

# 8th Grade Technology Pacing Guide

Weeks	Unit Title	Focus & Objectives
1–6	<b>Unit 1: Systems &amp; User Experience</b>	<ul style="list-style-type: none"><li>● recommend improvements to computing devices</li><li>● design hardware-software systems</li><li>● justify design decisions and trade-offs</li><li>● apply systematic troubleshooting</li></ul>
7–12	<b>Unit 2: Networking, Protocols &amp; Security</b>	<ul style="list-style-type: none"><li>● Model packet-based information transmission;</li><li>● role of protocols</li><li>● explain network security systems and hardware/software/practice interplay</li><li>● analyze responses to malware incidents</li></ul>
13–18	<b>Unit 3: Data Management &amp; Computational Models</b>	<ul style="list-style-type: none"><li>● collect/transform data</li><li>● clean errors</li><li>● distinguish bit-level storage vs. display</li><li>● analyze/refine climate change models</li></ul>
19–24	<b>Unit 4: Algorithms &amp; Structured Programming</b>	<ul style="list-style-type: none"><li>● design algorithms with flowcharts/pseudocode</li><li>● develop modular programs using variables, nested loops, compound conditionals, and procedures</li></ul>
25–30	<b>Unit 5: Iterative Program Development</b>	<ul style="list-style-type: none"><li>● incorporate existing code/libraries with attribution</li><li>● perform systematic testing/refinement</li><li>● document/debug code collaboratively</li></ul>
31–36	<b>Unit 6: Design Thinking, Ethics &amp; Impact</b>	<ul style="list-style-type: none"><li>● evaluate product design (function, value, aesthetics)</li><li>● apply the design process</li><li>● prototype real-world solutions</li><li>● assess trade-offs, sustainability, bias, accessibility, and societal impacts</li></ul>