1.   Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

a.   apply existing knowledge to generate new ideas, products, or processes

> **Skill & Example**
> describe what they already know and need to know about a challenge/problem selected by the teacher to elicit creative thinking (e.g., cyberbullying, recycling, resolving an issue in the school environment); then brainstorm and record ideas that might contribute to a new solution to the problem or issue, use technology to gather and organize ideas and information (e.g., a concept map or What-I-Know chart [KWHL]), and propose one or more new possible

b.   create original works as a means of personal or group expression

> **Skill & Example**
> create an original presentation based on a story, activity, or event including text, images and/or sound files using digital tools and resources.

c.   c. use models and simulations to explore complex systems and issues

> **Skill & Example**
> use digital tools and resources to find and organize data. With the help of the teacher, create a visual model or use a simulation (e.g., graph or concept map of the life cycle of plants and animals, seasonal changes, school-day activities, or how community workers contribute to the community).

d.   d. identify trends and forecast possibilities

> **Skill & Example**
> use graphic organizers and simulations (developed specifically for this age group) to identify key variables and patterns and to predict outcomes in everyday events and relationships.

2. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.   Students:

a.   interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media

> **Skill & Example**
>
> collaborate in pairs using age-appropriate digital media to learn about, develop, and share information and works with students, teachers, parents, and family members (e.g., collaborate with a partner to illustrate and present a nursery rhyme or story using concept mapping, collaborative graphic organizer, or story-building software developed for this age group).

b.   communicate information and ideas effectively to multiple audiences using a variety of media and formats

> **Skills & Example**
>
> share curriculum-related concepts with their classmates, families, and others using developmentally appropriate online curriculum-based resources (e.g., online songs, stories, games, puzzles, clip art, presentations, templates and webpages).

c.   develop cultural understanding and global awareness by engaging with learners of other cultures

> **Skill & Example**
>
> use technology tools to exchange—classroom to classroom—stories, artifacts, and information about their lives, communities, and cultures.

d.   contribute to project teams to produce original works or solve problems

> **Skill & Example**
>
> share with a partner or team steps use age-appropriate technology tools to create a product; solve a problem; or illustrate a song, rhyme, or story.

3. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

a.   plan strategies to guide inquiry

> **Skill & Example**
>
> with the teacher's help and using age-appropriate technology, make a KWHL chart of the steps involved in planning a project (such as investigating weather, exploring why birds fly south in the winter, or determining what makes a good friend, town, or day) including what they already Know, what else they Want to know, How they can find and organize information, what they Learned, and how to share with others.

b.   b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media

> **Skill & Example**
>
> with the help of the teacher, locate and gather information from preselected digital sources or subject directories, choose effective key words for age-appropriate search engines, then choose relevant information and identify new questions. Use age-appropriate tools or teacher-created template to organize and share what they learned (e.g., in text document, graphic file, or multimedia organizer).

c.   evaluate and select information sources and digital tools based on the appropriateness to specific tasks

> **Skill & Example**
>
> describe the uses of a variety of age-appropriate digital tools and select tools or resources from those available to effectively accomplish a variety of tasks.

d.   process data and report results

> **Skill & Example**
>
> use digital resources to collect data about a topic (e.g., weather, current events, personal interests) and to create ordered lists, identify patterns, and display results and conclusions in text and/or graphic formats.

4. Critical Thinking, Problem Solving, and Decision Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

a.   identify and define authentic problems and significant questions for investigation

> **Skill & Example**
> identify ways technology can help them explore and understand everyday problems (e.g., how to dress for the day's weather, important aspects of taking care of a pet, which community helper might help in a given situation). Record questions and capture answers and additional questions.

b.   plan and manage activities to develop a solution or complete a project

> **Skill & Example**
> with teacher support, identify and apply strategies to select information and digital resources to complete an activity or solve a particular problem. With teacher support, identify and record steps to complete a task.

c.   collect and analyze data to identify solutions and/or make informed decisions

> **Skill & Example**
> collect data on an everyday problem or issue. Record results using age-appropriate digital graphing tools (e.g., online survey tool, electronic chart). Identify patterns and propose a decision or solution.

d.   use multiple processes and diverse perspectives to explore alternative solutions

> **Skill & Example**
> in pairs or small groups, compare problem-solving processes and solutions (captured using charts, concept maps, timelines) and discuss similarities and differences.

5. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

a.   advocate and practice safe, legal, and responsible use of information and technology

> **Skill & Example**
> demonstrate an understanding of age-appropriate issues related to safe, healthy, and acceptable use of digital devices (e.g., online safety and privacy, amount of screen use per day, safe searching, online etiquette) and describe personal consequences of inappropriate use.

b.   exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity

> **Skill & Example**
> articulate and demonstrate ongoing cooperative and collaborative use of technology to contribute to an effective learning environment (e.g., work productively with a partner or in a small group on a technology-based activity and discuss or reflect on the benefits of working with a partner to complete the task).

c.   demonstrate personal responsibility for lifelong learning

> **Skill & Example**
> recognize the value of and use technology as a way to communicate with others and to access information for formal and informal learning.

d.   exhibit leadership for digital citizenship

> **Skill & Example**
> model technology use, sharing, and safety rules and encourage peers to follow accepted guidelines.

6.   Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:

a.   understand and use technology systems

> **Skill & Example**
> communicate about technology using developmentally appropriate and accurate terminology (e.g., be able to identify and refer to parts of the computer with proper terms). Perform basic hardware and software operations (e.g., copy and paste, navigate among open windows, use input devices, control sound and brightness of image, undo/redo). Demonstrate the ability to navigate in electronic environments (e.g., e-books, educational games and simulations, digital presentation software, mobile devices, and websites) with assistance as needed.

b.   select and use applications effectively and productively

> **Skill & Example**
> select from a teacher-approved list and independently apply age-appropriate applications and resources to address content-related tasks and problems (e.g., use games to practice basic skills, text readers and e-books to read, word processors to write, digital cameras to record stages in science projects, graphics programs to draw).

c.   troubleshoot systems and applications

> **Skill & Example**
> identify and, with the help of the teacher, resolve common problems that occur during everyday use (e.g., frozen screen, failure to print, difficulty accessing Internet, computer doesn't power up).

d.   transfer current knowledge to learning of new technologies

> **Skill & Example**
> recognize common terminology, icons, and symbols related to basic functions of technology and apply that knowledge to new technologies.