Revised for Fall 2024

CFISD Middle School Coding and Robotics

Scope and Sequence

Course Description:
This introductory programming course is designed for students interested in developing problem-solving skills and understanding logic used by robotics. Students will experience activities to either begin or increase their ability to use block-coding to solve problem scenarios, including communicating with programmable robots. Emphasis is placed on developing skills in critical thinking, reasoning, and designing solutions to challenges encountered through creating and modifying code. Additionally, students will explore career opportunities in the programming, robotics and automation industries. Students wishing to pursue more advanced skills in coding and robotics beyond this course should consider completing one of the high school credit STEM programs of study (Programming & Software Development, Robotics, or Engineering). (1/2 Credit)

- 7th or 8th Grade

TEKS
Local Credit - Aligns to portions of ISTE Student Standards and Technology Applications TEKS

Cluster: STEM

Endorsement: Business & Industry

- Meets advanced course requirement (Y/N): N
- Meets foundation requirement for math, science, fine arts, English, LOTE (Y/N-area): N

Industry Certification/Credentials: N/A

Instructional Units	Pacing
1. Getting Started with SPIKE Prime 2. Robot Movement with SPIKE Prime 3. Sensors with SPIKE Prime 4. Loops with SPIKE Prime	1st grading pd
5. Discrete Decisions with SPIKE Prime 6. Continuous Decisions with SPIKE Prime 7. Capstone: Subterranean Challenge with SPIKE Prime 8. Career/Course Research	2nd grading pd

Primary Instructional Materials:

CS-STEM Coding and Computation Thinking with LEGO SPIKE Prime that has been modified for CFISD teachers and students. The curriculum is available to all teachers through Schoology.