

Nebraska CS Standards Alignment with Python with Robots Curriculum

| | Unit 1 | Unit 2 | Unit 3 | Unit 4 |
|--------------------------------------------------------------------------------------------------------|--------|--------|--------|--------|
| HARDWARE/SOFTWARE | | | | |
| Demonstrate an understanding of the relationship between hardware and software. | | | | |
| Troubleshoot basic hardware and software problems. | | | | |
| Identify major computer components. | | | | |
| Describe the components and functions of computers and networks. | | | | |
| Apply strategies for identifying and solving routine problems that occur during everyday computer use. | | | | |
| COMPUTATIONAL THINKING | | | | |
| Create algorithms, or series of ordered steps, to solve problems. | | | | |
| Decompose a problem into smaller more manageable parts. | | | | |
| Collect, analyze, and represent data effectively. | | | | |
| Demonstrate and understanding of how information is represented, stored, and processed by a computer | | | | |
| Optimize an algorithm for execution by a computer. | | | | |
| Create simulations/models to understand natural phenomena and test hypotheses. | | | | |
| Evaluate algorithms by their efficiency, correctness, and clarity. | | | | |
| PROGRAMMING | | | | |
| Write programs using visual (block-based) programming languages (scratch, code.org). | | | | |
| Create and modify animations, and present work to others. | | | | |
| Write programs using text-based programming languages. | | | | |
| Create web pages with a practical, personal, and/or societal purpose. | | | | |