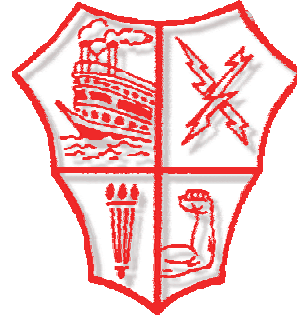


# OHIO ACADEMIC CONTENT STANDARDS TECHNOLOGY STANDARDS

Adopted from the Ohio Department of Education



## Grade 2

*New Richmond Exempted Village School District*

### Grade 2

Academic Correlation

#### Standard 1 ~ Nature of Technology

##### Benchmark A: Recognize the characteristics and scope of technology.

1. Contrast between characteristics that separate the natural and human-made designed world (e.g., appearance, structure, material).
2. Describe and give examples of how people use tools and processes to solve problems (e.g., using a knife to make a peanut butter sandwich, or using a measuring cup while following a recipe to make a cake).
3. Recall common terms, facts and basic concepts relative to technology.

##### Benchmark B: Describe and give examples of technology's core concepts: systems, resources and processes.

1. Identify and explain that systems have parts or components such as processes and controls that work together to accomplish a goal (e.g., to heat food in a microwave oven, electricity is generated and transmitted, temperature and cook time is controlled).
2. Identify the various component parts of familiar systems and articulate the goals that are accomplished with them (e.g., in a plumbing system, pipes deliver water, the faucet controls the flow).
3. Describe, identify and demonstrate appropriate systematic planning strategies in order to complete a task (e.g., steps required to bake cookies, how to complete a class project).

<b>Benchmark C: Describe the relationships among technologies, and the connections between technology and other fields of study.</b>	
1. Explore the use of technology in different fields of study (e.g., school subjects, careers, and technologies common to them).	
2. Describe how problems lead to invention and innovation (e.g., the invention and development of ear-muffs).	2 Sci -ST1
<b>Standard 2 ~ Technology and Society Interaction</b>	
<b>Benchmark A: Identify responsible citizenship relative to technology and its use.</b>	
1. Discuss how making products meets our needs and wants.	
2. Give examples of how the use of tools and machines can be helpful and/or harmful.	
<b>Benchmark B: Recognize that technology has an interrelationship with the environment.</b>	
1. Explain ways people can control pollution.	
2. Classify and differentiate among materials that can be reused and/or recycled.	
<b>Benchmark C: Describe and demonstrate how technology has had an influence on our world.</b>	
1. Demonstrate and give examples of how technology has changed the way people lived and worked throughout history.	
<b>Benchmark D: Collect information about products and discuss whether solutions create positive or negative results.</b>	
1. Collect information about everyday products and systems by asking questions (e.g., when on a field trip ask how things work).	
2. Determine if the human use of a product or system creates positive or negative results (e.g., discuss the use of technology in the news).	
<b>Standard 3 ~ Technology for Productivity Applications</b>	
<b>Benchmark A: Understand basic computer and multimedia technology concepts and terminology.</b>	
1. Identify and describe the purpose of various types of computer and multimedia technology (e.g., what is it and what does it do).	
2. Use correct terminology when talking about computers and multimedia technology.	
3. Know that software is necessary to operate computer technology.	
4. Use a variety of computer and multimedia technology resources for directed learning activities (e.g., computer, VCR/DVD player, audio player, camera).	
<b>Benchmark B: Demonstrate operation of basic computer and multimedia technology tools.</b>	
1. Demonstrate proper care of computer and multimedia technology resources.	
2. Identify and use input and output devices to operate and interact with computers and multimedia technology resource e.g., scanner, digital camera, video camera).	
3. Use proper keyboarding techniques (e.g., placing their fingers on home row keys).	
4. Demonstrate problem-solving skills within a software application.	

5. Develop a slide show presentation with teacher assistance (e.g., small groups work together to create slides or hypermedia products).	
<b>Benchmark C: Use productivity tools to produce creative works.</b>	
1. Use productivity tools with teacher assistance (e.g., word processing, presentations, drawing programs).	
2. Use technology resources with teacher assistance for communication and illustration of thoughts and ideas (e.g., creative stories, drawings, presentations, publication software).	
<b>Standard 4 ~ Technology and Communication Applications</b>	
<b>Benchmark A: Investigate the nature and operations of communication systems.</b>	
1. Use media to view information.	
2. Participate in the creation of media products (e.g., use appropriate communication tools with teacher assistance).	
<b>Benchmark B: Explore how information can be published and presented in different formats.</b>	
1. Use graphic organizers to plan a presentation (e.g., graphic organizing, charting or mapping software).	2-LA- R5
2. Compare digital graphic images used to portray a topic (e.g., students are given images on the same topic from two different sources and explain why one may be better for the assignment than another).	
3. Present information in an electronic format, including text, graphics or multimedia; write and illustrate a story based on writing prompt, slide show or photo album.	
4. Compose class e-mail (e.g., each student has an opportunity to contribute ideas for e-mail messages related to their studies).	
<b>Benchmark C: Participate in group projects and learning activities using telecommunications.</b>	
1. Use e-mail to share information in a teacher-directed group e-mail activity (e.g., comparing class information with another class at a remote location).	
2. Participate in telecommunication sessions (e.g., e-mail, video conferencing, phones, interact with other classes in teacher-directed online project).	
<b>Standard 5 ~ Technology and Information Literacy</b>	
<b>Benchmark A: State what information is, and show where it can be found.</b>	
1. Tell about the purposes for information use (e.g., information is helpful to solve problems, find answers, learn).	
2. Distinguish between fact and fiction (e.g., discuss and compare fact-based document about a topic with a story about the same topic).	
<b>Benchmark B: Use a simple research process model which includes deciding what to use, finding resources, using information and checking work to generate a product.</b>	
1. Discuss the question assigned by the teacher and where the information might be found.	
2. Use the online library catalog to locate information sources by title, author or subject.	2-LA-R-2,3
3. Select needed information from teacher-selected Web sites, electronic encyclopedias and other electronic collections.	2-LA-R-4

4. Record and organize information to generate a product.	2-LA-R-5
5. Give credit to the sources used for work by listing the author and the name of the source.	
6. Tell how information was found.	
<b>Benchmark C: Apply basic browser and navigation skills to find information from the Internet.</b>	
1. Demonstrate the use of browser elements including the toolbar, buttons, favorites or bookmarks, and tell their function.	
2. Search for information in an online encyclopedia using a topical search (e.g., choose from a list of topics, moving from broad (animals) to more specific (panda)).	
3. Read information from a Web site assigned by teacher and identify the name and topic of the Web site.	
<b>Standard 6 ~ Design</b>	
<b>Benchmark A: Identify problems and potential technological solutions.</b>	
1. Demonstrate how design is a creative process (e.g., each student brings in an old (pre-owned) toothbrush and look at the differences).	
2. Describe how experience has helped in solving a new problem (e.g., painting skills can be applied to different materials).	
3. Brainstorm multiple solutions to problems to be solved by the design process (e.g., how to transport a piece of paper (turning in an assignment) across the classroom).	
4. Plan, construct and evaluate a model to test a problem's solution (e.g., to harness wind energy, build a model windmill).	
<b>Benchmark B: Understand that changes in design can be used to strengthen or improve an object.</b>	
1. Describe a situation where a technology failed because it was not strong enough.	
2. Recognize that when weaker materials are combined together they become stronger (e.g., one thread is easy to break, but combined into a rope they are strong).	
3. Distinguish the engineering design process elements of identifying a problem, looking for ideas, developing solutions, and sharing solutions with others.	2-Sci-SI-10
4. Describe why expressing ideas to others verbally and through sketches and models is an important part of the design process (e.g., an architect needs to describe a building to the customer, the builder, and to the city building code officials).	
<b>Benchmark C: Explore how products are invented and repaired.</b>	
1. Identify famous inventors and products available today based on their inventions.	2-SS-PS-4
2. Describe something that you think should be invented (e.g., an airplane kids can pilot, a doll that can jump rope).	

## Standard 7 ~ Designed World

### Benchmark A: Develop an understanding of the goals in physical technologies.

1. Describe various ways energy can be conserved (e.g., limiting the number of times the refrigerator/freezer doors are opened; not leaving the water running while brushing your teeth).

2. List job titles that are in the technological system of energy and power technologies (e.g., auto mechanic, electric, lineperson, coal miner).

3. Understand that transportation vehicles need to be cared for to prolong their use (e.g., scheduled maintenance on cars).

4. List job titles that are in the technological system of transportation technology (e.g., driver, pilot, captain, attendant, reservations agent).

5. Explain that manufactured products are designed.

6. List job titles that are in the technological system of manufacturing technology (e.g., engineer, machinist, repair person, marketer, industrial designer).

7. Explain how the type of a structure determines how that parts are put together (e.g., bricks, lumber, concrete).

8. List job titles that are in the technological system of construction technology (e.g., carpenter, architect, building inspector, bulldozer operator, plumber).

### Benchmark B: Develop an understanding of the goals of informational technologies.

1. Understand that information is data that has been organized (e.g., make a table of data that has been collected).

2. List job titles that are in the technological system of information and communication technologies (e.g., reporter, camera person, printer, newscaster).

### Benchmark C: Develop an understanding of the goals of bio-related technologies.

1. List products designed specifically to help people take care of themselves (e.g., toothbrush, soap, clothing).

2. List job titles that are in the technological system of medical technology (e.g., nurse, doctor, emergency medical technician).

3. Describe how the use of technologies in agriculture makes it possible to conserve resources.

4. List job titles that are in the technological system of agricultural and related biotechnologies (e.g., farmer, picker, bottler, scientist, grocer).