Labs contain activities that are structured around iterative, engineering processes, real-world applications and opportunities for students to build teamwork and collaboration skills. STEM Labs provide students with hands-on, minds-on engagements that encourage students to design creative solutions and innovate through experimentation. STEM Labs are flexible enough to be used in any instructional setting (e.g. in-school, after-school, camps, VEX robotics teams/clubs, etc.) **The following Pacing Guide shows all VEX EXP STEM Labs Units and Activities in sequence for a classroom implementation.** Each VEX EXP STEM Lab Unit is centered around a competition game, where students will apply their learning, use the engineering design process, and collaborate with teammates to compete in a classroom competition. STEM Lab Units are designed for flexible implementation, and can be used in a variety of time frames and sequences, to best meet the needs of your students. VEX EXP Activities offer more ways to engage with the VEX EXP Kit, providing simple one page exercises that blend STEM concepts with curricular content in fun and engaging ways. They are designed to be easy to follow for independent student use, giving them great flexibility in terms of classroom implementation. Activities can be used as part of a teacher's lesson, as an extension activity, or as a scaffolding strategy to support differentiated learning.

Weeks	STEM Lab/Activity	Level	Description	Build	Programming?	Key Concepts
Weeks 1 & 2	Team Freeze Tag	Beginner	Students will drive the BaseBot using the Controller, choose wheels, and add sensors to their robot to compete in the Team Freeze Tag competition.	BaseBot	Yes, VEXcode EXP	Controller Sensors
Weeks 3 & 4	Robot Soccer	Beginner	Students will explore how to use the Controller to drive their Clawbot to grab, pass, and score the most points in a Robot Soccer competition.	Clawbot	No	Engineering Design Manipulators
Week 5	Bucky Basketball	Intermediate	Students will explore how to drive the CatapultBot to collect, shoot, and score Buckyballs into hoops in the Bucky Basketball competition.	CatapultBot	No	Engineering Design Controller
Weeks 6, 7 & 8	Up and Over	Intermediate	Students will explore how to design a Clawbot to collect, pick up, and move Buckyballs from one side of the Field to the other, in the Up and Over competition.	Clawbot	Yes, VEXcode EXP	Engineering Design Arm Design Motor Groups
Weeks 9 & 10	Ring Leader	Intermediate	Students will explore the difference between competing in a driver controlled and autonomous competition. They will use both autonomous and driver control in order to score Rings on different sized posts in the Ring Leader competition.	Clawbot	Yes, VEXcode EXP	Driver Control Coding Autonomous Movements
Weeks 11 & 12	Treasure Hunt	Intermediate	Students will build and code the Clawbot with the Optical Sensor to recognize and collect red Buckyballs to compete in the Treasure Hunt competition.	Clawbot	Yes, VEXcode EXP	Sensors Programming
Weeks 13, 14, & 15	Platform Placer	Advanced	Students will explore using manipulators on the Clawbot, including lifts, to move Buckyballs and rings to platforms of different levels. They will cooperate with another team to create a strategy combining robot design and driver skills to compete in the Platform Placer Competition!	Clawbot	Yes, VEXcode EXP	Engineering Design Manipulators Lifts Driver Control Strategy

Weeks 16, 17, & 18	Castle Crasher	Advanced	Students will explore how to use the Optical and Distance sensors to seek, crash, and clear Buckyball ‘castles’ to score points in the Castle Crasher competition.	BaseBot	Yes, VEXcode EXP	Engineering Design Sensors Algorithms
Weeks 19 - 24	Clean Water Mission	Advanced	Students engage in a series of open-ended challenges to use the AI Vision Sensor to identify, sort, and deliver contaminated, clean, and purified water through the various areas of a water treatment system.	Clawbot	Yes, VEXcode EXP	AI Vision Sensor Algorithms Open-Ended Challenges