

NC.DLS.CT.5

Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

| DLS Articulation | | DLS Indicator Samples |
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| NC.DLS.CT.5.a | Students formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions. | <ul style="list-style-type: none">• Students practice breaking down complex tasks, using digital organization tools, to make a process manageable and easily communicated.• Students create graphical representations of data using digital graphing tools and analyze the data shown.• Students build computational codes to respond to commands. |
| NC.DLS.CT.5.b | Students collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making. | <ul style="list-style-type: none">• Students use computational thinking (e.g., step-by-step thinking or directions) to solve problems and make decisions.• Students analyze data collected to determine if patterns or trends are present.• Students use digital tools to segregate data and identify patterns they represent in a variety of graphics, tables, and images. |
| NC.DLS.CT.5.c | Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving. | <ul style="list-style-type: none">• Students use digital organization tools to break down a problem into a logical flow.• Students create a project plan timeline and role descriptions for an upcoming group project.• Students design a solution, articulate the biggest challenges to implementation, and reflect on their process. |
| NC.DLS.CT.5.d | Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions. | <ul style="list-style-type: none">• Students create algorithms or a list of ordered steps, to solve a problem or communicate an idea.• Students demonstrate an understanding of logical processes and use reasoning (e.g., if/then statements) to infer and compare solutions, and draw conclusions in a variety of content areas.• Students formulate instructions and use coding to direct a computer-assisted device to complete tasks. |