CTE Intro to Robotics

PS 1 Describe characteristics of robots and explain/use NXT components.

PS 2 Build robotic circuits and run robotics programs.

PS 3 Understand the roles of hardware, software, and firmware, and how they interact in the NXT.

PS 4 Program a robot for precise forward and reverse motion.

PS 5 Build robot that responds to light and sound.

PS 6 Calculate and use gear ratios to optimize robot performance.

PS 7 Build robots capable of precision maneuvers, including moveable appendages.

PS 8 Plan and develop linear programs.

PS 9 Build robots that respond to touch and their proximity to objects.

PS 10 Plan and develop programs with repeating behaviors (loops).

PS 11 Build robots that make binary decisions based on sensory input.

PS 12 Plan and develop branching programs with switch blocks nested inside loops.

PS 13 Describe health and safety procedures in a NXT robotics lab.

PS 14 Identify STEM careers and pathways.

PS 15 9-10.RST.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.

PS 16 9-10.RST.7 Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

PS 17 9-10.WHST.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

PS 18 9-10.WHST.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation