**2015 ADVENTIST EDUCATION STANDARDS**

Standards, what learners should know (content) and be able to do (skills), serve as the framework for curriculum development. Standards in NAD Seventh-day Adventist schools reflect the Adventist worldview across the K-12 curricula as well as the integration of national and provincial/state standards. The Adventist worldview accepts the Bible as the standard by which everything else is measured. Four key concepts emerge from a biblical worldview that can be used as a lens for curriculum development, as well as informing the essential questions and big ideas of any content area: Creation (What is God’s intention?), Fall (How has God’s purpose been distorted?), Redemption (How does God help us to respond?), and Re-creation (How can we be restored in the image of God?).

* **THE CORE OF ADVENTIST EDUCATION CURRICULUM**

“Of every Christian the Lord requires growth in efficiency and capability in every line…” **( COL 330.4)**

Technology is part of the delivery and practice in every subject area. The technology standards are intentionally designed to give students opportunities to learn about the digital world, to facilitate personalized inquiry, and to prepare for a life of service. The knowledge and skills will extend beyond the classroom to foster lifelong learning so that students can thrive in this changing global society and be contributing, productive citizens while preparing for Christ’s return. The elementary technology standards support:

1. **DIGITAL LEARNING:** To use a range of relevant digital technologies to learn content and demonstrate understanding.
2. **DIGITAL FLUENCY:** To excel in current technology skills, operations, and vocabulary, in support of research, communication, and collaboration with a variety of digital resources.
3. **DIGITAL CITIZENSHIP:** To use digital technology responsibly to improve the online community by respecting self, others, and property.

**STANDARDS CODING**

The standards have been coded so that educators can easily refer to them in their curriculum, instruction, and assessment practices. The coding system that precedes each standard uses the following system of abbreviations:

• All are identified with **T**—Technology (**T**.K-2.DL.1).

• The second part of the code refers to the grade level (T.**K-2**.DL.1).

• The third part of the code refers to the particular technology domain (T.K-2.**DL**.1), with DL standing for Digital Learning.

• The fourth part of the code refers to a particular skill within the domain (T.K-2.DL.**1**).

• Following the standard is the name of the International Standards for Technology in Education (ISTE) primary domain correlation.

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**CREDITS**

The following resources were referenced in developing *Elementary Technology Standards for Seventh-day Adventist Schools*:

International Standards for Technology in Education (ISTE); Computer Science Teachers Association (CSTA); state standards, including Washington and Michigan; NAD technology documents; and the Core of Adventist Education Curriculum.

**ENGINEERING TECHNOLOGY AND APPLICATIONS**

|  |  |  |  |
| --- | --- | --- | --- |
| GRADE | TOPICS | STANDARDS (NGSS ALIGNMENT) | BY DESIGN CHAPTER CORRELATIONBold = included content*Italic* = related content |
| Essential Question: How has God equipped humans to apply knowledge of science to solve problems for the benefit of His Creation? | Big Idea: God designed humans to wonder, question, and develop an attitude of inquiry as scientific principles are applied to the materials and forces of nature for the benefit of His Creation. |
| K‑2 | Engineering Design | S.K‑2.ET.1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. (K‑2‑ETS1‑1) | These performance standards are found in multiple places throughout the By Design program. |
| S.K‑2.ET.2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object functions to solve a given problem. (K‑2‑ETS1‑2) |
| S.K‑2.ET.3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. (K‑2‑ETS1‑3) |
| 3‑5 | Engineering Design | S.3‑5.ET.1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. (3‑5‑ETS1‑1) | These performance standards are found in multiple places throughout the By Design program. |
| S.3‑5.ET.2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. (3‑5‑ETS1‑2) |
| S.3‑5.ET.3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved. (3‑5‑ETS1‑3) |
| 6‑8 | Engineering Design | S.6‑8.ET.1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions. (MS‑ETS1‑1) | These performance standards are found in multiple places throughout the By Design program. |
| S.6‑8.ET.2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem. (MS‑ETS1‑2) |
| S.6‑8.ET.3 Analyze data from tests to determine similarities and difference among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success. (MS‑ETS1‑3) |
| S.6‑8.ET.4 Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved. (MS‑ETS1‑4) |