Resource Type	Name	Lab Title	Build	Primary Subject	Secondary Subject	Primary Concept	Secondary Concept	Description	Coding?	Level
STEM Lab	Intro to Building	Lab 1 - Kit Introduction	None	Engineering	Science	Stability and Balance	N/A	Students are introduced to the VEX GO Kit and learn to build effectively using pieces in the Kit.	No	Level 1
STEM Lab	Intro to Building	Lab 2 - NASA Flagpole	Free Build	Engineering	Science	Stability and Balance	N/A	Students use pins, standoffs and beams to build the tallest free-standing flagpole.	No	Level 1
STEM Lab	Intro to Building	Lab 3 - Launch Pad	Free Build	Engineering	Science	Stability and Balance	N/A	Students use beams and plates to build a launch pad.	No	Level 1
STEM Lab	Intro to Building	Lab 4 - Spaceship	Free Build	Engineering	Science	Stability and Balance	N/A	Students use connectors and the Gray Slide Beam to design and build a spaceship.	No	Level 1
STEM Lab	Intro to Building	Lab 5 - Mars Buggy	Free Build	Engineering	Design	Stability and Balance	N/A	Students design and build a Mars buggy with wheels, axles, and gears.	No	Level 1
STEM Lab	Intro to Building	Lab 6 - Mars Base Build	Free Build	Engineering	Design	Stability and Balance	N/A	Students use pieces strategically to design and build a Mars Base that meets defined criteria and constraints.	No	Level 1
Activity Series	Animal Rescue	Activity 1 - Ladder Rescue	Free Build	Engineering	Design	Engineering	N/A	Students design and construct a ladder from VEX GO pieces to reach an animal in a tree.	No	Level 1
Activity Series	Animal Rescue	Activity 2 - Raft Rescue	Free Build	Engineering	Design	Engineering	N/A	Students design and construct a raft from VEX GO pieces to reach an animal in a pond.	No	Level 1
Activity Series	Animal Rescue	Activity 3 - Mobile Rescue	Free Build	Engineering	Design	Engineering	N/A	Students combine their designs from the first two activities and add wheels to create a rolling vehicle to make a mobile rescue vehicle.	No	Level 1
STEM Lab	Super Car	Lab 1 - How Far?	Super Car	Science	Engineering	Average Speed	Measurement	Students build the Super Car, then predict, test, and measure the distance it travels in several trials.	No	Level 1
STEM Lab	Super Car	Lab 2 - How Does it Go?	Super Car	Science	Engineering	Average Speed	Measurement	Students test how different variables affect the way the Super Car moves.	No	Level 1
STEM Lab	Super Car	Lab 3 - How Fast?	Super Car	Science	Engineering	Average Speed	Measurement	Students investigate the relationship between time and distance traveled, and learn to calculate the average speed of the Super Car.	No	Level 1
STEM Lab	Fun Frogs	Lab 1 - Tails and Tadpoles	Frog Life Cycle	Science	N/A	Habitat	Adaptation	Students build the first 2 phases of a frog's life cycle and construct a habitat for their frog.	No	Level 1
Activity Series	Fun with Formations	Activity 1 - Colossal Canyons	Free Build	Science	Engineering	Landforms	Engineering	Students create a model of a canyon using VEX GO pieces, then photograph it and write a description of how the canyon was formed by changes to the Earth's surface over time.	No	Level 1
Activity Series	Fun with Formations	Activity 2 - Drifting Dunes	Free Build	Science	Engineering	Landforms	Engineering	Students create a model of sand dunes using VEX GO pieces, then photograph it and write a description of how the dune was formed by changes to the Earth's surface over time.	No	Level 1
Activity Series	Fun with Formations	Activity 3 - Dynamic Deltas	Free Build	Science	Engineering	Landforms	Engineering	Students create a model of a delta using VEX GO pieces, then photograph it and write a description of how the delta was formed by changes to the Earth's surface over time.	No	Level 1
Activity Series	Fun with Formations	Activity 4 - Formation Creation	Free Build	Science	Engineering	Landforms	Engineering	Students create a model of a real world landform using VEX GO pieces, then photograph it and write a descriptive paragraph about the landform and how it was formed by changes to the Earth's surface over time.	No	Level 1
STEM Lab	Fun Frogs	Lab 2 - I'm a Big Frog Now	Frog Life Cycle	Science	N/A	Habitat	Adaptation	Students build the last two phases of the frog life cycle and draw their frog in its habitat.	No	Level 1
Activity Series	Island Expedition	Activity 1 - Topo Map Island	Topo Map	Science	Engineering	Earth and Human Activity	N/A	Students build the VEX GO Topo Map and identify how the various pieces represent island features and elevations.	No	Level 1
Activity Series	Island Expedition	Activity 2 - Island Designer	Free Build	Science	Engineering	Earth and Human Activity	N/A	Students design and build their own island using VEX GO Pieces.	No	Level 1
Activity Series	Island Expedition	Activity 3 - Island Mapper	None	Science	Engineering	Earth and Human Activity	N/A	Students combine what they learned the first two Activities to create a topographical map of their unique VEX GO island.	No	Level 1
STEM Lab	Magnet Car	Lab 1 - Magnets and Movement	Magnet Car	Science	N/A	Magnetism	N/A	Students use the Magnet Car to investigate the properties of magnetism, and then use magnetism to drive the Magnet Car.	No	Level 1
STEM Lab	Pendulum Game	Lab 1 - Engineering the Pendulum	Pendulum	Engineering	Math	Collaborative Design	Motion and Force	Students build the Pendulum and explore how the it works.	No	Level 1
STEM Lab	Pendulum Game	Lab 2 - Creating the Kerplunk Game	Pendulum	Engineering	Math	Collaborative Design	Motion and Force	Students create a game with the Pendulum, developing their own rules and goals.	No	Level 1
STEM Lab	Helping Hand	Lab 1 - Speed Stacker	Adaptation Claw	Engineering	Design	Engineering	Mechanisms	Students build and experiment with the Adaptation Claw and use it to solve an authentic problem.	No	Level 1
STEM Lab	Helping Hand	Lab 2 - Adapting the Claw	Adaptation Claw	Engineering	Design	Engineering	Mechanisms	Students design and build an adaptation for the claw to pick up different objects, then test their build in a class competition.	No	Level 1
Activity Series	Super Bowler	Activity 1 - Away We GO!	Slingshot Car	Science	N/A	Force and Motion	N/A	Students build the Slingshot Car and practice launching it.	No	Level 1
Activity Series	Super Bowler	Activity 2 - Tension Tester	Slingshot Car	Science	N/A	Force and Motion	N/A	Students test how the Slingshot Car performs when launched at different settings on the launcher that increase and decrease the rubber band tension.	No	Level 1
Activity Series	Super Bowler	Activity 3 - Super Bowler	Slingshot Car	Science	N/A	Force and Motion	N/A	Students use what they have learned about launching the Slingshot Car to play a bowling game.	No	Level 1
STEM Lab	Look Alike	Lab 1 - What are Traits?	Bunny Traits	Science	Math	Biology	Traits	Students build parent and baby bunnies with the VEX GO Kit, and explore how traits are inherited.	No	Level 1
STEM Lab	Simple Machines	Lab 1 - Inclined Plane	Inclined Plane	Engineering	Science	Simple Machines	Force and Motion	Students build the Inclined Plane build and investigate how the height of the inclined plane affects the movement of an object.	No	Level 1
STEM Lab	Simple Machines	Lab 2 - Lever	Lever	Engineering	Science	Simple Machines	Force and Motion	Students explore how a lever operates, and how the location of the pivot point affects its ability to do work.	No	Level 1

Resource Type	Name	Lab Title	Build	Primary Subject	Secondary Subject	Primary Concept	Secondary Concept	Description	Coding?	Level
STEM Lab	Simple Machines	Lab 3 - Wheel & Axle	Spring Car	Engineering	Science	Simple Machines	Force and Motion	Students investigate how a wheel and axle allow objects to move more easily with the Spring Car build.	No	Level 1
STEM Lab	Simple Machines	Lab 4 - Gears	Clock	Engineering	Science	Simple Machines	Force and Motion	Students build the VEX GO Clock, and compare gear arrangements to see how they affect the clock's ability to work.	No	Level 1
STEM Lab	Fractions	Lab 1 - Fractions	Fractions	Math	N/A	Fractions	N/A	Students explore whole equivalents and equivalent fractions using the Fractions build.	No	Level 1
STEM Lab	Battle Boats	Lab 1 - Battle Boats on a Coordinate Plane	Battle Boats	Math	N/A	Coordinate Plane	N/A	Students plot points on a coordinate plane in order to play the Battle Boats game.	No	Level 1
Activity Series	Spirograph Art Show	Activity 1 - Spirograph	Spirograph	Art	Engineering	Art	N/A	Students build a Spirograph and use it to create a drawing.	No	Level 2
Activity Series	Spirograph Art Show	Activity 2 - Gear up your Creativity	Spirograph	Art	Engineering	Art	N/A	Students change the gears on the Spirograph build to see how it changes the drawings that are produced.	No	Level 2
Activity Series	Spirograph Art Show	Activity 3 - Spirograph Artist	Spirograph	Art	Engineering	Art	N/A	Students apply what they have learned about the Spirograph build to create artwork using all the gear configurations and incorporate them into one piece of art.	No	Level 2
STEM Lab	Day and Night	Lab 1 - Day and Night	Day/Night with Switch	Science	Engineering	Day/Night Cycle	Scientific Modeling	Students build a model of the Earth and Sun using the Switch, and use it to demonstrate the Day/Night Cycle	No	Level 1
STEM Lab	Day and Night	Lab 2 - Earth and Sun	Code Day/Night	Science	Coding	Day/Night Cycle	Scientific Modeling	Students build a model of the Earth and Sun using the Brain and code it to demonstrate the Day/Night Cycle and explain why it appears the sun is moving across the sky.	Yes	Level 1
STEM Lab	Mars Rover: Surface Operations	Lab 1 - Collect a Sample	Code Base - LED Bumper Top	Coding	Science	Sequencing	Driving and Turning	Students build the Code Base and code it to collect a sample on Mars (a VEX GO Field).	Yes	Level 1
STEM Lab	Mars Rover: Surface Operations	Lab 2 - Collect and Bury Mission	Code Base - LED Bumper Top	Coding	Science	Sequencing	Driving and Turning	Students complete a challenge to code the Code Base to collect multiple samples and bring them back to the Mars base.	Yes	Level 1
STEM Lab	Mars Rover: Landing Challenge	Lab 1 - Detect Obstacles	Code Base - Eye Forward	Coding	Science	Using the Eye Sensor	Driving and Turning	Students build the Code Base and code it to use the Eye Sensor and drive until it detects an object on the Mars landing area (a VEX GO Field).	Yes	Level 1
STEM Lab	Mars Rover: Landing Challenge	Lab 2 - Clear the Landing Area	Code Base - Eye Forward	Coding	Science	Using the Eye Sensor	Driving and Turning	Students complete a challenge to code their robot to clear all obstacles from the Mars landing area.	Yes	Level 1
STEM Lab	Data Detectives: Bridge Challenge	Lab 1 - Understanding Data	Code Base - Eye Down	Coding	Data	Using Data to Solve an Authentic Problem	Data	Use the Eye Sensor to collect data about the sections of the bridge, to learn about how the sensor works, the kinds of data it	Yes	Level 2
STEM Lab	Data Detectives: Bridge Challenge	Lab 2 - Collecting Data	Code Base - Eye Down	Coding	Data	Using Data to Solve an Authentic Problem	Printing Data	Use the Eye Sensor on the Code Base to collect data about a crack on the bottom of a btridge, and graph the data on a Bridge Inspection Report.	Yes	Level 2
STEM Lab	Data Detectives: Bridge Challenge	Lab 3 - Analyzing Data	Code Base - Eye Down	Coding	Data	Using Data to Solve an Authentic Problem	Visualizing Data	Analyze bridge data in order to make a hypothesis about which bridge is unsafe and needs to be inspected.	Yes	Level 2
STEM Lab	Robot Jobs	Lab 1 - Robot Job Interview	Code Base	Coding	N/A	Connecting Code Base to VEXcode GO	Test a Coding Project	Students build the Code Base and prepare to code it to perform jobs that are dull, dirty or dangerous. They will first connect it to VEXcode GO, then test their first project.	Yes	Level 1
STEM Lab	Robot Jobs	Lab 2 - Sewer Robot	Code Base	Coding	N/A	Sequencing	Driving	Students code their robot to more forward and in reverse to perform certain jobs.	Yes	Level 1
STEM Lab	Robot Jobs	Lab 3 - Warehouse Robot	Code Base	Coding	N/A	Coding	Turning	Students code their robot to drive and turn to complete the Warehouse Challenge.	Yes	Level 1
STEM Lab	Robot Jobs	Lab 4 - Robot Job Fair	Code Base	Coding	N/A	Coding	Build and Test a Coding Project	Students choose a task that is dirty, dull, or dangerous and code their robot to perform that task.	Yes	Level 1
STEM Lab	Code Base	Lab 1 - Remote Control Robot	Code Base	Coding	Engineering	Using Drive mode	Drive and Turn	Students practice using the Drive mode to drive the Code Base through a slalom course.	Yes	Level 1
STEM Lab	Code Base	Lab 2 - Code and Drive	Code Base	Coding	Engineering	Sequencing	Driving and Turning	Students use VEXcode GO to code their robot to drive a challenge course.	Yes	Level 1
STEM Lab	Code Base	Lab 3 - Using the LED Bumper	Code Base - LED Bumper Top	Coding	Engineering	Using the LED Bumper	Sequencing	Students add the LED Bumper to the Code Base and explore the functions of this sensor.	Yes	Level 1
STEM Lab	Code Base	Lab 4 - Color Disk Maze	Code Base - Eye Forward	Coding	Engineering	Using the Eye Sensor	Sequencing	Students code the Code Base - Eye Forward to detect objects and colors in order to navigate a maze.	Yes	Level 1
Activity Series	Creature Feature	Activity 1 - Meet Crawler	Crawler	Engineering	N/A	Building	N/A	Students build the VEX GO Creature Crawler and create an environment for it to live in.	No	Level 1
Activity Series	Creature Feature	Activity 2 - Meet Ed	Ed	Engineering	N/A	Building	N/A	Students build the Ed creature and create a short story about a day in the life of an Ed.	No	Level 1
Activity Series	Creature Feature	Activity 3 - Meet Flopper	Flopper	Engineering	N/A	Building	N/A	Students build Flopper and create a personality profile for this VEX GO Creature.	No	Level 1
Activity Series	Creature Feature	Activity 4 - Creature Feature Race	Crawler Ed or Flopper	Engineering	N/A	Building	N/A	Students choose their favorite creature, and build it to participate in a race.	No	Level 1
Activity Series	Self-Driving Code Base	Move Until Line	Code Base - Eye Down	Coding	N/A	Using the Eye Sensor	Sequencing	Students test and iterate on an example project in VEXcode GO to become familiar with coding the Eye Sensor in the context of coding a self-driving car.	Yes	Level 2
Activity Series	Self-Driving Code Base	Stop Sign	Code Base - Eye Down	Coding	N/A	Using the Eye Sensor	Sequencing	Students create their own VEXcode GO project to stop their robot when the color red is detected.	Yes	Level 2
Activity Series	Self-Driving Code Base	Construction Zone	Code Base - Eye Down	Coding	N/A	Using the Eye Sensor	Sequencing	Students code their robot to drive through a 'construction zone' using different colors to indicate how the robot should move.	Yes	Level 2

Resource Type	Name	Lab Title	Build	Primary Subject	Secondary Subject	Primary Concept	Secondary Concept	Description	Coding?	Level
STEM Lab	Physical Science	Lab 1 - Unpowered Super Car	Unpowered Super Car	Science	Engineering	Motion and Force	Data Collection	Students collect data by making accurate measurements; and make predictions and use their data to compare how force affects the Super Car performance.	No	Level 2
STEM Lab	Physical Science	Lab 2 - Super Car	Super Car	Science	Engineering	Motion and Force	Data Collection	Students conduct trials with the Super Car to explore how data can be gathered, read, and used to predict results and make estimations.	No	Level 2
STEM Lab	Physical Science	Lab 3 - Motorized Super Car	Motorized Super Car	Science	Engineering	Motion and Force	Data Collection	Students explore how using rubber bands compares to using a motor and gears, and the affect that has on the speed of the Super Car.	No	Level 2
STEM Lab	Physical Science	Lab 4 - Steering Super Car	Steering Super Car	Science	Engineering	Motion and Force	Data Collection	Students observe how forces on the Steering Super Car work with the two motor configuration to allow it to turn.	No	Level 2
STEM Lab	Physical Science	Lab 5 - Code Super Car	Code Super Car	Science	Coding	Motion and Force	Coding	Students determine how changing the velocity of the Code Super Car changes its force and motion.	Yes	Level 2
STEM Lab	Parade Float	Lab 1 - Design a Project	Code Base	Engineering	Coding	Sequencing	Driving and Turning	Students build the Code Base and create a VEXcode GO project that navigates it through two challenge courses.	Yes	Level 2
STEM Lab	Parade Float	Lab 2 - Design a Float	Code Base	Engineering	Coding	Sequencing	Driving and Turning	Students design a parade float for the Code Base and code their float to follow a specific route for a classroom parade.	Yes	Level 2
STEM Lab	Parade Float	Lab 3 - Float Celebration	Code Base	Engineering	Coding	Sequencing	Driving and Turning	Students make final adjustments to their parade float and code it to participate in a class parade.	Yes	Level 2
STEM Lab	Parade Float	Lab 4 - Calculating Distance	Code Base	Engineering	Math	Mathematics of Driving	Coding individual motors	Students will calculate the distance of a new parade route and apply mathematical operations to code the individual motors of the Code Base to drive the route.	Yes	Level 2
STEM Lab	Parade Float	Lab 5 - Turning	Code Base	Engineering	Math	Mathematics of Turning	Coding individual motors	Students will build on what they learned in Lab 4 to code individual motors to make their robot turn on the parade route.	Yes	Level 2
STEM Lab	Ocean Emergency	Lab 1 - Plan and Build	Code Base	Engineering	N/A	Engineering Design Process	Building	Students build the Code Base and design an extension that could be used to gather trash, making it an ocean-cleaning robot.	No	Level 2
STEM Lab	Ocean Emergency	Lab 2 - Drive and Apply	Code Base	Coding	Engineering	Sequencing	Driving and Turning	Students create pseudocode to plan a project that will drive their Code Base in a square. Then, they create and test a coding project based on their pseudocode.	Yes	Level 2
STEM Lab	Ocean Emergency	Lab 3 - Practice and Drive	Code Base	Coding	Engineering	Sequencing	Driving and Turning	Students code their ocean-cleaning robot to move through a challenge course and pick up trash.	Yes	Level 2
STEM Lab	Mars Rover: Exploring Mars Geology	Lab 1 - Collect a Martian Rock Sample	Code Base - Eye + Electromagnet	Coding	Science	Using the Electromagnet	Sequencing	Students code their robot to collect a Martian rock sample (VEX GO Disk) and return it to base.	Yes	Level 2
STEM Lab	Mars Rover: Exploring Mars Geology	Lab 2 - Study your Martian Rock Sample	Code Base - Eye + Electromagnet	Coding	Science	Using the Eye Sensor with the Electromagnet	Using Conditional Statements for decision-making	Students code the their robot to collect and sort a Martian rock sample (VEX GO Disk) based on its color.	Yes	Level 2
STEM Lab	Mars Rover: Exploring Mars Geology	Lab 3 - Sort your Samples	Code Base - Eye + Electromagnet	Coding	Science	Using the Eye Sensor with the Electromagnet	Using Conditional Statements for decision-making	Students code their robot to collect and sort multiple Martian rock samples (VEX GO Disks) based on their color.	Yes	Level 2
STEM Lab	Mars Rover: Exploring Mars Geology	Lab 4 - Planetary Geologist	Code Base - Eye + Electromagnet	Coding	Science	Using the Eye Sensor with the Electromagnet	Using My Blocks	Students create a more streamlined project using My Blocks to have their robot collect and sort multiple Martian rock samples (VEX GO Disks) based on their color.	Yes	Level 2
STEM Lab	Pantograph	Lab 1 - Larger or Smaller	Pantograph	Design	Engineering	Using the Pantograph	Scaled Drawings	Students build the Pantograph and create scaled drawings of VEX GO pieces.	No	Level 2
STEM Lab	Pantograph	Lab 2 - Design Challenge!	Pantograph	Design	Engineering	Using the Pantograph	Design Challenge	Students apply their learning to use the Pantograph to create a design bid for an astronaut school.	No	Level 2
STEM Lab	Robot Arm	Lab 1 - Robot Arm	Robot Arm	Engineering	N/A	Robotic Arm movement	Building	Students build a manually-operated Robot Arm to explore what a robotic arm is, and how it works.	No	Level 2
STEM Lab	Robot Arm	Lab 2 - Motorized Robot Arm	Motorized Robot Arm	Engineering	N/A	Robotic Arm movement with motors	Building with Motors	Students pick up and place a colored disk using motors on the Motorized Robot Arm.	No	Level 2
STEM Lab	Robot Arm	Lab 3 - Using the Electromagnet	Code Robot Arm (1-Axis)	Coding	Engineering	Sequencing	Using the Electromagnet	Students modify the build to create the Robot Arm (1-axis) and code it to move disks with the Electromagnet.	Yes	Level 2
STEM Lab	Robot Arm	Lab 4 - Using the Eye Sensor	Code Robot Arm (2-Axis)	Coding	Engineering	Using the Eye Sensor with the Electromagnet	Decision-making	Students modify the build to add movement on a second axis with the Robot Arm (2-axis) build. Then, they code it to pick up disks when detected by the Eye Sensor.	Yes	Level 2
STEM Lab	Robot Arm	Lab 5 - Decision-Making	Code Robot Arm (2-Axis)	Coding	Engineering	Using the Eye Sensor with the Electromagnet	Using Conditional Statements for decision-making	Students code the Robot Arm (2-axis) to detect and sort disks based on their color.	Yes	Level 2
STEM Lab	Mars Math Expedition Competition	Lab 1 - Crater Collection	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 1 of the Mars Math Expedition Competition.	No	Level 2
STEM Lab	Mars Math Expedition Competition	Lab 2 - Lift Onto the Lab	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 2 of the Mars Math Expedition Competition.	No	Level 2
STEM Lab	Mars Math Expedition Competition	Lab 3 - Blast Off!	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 3 of the Mars Math Expedition Competition.	No	Level 2
STEM Lab	Mars Math Expedition Competition	Lab 4 - Fuel Cell Frenzy	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 4 of the Mars Math Expedition Competition.	No	Level 2

Resource Type	Name	Lab Title	Build	Primary Subject	Secondary Subject	Primary Concept	Secondary Concept	Description	Coding?	Level
STEM Lab	Mars Math Expedition Competition	Lab 5 - Mars Math Expedition Competition	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in the full Mars Math Expedition Competition.	No	Level 2
STEM Lab	Ocean Science Exploration	Lab 1 - Sensor Delivery	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 1 of the Ocean Science Exploration Competition.	No	Level 2
STEM Lab	Ocean Science Exploration	Lab 2 - Data Discovery	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 2 of the Ocean Science Exploration Competition.	No	Level 2
STEM Lab	Ocean Science Exploration	Lab 3 - Volcano Deposit	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 3 of the Ocean Science Exploration Competition.	No	Level 2
STEM Lab	Ocean Science Exploration	Lab 4 - Mission Relocation	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 4 of the Ocean Science Exploration Competition.	No	Level 2
STEM Lab	Ocean Science Exploration	Lab 5 - Ocean Science Exploration Competition	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in the full Ocean Science Exploration Competition.	No	Level 2
STEM Lab	Village Engineering Construction	Lab 1 - Village Construction	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 1 of the Village Engineering Construction Competition.	No	Level 2
STEM Lab	Village Engineering Construction	Lab 2 - Public Works Repair	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 2 of the Village Engineering Construction Competition.	No	Level 2
STEM Lab	Village Engineering Construction	Lab 3 - Water Transit	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 3 of the Village Engineering Construction Competition.	No	Level 2
STEM Lab	Village Engineering Construction	Lab 4 - Farm to Table	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 4 of the Village Engineering Construction Competition.	No	Level 2
STEM Lab	Village Engineering Construction	Lab 5 - Village Engineering Construction Competition	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in the full Village Engineering Construction Competition.	No	Level 2
STEM Lab	City Technology Rebuild	Lab 1 - Hospital Help	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 1 of the City Technology Rebuild Competition	No	Level 2
STEM Lab	City Technology Rebuild	Lab 2 - Raise the Roof	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 2 of the City Technology Rebuild Competition	No	Level 2
STEM Lab	City Technology Rebuild	Lab 3 - Power Up	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 3 of the City Technology Rebuild Competition	No	Level 2
STEM Lab	City Technology Rebuild	Lab 4 - Landslide!	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete in Stage 4 of the City Technology Rebuild Competition	No	Level 2
STEM Lab	City Technology Rebuild	Lab 5 - City Technology Rebuild Competition	Competition Base and Competition Base Advanced Hero Robot	Engineering	N/A	Competition	Collaboration and Teamwork	Students collaborate with a team to drive their robot to compete the full City Technology Rebuild Competition	No	Level 2
Activity	Scavenger Hunt	N/A	No Build	Science	Math	Observation and Patterns	Shapes and Attributes	Students use the Interactive Parts Poster to learn more about your VEX GO Kit and find all the pieces described in the Activity.	No	Level 1
Activity	Strike!	N/A	Inclined Plane	Engineering	N/A	Simple Machines	Building	Students use different pivot points on an incline plane to knock the most pins over in a bowling game.	No	Level 1
Activity	Alike	N/A	No Build	Math	Engineering	Introduction to VEX GO Kit	Shapes and Attributes	Students learn about VEX GO pieces by sorting the pieces by their attributes.	No	Discovery
Activity	Animal Habitats	N/A	Free Build	Science	Art	Habitats	Drawing	Students create an animal out of VEX GO pieces and use art skills to create a paper habitat.	No	Level 1
Activity	Architecture	N/A	Free Build	Art	Engineering	Introduction to VEX GO Kit	Drawing	Students use the VEX GO beams to plan a building, then draw their building on paper.	No	Discovery
Activity	Astronaut Rescue	N/A	Free Build	Design	Engineering	Design Challenge	Building	Students use design skills to create a pulley rescue contraption in order to save the VEX GO Astronaut.	No	Level 1
Activity	Astronaut Vault	N/A	Code Base	Coding	Science	Driving and Stopping	Motion and Force	Students code the Code Base to speed quickly towards an object and stop, while keeping the VEX GO Astronaut on top.	Yes	Level 1
Activity	Brain Break!	N/A	Clock	Art	Literacy	Building	Writing	Students create a dial to choose Brain Break activities.	No	Level 1
Activity	Build It, Make It, Engineer It	N/A	Free Build	Engineering	Science	Building	N/A	Students plan and build a house that could withstand a windstorm with VEX GO pieces.	No	Level 1
Activity	Bump It!	N/A	Code Base - LED Bumper Forward	Coding	N/A	Using the LED Bumper	Turning	Students code the Code Base to drive and turn when the LED Bumper Switch is pressed, in order to hit cardinal direction targets.	Yes	Level 2
Activity	Chain Reaction Machine	N/A	Free Build	Design	Engineering	Building	N/A	Students will plan and build a chain reaction machine that pushes the VEX GO Astronaut.	No	Level 1

Resource Type	Name	Lab Title	Build	Primary Subject	Secondary Subject	Primary Concept	Secondary Concept	Description	Coding?	Level
Activity	Code Base Coordinates	N/A	Code Base	Coding	Math	Driving and Turning	Coordinate Plane	Students code the Code Base to travel to a specific point on a coordinate plane grid.	Yes	Level 1
Activity	Color Code It!	N/A	Code Base - Eye Down	Coding	Science	Using the Eye Sensor	N/A	Students create a project that uses color detection to determine the path the Code Base takes.	Yes	Level 2
Activity	Color Designs!	N/A	Spirograph	Art	Engineering	Color Wheel	Building	Students create a design using the Spirograph and color it using primary and secondary colors.	No	Level 1
Activity	Community Helpers	N/A	Free Build	Social Studies	Engineering	Community	Engineering	Students explore who helps in a community, and build a tool of those jobs using VEX GO pieces.	No	Level 1
Activity	Compare It	N/A	No Build	Literacy	Math	Writing	Shapes and Attributes	Students use VEX GO pieces to practice using comparative and superlative adjectives.	No	Level 1
Activity	Compass Rose	N/A	Clock	Art	Literacy	Drawing	Writing	Students create a Compass Rose to explain cardinal directions.	No	Level 1
Activity	Copycat!	N/A	Free Build	Design	Science	Building	N/A	With a partner, students create a design on a VEX GO Plate. Partners then race to recreate the design.	No	Level 1
Activity	Covered Maze Box	N/A	Free Build	Engineering	Design	Building	N/A	Students create a mystery maze for marbles using VEX GO pieces.	No	Level 1
Activity	Create a Course	N/A	Code Base	Coding	Design	Driving and Turning	Course Design	Students draw a course for the Code Base and code the robot to complete the path.	Yes	Level 1
Activity	Creature Creation	N/A	Free Build	Art	Science	Design	Biodiversity	Students build their favorite animal/insect out of VEX GO pieces, and create build instructions for their animal.	No	Level 1
Activity	Definition in Action	N/A	Free Build	Literacy	Art	Vocabulary	Building	Students choose a vocabulary word or phrase from a current Unit, and create a build to show the definition in action.	No	Level 1
Activity	Design a Novel Diorama!	N/A	Free Build	Literacy	Art	Reading Response	Building	Students design and build a rolling base to represent a favorite novel.	No	Level 1
Activity	Design Star	N/A	Spirograph	Art	Math	Design	Building	Students pretend they are a TV design show star and create a catalog of design samples for clients using the VEX GO Spirograph build.	No	Level 1
Activity	Equation Balancer	N/A	Scale Lever	Math	Science	Equations	Simple Machines	Students modify the Scale Lever and assign numerical values to VEX GO pieces to create balanced equations.	No	Level 1
Activity	Fishing for Facts!	N/A	Robot Arm	Math	Science	Multiplication	Magnetism	Students use the Robot Arm and magnetic fish to practice multiplication facts.	No	Level 1
Activity	Flipping Flags	N/A	Free Build	Engineering	Math	Building	Shapes and Attributes	Students use VEX GO Beams and Plates to create flipped flags.	No	Discovery
Activity	Follow Directions	N/A	Free Build	Engineering	N/A	Building	N/A	Students work with a partner for this activity. They will first create a design with VEX GO pieces. After building, they will direct their partner(s) to recreate the design.	No	Discovery
Activity	Food Chain	N/A	Punnett Square	Science	Art	Biodiversity	N/A	Students start by building a bunny from the VEX GO Punnett Square build. Then, they make a three-step food chain using VEX GO Pieces.	No	Level 1
Activity	Get to Know GO	N/A	No Build	Math	N/A	Introduction to VEX GO Kit	Shapes and Attributes	Students get familiar with the VEX GO pieces using their powers of observation to study the patterns, colors and shapes of 12 select pieces.	No	Discovery
Activity	Handy Helpers	N/A	Adaptation Claw	Design	Literacy	Writing	N/A	Students create a brochure explaining different ways the Adaptation Claw can be used as a helpful tool.	No	Level 1
Activity	Hickory, Dickory, Clock	N/A	Clock	Math	Engineering	Time	Building	Students practice telling time in increments of 15 minutes with the VEX GO Clock build.	No	Level 1
Activity	Lunar Phases	N/A	Clock	Science	Art	Earth and Space Sciences	Drawing	Students learn about the phases of the Moon by creating a model of the eight phases of the Moon and learn their names with the VEX GO Clock build.	No	Level 1
Activity	Made to Measure	N/A	No Build	Math	N/A	Measuring		Students select different beams from the VEX GO Kit and measure them in centimeters.	No	Discovery
Activity	Map Challenge!	N/A	Free Build	Geography	N/A	Maps	Building	Students uses pieces in the VEX GO Kit to make a representation of a geographical region.	No	Level 1
Activity	Mars Rover - Sample Analysis	N/A	Code Base - Eye + Electromagnet	Coding	Science	Using the Eye Sensor	Color Spectrum	Students imagine the Code Base is a Mars Rover, and practice coding it to analyse the color of a sample with the Eye Sensor.	Yes	Level 2
Activity	Mars Rover - Search and Collect	N/A	Code Base - Eye + Electromagnet	Coding	Science	Using the Eye Sensor with the Electromagnet	Sequencing	Students imagine the Code Base is a Mars Rover, and practice coding it to use the Electromagnet with the Eye Sensor to go out and pick up a sample.	Yes	Level 2
Activity	Multiplication Madness	N/A	No Build	Math		Multiplication	N/A	Students create examples of multiplication facts using VEX GO pieces.	No	Level 1
Activity	Multiplication Road	N/A	Super Car	Math	Science	Multiplication	Motion and Force	Students practice multiplication facts using the VEX GO Super Car.	No	Level 1
Activity	Music Beat	N/A	No Build	Literacy	N/A	Writing	N/A	Students create their own musical code. They will write a musical rhythm that others can follow using VEX GO pieces.	No	Level 1
Activity	Obstacle	N/A	Code Base - Eye Forward	Coding	Science	Using the Eye Sensor	N/A	Students create a project that uses color detection with the Eye Sensor on the Code Base to detect and avoid obstacles.	Yes	Level 2
Activity	Pendulum Time	N/A	Pendulum	Engineering	Science	Building	Motion and Force	Students explore how the Pendulum works as they make changes to the Pendulum build and test them to see how the swing is affected.	No	Level 1

Resource Type	Name	Lab Title	Build	Primary Subject	Secondary Subject	Primary Concept	Secondary Concept	Description	Coding?	Level
Activity	Perimeter Practice	N/A	No Build	Math	N/A	Perimeter	N/A	Students practice calculating perimeters using beams to draw a floor plan and determine each room's perimeters.	No	Level 1
Activity	Pet Protection	N/A	No Build	Math	N/A	Measuring	Building	Students use VEX GO pieces to create a fence to protect a pet and measure around it.	No	Discovery
Activity	Pin Out!	N/A	No Build	Math	N/A	Shapes and Attributes	N/A	Students use Plates and Pins to play a fun game with VEX GO pieces.	No	Level 1
Activity	Ramp Racers	N/A	Inclined Plane	Science	Engineering	Simple Machines	N/A	Students modify the wheel of the VEX GO Inclined Plane build. Then, they test how the changes affect the Wheel's movement as they participate in a race.	No	Level 1
Activity	Reduce and Reuse Robot	N/A	Free Build	Science	Engineering	Earth and Human Activity	Building	Students explore how they can help their community with a recycling robot, then build and design a robot that will collect trash.	No	Level 1
Activity	Rotate It	N/A	No Build	Math	N/A	Shapes and Attributes	N/A	Students explore shapes and attributes as they practice rotation with pivoting beams.	No	Level 1
Activity	Security Robot	N/A	Code Base - LED Bumper Top	Coding	N/A	Sequencing	Using the LED Bumper Sensor	Students create a project that uses the Code Base to keep their treasures safe and sound by driving around the treasure and using the LED Bumper to signal when everything is safe.	Yes	Level 2
Activity	Stack 'em Up	N/A	No Build	Math	Art	Shapes and Attributes	Drawing	Students make stacks with VEX GO pieces and try to draw them.	No	Discovery
Activity	Start It!	N/A	Code Base - LED Bumper Forward	Coding	Science	Sequencing	Using the LED Bumper Sensor	Students create a project where the project starts when the LED Bumper is pressed.	Yes	Level 2
Activity	Super(hero) Car!	N/A	Super Car or Motorized Super Car	Literacy	Art	Writing	Drawing	Students turn their VEX GO Super Car into a super hero's dream car by designing some add-on features. Then, they practice persuasive writing by writing an ad designed to sell it to members of their favorite superhero universe!	No	Level 1
Activity	Syllable Count	N/A	No Build	Literacy	N/A	Reading	Phonics	Students practice separating words into syllables as they write a story containing words with specific syllable counts, and match VEX GO pieces to words.	No	Level 1
Activity	Symmetry	N/A	Free Build	Math	N/A	Shapes and Attributes	N/A	Students create a design, then challenge a partner to create a mirror image of their design!	No	Level 1
Activity	Tallest Tower Challenge	N/A	Free Build	Engineering	Design	Building	N/A	Students compete in a challenge with a partner. The goal is to build the tallest freestanding tower using the same 10 pieces.	No	Level 1
Activity	Venn Diagram!	N/A	No Build	Math	Literacy	Shapes and Attributes	N/A	Students use a Venn Diagram to compare and contrast attributes of different VEX GO pieces.	No	Level 1
Activity	VEX GO Fidget	N/A	Free Build	Engineering	N/A	Building	N/A	Students make their own unique fidget toy with VEX GO pieces.	No	Level 1
Activity	VEX GO Gaps	N/A	No Build	Literacy	N/A	Writing	Parts of Speech	Students review nouns, verbs, and adjectives in this activity. First, they create a story with missing words, then their classmates complete by knowing only the part of speech.	No	Level 1
Activity	VEX Pin Game	N/A	No Build	Design	N/A	Building	N/A	Students design and build a one-player game using pins. First they design the game, then they play it with a friend.	No	Level 1
Activity	What Is It?	N/A	Free Build	Art	N/A	Mixed-media	N/A	Students create a picture using VEX GO pieces.	No	Level 1
Activity	Wheel and Axle Lunar Rover	N/A	Free Build	Engineering	Design	Simple Machines	Building	Students design a Lunar Rover to drive on the moon. They can use as many axles and wheels as they need.	No	Level 1
Activity	Wheel It	N/A	Free Build	Engineering	Design	Simple Machines	Building	Students will design a wheelbarrow that incorporates more than one simple machine.	No	Level 1
Activity	Writing Instructions	N/A	Free Build	Literacy	Engineering	Writing	Building	Students will first create a build. Then, they will create a set of build directions so anyone can recreate their design.	No	Level 1