ROBOTS GOT TALENTS®



SPACE MISSIONS

ROVERS

SPIKE PRIME - PYTHON

LESSON ONE

- Introduction to Mars Rovers
- Mars Rovers Tasks
- Mars Rover Components
- SPIKE Prime Introduction
- SPIKE Prime Hub
- Introduction to Programming
- What is Python
- PyBricks - MicroPython
- PyBricks User Interface
- PyBricks Firmware
- Building Exercise 0
- Comments

LESSON TWO

- Building Exercise 1: Sojourner
- LEGO Education Spike Prime
- SPIKE Prime Motors
- SPIKE Prime Building Pieces
- Documentation
- Cheatsheet
- Variables
- Exercises 4-5: Motor Movement
- Exercises 6-7: Print Detected Colour
- Exercise 8: Move Forward
- Exercise 9: Rover Keyboard Control
- Exercises 10-11: Move Forward, Pause, Reverse & Stop

LESSON THREE

- Robots Characteristics
- Building Exercise 2: Spirit/Opportunity
- PyBricks Movement
- Exercise 12: DriveBase Movement
- Exercise 13: Move Forward
- Loops (For & While)
- Exercises 14-15: Simple Counter
- Exercise 16: Hub Display Counter
- Exercises 17-18: Autonomous Sequence
- PyBricks Ultrasonic
- Exercise 19: Distance Printing
- Exercise 20: Until Object Is Detected

LESSON FOUR

- PyBricks Color Sensor
- Building Exercise 3: Perseverance
- Exercise 21: Colour Sensor
- Exercise 22: Rover Drive Test
- Exercise 23: Print Force in Newtons
- Exercise 24: Interactive LED Control
- Exercise 25: Color Triggered Action
- Exercise 26: Motor Keyboard Teleoperation

