

## Elementary Standards and Benchmarks

There are no benchmarks in the following areas in the Elementary Technology Curriculum:

<u>Standard</u>	<u>Benchmark</u>	<u>Grades</u>
2	3	Kindergarten, Two, Three, Four, Five
4	4	Kindergarten
4	5	Kindergarten
4	6	Kindergarten
5	3	Kindergarten & One
6	3	Kindergarten
6	4	Kindergarten & One
6	5	Kindergarten & One
6	6	Kindergarten & One
6	7	Kindergarten & One

# Technology - Kindergarten

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

## Benchmark 1: Recognize technology in the home.

**MCF Benchmark:** 1.EE.1

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### Analysis of Benchmark

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#### Key Concepts

- Electronic technology exists in the home.

#### Evidence of Achievement

- The student will recognize telephone, radio, television, security, computer, electronic, and internet communication systems.

#### Instructional Activities

- The teacher will discuss types of technology in the home.
- The teacher will show examples of different types of technology.
- The student will list technological devices and systems in the home.

#### Curriculum Integration

SCI:MCF I.1.E.5 II.1.E.3

SOC:MCF II.1.EE.1 II.2.EE.1,2

#### Resources

Appendix: Standard Classroom List

## Assessment

<b>Title of Task:</b> Technology in the Home		<b>Grade:</b> Kindergarten	
<b>Standard &amp; Benchmark:</b> TEC.1.EE.1,2,3			
<b>Assessment Task</b>			
Students will describe the basic functions of electronic devices.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Oral questioning</li> <li>● Enactment</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students describe the electronic devices in their home and how they work.</p> <p>Students enact/role-play the use of a two-way communication device.</p>	

# Technology - Grade One

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

## Benchmark 1: Identify technology in the home.

**MCF Benchmark:** 1.EE.1

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### Analysis of Benchmark

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#### Key Concepts

- Electronic technology exists in the home.

#### Evidence of Achievement

- The student will describe the basic functions of telephone, radio, television, computer, electronic, and internet communication systems.

#### Instructional Activities

- The teacher will discuss types of technology in the home.
- The teacher will show examples of different types of technology.
- The student will list technological devices and systems in the home.
- The student will explore technological devices and systems.

#### Curriculum Integration

SCI:MCF I.1.E.5 II.1.E.3

SOC:MCF II.1.EE.1 II.2.EE.1,2

#### Resources

Appendix: Standard Classroom List

#### Assessment

See TEC.1.EE.1 (Kindergarten)

## Assessment

<b>Title of Task:</b> Technology in the Home		<b>Grade:</b> One	
<b>Standard &amp; Benchmark:</b> TEC.1.EE.1,2,3			
<b>Assessment Task</b>			
Students describe the basic functions of electronic devices.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Oral questioning</li> <li>● Enactment</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		<p>Students describe the electronic devices in their home and how they work.</p> <p>Students enact/role-play the use of a two-way communication device.</p>	

# Technology - Grade Two

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Benchmark 1: Identify how technology impacts a person's life.**

**MCF Benchmark:** 1.EE.1

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### Analysis of Benchmark

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#### Key Concepts

- There are different forms of technology.
- Technology makes our life easier.

#### Evidence of Achievement

- Students will discuss common uses of technology in daily life.
- Students will state advantages and disadvantages of using technology.

#### Instructional Activities

- The teacher will create questions and model the interview process.
- Students will interview a parent about changes in technology during their life.
- Students will present their findings during the classroom discussion.

#### Resources

Teacher created document of questions.

## Assessment

<b>Title of Task:</b> Using and Transferring		<b>Grade:</b> Two	
<b>Standard &amp; Benchmark:</b> TEC.1.EE.1,2,3			
<b>Assessment Task</b>			
Students learn to apply technology skills in their lives.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Careers</li> <li>● Model appropriate care</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students create a collage project showing examples of careers in technology.</p> <p>Sudents model appropriate care of equipment and software.</p>	

# Technology - Grade Three

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Benchmark 1: Identify how technology impacts a person's life.**

**MCF Benchmark:** 1.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- There are different forms of technology.
- Technology makes our life easier.

#### Evidence of Achievement

- Students will discuss the common uses of technology in daily life.
- Students will state the advantages and disadvantages of using technology.

#### Instructional Activities

- The teacher will talk about the steps involved in conducting an interview.
- Students create questions and instructor models interview.
- Students will interview someone older than their parent about changes in technology during their life.
- Students will orally present their findings to the class.

#### Curriculum Integration

ELA:MCF 8.LE.5

SCI:MCF I.1.E.5 II.1.E.3

SOC:MCF II.1.LE.2 V.1.LE.1

#### Resources

Appendix: Grade Three – Standard 1

## Assessment

<b>Title of Task:</b> Using and Transferring		<b>Grade:</b> Three	
<b>Standard &amp; Benchmark:</b> TEC.1.LE.1			
<b>Assessment Task</b>			
Students identify how sources of technology can impact their daily lives.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Demonstration</li> <li>● Discussion</li> <li>● Oral presentation</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students demonstrate the appropriate use and care of equipment.</p> <p>Students participate in a discussion of various ways to access information.</p> <p>Students orally present an interview with a subject who has experienced a vast change in technology trends.</p>	

# Technology - Grade Four

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Benchmark 1:** All students will be able to identify changes in technology in the home today and in the past.

**MCF Benchmark:** 1.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- Technology is constantly changing.
- Technology is different today than it was in the past.

#### Evidence of Achievement

- Students will be able to do a worksheet assessing old technology and new technology.

#### Instructional Activities

- Teachers model old technology vs. new technology.
- Students work in a group discussing old technology vs. new technology.
- Students complete a worksheet.

#### Curriculum Integration

ELA:MCF 8.LE.5

SCI:MCF I.1.E.5 II.1.E.3

SOC:MCF II.1.LE.2 V.1.LE.1

#### Resources

Appendix: Grade Four – Standard 1

## Assessment

<b>Title of Task:</b> Change		<b>Grade:</b> Four	
<b>Standard &amp; Benchmark:</b> TEC.1.LE.1			
<b>Assessment Task</b>			
Finish a worksheet showing five distinct changes in technology.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Old technology</li> <li>● Identification</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		<p>Students identify five old forms of technology on a worksheet.</p> <p>Students identify how each technology has changed.</p>	

# Technology - Grade Five

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Grade Level Benchmark 1:** Compare/contrast the impact of technology in the home today and in the past.

**MCF Benchmark:** 1.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- Technology has changed our home.
- There are constant developments in technology that change our life.

#### Evidence of Achievement

- Students will be able to explain the differences in technology between today and the 20<sup>th</sup> Century.
- Students will be able to discuss how technology changes.

#### Instructional Activities

- Teacher will lead a classroom discussion of old technology using photographs and old equipment available.
- Students will use old technology (i.e., typewriter, disk, and other available old equipment) and look at photographs.
- Students will discuss in groups the differences new technology has made in our life.

#### Curriculum Integration

SOC:MCF II.1.LE.2 V.1.LE.1

#### Resources

Appendix: Grade Five – Standard 1

## Assessment

<b>Title of Task:</b> Venn Diagram		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.1.LE.1,2,3			
<b>Assessment Task</b>			
Students create a Venn Diagram comparing and contrasting available urban and rural technologies.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>• Categories</li> <li>• Examples</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students write three available past technologies.</p> <p>Students write three present available technologies.</p> <p>Students write technologies that exist in both past and present.</p>	

# Technology - Kindergarten

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

## Benchmark 2: Recognize technological sources of information.

**MCF Benchmark:** 1.EE.2

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### Analysis of Benchmark

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#### Key Concepts

- Technological systems are sources of information.

#### Evidence of Achievement

- The student will identify different technology-based information sources (e.g., telephone, radio, television, security, computer, electronic, and internet communication systems).

#### Instructional Activities

- The teacher will discuss different technological systems.
- The teacher will demonstrate examples of electronic devices and systems.
- The student will list electronic devices and systems used to process information.

#### Curriculum Integration

ART:MCF IV.1.E.1 IV.2.E.1,6

SCI:MCF II.1.E.3

SOC:MCF V.1.EE.1

#### Resources

Appendix: Standard Classroom List

#### Assessment

See TEC.1.EE.1

# Technology - Grade One

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

## Benchmark 2: Recognize technological sources of information.

**MCF Benchmark:** 1.EE.2

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### Analysis of Benchmark

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#### Key Concepts

- Technological systems are sources of information.

#### Evidence of Achievement

- The student will identify different technological sources of information (e.g., telephone, radio, television, security, computer, electronic, and internet communication systems).
- The student will describe different types of information.

#### Instructional Activities

- The teacher will discuss different technological systems.
- The teacher will demonstrate examples of electronic devices and systems.
- The student will list electronic devices and systems used to process information.
- The student will explore different interactive media; telephones, computers, pagers.
- The student will explore differences in family use of receptive media; radio, television.

#### Curriculum Integration

ART:MCF IV.1.E.1 IV.2.E.1,6

SCI:MCF II.1.E.3

SOC:MCF V.1.EE.1

#### Resources

Appendix: Standard Classroom List

#### Assessment

See TEC.1.EE.1

# Technology - Grade Two

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Benchmark 2:** Recognize technology in related careers within your community.

**MCF Benchmark:** 1.EE.4

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### Analysis of Benchmark

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#### Key Concepts

- Technology is used in the work force.
- It is important to understand what technology is used in different careers.

#### Evidence of Achievement

- Students will identify careers that use technology.
- Students will state the technology used in careers.

#### Instructional Activities

- The teacher will model a completed collage of technology careers.
- The teacher will show individual images from careers using technology.
- The teacher will model how to create a collage.
- Students will create a collage.

#### Resources

Collect pictures from magazines, internet, etc.  
MOIS

#### Assessment

See TEC.1.EE.1

# Technology - Grade Three

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Benchmark 2: Identify and state the impact of information from different technological sources.**

**MCF Benchmark:** 1.LE.2

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### Analysis of Benchmark

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#### Key Concepts:

- Information comes from many sources.
- Information impacts our life.
- Technology makes your life more efficient.

#### Evidence of Achievement:

- Students will identify that information can come from TV, internet, e-mail, cell phone, newspaper, radio, CD/DVD/VCR.
- Students will see the difference in speed between pencil/paper and calculator.
- Students will compare and contrast the rate at which answers to questions can be generated using the internet compared to the library.

#### Instructional Activities:

- The teacher will lead classroom discussion about various ways to access information.
- Students will be placed into groups to demonstrate the efficiency of a calculator compared to pencil/paper.
- Students will answer questions using the internet compared to the library.
- Classroom discussion will follow about the impact of calculators and the internet.

#### Curriculum Integration:

ART:MCF IV.1.E.11 IV.2.E.1, 6

ELA:MCF 8.LE.5

SCI:MCF II.1.E.3

SOC:MCF V.1.LE.1 V.2.LE.2

#### Resources:

Appendix: Standard Classroom List

#### Websites

- <http://www.factmonster.com>

## Assessment

<b>Title of Task:</b> Using and Transferring		<b>Grade:</b> Three	
<b>Standard &amp; Benchmark:</b> TEC.1.EE.2,3			
<b>Assessment Task</b>			
Students learn to apply technology skills in their lives.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Project</li> <li>● Model</li> </ul>			
Beginning	Developing	<b>Achieving</b>	Exceeding
		<p>Students create a collage project showing examples of careers in technology.</p> <p>Sudents model appropriate care of equipment and software.</p>	

# Technology - Grade Four

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Benchmark 2: Identify and state the impact of information from different technological sources.**

**MCF Benchmark:** 1.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- The internet is used to find information.
- Email can be used to gather information from reliable sources.
- Different media center sources provide a variety of information.
- Learn that different sources of information provides different rates of feedback.

#### Evidence of Achievement

- Students will be able to write a research paper using the internet and media center for different sources of information.

#### Instructional Activities

- Teacher will model how to search on the internet.
- Teacher will model how to search information in the media center.
- Students will use the internet and media center to search on their own.
- Students will write a research paper using different sources of information.

#### Curriculum Integration

ART:MCF IV.1.E.11 IV.2.E.1, 6

ELA:MCF 8.LE.5

SCI:MCF II.1.E.3

SOC:MCF V.1.LE.1 V.2.LE.2

#### Resources

Appendix: Grade Four – Standard 1

## Assessment

<b>Title of Task:</b> The Engine		<b>Grade:</b> Four	
<b>Standard &amp; Benchmark:</b> TEC.1.LE.2			
<b>Assessment Task</b>			
Students will complete an essay on facts collected from the internet.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Model</li> <li>● Factual data</li> <li>● Essay</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		<p>Students model using a search engine for the teacher.</p> <p>Students collect five facts on a topic.</p> <p>Students write an informative essay containing five facts on their topic.</p>	

# Technology - Grade Five

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Grade Level Benchmark 2:** Identify and state the impact of information from different technological sources.

**MCF Benchmark:** 1.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- The internet is useful in finding information.
- Different media sources can be used to find information.
- Different sources of information provides different rates of feedback.

#### Evidence of Achievement

- Students will be able to write a research paper using the internet and media center for different sources of information.

#### Instructional Activities

- Teacher will model how to search on the internet.
- Teacher will model how to search information in the media center.
- Students will use the internet and media center to search on their own.
- The students will write a research paper using different sources of information.

#### Curriculum Integration

ART:MCF IV.1.E.11 IV.2.E.1, 6

ELA:MCF 8.LE.5

SCI:MCF II.1.E.3

SOC:MCF V.1.LE.1 V.2.LE.2

#### Resources

Appendix: Grade Five – Standard 1

#### Assessment

See TEC.1.LE.1

# Technology - Kindergarten

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Benchmark 3: Recognize technology and how it is used in the community.**

**MCF Benchmark:** 1.EE.4

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## Analysis of Benchmark

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### Key Concepts

- Technological tools work together.

### Evidence of Achievement

- The student will recognize that telephones connect with other people.
- The student will recognize the internet as a source of information.
- The student will recognize the internet as a source of communication.

### Instructional Activities

- The teacher will discuss and demonstrate how technological tools work together.
- The student will pantomime phone calls.
- The student will use technology to access weather information.

### Curriculum Integration

SCI:MCF II.1.E.3

SOC:MCF I.EE.1 V.2.EE.2

### Resources

Appendix: Kindergarten – Standard 1, Standard Classroom List

### Assessment

See TEC.1.EE.1

# Technology - Grade One

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

## Benchmark 3: Explore technological systems in your community.

**MCF Benchmark:** 1.EE.4

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### Analysis of Benchmark

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#### Key Concepts

- Technological tools work together.

#### Evidence of Achievement

- The student will recognize various forms of two-way electronic communication.
- The student will recognize the Internet as a form of information exchange.

#### Instructional Activities

- The teacher will discuss and demonstrate how technological tools work together.
- The student will access local weather reports, etc.
- The student will conduct an internet search.
- The student will role-play two-way communication technology.

#### Curriculum Integration

SCI:MCF II.1.E.3

SOC:MCF I.EE.1 V.2.EE.2

#### Resources

Appendix: Grade One – Standard 1

#### Assessment

See TEC.1.EE.1

# Technology - Grade Two

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Benchmark 3: Demonstrate the proper care of technological systems and components.**

**MCF Benchmark:** 1.EE.6

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### Analysis of Benchmark

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#### Key Concepts

- There are proper procedures to follow when caring for computer components and software.

#### Evidence of Achievement

- Students will demonstrate ongoing proper care of equipment.

#### Instructional Activities

- Teachers will model appropriate care of equipment and software.
- Teachers will discuss building procedures for proper care with students.
- Students will exercise proper care when using technology equipment.

#### Resources

Computer lab procedures  
Classroom procedures

#### Assessment

See TEC.1.EE.1

# Technology - Grade Three

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Benchmark 3: Demonstrate the proper care of technological systems and components.**

**MCF Benchmark:** 1.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- There are proper procedures to follow when caring for computer components and software.

#### Evidence of Achievement

- Students will demonstrate proper care of equipment.

#### Instructional Activities

- The teacher will model appropriate care of equipment and software.
- The teacher will coordinate the standardization of building procedures for proper care.
- Students will exercise proper caring when using technology equipment.

#### Resources

Computer lab procedures  
Classroom procedures

#### Assessment

See TEC.1.LE.2

# Technology – Grade Four

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Grade Level Benchmark 3:** Compare and contrast available technology of urban and rural communities.

**MCF Benchmark:** 1.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- There are varying available sources of technology in urban and rural communities.

#### Evidence of Achievement

- Students will be able to create a Venn diagram that compares and contrasts technology in urban and rural communities.

#### Instructional Activities

- Teacher should model how to do a Venn diagram.
- Students will discuss the differences between urban and rural communities.
- Students will create a Venn diagram that compares and contrasts urban and rural communities.

#### Resources

Appendix: Grade Five – Standard 1, A5, B5

#### Assessment

See TEC.1.LE.2

# Technology - Grade Five

## Concept: Using and Transferring

**Standard 1:** All students will use and transfer technological knowledge and skills for life roles (i.e., family member, citizen, worker, consumer, lifelong learner).

**Grade Level Benchmark 3: Demonstrate the proper care of technological systems and components.**

**MCF Benchmark:** 1.LE.6

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### Analysis of Benchmark

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#### Key Concepts

- It is critical to take proper care of technological systems.

#### Evidence of Achievement

- Students take proper care of technological systems.

#### Instructional Activities

- Teacher will model the proper care of technological system.
- Students will practice the proper care of technological systems.
- Students will demonstrate the proper care of technological systems.

#### Resources

Appendix: Grade Five – Standard 1

#### Assessment

See TEC.1.LE.1

# Technology - Kindergarten

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

**Benchmark 1:** Input and retrieve information from a technological system (including the practice of word processing skills).

**MCF Benchmark:** 2.EE.1

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### Analysis of Benchmark

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#### Key Concepts

- It is important to understand basic input devices (keyboard, mouse).
- Displayed data on an output device (monitor, etc.) can be used for a variety of purposes.

#### Evidence of Achievement

- The student will demonstrate proper technique in pressing keys, mouse clicking.
- The student will interpret and respond to output display.

#### Instructional Activities

- The teacher will discuss the proper techniques in using input devices.
- The teacher will model appropriate usage technique in classroom activities.
- The student will demonstrate the proper use of input devices in the lab.

#### Curriculum Integration

ART:MCF IV.1.E.1 IV.2.E.1

ELA:MCF 3.EE.2 3.EE.6 11.EE.2

MAT:MCF III.1.E.1,2,3 III.2.E.1,4 III.3.E.1.2

SCI:MCF I.1.E.1,5,6 II.1.E.3

#### Resources

Appendix: Standard Classroom List

## Assessment

<b>Title of Task:</b> Operating the Computer		<b>Grade:</b> Kindergarten	
<b>Standard &amp; Benchmark:</b> TEC.2.EE.1			
<b>Assessment Task</b>			
Students demonstrate the proper technique of operating keys and mouse.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Demonstration of technique</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		Students demonstrate the proper technique in pressing keys and mouse clicking.	

# Technology - Grade One

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

**Benchmark 1:** Input and retrieve information from a technological system (including the practice of word processing skills).

**MCF Benchmark:** 2.EE.1

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### Analysis of Benchmark

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#### Key Concepts

- It is important to understand basic input devices (keyboard, mouse).
- Displayed data on an output device (monitor, etc.) can be used for a variety of purposes.

#### Evidence of Achievement

- Students will demonstrate proper technique in pressing keys, mouse clicking.
- Students will interpret and respond to output display.

#### Instructional Activities

- The teacher will model appropriate use of input devices.
- Students will demonstrate the proper use of input devices in the lab.
- Students will use input devices to communicate ideas.
- Students will have opportunities for editing and publishing work.

#### Curriculum Integration

ART:MCF IV.1.E.1 IV.2.E.1

ELA:MCF 3.EE.2 3.EE.6 11.EE.2

MAT:MCF III.1.E.1,2,3 III.2.E.1,4 III.3.E.1.2

SCI:MCF I.1.E.1,5,6 II.1.E.3

#### Resources

Appendix: Grade One – Standard 2

## Assessment

<b>Title of Task:</b> Introduction to Word Processing		<b>Grade:</b> One	
<b>Standard &amp; Benchmark:</b> TEC.2.EE.1			
<b>Assessment Task</b>			
Students demonstrate the proper technique of keyboarding.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Technique</li> <li>● Model process</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students demonstrate proper technique in pressing keys and mouse clicking.</p> <p>Students model the process to show that they understand the data on the monitor came as a result of their keyboarding actions.</p>	

# Technology - Grade Two

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

**Benchmark 1:** Input and retrieve information from a technological system (including the practice of word processing skills).

**MCF Benchmark:** 2.EE.1

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### Analysis of Benchmark

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#### Key Concepts

- The keyboard and mouse are used as input/output devices.
- Information can be retrieved from video, CD, internet, and television.
- Hard copies of retrieved information can be created by printing.

#### Evidence of Achievement

- The student will print a final product.
- The student will input data using the keyboard.
- The student will retrieve information using the mouse.

#### Instructional Activities

- Instructor models how to input, retrieve, and print from one of the following appliances or devices (keyboard, KidPix/multimedia, word processing, web sites).
- Student demonstrates proficiency by following teacher created lesson or project.

#### Resources:

Appendix: Standard Classroom List

## Assessment

<b>Title of Task:</b> Using Information Technology		<b>Grade:</b> Two	
<b>Standard &amp; Benchmark:</b> TEC.2.EE.1,2			
<b>Assessment Task</b>			
Students retrieve and evaluate information from a technological system.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>• Information retrieval</li> <li>• Information communication</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		Students retrieve and communicate weather data in a hard copy format, such as a word processing or KidPix program.	

# Technology - Grade Three

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

**Benchmark 1:** Use search engine strategies to locate, interpret, and analyze information with the use of technology.

**MCF Benchmark:** 2.LE.1 2.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- Information can be retrieved using search engines.
- Relevant data can be found using a search engine.

#### Evidence of Achievement

- Students will create and organize a list of relevant data.

#### Instructional Activities

- The teacher will model how to use a search engine to locate data.
- Students will choose a topic to research.
- Students will gather data using a search engine.
- The students will create a list of data on the topic using a word processing program.

#### Curriculum Integration

ART:MCF IV.1.E.1

ELA:MCF 3.LE.6 11.LE.2

MAT:MCF III.1.E.1, 2, 3, 4 III.2.E.1, 3, 4, 5 III.3.E.1, 2, 3, 4, 5

SCI:MCF I.1.E.1, 5, 6 II.1.E.3

SOC:MCF V.1.LE.1 V.2.LE.2

#### Resources

Appendix: Grade Three – Standard 2, Software List

## Assessment

<b>Title of Task:</b> Using Information Technologies		<b>Grade:</b> Three	
<b>Standard &amp; Benchmark:</b> TEC.2.LE.1,2			
<b>Assessment Task</b>			
Students research and share information.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Project</li> <li>● Checklist</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students gather data using a search engine to create a multi-media slideshow project.</p> <p>Students utilize a rubric to evaluate their project.</p>	

# Technology - Grade Four

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

**Benchmark 1:** Use search engine strategies to locate, interpret, and analyze information with the use of technology.

**MCF Benchmark:** 2.LE.1 2.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- Information can be retrieved using multiple search engines.
- Search engines can be used to analyze technology.

#### Evidence of Achievement

- Students will be able to analyze their list for relevant information.
- Students will be able to create a list of information gained from multiple searches.

#### Instructional Activities

- Teacher will model how to search on the internet using multiple search engines.
- Students will search internet.
- Students will create a relevant list of information gained from a search.

#### Curriculum Integration

ART:MCF IV.1.E.1

ELA:MCF 3.LE.6 11.LE.2

MAT:MCF III.1.E.1, 2, 3, 4 III.2.E.1, 3, 4, 5 III.3.E.1, 2, 3, 4, 5

SCI:MCF I.1.E.1, 5, 6 II.1.E.3

SOC:MCF V.1.LE.1 V.2.LE.2

#### Resources

Appendix: Grade Four – Standard 2

## Assessment

<b>Title of Task:</b> Evaluate Presentations		<b>Grade:</b> Four	
<b>Standard &amp; Benchmark:</b> TEC.2.LE.1,2			
<b>Assessment Task</b>			
Students search, collect facts, and create a multimedia presentation. Students present data and evaluate each others' work.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Data collection</li> <li>● Presentation</li> <li>● Evaluation</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students search via multiple search engines.</p> <p>Students collect ten facts on a topic.</p> <p>Students create a multimedia project containing a least eight slides.</p> <p>Students present project.</p> <p>Students evaluate other projects (according to criteria).</p>	

# Technology - Grade Five

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

**Grade Level Benchmark 1:** Use search engine strategies to locate, interpret, and analyze information with the use of technology.

**MCF Benchmark:** 2.LE.1 2.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- Basic search engine boolean operators are used to locate information.
- Information received through search must be interpreted and analyzed.

#### Evidence of Achievement

- Students will be able to create a list of information gained from multiple search engines.
- Students will be able to analyze their list for relevant information.

#### Instructional Activities

- Teacher will model how to use basic boolean operators (and, or, "", +, -).
- Students will search internet using boolean operators and create a list of information.
- Students will analyze their list of information for relevance and create a new list.
- Teacher will evaluate students final list of information.

#### Curriculum Integration

ART:MCF IV.1.E.1

ELA:MCF 3.LE.6 11.LE.2

MAT:MCF III.1.E.1, 2, 3, 4 III.2.E.1, 3, 4, 5 III.3.E.1, 2, 3, 4, 5

SCI:MCF I.1.E.1, 5, 6 II.1.E.3

SOC:MCF V.1.LE.1 V.2.LE.2

#### Resources

Appendix: Grade Five – Standard 2

## Assessment

<b>Title of Task:</b> Media Presentation		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.2,3.LE.1,2			
<b>Assessment Task</b>			
Students create a multimedia project using media software on the topic of technology solutions of past and present.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Number of slides</li> <li>● Factual data</li> <li>● Images per slide</li> <li>● Presentation</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		Students research past/present technologies.  Students create five slides.  Students have one image per slide.  Students have at least two facts per slide.  Students present slideshows to class.	

# Technology - Kindergarten

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

**Benchmark 2:** Evaluate information received through technologies.

**MCF Benchmark:** 2.EE.4

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### Analysis of Benchmark

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#### Key Concepts

- Information received from technology sources needs to be evaluated.

#### Evidence of Achievement

- The student will have an opportunity to make objective decisions as to the attributes of different data.

#### Instructional Activities

- The teacher will discuss the different sources of information technology.
- The teacher will provide exposure to a variety of technological information sources.
- The student will distinguish between the different types of information technology when presented to them.

#### Curriculum Integration

MAT:MCF III.1.E.1,2,3 III.2.E.1,3,4 III.3.E.1,2,3,4,5

#### Resources

Appendix: Standard Classroom List

## Assessment

<b>Title of Task:</b> Processing Information		<b>Grade:</b> Kindergarten	
<b>Standard &amp; Benchmark:</b> TEC.2.EE.2			
<b>Assessment Task</b>			
Students express personal opinions and choices relating to technology.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Observation</li> <li>● Discussion</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		Students observe and discuss technology choices in the classroom.	

# Technology - Grade One

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

## Benchmark 2: Process information received through technologies.

**MCF Benchmark:** 2.EE.4

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### Analysis of Benchmark

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#### Key Concepts

- Information received from technology sources needs to be evaluated.

#### Evidence of Achievement

- The student will demonstrate the ability to make subjective decisions as to the attributes of different data.

#### Instructional Activities

- The teacher will model the decision making process used when looking at different sources of data.
- The student will be allowed to make choices based on a variety of technological information sources.
- The student will explain an opinion on a technological issue.

#### Curriculum Integration

MAT:MCF III.1.E.1,2,3 III.2.E.1,3,4 III.3.E.1,2,3,4,5

#### Resources

Appendix: Standard Classroom List

## Assessment

<b>Title of Task:</b> Processing Information		<b>Grade:</b> One	
<b>Standard &amp; Benchmark:</b> TEC.2.EE.2			
<b>Assessment Task</b>			
Students choose the appropriate software to complete a project.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Choice of software</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		Students demonstrate the ability to choose the appropriate software for a project.	

# Technology - Grade Two

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

**Benchmark 2:** Evaluate information received through technologies.

**MCF Benchmark:** 2.EE.4

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### Analysis of Benchmark

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#### Key Concepts

- Personal opinions and choices relating to technology can be expressed.

#### Evidence of Achievement

- Students will make subjective decisions as to the attributes of different data.

#### Instructional Activities

- The teacher will provide students with retrieved weather data.
- The teacher will discuss how to interpret the data.
- Students will evaluate the information.
- Students will summarize and discuss the weather information.

#### Resources

Appendix: Grade Two – Standard 2

#### Assessment

See TEC.2.EE.1

# Technology - Grade Three

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

**Benchmark 2:** Communicate and evaluate relevant information using a technological system.

**MCF Benchmark:** 2.LE.3 2.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- It is important to organize and apply relevant information when developing a multimedia project.
- Information can be communicated by presenting a multimedia project.
- Evaluation of presentations is an important skill.

#### Evidence of Achievement

- Students will evaluate a multi-media project using a teacher created assessment rubric.

#### Instructional Activities

- Teacher demonstrates a multi-media project using presentation software.
- The teacher will create a rubric for multi-media project and discuss expectations with the students.
- Students will use data collected from their research list to create a multi-media project.
- Students will present their project.

#### Curriculum Integration

ART:MCF IV.2.E.1

ELA:MCF 11.LE.3

MAT:MCF III.1.E.1, 2, 3, 4 III.2.E.1, 3, 4, 5 III.3.E.1, 2, 3, 4, 5

SCI:MCF I.1.E.1, 5, 6 II.1.E.3

SOC:MCF V.2.LE.2

#### Resources

Appendix: Grade Three – Standard 2, Software List

#### Assessment

See TEC.2.LE.1

# Technology - Grade Four

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

**Benchmark 2:** Communicate and evaluate relevant information using technological systems.

**MCF Benchmark:** 2.LE.3 2.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- Information can be communicated through a multimedia project.
- Rubrics can be used to evaluate multimedia projects.

#### Evidence of Achievement

- Students will be able to communicate information using multimedia software.
- Students will be able to evaluate each others multimedia project using a teacher created rubric.

#### Instructional Activities

- Teacher will model how to use a multimedia program to communicate.
- Students will create a multimedia program to communicate information.
- Students will evaluate a multimedia program using a teacher created rubric.

#### Curriculum Integration

ART:MCF IV.2.E.1

ELA:MCF 11.LE.3

MAT:MCF III.1.E.1, 2, 3, 4 III.2.E.1, 3, 4, 5 III.3.E.1, 2, 3, 4, 5

SCI:MCF I.1.E.1, 5, 6 II.1.E.3

SOC:MCF V.2.LE.2

#### Resources

Appendix: Grade Four – Standard 2

#### Assessment

See TEC.2.LE.1

# Technology - Grade Five

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

**Grade Level Benchmark 2: Communicate and evaluate relevant information using technological systems.**

**MCF Benchmark:** 2.LE.3 2.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- There are established ways to communicate information through a multimedia program.
- Teachers and students can evaluate a multimedia project using a student created rubric.

#### Evidence of Achievement

- Students will be able to create a multimedia presentation using relevant information retrieved from search engines.
- Students will be able to evaluate a multimedia project using a student created rubric.

#### Instructional Activities

- Teacher will model how to use a multimedia program to communicate information.
- Students will search the internet using multiple search engines.
- Students will create a multimedia presentation to communicate information gained through the internet.
- Students will evaluate multimedia presentations using a student created rubric.

#### Curriculum Integration

ART:MCF IV.2.E.1

ELA:MCF 11.LE.3

MAT:MCF III.1.E.1, 2, 3, 4 III.2.E.1, 3, 4, 5 III.3.E.1, 2, 3, 4, 5

SCI:MCF I.1.E.1, 5, 6 II.1.E.3

SOC:MCF V.2.LE.2

#### Resources

Appendix: Grade Five – Standard 2

#### Assessment

See TEC.2.LE.1

# Technology - Grade One

## Concept: Using Information Technologies

**Standard 2:** All students will use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information.

**Benchmark 3:** Evaluate information received through technology.

**MCF Benchmark:** 2.EE.4

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### Analysis of Benchmark

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#### Key Concepts

- Utilize drawing tools which include graphics.
- Work with appropriate multimedia software and tools.

#### Evidence of Achievement

- The student will generate an intentional graphic design.
- The student will employ available software devices to build patterns and repeated designs.

#### Instructional Activities

- The teacher will demonstrate use of various software tools to generate designs and repeating patterns.
- The student will practice using multimedia software.
- The student will create a basic design.

#### Curriculum Integration

MAT:MCF III.1.E.1,2,3 III.2.E.1,3,4 III.3.E.1,2,3,4,5

#### Resources

Appendix: Software List (Drawing)

## Assessment

<b>Title of Task:</b> Drawing with Technology		<b>Grade:</b> One	
<b>Standard &amp; Benchmark:</b> TEC.2.EE.3			
<b>Assessment Task</b>			
Students generate a graphic design.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Design</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		Students complete a project which uses a software device to create a design or pattern.	

# Technology - Kindergarten

## Concept: Applying Appropriate Technologies

**Standard 3:** All students will apply appropriate technologies to critical thinking, creative expression, and decision making skills.

## Benchmark 1: Explore technological solutions to a problem.

**MCF Benchmark:** 3.EE.1 3.EE.3

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### Analysis of Benchmark

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#### Key Concepts

- A variety of technologies can be used to solve classroom problems.

#### Evidence of Achievement

- The student will accurately solve a variety of challenges using technology.

#### Instructional Activities

- Teacher will demonstrate how technology is used to solve problems.
- Student will explore environmental data via the Internet (i.e., weather).
- Student will locate graphics via multiple sources (CD, Internet, files).

#### Curriculum Integration

ART:MCF IV.2.E.3

ELA:MCF II.EE.4

MAT:MCF III.1.E.4 III.2.E.4,5 III.3.E.4,5

SCI:MCF I.1.E.2,5

SOC:MCF V.2.EE.2

#### Resources

Appendix: Kindergarten – Standard 3, Standard Classroom List

## Assessment

<b>Title of Task:</b> Working Technology		<b>Grade:</b> Kindergarten	
<b>Standard &amp; Benchmark:</b> TEC.3.EE.1,2			
<b>Assessment Task</b>			
Students select appropriate data to address specific purposes.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Demonstration</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		Students demonstrate use of selected systems.	

# Technology - Grade One

## Concept: Applying Appropriate Technologies

**Standard 3:** All students will apply appropriate technologies to critical thinking, creative expression, and decision making skills.

## Benchmark 1: Explore technological solutions to a problem.

**MCF Benchmark:** 3.EE.1 3.EE.3

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### Analysis of Benchmark

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#### Key Concepts

- A variety of technologies can be used to solve classroom problems.

#### Evidence of Achievement

- The student will accurately solve a variety of challenges using technology.

#### Instructional Activities

- The teacher will discuss how technology is used to solve problems.
- The teacher will demonstrate how to properly locate information.
- The student will explore environmental data via the internet (e.g., weather data, maps).
- The student will locate graphics via multiple sources (CD, Internet, Files).
- The student will publish acquired information.

#### Curriculum Integration

ART:MCF IV.2.E.3

ELA:MCF II.EE.4

MAT:MCF III.1.E.4 III.2.E.4,5 III.3.E.4,5

SCI:MCF I.1.E.2,5

SOC:MCF V.2.EE.2

#### Resources

Appendix: Grade One – Standard 3

## Assessment

<b>Title of Task:</b> Working Technology		<b>Grade:</b> One	
<b>Standard &amp; Benchmark:</b> TEC.3.EE.1,2			
<b>Assessment Task</b>			
Students select appropriate data to approach problems.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Selection</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		Students demonstrate appropriate selections when choosing data to answer a question.	

# Technology - Grade Two

## Concept: Applying Appropriate Technologies

**Standard 3:** All students will apply appropriate technologies to critical thinking, creative expression, and decision making skills.

## Benchmark 1: Explore technological solutions to a problem.

**MCF Benchmark:** 3.EE.1 3.EE.3

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### Analysis of Benchmark

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#### Key Concepts

- There are many technological problems.
- There is more than one way to solve a problem.

#### Evidence of Achievement

- The students will be able to state that technology can help us solve problems.

#### Instructional Activities

- The teacher will write an addition or subtraction math problem on the board.
- The student will solve the problem.
- The teacher will demonstrate, using a calculator, how technology can quickly solve the problem.

#### Resources

Appendix: Grade Two – Standard 3

## Assessment

<b>Title of Task:</b> Problem Solving		<b>Grade:</b> Two	
<b>Standard &amp; Benchmark:</b> TEC.3.EE.1			
<b>Assessment Task</b>			
Students use technology to solve problems.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Problem solving demonstration</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		Students demonstrate problem solving using a calculator to solve a math problem.	

# Technology - Grade Three

## Concept: Applying Appropriate Technologies

**Standard 3:** All students will apply appropriate technologies to critical thinking, creative expression, and decision making skills.

**Benchmark 1: Compare and contrast technological solutions to problems of today and the past.**

**MCF Benchmark:** 3.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- Technology makes life easier.

#### Evidence of Achievement

- Students will create a timeline showing ways life has become easier.

#### Instructional Activities

- The teacher will model a created timeline showing the development of the telephone.
- Students will pick a biography to read about an inventor (Bell).
- In a classroom discussion students will follow the development of the telephone.

#### Curriculum Integration

ART:MCF IV.1.E.1 IV.2.E.1, 2, 4, 6

MAT:MCF III.1.E.2, 4 V.1.E.2

#### Resources

Appendix: Grade Three – Standard 3

## Assessment

<b>Title of Task:</b> Following the Creation of Technology		<b>Grade:</b> Three	
<b>Standard &amp; Benchmark:</b> TEC.3.LE.1			
<b>Assessment Task</b>			
Students create a timeline showing technological development.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Visual representation</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		Students create a visual representation (timeline) to show the development of a piece of technology including the biography of the inventor.	

# Technology - Grade Four

## Concept: Applying Appropriate Technologies

**Standard 3:** All students will apply appropriate technologies to critical thinking, creative expression, and decision making skills.

**Benchmark 1: Compare and contrast technological solutions to problems of today and the past.**

**MCF Benchmark:** 3.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- Technological solutions solved problems of the past as well as of today.

#### Evidence of Achievement

- Students will be able to create a chart that compares and contrasts technological solutions of today and the past.

#### Instructional Activities

- Teacher will model old technology versus new technology.
- Students work in a group discussing technological solutions to problems of today and the past.
- Students will fill in a chart to comparing technological solutions to problems of today and the past.

#### Curriculum Integration

ART:MCF IV.1.E.1 IV.2.E.1, 2, 4, 6

MAT:MCF III.1.E.2, 4 V.1.E.2

#### Resources

Appendix: Grade Four – Standard 3

## Assessment

<b>Title of Task:</b> Problem Solved		<b>Grade:</b> Four	
<b>Standard &amp; Benchmark:</b> TEC.3.LE.1,2			
<b>Assessment Task</b>			
Create a multimedia project showing how technologies have solved problems and may solve future problems.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Problem/solution identification</li> <li>● Problem/solution prediction</li> <li>● Presentation</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students identify three problems solved by technology.</p> <p>Students identify each solution.</p> <p>Students predict a problem that technology may solve.</p> <p>Students predict a solution.</p> <p>Students create and present work as a multimedia project.</p>	

# Technology - Grade Five

## Concept: Applying Appropriate Technologies

**Standard 3:** All students will apply appropriate technologies to critical thinking, creative expression, and decision making skills.

**Grade Level Benchmark 1:** Compare and contrast technological solutions to problems of today and the past.

**MCF Benchmark:** 3.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- Technological solutions solved problems of the past.
- Technological solutions solves problems of today.

#### Evidence of Achievement

- Students will create a chart that compares technological solutions of today and the past.
- Students will discuss how technological solutions solves problems of the past.
- Students will discuss how technological solutions solves problems of today.

#### Instructional Activities

- Teacher will model the differences of technological solutions of today and the past.
- Students will discuss in groups the technological problems of today and the past.
- Students will create a chart comparing technological solutions to problems of today and the past.

#### Curriculum Integration

ART:MCF IV.1.E.1 IV.2.E.1, 2, 4, 6

MAT:MCF III.1.E.2, 4 V.1.E.2

#### Resources

Appendix: Grade Five – Standard 3

#### Appendix

See TEC.3.LE.1

#### Assessment

See TEC.3.LE.1 (Grade Four)

# Technology - Kindergarten

## Concept: Applying Appropriate Technologies

**Standard 3:** All students will apply appropriate technologies to critical thinking, creative expression, and decision making skills.

**Benchmark 2:** Use a variety of technologies to organize thoughts and express ideas (e.g., voice, data video, graphics).

**MCF Benchmark:** 3.EE.2 3EE.4

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### Analysis of Benchmark

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#### Key Concepts

- A variety of technology can be used to organize and express ideas.

#### Evidence of Achievement

- The student will select correctly from voice, pictographic, and/or data systems to approach problems.

#### Instructional Activities

- The teacher will model how technology can be used to express ideas.
- The student will use voice recording technology to develop word/graphic connections.
- The student will use video graphic recording in story telling.

#### Curriculum Integration

ART:MCF IV.1.E.1 IV.2.E.1,2,4,6

ELA:MCF 3.EE.8

MAT:MCF III.1.E.2,4 V.1.E.2

SCI:MCF I.E.2,5,6

SOC:MCF V.1.EE.3 V.2.EE.2

#### Resources

Appendix: Standard Classroom List, Software List (Drawing)

#### Assessment

See TEC.3.EE.1

# Technology - Grade One

## Concept: Applying Appropriate Technologies

**Standard 3:** All students will apply appropriate technologies to critical thinking, creative expression, and decision making skills.

**Benchmark 2:** Use a variety of technologies to organize thoughts and express ideas (e.g., voice, data video, graphics).

**MCF Benchmark:** 3.EE.2 3.EE.4

---

## Analysis of Benchmark

---

### Key Concepts

- A variety of technology can be used to organize and express ideas.

### Evidence of Achievement

- The student will select correctly from voice, pictographic, and/or data systems to approach problems.
- The student will demonstrate use of selected systems.

### Instructional Activities

- The teacher will discuss the importance of technology selection in the expression of ideas.
- The student will compare effective use of verbal and graphic media to express ideas in a classroom discussion.
- The student will combine appropriate technologies to express ideas more clearly.

### Curriculum Integration

ART:MCF IV.1.E.1 IV.2.E.1,2,4,6

ELA:MCF 3.EE.8

MAT:MCF III.1.E.2,4 V.1.E.2

SCI:MCF I.E.2,5,6

SOC:MCF V.1.EE.3 V.2.EE.2

### Resources

Appendix: Software List (Multimedia)

### Assessment

See TEC.3.EE.1

# Technology - Grade Two

## Concept: Applying Appropriate Technologies

**Standard 3:** All students will apply appropriate technologies to critical thinking, creative expression, and decision making skills.

**Benchmark 2:** Use a variety of technologies to organize and express ideas in a logical process (e.g., voice, data, video, graphics).

**MCF Benchmark:** 3.EE.2 3.EE.4

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### Analysis of Benchmark

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#### Key Concepts

- A variety of technologies can be used to organize and express ideas.

#### Evidence of Achievement

- Students will use a computer application to organize and express ideas.

#### Instructional Activities

- The teacher will model the research process.
- Students will research a topic.
- Students will organize their thoughts using the stated pieces of software.
- Students will print their results and share with the class.

#### Resources

Appendix: Software List (Drawing, Word Processing)

## Assessment

<b>Title of Task:</b> Computer Applications		<b>Grade:</b> Two	
<b>Standard &amp; Benchmark:</b> TEC.3.EE.2			
<b>Assessment Task</b>			
Student use a computer application to organize and express ideas.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Organization</li> <li>● Oral presentation</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students produce a research project using software pieces.</p> <p>Students orally present their research results to the class.</p>	

# Technology - Grade Three

## Concept: Applying Appropriate Technologies

**Standard 3:** All students will apply appropriate technologies to critical thinking, creative expression, and decision making skills.

**Benchmark 2:** Analyze problems and identify technologies and systems that could solve them and communicate the solution using a variety of media such as (e.g., voice, data, video, graphics).

**MCF Benchmark:** 3.LE.2 3.LE.3 3.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- Problems can be solved with the use of technology.
- There are better choices of technology to address certain problems.
- Solutions can be communicated using different forms of media.

#### Evidence of Achievement

- Students will explain how they solved the problem using some form of technology.
- Students will explain their choice of technology using a form of media and the reason that they chose that technology.

#### Instructional Activities

- The teacher will discuss three problems with students; one requires the use of a calculator, one a ruler, and one a compass or protractor.
- Students will identify and explain which problem requires the use of which technology device.
- Students will email their results or present to the class.

#### Curriculum Integration

ELA:MCF II.LE.4

MAT:MCF III.2.E.5

SOC:MCF V.2.LE.2

#### Resources

Appendix: Standard Classroom List

## Assessment

<b>Title of Task:</b> Technology Problem Solving		<b>Grade:</b> Three	
<b>Standard &amp; Benchmark:</b> TEC.3.LE.2			
<b>Assessment Task</b>			
Students use technology for problem solving.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Oral representation</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		Students orally present or electronically deliver findings of their technology device choice for a given problem.	

# Technology - Grade Four

## Concept: Applying Appropriate Technologies

**Standard 3:** All students will apply appropriate technologies to critical thinking, creative expression, and decision making skills.

**Benchmark 2:** Analyze problems and identify technologies and systems that could solve them and communicate a solution for a variety of media (e.g., voice, data, video, graphics).

**MCF Benchmark:** 3.LE.2 3.LE.3

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### Analysis of Benchmark

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#### Key Concepts

- Technology can be used to identify and solve problems.
- Solutions can be communicated in a variety of ways.

#### Evidence of Achievement

- The students will be able to create a multimedia project that communicates a solution to a problem that the students have analyzed.

#### Instructional Activities

- Teacher models how to analyze problems using technologies and systems.
- Teachers model solving problems using technologies and systems.
- Students discuss and analyze problems using technologies and systems.
- Students demonstrate how to analyze problems in small groups using technologies and present their solutions.

#### Curriculum Integration

ELA:MCF II.LE.4

MAT:MCF III.2.E.5

SOC:MCF V.2.LE.2

#### Resources

Appendix: Grade Four – Standard 3

#### Assessment

See TEC.3.LE.1

# Technology - Grade Five

## Concept: Applying Appropriate Technologies

**Standard 3:** All students will apply appropriate technologies to critical thinking, creative expression, and decision making skills.

**Grade Level Benchmark 2:** Analyze problems and identify technologies and systems that could solve them and communicate a solution for a variety of media (e.g., voice, data, video, graphics).

**MCF Benchmark:** 3.LE.2 3.LE.3

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### Analysis of Benchmark

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#### Key Concepts

- Problems can be identified; solutions can be found to resolve them.
- Solutions can be communicated in a variety of ways.

#### Evidence of Achievement

- Students will be able to create a multimedia project that communicates a solution to a problem that the students have analyzed.

#### Instructional Activities

- Teacher will model how to identify and analyze problems using technologies.
- Teacher will model how to create and use a multimedia project to communicate solutions.
- Students will discuss ways to solve problems using technology systems.
- Students will create a multimedia project to communicate solutions to problems that were analyzed.

#### Curriculum Integration

ELA:MCF II.LE.4

MAT:MCF III.2.E.5

SOC:MCF V.2.LE.2

#### Resources

Appendix: Grade Five – Standard 3

#### Assessment

See TEC.3.LE.1 (Grade Four)

# Technology - Kindergarten

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 1:** Use the basic terminology for a variety of technological systems.

**MCF Benchmark:** 4.EE.1

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### Analysis of Benchmark

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#### Key Concepts

- Knowledge of the basic components of a computer system is needed for proper usage.

#### Evidence of Achievement

- The student will be able to appropriately identify the elements of a system.

#### Instructional Activities

- The teacher will display and discuss the elements of a computer system.
- The student will participate in active learning activities and hands-on practice.
- The student will identify the basic components of computer system.

#### Resources

Appendix: Kindergarten – Standard 4, Software List (Drawing)

## Assessment

<b>Title of Task:</b> Employing Systematic Approach		<b>Grade:</b> Kindergarten	
<b>Standard &amp; Benchmark:</b> TEC.4.EE.1,2,3			
<b>Assessment Task</b>			
Students use a computer system to create text.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Vocabulary</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		Students use the correct terminology when demonstrating computer executions.	

# Technology - Grade One

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 1:** Use the basic terminology for a variety of technological systems.

**MCF Benchmark:** 4.EE.1

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### Analysis of Benchmark

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#### Key Concepts

- Knowledge of the basic components of a computer system is needed for proper usage.

#### Evidence of Achievement

- The student will be able to appropriately demonstrate the elements of a system.

#### Instructional Activities

- The teacher will discuss the various components of a computer system.
- The teacher will provide active learning activities with hands-on practice.
- Students will identify the elements of a computer in an oral assessment.

#### Resources

Appendix: Grade One – Standard 4, Software List

## Assessment

<b>Title of Task:</b> Employing Systematic Approach		<b>Grade:</b> One	
<b>Standard &amp; Benchmark:</b> TEC.4.EE.1,2,3,4,5,6			
<b>Assessment Task</b>			
Students produce a presentation on caring for the computer.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Vocabulary</li> <li>● Oral presentation rubric</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students use the correct terminology when demonstrating computer executions.</p> <p>Students use peripheral devices to produce an oral presentation on the care of computers.</p>	

# Technology - Grade Two

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 1:** Uses the basic terminology to label a variety of technological systems (e.g., input, process, output, and feedback).

**MCF Benchmark:** 4.EE.1

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### Analysis of Benchmark

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#### Key Concepts

- The main hardware components include the CPU, CD/DVD, floppy, mouse, keyboard, monitor, USB, flash drive, printer, scanner, digital camera, and video camera.
- Important keyboarding terms include home row keys and finger placement.
- Word processing includes using the space bar, shift, back space, and arrow keys.
- Cursor placement can be accomplished using the mouse.
- Spell check of writing can be accomplished by using right click on the mouse.

#### Evidence of Achievement

- Students will identify hardware components.
- Students will be able to use proper terminology when discussing the work being done.
- Students will be able to use keyboarding software.
- Students will be able to word process short stories, poems, and non-fiction reports.

#### Instructional Activities

- The teacher will discuss and identify hardware components.
- As the instructor points at components, the class will respond orally.
- The teacher will demonstrate use of home row keys.
- Students will practice on essay of teachers choice and use spellcheck.

#### Resources

Appendix: Grade Two – Standard 4

## Assessment

<b>Title of Task:</b> Word Processing		<b>Grade:</b> Two	
<b>Standard &amp; Benchmark:</b> TEC.4.EE.1			
<b>Assessment Task</b>			
Student learn keyboarding and word processing skills.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Word processing demonstration</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students demonstrate knowledge of hardware and correct keyboarding.</p> <p>Students word process a story, poem, or non-fiction report.</p>	

# Technology - Grade Three

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 1: Construct technological systems which use input, process, output, and feedback.**

**MCF Benchmark:** 4.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- A keyboard and mouse are used to input data.
- Word processing programs are used to create documents.
- The technology process includes creating, saving, and printing a document.
- Word processing functions include the ability to change font, font size, bold, italicize, underline, justify text, tab, copy, cut, paste, and insert graphics.

#### Evidence of Achievement

- Students will be able to create a document using key concepts.

#### Instructional Activities

- The teacher will discuss key concepts and write each one on the board.
- The teacher will create and distribute a checklist for the students to use.
- The student will write a research paper demonstrating each key concept.

#### Curriculum Integration

SCI:MCF I.1.E.2, 5

SOC:MCF V.2.LE.2

#### Resources

Appendix: Grade Three – Standard 4, Standard Software List (Word Processing)

## Assessment

<b>Title of Task:</b> Word Processing		<b>Grade:</b> Three	
<b>Standard &amp; Benchmark:</b> TEC.4.LE.1			
<b>Assessment Task</b>			
Students use a word processing program to create a document.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Demonstration</li> <li>● Checklist</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		Students demonstrate word processing functions while completing a checklist of required elements.	

# Technology - Grade Four

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 1: Construct technological systems which use input, process, output, and feedback.**

**MCF Benchmark:** 4.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- A technological system can be used to input information.
- A technological system can be used to create feedback.

#### Evidence of Achievement

- Students will write a research paper using a technological system.

#### Instructional Activities

- Teacher will model how to write a research paper using a technological system.
- The teacher will discuss the requirements of the research project.
- Students will use a technological system to input information for a research paper.
- Students will use a technological system to output information for their research paper.

#### Curriculum Integration

SCI:MCF I.1.E.2, 5

SOC:MCF V.2.LE.2

#### Resources

Appendix: Grade Four – Standard 4

## Assessment

<b>Title of Task:</b> How Can I Help?		<b>Grade:</b> Four	
<b>Standard &amp; Benchmark:</b> TEC.4.LE.1,5,6			
<b>Assessment Task</b>			
Follow the service-learning project model, students will solve a societal need using technology and write about their experience.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Problem identification</li> <li>● Planning</li> <li>● Implementation</li> <li>● Journal</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students identify a societal problem that technology can solve.</p> <p>Students create a systematic approach that will address the societal problem.</p> <p>Students execute the plan.</p> <p>Students complete in a timely manner.</p> <p>Students type about their results.</p>	

# Technology - Grade Five

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Grade Level Benchmark 1: Construct technological systems which use input, process, output, and feedback.**

**MCF Benchmark:** 4.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- Technological systems can be used to input, process, and output information.
- Technological systems can be used to create feedback loops.

#### Evidence of Achievement

- Students will be able to create a multimedia presentation using a technological system.

#### Instructional Activities

- Teacher will model how to create a multimedia presentation using a technological system.
- Students will begin input information for a multimedia presentation using a technological system.
- Students will present a multimedia presentation using a technological system for feedback.

#### Curriculum Integration

SCI:MCF I.1.E.2, 5

SOC:MCF V.2.LE.2

#### Resources

Appendix: Grade Five – Standard 4

## Assessment

<b>Title of Task:</b> PowerPoint Presentation		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.4.LE.1			
<b>Assessment Task</b>			
Create a two slide PowerPoint.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Number of slides</li> <li>● Images per slide</li> <li>● Transitions with sound</li> <li>● Title page, informational page</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students make two slides.</p> <p>Students have two images on each slide.</p> <p>Students have one slide with transitional sound.</p> <p>Students have one title page, and informational page.</p>	

# Technology - Kindergarten

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 2:** Uses appropriate tools, materials, and processes in a safe manner to present technological solutions.

**MCF Benchmark:** 4.EE.2 4.EE.6

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### Analysis of Benchmark

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#### Key Concepts

- Computer programs are used to create text.

#### Evidence of Achievement

- The student will demonstrate correct use of a computer system to create text.

#### Instructional Activities

- The teacher will model the correct use of simple word processing programs.
- The teacher will discuss why word processing systems are used.
- The student will use simple word processing programs in everyday lessons.

#### Curriculum Integration

ART:MCF IV.1.E.1,3 IV.2.E.1,2,3,4,5,6

ELA:MCF II.E.3,4

SCI:MCF I.1.E.5,6

SOC:MCF V.1.EE.3

#### Resources

Appendix: Software List (Word Processing)

#### Assessment

See TEC.4.EE.1

# Technology - Grade One

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

## Benchmark 2: Presents technological solutions using sketches and drawing.

**MCF Benchmark:** 4.EE.2

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### Analysis of Benchmark

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#### Key Concepts

- Graphics and drawing tools can be used to solve problems.

#### Evidence of Achievement

- The student will operate selected drawing and graphics software.

#### Instructional Activities

- The teacher will demonstrate how graphics are and drawing tools are used on a computer.
- The student will explore technology to practice drawing skills.
- The student will publish work from graphics software.

#### Curriculum Integration

ART:MCF IV.1.E.1,3 IV.2.E.1,2,3,4,5,6

ELA:MCF II.E.3,4

SCI:MCF I.1.E.5,6

SOC:MCF V.1.EE.3

#### Resources

Appendix: Software List (Drawing)

#### Assessment

See TEC.4.EE.1

# Technology - Grade Two

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

## Benchmark 2: Present technological solutions using sketches and drawings.

**MCF Benchmark:** 4.EE.2

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### Analysis of Benchmark

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#### Key Concepts

- Grid paper is used to sketch/draw a map.
- Maps are based on perspective (e.g., birds-eye view, eye level view).

#### Evidence of Achievement

- Students will make a map completed in two different views (familiar room).

#### Instructional Activities

- The teacher will model making a map of the classroom (bird's eye, eye level).
- Distribute grid paper and rulers.
- Send work home for students to make a map of their bedroom or a room of their choice.
- Students will make a map using grid paper and present the map to the teacher.

#### Resources

Appendix: Grade Two – Standard 4

## Assessment

<b>Title of Task:</b> Creating with Technology		<b>Grade:</b> Two	
<b>Standard &amp; Benchmark:</b> TEC.4.EE.2,3,4,5			
<b>Assessment Task</b>			
Student use a systematic approach to design a project.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Demonstration</li> <li>● Project design</li> </ul>			
Beginning	Developing	<b>Achieving</b>	Exceeding
		<p>Students create a room map using grid paper and ruler and calculate area of the room.</p> <p>Students demonstrate safe usage of technology tools.</p> <p>Students design a project to apply a systematic approach to accomplish an end product.</p>	

# Technology - Grade Three

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 2: Present technological solutions using scale and proportion in sketches and drawings.**

**MCF Benchmark:** 4.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- Scale and proportion are important in solving technological problems.

#### Evidence of Achievement

- Students will demonstrate the ability to sketch and draw an item to scale and proportion.

#### Instructional Activities

- The teacher will demonstrate how to draw an object to scale using graph paper.
- Graph paper and rulers will be distributed to the students.
- Students will draw an object to scale.

#### Curriculum Integration

ELA:MCF II.LE.4

SCI:MCF I.1.E.6

SOC:MCF V.2.LE.2

#### Resources

Appendix: Grade Three – Standard 4, Standard Classroom List

## Assessment

<b>Title of Task:</b> Drawing and Constructing		<b>Grade:</b> Three	
<b>Standard &amp; Benchmark:</b> TEC.4.LE.2,3,4,5,6			
<b>Assessment Task</b>			
Students create, design, plan, and execute a service learning project.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Model</li> <li>● Demonstration</li> <li>● Project</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students demonstrate drawing to scale while using measurement tools.</p> <p>Students demonstrate safe usage of simplehand tools.</p> <p>Students plan and complete a service project dictated by an environmental need.</p>	

# Technology - Grade Four

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 2: Present technological solutions using scale and proportion in sketches and drawings.**

**MCF Benchmark:** 4.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- A map has detail.

#### Evidence of Achievement

- Students will be able to draw a map with scale and details.

#### Instructional Activities

- Teacher will model drawing a map.
- Students will practice measuring and drawing a map.
- Students will draw a map with scale and detail.

#### Curriculum Integration

ELA:MCF II.LE.4

SCI:MCF I.1.E.6

SOC:MCF V.2.LE.2

#### Resources

Appendix: Grade Four – Standard 4

## Assessment

<b>Title of Task:</b> The Mighty Mac		<b>Grade:</b> Four	
<b>Standard &amp; Benchmark:</b> TEC.4.LE.2,3,4			
<b>Assessment Task</b>			
Create a map of Michigan, identify the Mackinaw Bridge, and make a model of the Mackinaw Bridge.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Scale drawing</li> <li>● Research</li> <li>● Model</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students use graph paper to draw a map of Michigan to scale identifying the Upper Peninsula, Lower Peninsula, Mackinaw Bridge and the Great Lakes.</p> <p>Students research Mackinaw Bridge dimensions.</p> <p>Students make a model requiring cutting, forming, fastening and finishing materials in a safe manner.</p>	

# Technology - Grade Five

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Grade Level Benchmark 2: Present technological solutions using scale and proportion in sketches and drawings.**

**MCF Benchmark:** 4.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- Rooms can be drawn to scale.

#### Evidence of Achievement

- Students will be able to draw a room to scale using correct measurements.

#### Instructional Activities

- Teacher will model how to draw a room to scale.
- Students will practice taking measurements and drawing rooms to scale in groups.
- Students will draw a room to scale on their own.

#### Curriculum Integration

ELA:MCF II.LE.4

SCI:MCF I.1.E.6

SOC:MCF V.2.LE.2

#### Resources

Appendix: Grade Five – Standard 4

## Assessment

<b>Title of Task:</b> Scale		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.4.LE.2			
<b>Assessment Task</b>			
As a group, students draw a room to scale.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Measurements of room</li> <li>● Measurement of objects</li> <li>● Scale drawing</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students measure room.</p> <p>Students measure five objects.</p> <p>Students draw 12:1 scale picture of room.</p>	

# Technology - Kindergarten

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 3: Identify the components and follow a basic, systematic approach to design and implement technological solutions to a problem.**

**MCF Benchmark:** 4.EE.7 4.EE.8

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### Analysis of Benchmark

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#### Key Concepts

- Technological systems have many important components.
- Proper care and use of technological components is important.

#### Evidence of Achievement

- The student will identify relationships of major hardware components within a technological system.

#### Instructional Activities

- The teacher will model the key components of technological systems.
- The teacher will provide for the use of technological systems in daily lessons.
- The student will use technology in daily lessons.

#### Curriculum Integration

ART:MCF I.1.E.1

SCI:MCF I.1.E.4,6

SOC:MCF V.1.EE.3

#### Resources

Appendix: Kindergarten – Standard 4

#### Assessment

See TEC.4.EE.1

# Technology - Grade One

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 3:** Use measurement to determine lengths, widths, and heights to construct and record technological solutions to a problem.

**MCF Benchmark:** 4.EE.3

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### Analysis of Benchmark

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#### Key Concepts

- Length, width, and height are needed to determine technological solutions to problems.

#### Evidence of Achievement

- The student will use software to produce a presentation.

#### Instructional Activities

- The teacher will provide classroom lessons which allow students to practice designing a presentation.
- The teacher will model how to complete a successful presentation.
- The student will complete an oral presentation.

#### Curriculum Integration

ART:MCF I.1.E.1

SCI:MCF I.1.E.4,6

SOC:MCF V.1.EE.3

#### Resources

Appendix: Software List (Drawing, Multimedia)

#### Assessment

See TEC.4.EE.1

# Technology - Grade Two

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 3:** Use technology to solve problems that require collecting and organizing measurement data.

**MCF Benchmark:** 4.EE.3 4.EE.4

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### Analysis of Benchmark

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#### Key Concepts

- Perimeter can be found using a measuring device (ruler, yardstick, meter stick, trundle wheel) and a calculator.
- Grid paper or software can be used to organize data.

#### Evidence of Achievement

- The students will be able to find the area of the classroom by measuring the length and width, organizing data on graph paper, and using a calculator.

#### Instructional Activities

- Students will use a measuring device to find the length and width of the classroom.
- Students will use graph paper to draw the perimeter of the classroom and label the dimensions.
- Students will use a calculator to figure  $L \times W = \text{area}$ .

#### Resources

Appendix: Standard Classroom List, Software List (Spreadsheet)

#### Assessment

See TEC.4.EE.2

# Technology - Grade Three

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 3:** Use measurements of dimension (length, area, volume) to construct technological solutions to problems.

**MCF Benchmark:** 4.LE.3 4.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- Length and width are needed to find area.
- Measurement tools are used to find length and width.
- Measurement tools are used to solve technological problems.

#### Evidence of Achievement

- Students will demonstrate how to use measurement tools to find length and width.
- Students will solve a problem by finding the area.

#### Instructional Activities

- The teacher will model the correct use of measurement tools.
- Students will measure the bottom of a shoebox.
- Students will cut out of colored construction paper the same dimensions.
- Discuss how this shows the area of the bottom of the shoebox.
- Students will paste the paper to the floor of the box.
- Students will label the dimensions and use a calculator to find and label the area.

#### Curriculum Integration

ART:MCF IV.1.E.1

SCI:MCF I.1.E.4, 6

#### Resources

Appendix: Grade Three – Standard 4

#### Assessment

See TEC.4.LE.2

# Technology - Grade Four

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 3:** Use measurements of dimension (length, area, and volume) to construct technological solutions to problems.

**MCF Benchmark:** 4.LE.3 4.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- The measurements of length, width, and height are used to find volume.

#### Evidence of Achievement

- Students will measure length, width, and height to find volume.

#### Instructional Activities

- Teacher will model how to find length, width, and height to find volume.
- Students will practice taking measurements of length, width, and height to find volume.
- Students will take a test on finding length, width, and height to find volume.

#### Curriculum Integration

ART:MCF IV.1.E.1

SCI:MCF I.1.E.4, 6

#### Resources

Appendix: Grade Four – Standard 4

#### Assessment

See TEC.4.LE.2

# Technology - Grade Five

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Grade Level Benchmark 3: Use measurements of dimension (length, area, and volume) to construct technological solutions to problems.**

**MCF Benchmark:** 4.LE.3 4.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- Perimeter, area, and volume are sometimes needed to create technological solutions to problems.

#### Evidence of Achievement:

- Students will be able to take measurements and apply them to perimeter, area, and volume to create a technological solution to a problem.

#### Instructional Activities

- Teacher will demonstrate how to apply measurements to perimeter, area, and volume.
- Students will practice taking measurements and applying them to perimeter, area, and volume.
- Students will do a written worksheet where measurements will be used to find perimeter, area, and volume.

#### Curriculum Integration

ART:MCF IV.1.E.1

SCI:MCF I.1.E.4, 6

#### Resources

Appendix: Grade Five – Standard 4

## Assessment

<b>Title of Task:</b> Geometry Technology		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.4.LE.3			
<b>Assessment Task</b>			
Students finish a worksheet demonstrating how to find perimeter, area, and volume.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Perimeter</li> <li>● Area</li> <li>● Volume</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		Students measure and find the perimeter of a polygon.  Students find the area of a square.  Students find the volume of a rectangle.	

# Technology - Grade One

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 4:** Use appropriate tools, materials, equipment, and processes in a safe manner to design a technological solution to a given problem.

**MCF Benchmark:** 4.EE.6

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### Analysis of Benchmark

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#### Key Concepts

- Hardware must be used properly.
- Multimedia tools are important in problem solving.
- The appropriate multimedia software and hardware need to be selected based upon the problem.

#### Evidence of Achievement

- Students will correctly operate various multimedia tools.

#### Instructional Activities

- The teacher will identify different types of multimedia tools.
- The teacher will model the use of multimedia tools.
- The student will use multimedia tools (e.g., digital cameras, scanners).

#### Curriculum Integration

ART:MCF IV.1.E.1,2

#### Resources

Appendix: Grade One – Standard 4

#### Assessment

See TEC.4.EE.1

# Technology - Grade Two

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain, and improve products, systems, and environments.

**Benchmark 4: Explore and compare tools used in cutting, forming, fastening, and finishing materials to produce technological solutions to problems (multimedia).**

**MCF Benchmark:** 4.EE.5 4.EE.6

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### Analysis of Benchmark

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#### Key Concepts

- Safety is important when using technology tools.
- Technology tools have many different functions.

#### Evidence of Achievement

- Students will demonstrate knowledge of the safe way to use technology tools.
- Students will state the various functions of technology tools.

#### Instructional Activities

- The teacher will brainstorm a list of occupations and the tools they use with students.
- The teacher will distribute a graphic web with the words "What Technology Tools Do".
- The teacher will categorize with students the various uses of technology tools.
- Students will categorize technology tools.

#### Resources

Appendix: Grade Two – Standard 4

#### Assessment

See TEC.4.EE.2

# Technology - Grade Three

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 4:** Explore and compare tools, equipment, and processes used in cutting, forming, fastening, and finishing materials to produce technological solutions to problems.

**MCF Benchmark:** 4.LE.5 4.LE.6

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### Analysis of Benchmark

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#### Key Concepts

- Tools and equipment need to be used in a safe manner.
- Tools, equipment, and processes are used to solve technological problems.

#### Evidence of Achievement

- Students will explore and compare tools and equipment used to solve technological problems.
- Students will use tools and equipment in a safe manner.

#### Instructional Activities

- The teacher will model how to use some simple machines in a safe manner (e.g., screw driver, hammer, wedge, screw, saw, gears).
- The teacher will model how these are used to solve problems.
- Students will use simple tools to solve technological problems.

#### Curriculum Integration

ART:MCF IV.1.E.1, 2

#### Resources

Appendix: Grade Three – Standard 4

#### Assessment

See TEC.4.LE.2

# Technology - Grade Four

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain, and improve products, systems, and environments.

**Benchmark 4:** Students will explore and compare tools, equipment, and process used in cutting, forming, fastening, and finishing materials to produce technological solutions to problems.

**MCF Benchmark:** 4.LE.5 4.LE.6

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### Analysis of Benchmark

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#### Key Concepts

- All tools and equipment need to be used in a safe manner to solve technological solutions to problems.

#### Evidence of Achievement

- Students will use tools and equipment in a safe manner to solve technological solutions to problems.

#### Instructional Activities

- Teacher will model how to use tools, and equipment in a safe manner, to build a model of the Mackinaw Bridge.
- Students will use tools and equipment in a safe manner to build a model of the Mackinaw Bridge.
- Students will test their bridge for integrity.

#### Curriculum Integration

ART:MCF IV.1.E.1, 2

#### Resources

Appendix: Grade Four – Standard 4

#### Assessment

See TEC.4.LE.2

# Technology - Grade Five

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Grade Level Benchmark 4: Explore and compare tools, equipment, and process used in cutting, forming, fastening, and finishing materials to produce technological solutions to problems.**

**MCF Benchmark:** 4.LE.5 4.LE.6

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### Analysis of Benchmark

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#### Key Concepts

- Different tools, equipment and processes can be used to create a technological solution to a problem.

#### Evidence of Achievement

- Students will be able to use different tools, equipment and process to create a technological solution to a problem.

#### Instructional Activities

- Teacher will model how to cut, measure, and fasten different materials, and tools used in making a puff mobile.
- Students will cut, measure, and fasten three straws, unlimited pins, two dowels, one 8½ x 11 sheet of paper, and 12 inches of tape to create a puff mobile.
- Students will demonstrate how their puff mobile works.

#### Curriculum Integration

ART:MCF IV.1.E.1, 2

#### Resources

Appendix: Grade Five – Standard 4

## Assessment

<b>Title of Task:</b> Puff Mobile		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.4.LE.4			
<b>Assessment Task</b>			
Students demonstrate and create a puff mobile requiring the students to cut, measure, and fasten different materials.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Planning</li> <li>● Prepare materials</li> <li>● Demonstration</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students make a plan for creating the puff mobile.</p> <p>Students cut, measure, and fasten 2 straws, 2 dowels, 8½ x 11 sheet of paper and 12’ of tape to create puff mobile.</p> <p>Students successfully demonstrate puff mobile.</p>	

# Technology - Grade One

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain, and improve products, systems, and environments.

**Benchmark 5: Identify the components and follow a basic, systematic approach to design and implement technological solutions to a problem.**

**MCF Benchmark:** 4.EE.7 4.EE.8

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### Analysis of Benchmark

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#### Key Concepts

- Components of a technological system need to be identified for correct usage.
- Proper care and use of technological components is important.
- Technological systems have different hardware components.

#### Evidence of Achievement

- The student will identify major hardware components in a technological system.

#### Instructional Activities

- The teacher will explain the different types of systems in a classroom discussion.
- The teacher will provide use of technological systems in daily lessons.
- The student will explore the combinations of hardware components.
- The student will use technological systems to complete classroom tasks.

#### Curriculum Integration

SCI:MCF I.1.E.5

#### Resources

Appendix: Standard Classroom List

#### Assessments

See TEC.4.EE.1

# Technology - Grade Two

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 5:** Design/redesign a project or solve a problem using a simple systematic approach that requires the use of appropriate tools, materials, equipment, and processes.

**MCF Benchmark:** 4.EE.7 4.EE.8

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### Analysis of Benchmark

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#### Key Concepts

- A systematic approach is needed to solve problems.
- It is important to identify the correct tools and materials needed to solve the problem.

#### Evidence of Achievement

- Students will solve a problem by creating a systematic plan.

#### Instructional Activities

- The teacher will discuss and model how to design a game or project.
- Students will design a garden, a game, community service project.

#### Resources

Appendix: Grade Two – Standard 4

#### Assessments

See TEC.4.EE.2

# Technology - Grade Three

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 5: Design/redesign a project that meets a societal or environmental need using a systematic approach that requires the use of appropriate tools, materials, equipment, and processes.**

**MCF Benchmark:** 4.LE.7 4.LE.8

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### Analysis of Benchmark

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#### Key Concepts

- A systematic approach is used to address societal or environmental needs.
- Appropriate tools, materials, and equipment are needed to address societal or environmental needs.

#### Evidence of Achievement

- Students will solve a societal or environmental problem using a systematic approach.
- Students will demonstrate which tools are needed to solve a societal or environmental problem.

#### Instructional Activities

- The teacher will discuss the key components of a service learning project.
- The class will plan a service learning project.
- Classroom discussion of ideas for a project will take place.
- Brainstorm a list of items needed for the project selected.
- Students will complete a service learning project.

#### Curriculum Integration

ART:MCF IV.1.E.1

SCI:MCF I.1.E.5, 6 II.1.E.1

#### Resources

Appendix: Standard Classroom List

#### Assessments

See TEC.4.LE.2

# Technology - Grade Four

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 5:** Design/redesign a project that meets a societal or environmental need using a systematic approach that requires the use of appropriate tools, materials, equipment, and processes.

**MCF Benchmark:** 4.LE.7 4.LE.8

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### Analysis of Benchmark

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#### Key Concepts

- A systematic approach is used to address societal and environmental needs.
- Appropriate tools, materials, equipment, and processes are needed to address societal or environmental needs.

#### Evidence of Achievement

- Students will use a systematic approach to solve societal and environmental needs.
- Students will use appropriate tools, material, equipment, and processes to address societal or environmental needs.

#### Instructional Activities

- Teachers will model a service learning project.
- Students will work on a service learning project.
- Students will show evidence of work in the service learning project.

#### Curriculum Integration

ART:MCF IV.1.E.1

SCI:MCF I.1.E.5, 6 II.1.E.1

#### Resources

Appendix: Grade Four – Standard 4

#### Assessments

See TEC.4.LE.2

# Technology - Grade Five

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Grade Level Benchmark 5:** Design/redesign a project that meets a societal or environmental need using a systematic approach that requires the use of appropriate tools, materials, equipment, and processes.

**MCF Benchmark:** 4.LE.7 4.LE.8

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### Analysis of Benchmark

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#### Key Concepts

- A systematic approach is used to address societal and environmental needs.
- Appropriate tools, materials, equipment, and processes are needed to address societal or environmental needs.

#### Evidence of Achievement

- Students will use a systematic approach to solve societal and environmental needs.
- Students will use appropriate tools, material, equipment and processes to address societal or environmental needs.

#### Instructional Activities:

- Teacher will model a service learning project.
- Students will discuss what kinds of service learning projects are needed at school.
- Students groups will create their own service learning projects.
- Students will implement a service learning project.

#### Curriculum Integration:

ART:MCF IV.1.E.1

SCI:MCF I.1.E.5, 6 II.1.E.1

#### Resources:

Appendix: Grade Five – Standard 4

## Assessment

<b>Title of Task:</b> Service Learning		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.4.LE.5,6			
<b>Assessment Task</b>			
Students complete a service learning project.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Identification</li> <li>● Written plan</li> <li>● Gather materials</li> <li>● Implement plan</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		Students identify a social or environmental need.  Students make a written plan of their service learning project.  Students gather materials.  Students implement plan.	

# Technology - Grade One

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 6: Identify how resources and processes are used to help people in society accomplish tasks to achieve a technological solution to a problem.**

**MCF Benchmark:** 4.EE.9

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### Analysis of Benchmark

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#### Key Concepts

- Technological resources can be used to solve problems.

#### Evidence of Achievement

- The student will identify technological resources.

#### Instructional Activities

- The teacher will demonstrate how to use technology in a problem solving process.
- The student will explore technological resources.
- The student will use orally present a technology issue.

#### Curriculum Integration

ART:MCF IV.1.E.1

ELA:MCF II.E.2

SCI:MCF I.1.E.5

#### Resources

Appendix: Grade One – Standard 4

#### Assessments

See TEC.4.EE.1

# Technology - Grade Two

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 6: Identify how resources and processes help people achieve a technological solution to a problem.**

**MCF Benchmark:** 4.EE.9

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### Analysis of Benchmark

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#### Key Concepts

- Technological resources have been used to solve a problem.

#### Evidence of Achievement

- Students will identify that technology has created certain items that have enriched their lives (e.g., pencil, eraser, paper, crayons).

#### Instructional Activities

- The teacher will ask the question, "Where does a pencil come from?"
- The students will go to the website - [www.pencils.com](http://www.pencils.com) and research together.
- The teacher will model the research process.
- Students will discuss and identify which forms of technology were used to create a pencil.

#### Resources

Appendix: Grade Two – Standard 4

## Assessment

<b>Title of Task:</b> Technology Solving Problems		<b>Grade:</b> Two	
<b>Standard &amp; Benchmark:</b> TEC.4.EE.6			
<b>Assessment Task</b>			
Students discover that technological resources can be used to solve a problem.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Participation</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		Students participate in a discussion to identify which forms of technology were used to create an object such as a pencil.	

# Technology - Grade Three

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 6: Demonstrate how the appropriate use of resources and processes affect the environment and societal needs to achieve a technological solution to a problem.**

**MCF Benchmark:** 4.LE.9

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### Analysis of Benchmark

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#### Key Concepts

- Resources are used and a process is followed to achieve a technological solution to an environmental or societal problem.

#### Evidence of Achievement

- Students will address an environmental or societal need by executing a service learning project.

#### Instructional Activities

- The teacher will discuss the types of service learning projects that are available.
- Students will select a project to complete.
- Students will complete a service learning project.

#### Curriculum Integration

ART:MCF IV.1.E.1

ELA:MCF II.LE.2

SCI:MCF I.1.E.5 II.1.E.1, 4

SOC:MCF VII.1.LE.2

#### Resources

Appendix: Standard Classroom List

#### Assessments

See TEC.4.LE.2

# Technology - Grade Four

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Benchmark 6: Demonstrate how the appropriate use of resources and processes affect the environment and societal needs to achieve a technological solution to a problem.**

**MCF Benchmark:** 4.LE.9

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### Analysis of Benchmark

---

#### Key Concepts

- Resources are used and a process is followed to achieve a technological solution to an environmental or societal problem.

#### Evidence of Achievement

- Students will demonstrate how resources are used and a process is followed to achieve a technological solution to an environmental or societal problem.

#### Instructional Activities

- Teacher will model the process of a service learning project.
- Students will use resources and processes to execute a solution to an environmental or societal problem using a service learning project.
- Students will implement a service learning project.
- The teacher will evaluate the service learning project.

#### Curriculum Integration

ART:MCF IV.1.E.1

ELA:MCF II.LE.2

SCI:MCF I.1.E.5 II.1.E.1, 4

SOC:MCF VII.1.LE.2

#### Resources

Appendix: Grade Four – Standard 4

#### Assessments

See TEC.4.LE.2

# Technology - Grade Five

## Concept: Employing Systematic Approach

**Standard 4:** All students will employ a systematic approach to technological solutions by using resources and processes to create, maintain and improve products, systems, and environments.

**Grade Level Benchmark 6: Demonstrate how the appropriate use of resources and processes affect the environment and societal needs to achieve a technological solution to a problem.**

**MCF Benchmark:** 4.LE.9

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### Analysis of Benchmark

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#### Key Concepts

- Resources are used and a process is followed to achieve a technological solution to an environmental or societal problem.

#### Evidence of Achievement

- Students will be able to demonstrate how resources are used and a process is followed to achieve a technological solution to and environmental or societal problem.

#### Instructional Activities

- Teacher will model what a service learning project is.
- Students discuss in groups what service learning projects are needed at their school.
- Students will create a service learning project using resources and a process to achieve a technological solution.
- Students will implement their group's service learning project.

#### Curriculum Integration

ART:MCF IV.1.E.1

ELA:MCF II.LE.2

SCI:MCF I.1.E.5 II.1.E.1, 4

SOC:MCF VII.1.LE.2

#### Resources

Appendix: Grade Five – Standard 4

#### Assessments

See TEC.4.LE.5

# Technology - Kindergarten

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 1: Practice ethical and legal standards related to technology in the home and at school.**

**MCF Benchmark:** 5.EE.1 5.EE.2

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### Analysis of Benchmark

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#### Key Concepts

- Rules of etiquette should be practiced.
- Ethical and legal standards should be followed.

#### Evidence of Achievement

- The student behaviors will reflect legal and ethical guidelines.
- The student will respect passwords, firewalls, and other barriers to use.

#### Instructional Activities

- The teacher will discuss how ethical and legal standards are developed in technology.
- The teacher will model the correct use of technology such as the internet.
- Students will share information during daily lessons.
- Students will respect privacy of others.

#### Resources

Appendix: Kindergarten – Standard 5

## Assessment

<b>Title of Task:</b> Computer Etiquette		<b>Grade:</b> Kindergarten	
<b>Standard &amp; Benchmark:</b> TEC.5.EE.1,2			
<b>Assessment Task</b>			
Students learn the proper etiquette of using computers.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Demonstrate</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		Students demonstrate the proper respect for privacy and general computer etiquette.	

# Technology - Grade One

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 1:** Practice ethical and legal standards related to technology in the home and at school.

**MCF Benchmark:** 5.EE.1 5.EE.2

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### Analysis of Benchmark

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#### Key Concepts

- The rules of etiquette should be followed.
- Ethical and legal standards should be observed.

#### Evidence of Achievement

- The student behaviors will reflect legal and ethical guidelines.
- The student will respect passwords, firewalls and other barriers to use.

#### Instructional Activities

- The teacher will discuss the importance of observing ethical and legal policies and procedures.
- The teacher will model appropriate technology system usage.
- Students will share information during daily lessons.
- Students will respect the privacy of others.

#### Resources

Appendix: Grade One – Standard 5

## Assessment

<b>Title of Task:</b> Computer Etiquette		<b>Grade:</b> One	
<b>Standard &amp; Benchmark:</b> TEC.5.EE.1,2			
<b>Assessment Task</b>			
Students learn the proper etiquette of using computers.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Demonstrate</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		Students demonstrate the proper respect for privacy, firewall guidelines and general computer etiquette.	

# Technology - Grade Two

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 1: Practice ethical and legal standards related to technology in the home and at school (e.g., follow classroom rules, respect personal property).**

**MCF Benchmark:** 5.EE.1

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### Analysis of Benchmark

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#### Key Concepts

- Classroom rules provide a safe and effective learning environment.
- It is important to respect personal property to maintain quality equipment.

#### Evidence of Achievement

- Students will follow classroom rules and procedures.
- Students will demonstrate respect for personal property.

#### Instructional Activities

- The teacher will discuss the process for developing rules.
- The teacher will model appropriate behaviors.
- The students will create rules and discuss building procedures for each academic setting.

#### Resources

Appendix: Standard Classroom List

## Assessment

<b>Title of Task:</b> Technology Rules		<b>Grade:</b> Two	
<b>Standard &amp; Benchmark:</b> TEC.5.EE.1,2,3			
<b>Assessment Task</b>			
Students become aware of procedures for using technology.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Demonstration of procedures</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		Students demonstrate proper procedures and practices while using technology.	

# Technology - Grade Three

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 1:** Explain the need for laws and regulations related to technologies (e.g., safety, proper care and use tools).

**MCF Benchmark:** 5.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- Laws and regulations are necessary to maintain proper use and care of equipment.
- Laws and regulations are necessary to maintain a safe and effective learning environment.

#### Evidence of Achievement

- Students will demonstrate the proper use and care of equipment.
- Students will state why following laws and regulations provides a safe and effective learning environment.

#### Instructional Activities

- Instructor will discuss rules, laws, regulations and/or procedures of the AUP and classroom use of technology.
- Instructor will encourage students to share their own thoughts.
- Students will state why following these laws and regulations are important to maintain a safe and productive learning environment.
- Students will demonstrate throughout the course of the year the proper use of technology and following laws and regulations.

#### Resources

Appendix: Grade Three – Standard 5

## Assessment

<b>Title of Task:</b> Applying Standards		<b>Grade:</b> Three	
<b>Standard &amp; Benchmark:</b> TEC.5.LE.1,2,3			
<b>Assessment Task</b>			
Students demonstrate ethical and legal procedures for using technology.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Demonstration</li> <li>● Discussion</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		<p>Students demonstrate the proper use of technology following laws and regulations.</p> <p>Students collect pictures citing sources.</p>	

# Technology - Grade Four

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 1:** Explain the need for laws and regulations related to technologies (e.g., safety, proper care and use tools).

**MCF Benchmark:** 5.EL.1

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### Analysis of Benchmark

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#### Key Concepts

- Laws and regulations are necessary to provide a safe learning environment.
- Laws and regulations are necessary to maintain proper care of equipment related to technologies.

#### Evidence of Achievement

- Students will be able to demonstrate the proper care of equipment related to technologies.
- Students will be able to state what laws and regulations provide a safe learning environment.

#### Instructional Activities

- Teacher will demonstrate and discuss the laws and regulations in regards to the proper care and safety of technologies.
- Students will discuss the laws and regulations in regards to the proper care and safety of technologies.
- Students will follow all the laws and regulations for using technologies throughout the year.

#### Resources

Appendix: Grade Four – Standard 5

## Assessment

<b>Title of Task:</b> Plagiarism		<b>Grade:</b> Four	
<b>Standard &amp; Benchmark:</b> TEC.5.LE.1,2,3			
<b>Assessment Task</b>			
Identify and research the inventor of the internet, cite source, and write an essay about safety, laws regulations, and ethics related to the internet.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Research</li> <li>● Identification</li> <li>● Sources</li> <li>● Essay</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students research and identify the inventors of the internet. Find five facts related to issues created by the internet.</p> <p>Students cite sources used.</p> <p>Students write an essay identifying the creators of the internet, and five issues associated with it.</p>	

# Technology - Grade Five

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 1:** Explain the need for laws and regulations related to technologies (e.g., safety, proper care and use tools).

**MCF Benchmark:** 5.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- Laws and regulations are necessary to provide a safe learning environment.
- Laws and regulations are necessary to maintain proper care of equipment related to technologies.

#### Evidence of Achievement

- Students will be able to demonstrate the proper care of equipment related to technologies.
- Students will be able state what laws and regulations provide a safe learning environment.

#### Instructional Activities

- Teacher will demonstrate and discuss the laws and regulations in regards to the proper care and safety of technologies.
- Students will discuss the laws and regulations in regards to the proper care and safety of technologies.
- Students will discuss what would happen if there were no laws and regulations in regard to technologies.
- Students will demonstrate their understanding all the laws and regulations for using technologies by following them throughout the year.

#### Resources

Appendix: Grade Five – Standard 5

## Assessment

<b>Title of Task:</b> FOIA (Freedom of Information Act)		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.5.LE.1,2,3			
<b>Assessment Task</b>			
Write a short biography on a government official, cite the source, and write why this information is available, and its importance to cite the source.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Essay</li> <li>● Cite source</li> <li>● FOIA statement</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students write a short essay on a public official containing five facts.</p> <p>Students cite the source of information correctly.</p> <p>Students cite as part of their essay why this information is made available.</p>	

# Technology - Kindergarten

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 2:** Explain how individuals are responsible for their technology related actions and decisions.

**MCF Benchmark:** 5.EE.4

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### Analysis of Benchmark

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#### Key Concepts

- The rules of etiquette must be followed.

#### Evidence of Achievement

- The student will use technology reflecting proper and appropriate care.

#### Instructional Activities

- The teacher will discuss why people are responsible for the care of systems.
- The teacher will provide opportunities to practice proper procedures.
- Students will appropriately use technology systems.

#### Resources

Appendix: Kindergarten – Standard 5

#### Assessment

See TEC.5.EE.1

# Technology - Grade One

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 2:** Explain how individuals are responsible for their technology related actions and decisions.

**MCF Benchmark:** 5.EE.4

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### Analysis of Benchmark

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#### Key Concepts

- Rules of etiquette as they pertain to technology must be followed.

#### Evidence of Achievement

- Students will use technology reflecting proper and appropriate care.

#### Instructional Activities

- The teacher will model proper procedures.
- The teacher will provide opportunities for students to practice proper procedures.
- Students will demonstrate to the teacher that they understand how to properly care for technology equipment.

#### Resources

Appendix: Grade One – Standard 5

#### Assessment

See TEC.5.EE.1

# Technology - Grade Two

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 2:** Recognize legal authority in situations involving technology and the well being of others.

**MCF Benchmark:** 5.EE.2

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### Analysis of Benchmark

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#### Key Concepts

- Local, state, and federal authorities protect society from improper use of technology.
- The Acceptable Use Policy (AUP) is used to ensure proper use of technology.

#### Evidence of Achievement

- Students will produce an AUP signed by parent and student.
- Students will state which authorities are used to protect us from improper use of technologies.

#### Instructional Activities

- The teacher will discuss with parents and students the requirements behind the AUP.
- Students and parents will sign the AUP.
- The teacher will bring in authority figures to discuss the impact of improper use of technology.

#### Resources

Appendix: Grade Two – Standard 5

#### Assessment

See TEC.5.EE.1

# Technology - Grade Three

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 2: Identify legal and ethical problems resulting from technological achievements.**

**MCF Benchmark:** 5.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- Legal and ethical problems are created from technological achievements.

#### Evidence of Achievement

- Students will identify a technological achievement and write about the legal and ethical problems associated with it.

#### Instructional Activities

- The teacher will identify a technological achievement (internet).
- The teacher will lead students in a discussion about the negative impact of having this technology.
- The students will brainstorm with the instructor technological achievements.
- The students will identify one of the technological achievements and the legal and ethical problems associated with it.

#### Resources

Appendix: Grade Three – Standard 5

#### Assessment

See TEC.5.LE.1

# Technology - Grade Four

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 2: Identify legal and ethical problems resulting from technological achievements.**

**MCF Benchmark:** 5.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- Legal and ethical problems are created from technological achievements.

#### Evidence of Achievement

- Students will be able to state a technological achievement that created an ethical problem.
- Students will be able to state a technological achievement that created a legal problem.

#### Instructional Activities

- Teacher will discuss examples of ethical and legal problems that impacted society due to a technological achievement.
- Students will discuss different technological achievements that created an ethical or legal problem and the solutions that society provided.
- Students will write a response to why a technological achievement provided a legal or ethical problem for society.

#### Resources

Appendix: Grade Four – Standard 5

#### Assessment

See TEC.5.LE.1

# Technology - Grade Five

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 2: Identify legal and ethical problems resulting from technological achievements.**

**MCF Benchmark:** 5.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- Legal and ethical problems are created from technological achievements.

#### Evidence of Achievement

- Students state a technological achievement that created a legal and ethical problem.
- Students discuss a technological achievement that created a legal and ethical problem.

#### Instructional Activities

- The teacher will discuss examples of ethical and legal problems that impacted society due to a technological achievement.
- The teacher will discuss new technologies that are creating legal and ethical problems.
- Students will discuss and research different technological achievements from the past and present that created a legal and ethical problem and the solutions that society provided.
- Students will write a research paper on the legal and ethical problems created by technological achievements.

#### Resources

Appendix: Grade Five – Standard 5

#### Assessment

See TEC.5.LE.1

# Technology - Grade Two

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 3: Participate in the creation of a rule related to technology and explain its impact on others and explain how individuals are responsible for their technology related actions and decisions.**

**MCF Benchmark:** 5.EE.3 5.EE.4

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### Analysis of Benchmark

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#### Key Concepts

- Good behavior and judgement are required when using technology.

#### Evidence of Achievement

- Students will demonstrate proper behavior and show good judgement when using technology.

#### Instructional Activities

- The teacher will discuss with students what to do if they encounter something inappropriate on their computer. The student will inform the instructor of inappropriate material.
- The teacher will discuss the importance of not sharing personal information with others using technology. Students will explain the impact of sharing personal information.
- Students and teacher will brainstorm a list of the negative impact of sharing personal information using technology.
- The students will brainstorm when it may be appropriate to share personal information (parent permission).

#### Resources

Appendix: Standard Classroom List

#### Assessment

See TEC.5.EE.1

# Technology - Grade Three

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 3: Practice and adhere to copyright, patent, freedom of information, state and federal laws as related to the uses of technology.**

**MCF Benchmark:** 5.LE.3 5.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- Copyright laws are created to protect personal creations.
- Freedom of information allows people to access some personal information while other information is protected.

#### Evidence of Achievement

- Students will be able to define the importance of copyright laws.
- Students will be able to understand why personal information is made available through freedom of information.

#### Instructional Activities

- Teacher will model how to locate information on a government official website and cite source.
- Students will use a graphical organizer when collecting information.
- Students will write a biography about a key government official by collecting information from the internet.
- Students will collect pictures from the internet requiring them to ask for permission to use and cite the source.

#### Resources

Appendix: Grade Three – Standard 5

#### Assessment

See TEC.5.LE.1

# Technology - Grade Four

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 3: Practice and adhere to copyright, patent, freedom of information, state and federal laws as related to the uses of technology.**

**MCF Benchmark:** 4.LE.3 4.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- Copyright laws are created to protect personal creations.
- Freedom of information allows people to access personal information while other information is protected.
- Patents are created to protect personal invention.

#### Evidence of Achievement

- Students will be able to identify the importance of copyright laws.
- Students will be able to understand why personal information is made available through the Freedom of information act.
- Students will be able to identify the importance of copyright laws.

#### Instructional Activities

- Teacher will model how to cite information correctly from a variety of sources.
- Students will research a famous person using a variety of sources.
- Students will write a research paper on their person making sure to site all their sources correctly.

#### Resources

Appendix: Grade Four – Standard Five

#### Assessment

See TEC.5.LE.1

# Technology - Grade Five

## Concept: Applying Standards

**Standard 5:** All students will apply ethical and legal standards in planning, using, and evaluating technology.

**Benchmark 3: Practice and adhere to copyright, patent, Freedom of Information, state and federal laws as related to the uses of technology.**

**MCF Benchmark:** 4.LE.3 4.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- Copyright laws are created to protect personal invention.
- Freedom of information allows people to access personal information while other information is protected.
- Patents are created to protect personal creations.

#### Evidence of Achievement

- Students will be able to identify the importance of copyright laws.
- Students will be able to understand and discuss in detail why the Freedom of Information Act is important to society.
- Students will be able to identify the importance of copyright laws.

#### Instructional Activities

- Teacher will model the importance of copyright laws, patents, and Freedom of Information Act.
- Students will research copyright laws, and the Freedom of Information Act.
- Students will identify a time when the copyright law or the Freedom of Information Act was violated and the consequences of such an action.
- Students will write a research paper on their findings citing all sources of information.

#### Resources

Appendix: Grade Five – Standard 5

#### Assessment

See TEC.5.LE.1

# Technology - Kindergarten

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 1:** Describe how a technology can be used in a career or occupation.

**MCF Benchmark:** 6.EE.1

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### Analysis of Benchmark

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#### Key Concepts

- Technology is used in the workplace.

#### Evidence of Achievement

- Students will identify technological applications in the workplace.

#### Instructional Activities

- The teacher will discuss different careers that involve the use of technology.
- Students will role-play careers.
- Students will identify careers that involve technology in a class discussion.

#### Curriculum Integration

SCI:MCF I.1.E.3,4

#### Resources

Appendix: Kindergarten – Standard 6

## Assessment

<b>Title of Task:</b> Evaluate and Forecast		<b>Grade:</b> Kindergarten	
<b>Standard &amp; Benchmark:</b> TEC.6.EE.1,2			
<b>Assessment Task</b>			
Students recognize technology in a career or occupation.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Role play (careers)</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		Students role play careers demonstrating the technology used in occupations.	

# Technology - Grade One

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 1:** Give examples of the effects of technology on life in the past and present.

**MCF Benchmark:** 6.EE.2

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### Analysis of Benchmark

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#### Key Concepts

- Daily tasks have changed through technological development.

#### Evidence of Achievement

- Students will demonstrate awareness of technological advances.

#### Instructional Activities

- The teacher will discuss the role of technology in the past and present.
- The teacher will lead compare/contrast activities relating to evolution of technology.
- Students will compare and contrast different forms of technology used today and in the past.

#### Curriculum Integration

SCI:MCF I.1.E.3,4

#### Resources

Appendix: Grade One – Standard 6

## Assessment

<b>Title of Task:</b> Evaluation and Forecast		<b>Grade:</b> One	
<b>Standard &amp; Benchmark:</b> TEC.6.EE.1,2,3			
<b>Assessment Task</b>			
Students understand safe practices while using technology.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Safety demonstration</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		Students demonstrate safe practices when using technology.	

# Technology - Grade Two

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 1:** Describe how a technology could be used in a career or occupation.

**MCF Benchmark:** 6.EE.1

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### Analysis of Benchmark

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#### Key Concepts

- Technology plays a key role in many careers.

#### Evidence of Achievement

- Students will identify an occupation or career that uses technology.
- Students will create a human "paper" figure demonstrating the use of the technology.
- Students will write a short essay on the use of the technology.

#### Instructional Activities

- The instructor will identify an occupation that uses technology.
- The instructor will read informational selection on the use of this technology (planes, trains, automobiles).
- The instructor will use a graphic organizer to model how to write about the occupation (writing process).
- The students will identify, research, write, and create a paper model of the technological occupation.

#### Resources

Appendix: Grade Three – Standard 6

## Assessment

<b>Title of Task:</b> Careers in Technology		<b>Grade:</b> Two	
<b>Standard &amp; Benchmark:</b> TEC.6.EE.1			
<b>Assessment Task</b>			
Students explore technological occupations.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Project design</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		Students create a project which illustrates an occupation in the technology field.	

# Technology - Grade Three

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 1: Demonstrate how people in different occupations and careers use technology to do their work.**

**MCF Benchmark:** 6.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- Technology is used in a career or occupation.

#### Evidence of Achievement

- Students will identify various occupations and careers that use technology.
- Students will orally present information gathered from an interview showing technology in use.

#### Instructional Activities

- Teacher and students will create a list of questions to be used in an interview.
- The teacher will interview a student regarding technology they use in a classroom (model).
- The teacher will present gathered information (model).
- Create questions for student to use when interviewing parent or special person and how technology is used in their occupation.
- Each student will present their information to the class.

#### Curriculum Integration

ART:MCF V.1.E.2

SCI:MCF II.1.E.2,3

#### Resources

Appendix: Grade Three – Standard 6

## Assessment

<b>Title of Task:</b> Evaluating and Forecasting		<b>Grade:</b> Three	
<b>Standard &amp; Benchmark:</b> TEC.6.LE.1,2,3,4,5,6			
<b>Assessment Task</b>			
Students explore the integration of technology in their lives.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Visual representation</li> <li>● Discussion</li> <li>● Project</li> <li>● Essay</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students participate in a discussion about careers in technology and forecast trends of future developments.</p> <p>Students discuss how electronic mail impacts their lives.</p> <p>Students discuss and produce a visual representation of how technology has solved a problem.</p> <p>Students write an essay on a famous inventor's impact on society.</p>	

# Technology - Grade Four

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 1: Demonstrate how people in different occupations and careers use technology to do their work.**

**MCF Benchmark:** 6.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- Technology is used in different careers or occupations.

#### Evidence of Achievement

- Students will be able to identify the different ways careers or occupations use technology.

#### Instructional Activities

- Teacher will model by discussing with students the different ways technology is used in careers and occupations.
- Students will pick two careers and research (using the internet as at least one source) the use of technology in those careers.
- Students create a list that compares and contrasts the use of technology in the careers or occupations they have chosen.
- Students will give an oral presentation on what they learned in their research.

#### Curriculum Integration

ART:MCF V.1.E.2

SCI:MCF II.1.E.2,3

#### Resources

Appendix: Grade Four – Standard 6

## Assessment

<b>Title of Task:</b> I'm a Techie!		<b>Grade:</b> Four	
<b>Standard &amp; Benchmark:</b> TEC.6.LE.1			
<b>Assessment Task</b>			
Create a web of 10 careers and list how they use technology.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Questions</li> <li>● Interview</li> <li>● Website</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students create interview questions to identify a family members careers and how they use technology.</p> <p>Interview a family member.</p> <p>Compile all careers and how the technology is used.</p> <p>Choose ten of those careers and make a web with "Technology Career" as a heading</p>	

# Technology - Grade Five

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 1: Demonstrate how people in different occupations and careers use technology to do their work.**

**MCF Benchmark:** 6.LE.1

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### Analysis of Benchmark

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#### Key Concepts

- Technology is used in different careers or occupations to do different types of work.

#### Evidence of Achievement

- Students will be able to identify how different careers or occupations use technology.
- Students will be able to compare and contrast how different careers or occupations use technology.

#### Instructional Activities

- Teacher will model by discussing with students the different ways technology is used in careers and occupations.
- Students will pick three careers and research (using the internet as at least one source) the use of technology in those careers.
- Students create a list that compares and contrasts the use of technology in careers or occupations.
- Students will give an oral presentation on what they learned in their research, using a multimedia presentation program.

#### Curriculum Integration

ART:MCF V.1.E.2

SCI:MCF II.1.E.2,3

#### Resources

Appendix: Grade Five – Standard 6

## Assessment

<b>Title of Task:</b> Careers		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.6.LE.1			
<b>Assessment Task</b>			
Create a web showing three careers using technology.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Research</li> <li>● Web careers</li> <li>● Technology use</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students research three careers and how technology is used.</p> <p>Students web the three careers with technology in the middle.</p> <p>Students web from the three careers how technology is used.</p>	

# Technology - Kindergarten

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 2:** List and describe safe and unsafe aspects of communication technology.

**MCF Benchmark:** 6.EE.5

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### Analysis of Benchmark

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#### Key Concepts

- There are potential dangers in the use of communication technology as they relate to safety and privacy.

#### Evidence of Achievement

- Students will recognize best practices in current safety and privacy issues.

#### Instructional Activities

- The teacher will discuss the importance of safety and privacy when using technology.
- The teacher will provide hands on lessons relating to safety and privacy.
- Students will practice using the internet to conduct searches.

#### Resources

Appendix: Kindergarten – Standard 6

#### Assessment

See TEC.6.EE.1

# Technology - Grade One

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 2:** List and describe safe and unsafe aspects of communication technology.

**MCF Benchmark:** 6.EE.5

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### Analysis of Benchmark

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#### Key Concepts

- There are potential dangers in communication technology.

#### Evidence of Achievement

- Students will be aware of best practices in current safety and privacy issues.

#### Instructional Activities

- The teacher will lead a discussion emphasizing the importance of safety and privacy issues.
- The teacher will provide activities relating to safety and privacy.
- Students will demonstrate proper computer usage.

#### Resources

Appendix: Grade One – Standard 6

#### Assessment

See TEC.6.EE.1

# Technology - Grade Two

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 2:** Give examples of the effects of technology on life in the past and present.

**MCF Benchmark:** 6.EE.2

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### Analysis of Benchmark

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#### Key Concepts

- The effects of technology on life in the past and present can be compared.

#### Evidence of Achievement

- Students will create a Venn diagram showing the positive and negative effects of technology on a community.

#### Instructional Activities

- The teacher will discuss the role of technology today and in the past.
- The instructor will hold two images of a community, one from the 1800's and one from the 21<sup>st</sup> century.
- Students will be handed a Venn diagram and write the positive and negative effects of technology on the community (lighting - positive, telephone poles - negative, cell phone - positive, distraction driving - negative).

#### Resources

Appendix: Grade Two – Standard 6

## Assessment

<b>Title of Task:</b> Evaluating Technology		<b>Grade:</b> Two	
<b>Standard &amp; Benchmark:</b> TEC.6.EE.2,4,6			
<b>Assessment Task</b>			
Students evaluate the effects of technology.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Visual presentation</li> <li>● Project</li> </ul>			
Beginning	Developing	<b>Achieving</b>	Exceeding
		<p>Students complete a Venn diagram showing negative and positive effects of technology.</p> <p>Students create a collage of positive and negative examples.</p>	

# Technology - Grade Three

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 2:** Forecast the possible effects technology could have on our society.

**MCF Benchmark:** 6.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- Technology will impact society in the future.

#### Evidence of Achievement

- Students will brainstorm a list of effects of technology in the future.

#### Instructional Activities

- The instructor should state several examples of how technology may change and its effect on society (i.e., electric car).
- Students will brainstorm a list of the future effects of technology.
- Students will share their thoughts.

#### Curriculum Integration

SCI:MCF II.1.E.4

SOC:MCF IV.1.LE.2,3 IV.3.LE.1

#### Resources

Appendix: Standard Classroom List

#### Assessment

See TEC.6.LE.1

# Technology - Grade Four

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 2:** Forecast the possible effects technology could have on our society.

**MCF Benchmark:** 6.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- Technology will impact the future.

#### Evidence of Achievement

- Students will be able to identify possible effects that technology will have on our future.

#### Instructional Activities

- Teacher will model by discussing possible effects technology will have on our future.
- Students will discuss in groups the possible effects different technology can have on our future.
- Students will share their thoughts as a whole group.

#### Curriculum Integration

SCI:MCF II.1.E.4

SOC:MCF IV.1.LE.2,3 IV.3.LE.1

#### Resources

Appendix: Grade Four – Standard 6

## Assessment

<b>Title of Task:</b> Segway		<b>Grade:</b> Four	
<b>Standard &amp; Benchmark:</b> TEC.6.LE.2,3,4,5,6			
<b>Assessment Task</b>			
Students create an essay stating the positive and effects of new technology on society, and safety issues related to this technology.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Research</li> <li>● Positive/negative impacts</li> <li>● Safety issues</li> <li>● Essay</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students research the negative and positive effects of the Segway Human transporter and the safety issues associated with it.</p> <p>Students write a list of five negative and positive effects the Segway has on society.</p> <p>Students write a list of five safety related issues.</p> <p>Students write an essay related to the Segway's impact on society.</p>	

# Technology - Grade Five

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 2:** Forecast the possible effects technology could have on our society.

**MCF Benchmark:** 6.LE.2

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### Analysis of Benchmark

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#### Key Concepts

- Technology will impact the future.

#### Evidence of Achievement

- Students will be able to identify possible effects that technology will have on our future.

#### Instructional Activities

- Teacher will model by discussing possible effects technology will have on our future.
- Students will discuss in groups the possible effects different technology can have on our future.
- Students will share their thoughts with each other in groups while the teacher observes.

#### Curriculum Integration

SCI:MCF II.1.E.4

SOC:MCF IV.1.LE.2,3 IV.3.LE.1

#### Resources

Appendix: Grade Five – Standard 6

## Assessment

<b>Title of Task:</b> Technology Affect		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.6.LE.2,3,4			
<b>Assessment Task</b>			
Students create a list of ten impacts technology has on life.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Research</li> <li>● Discussion of impacts</li> <li>● List of impacts</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students research different forms of technology.</p> <p>Students discuss with class how this technology impacts our life.</p> <p>Students create a list of ten impacts.</p>	

# Technology - Grade One

## **Concept: Evaluating and Forecasting**

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 3: Study and predict the consequences of the development of new technology.**

**MCF Benchmark:** 6.EE.6 6.EE.7

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### Analysis of Benchmark

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#### **Key Concepts**

- Technology is constantly evolving and changing.

#### **Evidence of Achievement**

- The student will demonstrate awareness of various technological changes.

#### **Instructional Activities**

- The teacher will demonstrate various technological changes.
- The teacher will provide technological options.
- The student will orally list technology changes.

#### **Resources**

Appendix: Standard Classroom List

#### **Assessment**

See TEC.6.EE.1

# Technology - Grade Two

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 3:** Compare and contrast individuals' experiences and decisions about technology.

**MCF Benchmark:** 6.EE.3

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### Analysis of Benchmark

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#### Key Concepts

- Individual experiences with technology vary and this affects our ability to make technological decisions.

#### Evidence of Achievement

- Students will create a graph showing the varying degrees of technology use.
- Students will state the advantages/disadvantages of being experienced with various technologies.

#### Instructional Activities

- The teacher will create a tally chart showing student experiences with three different forms of technology (e.g., cell phone, home phone, e-mail).
- The teacher will model how to create a bar graph from the tally chart.
- Students will create the bar graph.
- The teacher will discuss which technology is used the most, least, etc.
- Students will discuss the advantages/disadvantages of technology choices.
- Students will make a Venn diagram of the advantages and disadvantages.

#### Resources

Appendix: Standard Classroom List, Software List (Spreadsheet)

## Assessment

<b>Title of Task:</b> Deciding to Use Technology		<b>Grade:</b> Two	
<b>Standard &amp; Benchmark:</b> TEC.6.EE.3,5			
<b>Assessment Task</b>			
Students explore technological uses and the advantages/disadvantages.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Visual presentation</li> <li>● Participation in discussion</li> </ul>			
Beginning	Developing	Achieving	Exceeding
		<p>Students create a tally chart, bar graph or table graph which shows experiences with using technology.</p> <p>Students participate in a discussion of the advantages/disadvantages of using technology.</p>	

# Technology - Grade Three

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 3:** Show examples of how technology affects and impacts one's current life.

**MCF Benchmark:** 6.LE.3

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### Analysis of Benchmark

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#### Key Concepts

- Technology impacts our life.

#### Evidence of Achievement

- Students will state the affects and impacts of technology on their personal life.

#### Instructional Activities

- The teacher will model how to email and attach an image.
- The students will discuss how the ability to email and send/receive pictures this way impacts their personal life.

#### Curriculum Integration

ART:MCF IV.5.E.1

SCI:MCF II.1.E.3

SOC:MCF VI.1.LE.1

#### Resources

Appendix: Grade Three – Standard 6

#### Assessment

See TEC.6.LE.1

# Technology - Grade Four

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 3:** Show examples of how technology affects and impacts one's current life.

**MCF Benchmark:** 6.LE.3

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### Analysis of Benchmark

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#### Key Concepts

- Technology impacts and affects our life.

#### Evidence of Achievement

- Students will be able to list ways technology affects and impacts our life.

#### Instructional Activities

- Teacher will model by discussing different ways technology impacts our life.
- Teacher will model different kinds of questions to ask in regard to technology.
- Students will discuss in groups how technology impacts their life compared to their parents and grandparents.
- Students will interview one grandparent and parent in regard to technology when they were the student's age.
- Students will write a paper discussing the benefits of technology today, using what they learned from their interviews.

#### Curriculum Integration

ART:MCF IV.5.E.1

SCI:MCF II.1.E.3

SOC:MCF VI.1.LE.1

#### Resources

Appendix: Grade Four – Standard 6

#### Assessment

See TEC.6.LE.2

# Technology - Grade Five

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 3:** Show examples of how technology affects and impacts one's life.

**MCF Benchmark:** 6.LE.3

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### Analysis of Benchmark

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#### Key Concepts

- Technology impacts and affects our life.

#### Evidence of Achievement

- Students will be able to list ways technology affects and impacts our current life.

#### Instructional Activities

- Teacher will model by discussing different ways technology impacts our life.
- Teacher will model how to email, text and images.
- Students will discuss as a group how technology is beneficial to our life today.
- Students will compare and contrast the benefits of technology today with the methods of the past, focusing on email.

#### Curriculum Integration

ART:MCF IV.5.E.1

SCI:MCF II.1.E.3

SOC:MCF VI.1.LE.1

#### Resources

Appendix: Grade Five – Standard 6

#### Assessment

See TEC.6.LE.2

# Technology - Grade Two

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 4: Identify the advantages and disadvantages from the application of a technology to a civic, economic, or societal problem.**

**MCF Benchmark:** 6.EE.4

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### Analysis of Benchmark

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#### Key Concepts

- Technology has civic, economic, or societal advantages and disadvantages.

#### Evidence of Achievement

- Students will create a Venn diagram showing the advantages and disadvantages of a technology.

#### Instructional Activities

- The teacher will discuss the advantages and disadvantages of technology.
- The teacher will distribute a blank Venn diagram labeled "Technology Advantages" and "Technology Disadvantages".
- The students will title the Venn diagram "Automobile".
- Students will discuss the advantages/disadvantages of owning an automobile.
- Students will state whether owning an automobile is an advantage or a disadvantage.

#### Resources

Appendix: Standard Classroom List

#### Assessment

See TEC.6.EE.2

# Technology - Grade Three

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 4: Identify the advantages and disadvantages from the application of a technology to a civic, economic, or societal problem.**

**MCF Benchmark:** 6.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- There are advantages and disadvantages from the application of technology on a civic, economic, or societal problem.

#### Evidence of Achievement

- Students will be able to create a Venn diagram showing advantages and disadvantages of the application of technology on a civic, economic, or societal problem.

#### Instructional Activities

- The teacher will discuss with students the advantages and disadvantages between riding a bicycle to work compared to driving a car.
- The teacher will distribute a Venn diagram and have the students fill in the advantages and disadvantages.
- Students will complete and share the results of the Venn diagram that they have developed.

#### Curriculum Integration

ART:MCF IV.4.E.1,3

SCI:MCF II.1.E.3

#### Resources

Appendix: Standard Classroom List

#### Assessment

See TEC.6.LE.1

# Technology - Grade Four

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 4: Identify the advantages and disadvantages from the application of technology to a civic, economic, or societal problem.**

**MCF Benchmark:** 6.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- There are advantages from the application of a technology to a civic, economic, or societal problem.
- There are disadvantages from the application of a technology to a civic, economic, or societal problem.

#### Evidence of Achievement

- Students will be able to compare and contrast the advantages and disadvantages from the application of a technology to a civic, economic, or societal problem.

#### Instructional Activities

- Teacher will discuss advantages and disadvantages of different modes of transportation and the problems they can cause. (Do not forget about the Segway Human Transporter).
- In a group students will discuss the advantages and disadvantages of different modes transportation.
- Students will share what they found in their groups with the whole class.

#### Curriculum Integration

ART:MCF IV.4.E.1,3

SCI:MCF II.1.E.3

#### Resources

Appendix: Grade Four – Standard 6

#### Assessment

See TEC.6.LE.2

# Technology - Grade Five

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 4: Identify the advantages and disadvantages from the application of a technology to a civic, economic, or societal problem.**

**MCF Benchmark:** 6.LE.4

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### Analysis of Benchmark

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#### Key Concepts

- There are both advantages and disadvantages from the application of a technology to a civic, economic, or societal problem.

#### Evidence of Achievement

- Students will be able to compare and contrast the advantages and disadvantages from the application of a technology to a civic, economic, or societal problem.

#### Instructional Activities

- Teacher will model the use of different fuel powered vehicles using a web mapping technique.
- Students will discuss the advantages/disadvantages of different fuel powered vehicles.
- Students will create a “Web” to show the advantages and disadvantages of fuel powered vehicles.

#### Curriculum Integration

ART:MCF IV.4.E.1,3

SCI:MCF II.1.E.3

#### Resources

Appendix: Grade Five – Standard 6

## Assessment

<b>Title of Task:</b> Technology Advantages		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.6.LE.4			
<b>Assessment Task</b>			
Students will create a Venn Diagram of Technology advantages and disadvantages.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Selection</li> <li>● Discussion</li> <li>● Venn diagram</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students pick a technology that impacts society.</p> <p>Students discuss advantages and disadvantages.</p> <p>Students create a Venn diagram.</p>	

# Technology - Grade Two

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 5:** List and describe safe and unsafe aspects of technology in relation to oneself and others.

**MCF Benchmark:** 6.EE.5

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### Analysis of Benchmark

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#### Key Concepts

- There are safe and unsafe aspects of technology in relation to oneself and others.

#### Evidence of Achievement

- Students will state the importance of wearing a helmet on a bicycle.

#### Instructional Activities

- The teacher will discuss various types of technological devices and the importance of safety.
- Students will discuss why it is an advantage to ride a bicycle.
- Students will discuss how a bicycle is a great technological device, but can be unsafe.
- Students will discuss how to make this technology safer.

#### Resources

Appendix: Standard Classroom List

#### Assessment

See TEC.6.EE.3

# Technology - Grade Three

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 5:** Classify and discuss the safe and unsafe factors of technological applications, their historical advances and impact, as they apply in the home, school, community, and/or the workplace.

**MCF Benchmark:** 6.LE.5 6.LE.6 6.LE.7

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### Analysis of Benchmark

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#### Key Concepts

- Technology applications have safe and unsafe factors.
- Technology advances impact society.

#### Evidence of Achievement

- Students will state the importance of following procedures when traveling to school and returning home on a bus.
- Students will state that bussing has impacted and solved a societal need.

#### Instructional Activities

- The teacher will discuss with students that school buses were created to provide transportation for students that had difficulty getting to school.
- The teacher will discuss with students that this form of technology has several safety factors.
- The classroom will discuss procedures necessary so that this form of technology can be used safely.

#### Resources

Appendix: Grade Three – Standard 6

#### Assessment

See TEC.6.LE.1

# Technology - Grade Four

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 5:** Classify and discuss the safe and unsafe factors of technological applications, their historical advances and impact, as they apply in the home, school, community, and/or the workplace.

**MCF Benchmark:** 6.LE.5 6.LE.6 6.LE.7

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### Analysis of Benchmark

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#### Key Concepts

- Technological applications have safe and unsafe factors.
- Technological application advances impact society in different ways.

#### Evidence of Achievement

- Students will be able to state the safe and unsafe factors of technological applications.
- Students will be able to give examples of how technological advances impact society.

#### Instructional Activities

- Teacher will discuss the safe and unsafe factors of having information available through technological applications like computers in the workplace.
- Students will research in small groups different incidences where workplace computers caused an unsafe factor and how the company resolved the issue making it a safe factor.
- Students will report their findings within their groups to the whole class.

#### Resources

Appendix: Grade Four – Standard 6

#### Assessment

See TEC.6.LE.2

# Technology - Grade Five

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 5: Classify and discuss the safe and unsafe factors of technological applications, their historical advances and impact, as they apply in the home, school, community, and/or the workplace.**

**MCF Benchmark:** 6.LE.5 6.LE.6 6.LE.7

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### Analysis of Benchmark

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#### Key Concepts

- Technological applications have safe and unsafe factors.
- Technological application advances impact society in different ways.

#### Evidence of Achievement

- Students will be able to state the safe and unsafe factors of technological applications.
- Students will be able to give examples of how technological advances impact society.

#### Instructional Activities

- Teacher will discuss the safe and unsafe factors of having information available through technological applications in society. Examples include cars, trucks, semi-trucks, computers, ATM's, and Security Systems.
- Students will list the different kinds of safe and unsafe factors of technological applications in society.
- Students will discuss the safe and unsafe factors of technological applications in society.

#### Resources

Appendix: Grade Five – Standard 6

## Assessment

<b>Title of Task:</b> Technology Safety		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.6.LE.5			
<b>Assessment Task</b>			
Create a Venn Diagram showing the safe and unsafe aspects of a technology.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Identification of technology</li> <li>● Identification of factors</li> <li>● Venn diagram</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students identify a technology that impacts society.</p> <p>Students identify and discuss three safe and unsafe factors.</p> <p>Create a Venn diagram with at least six points showing safe, unsafe and neutral factors of technology.</p>	

# Technology - Grade Two

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 6: Identify how technology has impacted the environment.**

**MCF Benchmark:** 6.EE.6

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### Analysis of Benchmark

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#### Key Concepts

- Technology has a positive/negative affect on the environment.

#### Evidence of Achievement

- Students will create a collage of positive and negative examples.

#### Instructional Activities

- The teacher will discuss the positive and negative impacts of technology on the environment.
- Students will discuss positive effects of technology (easier work).
- Students will discuss negative effects of technology (danger to environment).
- Students will discuss negative effects of technology (reason not to throw away).
- The instructor will distribute a Venn diagram template. The students will categorize advantages and disadvantages using a Venn diagram.

#### Resources

Appendix: Grade Two – Standard 6

#### Assessment

See TEC.6.EE.2

# Technology - Grade Three

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 6: Research and predict the consequences of the development of a new technology.**

**MCF Benchmark:** 6.LE.8

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### Analysis of Benchmark

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#### Key Concepts

- There are consequences from the development of new technology.

#### Evidence of Achievement

- Students will write an essay stating how a famous inventor's invention impacted society (e.g., Henry Ford - automobile).
- Students will predict how advances in this technology (electric car) can impact society.

#### Instructional Activities

- The teacher will read a biography about a famous inventor (i.e., Edison, Bell, Ford) to the class.
- Classroom discussion will follow on how this inventor's projects impacted society.
- The teacher will help the students predict how additional advances in this technology would impact society.
- Students will write an essay on this topic.

#### Resources

Appendix: Grade Three – Standard 6

#### Assessment

See TEC.6.LE.1

# Technology - Grade Four

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 6: Research and predict the consequences of the development of new technologies.**

**MCF Benchmark:** 6.LE.8

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### Analysis of Benchmark

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#### Key Concepts

- The development of a new technology has consequences.

#### Evidence of Achievement

- Students will be able to give examples of consequences that occurred from the development of a new technology.

#### Instructional Activities

- Teacher will model how to research new technologies using the internet.
- Students will use the internet to research new technologies that could someday impact society.
- Students should predict what consequences the new technology the researched will have in a whole class discussion.

#### Resources

Appendix: Grade Four – Standard 6

#### Assessment

See TEC.6.LE.2

# Technology - Grade Five

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 6: Research and predict the consequences of the development of new technology.**

**MCF Benchmark:** 6.LE.8

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### Analysis of Benchmark

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#### Key Concepts

- The development of a new technology has consequences.

#### Evidence of Achievement

- Students will be able to give examples of consequences that occurred from the development of a new technology.

#### Instructional Activities

- Teacher will model how to research new technologies using the internet.
- Students will use the internet to research new technologies that could someday impact society.
- Students will create a multimedia presentation discussing their predictions that they will present to the class.

#### Resources

Appendix: Grade Five – Standard 6

## Assessment

<b>Title of Task:</b> Technology Consequence		<b>Grade:</b> Five	
<b>Standard &amp; Benchmark:</b> TEC.6.LE.6			
<b>Assessment Task</b>			
Students create a PowerPoint presentation showing how technology will impact the future.			
<b>Scoring Guide Criteria</b>			
<ul style="list-style-type: none"> <li>● Research</li> <li>● Identification of impacts</li> <li>● Slide presentation</li> </ul>			
<b>Beginning</b>	<b>Developing</b>	<b>Achieving</b>	<b>Exceeding</b>
		<p>Students research a technology.</p> <p>Students identify five ways technology will impact the future.</p> <p>Students create a PowerPoint presentation with six slides.</p>	

# Technology - Grade Two

## Concept: Evaluating and Forecasting

**Standard 6:** All students will evaluate the societal and environmental impacts of technology and forecast alternative uses and possible consequences to make informed civic, social, and economic decisions.

**Benchmark 7: Study and predict the consequences of the development of a new technology.**

**MCF Benchmark:** 6.EE.7

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### Analysis of Benchmark

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#### Key Concepts

- Technology is a result of a need.

#### Evidence of Achievement

- Students will create a solution to an identified need.

#### Instructional Activities

- The teacher will discuss and model uses of a calculator with students.
- The teacher will discuss how creating this technology fulfilled a need.
- Students will use a calculator to solve a problem.

#### Resources

Appendix: Grade Two – Standard 6

#### Assessment

See TEC.6.EE.6