



A Correlation of the
Science and Technology
for Children™ Curriculum
to the
Dayton Science Course of Study

Prepared by

 **Carolina Biological Supply Company**

Working Together To Be The Most Valued
Teammate Of Every Science Educator

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The following tables are provided to give a quick visual guide to the correlation of the Science and Technology for Children™ (STC™) units of study to the Dayton (Ohio) Science Course of Study. Since there is some flexibility in grade level placement with the STC units, we suggest that you give consideration to units recommended for the grade level above and the grade level below the grade being considered. For example, in Grade 5, units from grades three, four, and five have been used in the correlation. If an enabling skill is met by an STC unit that falls outside the grade range, it is indicated by an asterisk (*). All fourth-grade through sixth-grade unit kits now include a Discovery Deck, a set of extensions for the unit. When the Discovery Deck meets or helps to meet an enabling skill, the abbreviation DD will follow the unit abbreviation.

Key to STC™ Abbreviations

O Organisms	PGD Plant Growth and Development	Mw Microworlds
W Weather	RM Rocks and Minerals	E Ecosystems
SL Solids and Liquids	CT Chemical Tests	FC Food Chemistry
CM Comparing and Measuring	So Sound	FS Floating and Sinking
LCB The Life Cycle of Butterflies	AS Animal Studies	EP Experiments with Plants
S Soils	LW Land and Water	MT Measuring Time
C Changes	EC Electric Circuits	MM Magnets and Motors
BW Balancing and Weighing	MD Motion and Design	TP The Technology of Paper
DD Discovery Deck		

Recommended Grade Levels for STC™ Units

The National Science Resources Center (NSRC) recommends that an STC unit not be moved up or down more than one grade level from these recommendations.

1 st				2 nd				3 rd			
O	W	SL	CM	LCB	S	C	BW	PGD	RM	CT	So
4 th				5 th				6 th			
AS	LW	EC	MD	Mw	E	FC	FS	EP	MT	MM	TP

V0002

Grade 5

Habits of the Mind	
Objective A01. To develop a positive attitude and excitement toward learning science and develop confidence in one's ability to do and understand science.	
Enabling Skills	STC Unit(s)
01. Ask divergent questions and begin to investigate.	All STC units
02. Request data before accepting a hypothesis.	All STC units
03. Approach scientific experiences with confidence.	All STC units
04. Formulate questions which are answered by simple experiments.	All STC units
05. Participate in a science investigation team to resolve teacher facilitated problems.	All STC units
06. Identify self as a problem solver.	All STC units
07. Discuss recent political issues involving science, for opposing viewpoints.	E, E DD
08. Keep record of observations and investigations.	All STC units
09. Use data to describe what happens in the investigations.	All STC units
10. Perform selected group roles and responsibilities.	All STC units
11. Design and perform, in groups or individually, an experiment which can be tested.	AS, LW, EC, MD, E, EP, MT, MM, TP
12. Is open-minded and willing to modify opinions based on evidence.	All STC units
13. Exhibit safe and appropriate techniques for using science equipment.	All STC units
Nature of Science	
Objective B01. To investigate and interpret information to explore scientific phenomena.	
Enabling Skills	STC Unit(s)
01. Observe, classify, and analyze using scientific equipment (e.g., balances, weights, cylinders, test tubes, microscopes and hand lens).	All STC units
02. Recognize, generate, and state alternatives, hypotheses, and theories.	All STC units
03. Conduct experiments while controlling variables.	E, EP, MT, MM, TP
04. Describe complex objects by observing their essential characteristics. (Example: choose three unique identifying characteristics of a root, crystal, seed, etc.)	AS, LW, EC, EC DD, MD, MD DD, Mw, Mw DD, E, FC, FS, FS DD, EP, MT, MT DD, MM, MM DD, TP, TP DD
05. Choose and use appropriate tools to develop a model.	LW, MD, MT
06. Verify observations of the characteristics of living and non-living things. (Observe similarities and differences.)	AS, Mw, E, EP

07. Identify objects within a system and their interactions. (Example: use electric circuits, rockets, furnaces and thermostats, list the objects in each system and identify the way they interact.)	AS, LW, EC, EC DD, MD, MD DD, Mw, Mw DD, E, FS, FS DD, EP, EP DD, MT, MT DD, MM, MM DD, TP, TP DD
08. Identify inferences during a hands-on experience. (Example: compare a block of wood and a block of plastic of the same size and infer the objects weigh the same.)	AS, LW, EC, MD, E, FC, FS, EP, MT, MM, TP
09. Distinguish inferences from observations. (Example: given a set of objects and statements about them, identify statements which are observational facts from references, observe the ground is wet and infer that it rained last night.)	
10. Classify items by putting them together on the basis of more than a single characteristic at a time.	MM
11. Observe phenomena and make predictions.	All STC units
12. Make predictions based on recorded data.	All STC units
13. Use data from graphs to make predictions.	MD, FS, EP, MT, MM
14. Practice measuring length, weight, and volume by comparison to a standard unit of measure. (U.S., metric)	AS, LW, MD, Mw, E, FS, EP, MT, TP
15. Explore and describe the use of a technical device.	EC, MD, Mw, FS, MT, MM, TP
16. Gather and evaluate information related to science topics from multiple sources.	All Discovery Decks
17. Choose the most appropriate unit and measuring device for a given observation. (Example: given a meal worm race, decide how to measure the distance.)	E, EP, MT, MM

Scientific Knowledge

Objective C01. To acquire knowledge and investigate the physical universe and the biological environment to interpret the world.

Enabling Skills	STC Unit(s)
01. Investigate various properties of groups of objects and organisms.	AS, AS DD, LW, LW DD, EC, EC DD, MD DD, Mw, Mw DD, E, E DD, FC, FS, FS DD, EP, EP DD, MT, MT DD, MM, MM DD, TP, TP DD
02. Investigate the structure and function of organisms. (tissues, organs)	AS, AS DD, Mw, Mw DD, E, E DD, FS DD, EP, EP DD
03. Investigate and describe traits living things receive from parents.	AS, AS DD, EP, EP DD
04. Identify organisms by their characteristics, adaptations, and life cycles.	AS, AS DD, Mw, Mw DD, E, E DD, EP, EP DD
05. Analyze the impact of human activity on the ecosystems of the earth.	LW, Mw DD, E, E DD, EP DD

06. Investigate the consequences of changes in roles and contributions of various components of technological, social, and ecological systems.	EC, MD, E, MT, MM
07. Investigate the diversity of methods by which living things meet their needs (e.g., food, shelter, protection, respiration).	AS, AS DD, Mw, Mw DD, E, E DD, EP, EP DD
08. Recognize that all things use or are produced by energy.	AS, EC, EC DD, MD, MD DD, Mw, Mw DD, E, E DD, FC, FC DD, EP, EP DD, MT, MT DD, MM, MM DD
09. Distinguish among energy resources (renewable and non-renewable, national resources).	LW DD, EC DD, MM DD
10. Investigate the impacts of various forms of mechanical and electromagnetic waves on various organisms and objects.	MM, MM DD
11. Explore how light interacts with matter.	Mw, Mw DD, TP
12. Investigate the transmission, transformation, and conservation of various forms of energy through biological and physical systems (e.g., electricity, weather, agriculture).	EC, EC DD, MD, E, FC, FC DD, MT, MT DD, MM, MM DD
13. Investigate easily measured distances and rates of change and their implications in technical and natural systems.	LW, MD
14. Observe a physical change and develop and test a relevant “what if” question.	TP
15. Investigate the regularity of motion found in the interactions in the solar system (e.g., seasons, tides, planets, moons).	MT, MT DD
16. Investigate the composition and level of organization of objects (e.g., crystals, minerals, rocks).	LW, LW DD, EC, EC DD, MD, MD DD, FC, MT, MT DD, MM, MM DD, TP, TP DD
17. Explore the content and structure of the universe (e.g., observe distant objects, sun, and stars by the light they produce).	
18. Compare and contrast the formation and classification of rocks and minerals.	RM*
19. Describe and explore the history of the earth and the processes that shaped the earth’s present features. (weathering changes in land, changes within the earth, water, ice, and wind change in the land, rocks, sedimentary, igneous, metamorphic)	LW, LW DD
20. Describe and identify the physical processes of fresh and salt-water environments (tides, waves, currents, rivers, streams, and lakes).	E?
21. Select consumer products based on performance evaluations using appropriate criteria (e.g., nutrition, safety, energy, consumption, environmental impact).	E, E DD, FC, FC DD, TP, TP DD

Individual Perspectives	
Objective D01. To acquire scientific and technological knowledge to make evidence-based decisions.	
Enabling Skills	STC Unit(s)
01. Identify and describe careers in science.	AS, LW, EC, MD, Mw, E, FC, FS, EP, MT, MM, TP, all Discovery Decks
02. Explain how science is an integral part of other careers (e.g., beautification, landscape, architecture, law enforcement).	LW, LW DD, EC DD, MD, MD DD, Mw DD, E, E DD, FC, FC DD, FS, FS DD, EP DD, MT, MT DD, MM, TP, TP DD
03. Give examples of non-science careers that utilize science and technology.	LW, LW DD, EC DD, MD, Mw DD, E, E DD, FC, FC DD, FS, FS DD, EP DD, MT, MT DD, MM, TP, TP DD
04. Discuss controversial issues in science giving opinions (e.g., space explorations, environmental issues, nuclear reactors, endangered species).	E, E DD
05. Investigate future scientific endeavors.	
06. Recognize that scientific knowledge, thinking processes, and skills are used in a great variety of careers. (Example: develop interview questions and then conduct an interview of a person involved in a scientific field.)	All STC units and Discovery Decks
07. Recognize that specific careers are not unique to gender, culture, or ethnicity. (Example: interact with individuals in non-traditional careers.)	All Discovery Decks feature scientists from different genders, cultures, and ethnicities.
Societal Perspectives	
Objective E01. To explore and investigate the interrelationships among science, technology, society, and the environment.	
Enabling Skills	STC Unit(s)
01. Identify societal needs that have precipitated advancements in science and technology.	EC, MD, Mw DD, E, E DD, FC, FC DD, FS, FS DD, EP DD, MT, MT DD, MM DD, TP, TP DD
02. Conduct simple group investigations using community resources. (Example: conduct a survey of hazardous conditions in the home; e.g., hazardous waste, smoke detectors, etc.)	Mw, FS, TP
03. Make decisions related to personal health, nutrition, and lifestyle based upon knowledge of scientific concepts.	EC, E, EC DD, FC, FC DD, EP DD, MT, MT DD, MM
04. Analyze how technological developments affect the quality and standard of life.	EC DD, MD DD, Mw DD, E, E DD, FC DD, FS DD, MT DD, MM DD, TP DD
05. Distinguish between science and technology but recognize that an interrelationship exists.	

History of Science

Objective F01. Recognize that scientific contributions have been made by people of different genders, racial and ethnic groups, and from different countries.

Enabling Skills	STC Unit(s)
01. Identify women, minority, eastern, and western people who have made significant contributions to science.	AS DD, MD DD, Mw, E DD, FS DD, EP, EP DD, MM
02. Examine differences in equipment used by scientists in the past.	Mw, Mw DD, MT, MT DD, TP, TP DD
03. Relate the data gathered using early telescopes to data obtained from the Explorer or Galileo probes.	
04. Trace historical developments in science and technology to contemporary counterparts.	MD DD, Mw, Mw DD, MT, MT DD, MM, TP, TP DD