

## Appendix A: Professional Standards

### CSTA Standards for Teachers, Standard 1 (CS Knowledge and Skills):

#### CSE 6013

|   | Standard # | Element  |
|---|------------|--|
| x | 1a         | Apply CS Practices: Apply CS and computational thinking practices in flexible and appropriate ways. Practices include: Fostering an Inclusive Computing Culture, Collaborating Around Computing, Communicating About Computing, Recognizing and Defining Computational Problems, Developing and Using Abstractions, Creating Computational Artifacts, and Testing and Refining Computational Artifacts.  |
| x | 1b         | Apply knowledge of computing systems: Apply knowledge of how hardware and software function to input, process, store, and output information within computing systems by analyzing interactions, designing projects, and troubleshooting problems.   |
|   | 1c         | Model networks and the Internet and apply security practices: Model how computing devices connect via networks and the Internet to facilitate communication, explain tradeoffs between usability and security, and apply security measures.  |
| x | 1d         | Use and analyze data: Collect, store, transform, and analyze digital data to better understand the world and make more accurate predictions.   |
| x | 1e         | Develop programs and interpret algorithms: Design, implement, debug, and review programs in an iterative process using appropriate CS tools and technologies. Interpret algorithms, and explain tradeoffs associated with different algorithms.  |
|   | 1f         | Analyze impacts of computing and introduction of current CS subjects: Analyze how people influence computing through their behaviors, cultural norms, and social interactions, as well as how computing impacts society in both positive and negative ways. Describe or explore computing technologies such as artificial intelligence, cybersecurity, machine learning, augmented/virtual reality, or other current or evolving subjects in CS. |