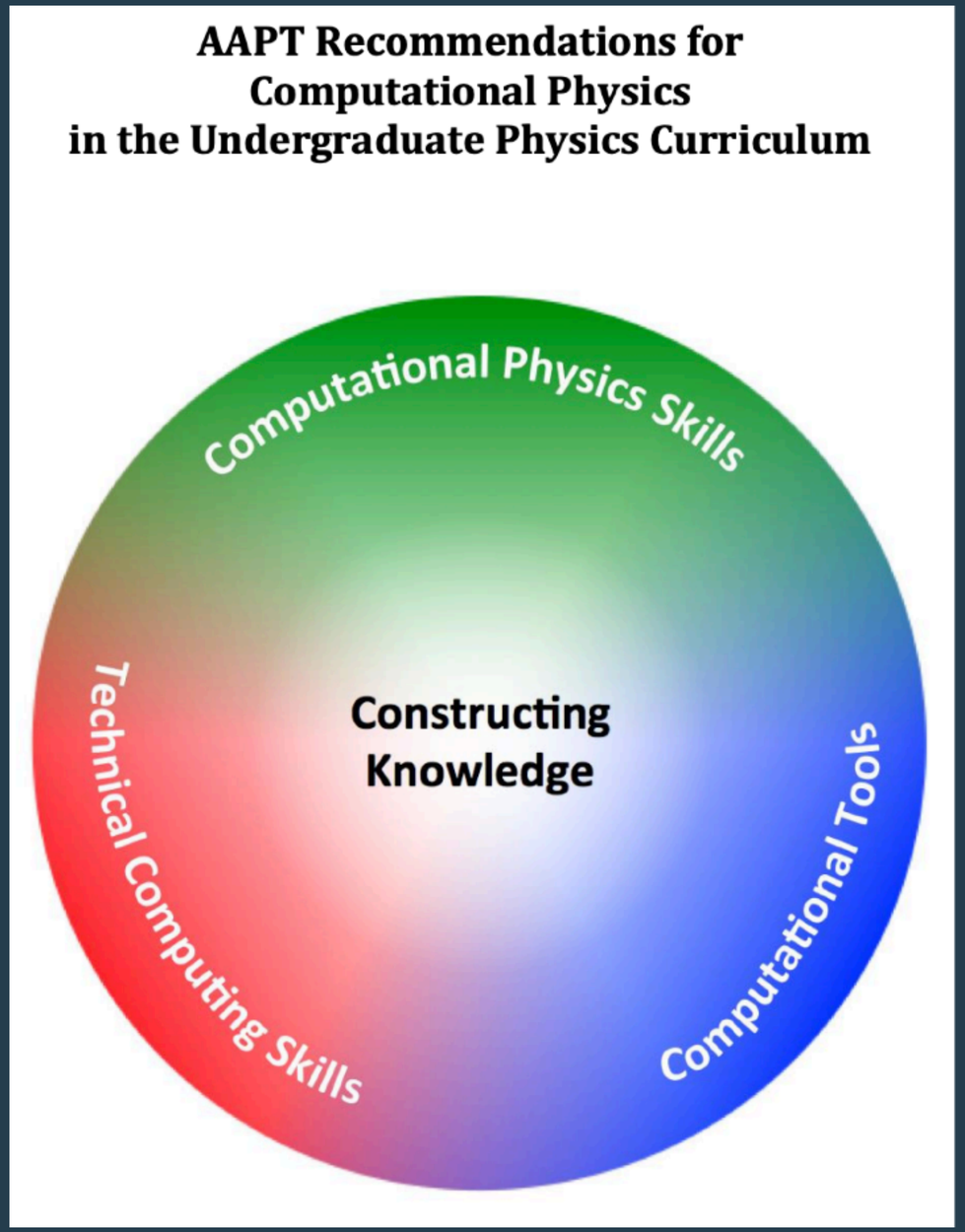


*https://www.aapt.org/resources/upload/aapt_uctf_compphysreport_final_b.pdf*

# What should students know and be able to do with computing in physics?

Computational Physics Skills
Translate a model into code
Subdivide a model into a set of manageable computational tasks

Technical Computing Skills
Process data
Represent data visually

Computational Tools
Spreadsheets
MATLAB, Mathematica
Python, C, Fortran

# 2019 K12 Computing in Science Visioning Report

Integration of computation must **emphasize values native to the discipline in which computing is being integrated** and demonstrate a clear alignment with existing standards

Educational leaders need to **recognize that relevant computing content differs across the sciences**, ruling out a “one size fits all” notion of integrating computing in science.

**Diversity, Equity and Inclusion must be built into all efforts** to integrate computation with science education.

K-12 teachers need **sustained professional development and support** to learn and teach science while leveraging computing.

**Research is needed** to understand and assess computational integration. There are **relatively few theories of how computation impacts science learning.** There are also **very few useful assessments** for charting progress.

*https://www.aapt.org/Resources/upload/Computational_Thinking_Conference_Report_Final_200212.pdf*