January 26, 2023

Ryan Walters
Superintendent of Public Instruction
Oklahoma State Department of Education
2500 N. Lincoln Blvd.
Oklahoma City, OK 73105

RE: Oklahoma Academic Standards for Computer Science

Tulsa Regional STEM Alliance (TRSA) sits at the intersection of community partnerships, nonprofits, industry, and workforce development initiatives, and PK-20 school systems shaping, creating, and supporting high-quality STEM education for all. TRSA coordinates, strengthens, and directly provides opportunities, possibilities, and resources for educators and students in science, mathematics, engineering, and computer science across the Tulsa region. Therefore, we have a vested interest in the quality of STEM education—including computer science education—so that Oklahoma students are given the best chance to design and build computational artifacts throughout their PK-12 education.

Oklahoma students deserve access to nationally competitive opportunities in computer science as defined by the Oklahoma Academic Standards. TRSA supports the proposed 2023 academic standards for computer science for adoption by the Oklahoma State School Board and Legislature. Academic standards are just one critical aspect of the ecosystem that promotes excellence in Oklahoma's education, and we would be remiss to not point out that a strong educational landscape will only ever be possible when world-class standards, sufficient funding, competitive teacher pay, empowered local leadership, mutual respect, high-quality curriculum, access to resources, and internal accountability systems are championed by the state of Oklahoma. We appreciate that the Oklahoma State Department of Education has served as that champion and look forward to your leadership in this regard.

To the extent that academic standards can impact learning outcomes for Oklahoma students, those standards must have focus, coherence, and clarity. Excellent standards must **focus on the content and practices known to develop computationally literate students** use to fully engage in a data-rich and interconnected world. They must carefully weave a **connected progression** of content, including Computing Systems, Networks and the Internet, Data Analysis, Algorithms and Programming, and Impacts of Computing, along with critical practices like Collaborating, Communicating, Creating, Creating Abstractions, Defining and Testing Solutions, and Considering the Users. And the standards must be designed so teachers, curriculum developers, leaders, and knowledgeable community members can have a **clear understanding** of what the student should be expected to do and understand. On each matter, the 2023 draft of the Oklahoma Academic Standards for Computer Science has made improvements compared to the 2018 version.

TRSA understands the enduring challenge of preparing students for the ever-evolving workforce is inextricably linked to the competence and confidence our education system instills in them. They should be provided many opportunities to learn and apply computer science knowledge and practices as they prepare for their post-secondary endeavors. For the first time in our state's history, the proposed standards explicitly include the Computer Science Practices, which is a great advancement for the discipline and sure to impact the extent to which the discipline is conceived as more than just coding, but it is about working together to solve problems faced by our neighbors, families, and communities. We commend you for prioritizing this new development!

As a member of the Computer Science Standards Revision Executive Committee, I am personally pleased to support the proposed standards for consideration and approval by the Oklahoma State Board of Education and the Oklahoma Legislature. As the Executive Director of TRSA, I additionally support the revisions and believe they represent a consistent view for computer science with the fine-tuning needed to set our students and educators up for success.

Sincerely,

Levi J. Patrick, M. Ed.
Executive Director