

## BIG IDEAS

Designs grow out of natural curiosity.

Skills can be developed through play.

Technologies are tools that extend human capabilities.

## Learning Standards

Curricular Competencies	Content
<p><i>Students are expected to be able to do the following:</i></p> <p><b>Applied Design</b></p> <p><b>Ideating</b></p> <ul style="list-style-type: none"> <li>Identify needs and opportunities for designing, through exploration</li> <li>Generate ideas from their experiences and interests</li> <li>Add to others' ideas</li> <li>Choose an idea to pursue</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>Choose tools and materials</li> <li>Make a <b>product</b> using known procedures or through modelling of others</li> <li>Use trial and error to make changes, solve problems, or incorporate new ideas from self or others</li> </ul> <p><b>Sharing</b></p> <ul style="list-style-type: none"> <li>Decide on how and with whom to <b>share</b> their product</li> <li>Demonstrate their product, tell the story of designing and making their product, and explain how their product contributes to the individual, family, community, and/or environment</li> <li>Use personal preferences to evaluate the success of their design solutions</li> <li>Reflect on their ability to work effectively both as individuals and collaboratively in a group</li> </ul> <p><b>Applied Skills</b></p> <ul style="list-style-type: none"> <li>Use materials, tools, and technologies in a safe manner in both physical and digital environments</li> <li>Develop their skills and add new ones through play and collaborative work</li> </ul> <p><b>Applied Technologies</b></p> <ul style="list-style-type: none"> <li>Explore the use of simple, available tools and <b>technologies</b> to extend their capabilities</li> </ul>	<p><i>Students are expected to use the learning standards for Curricular Competencies from Applied Design, Skills, and Technologies K–3 in combination with grade-level content from other areas of learning in cross-curricular activities to develop foundational mindsets and skills in design thinking and making.</i></p>

## BIG IDEAS

Designs can be improved with prototyping and testing.

Skills are developed through practice, effort, and action.

The choice of technology and tools depends on the task.

## Learning Standards

Curricular Competencies	Content
<p><i>Students are expected to be able to do the following:</i></p> <p><b>Applied Design</b></p> <p><i>Understanding context</i></p> <ul style="list-style-type: none"> <li>Gather information about or from potential <b>users</b></li> </ul> <p><b>Defining</b></p> <ul style="list-style-type: none"> <li>Choose a design opportunity</li> <li>Identify key features or user requirements</li> <li>Identify the main objective for the design and any <b>constraints</b></li> </ul> <p><b>Ideating</b></p> <ul style="list-style-type: none"> <li>Generate potential ideas and add to others' ideas</li> <li>Screen ideas against the objective and constraints</li> <li>Choose an idea to pursue</li> </ul> <p><b>Prototyping</b></p> <ul style="list-style-type: none"> <li>Outline a general plan, identifying tools and materials</li> <li>Construct a first version of the <b>product</b>, making changes to tools, materials, and procedures as needed</li> <li>Record <b>iterations</b> of prototyping</li> </ul> <p><b>Testing</b></p> <ul style="list-style-type: none"> <li>Test the product</li> <li>Gather peer feedback and inspiration</li> <li>Make changes and test again, repeating until satisfied with the product</li> </ul>	<p><i>Students are expected to use the learning standards for Curricular Competencies from Applied Design, Skills, and Technologies 4–5 in combination with grade-level content from other areas of learning in cross-curricular activities to develop foundational mindsets and skills in design thinking and making.</i></p>

**Learning Standards (continued)**

Curricular Competencies	Content
<p><i>Making</i></p> <ul style="list-style-type: none"> <li>Construct the final product, incorporating planned changes</li> </ul> <p><i>Sharing</i></p> <ul style="list-style-type: none"> <li>Decide on how and with whom to <b>share</b> their product</li> <li>Demonstrate their product and describe their process</li> <li>Determine whether their product meets the objective and contributes to the individual, family, community, and/or environment</li> <li>Reflect on their design thinking and processes, and their ability to work effectively both as individuals and collaboratively in a group, including their ability to share and maintain a co-operative work space</li> <li>Identify new design issues</li> </ul> <p><b>Applied Skills</b></p> <ul style="list-style-type: none"> <li>Use materials, tools, and technologies in a safe manner, and with an awareness of the safety of others, in both physical and digital environments</li> <li>Identify the skills required for a task and develop those skills as needed</li> </ul> <p><b>Applied Technologies</b></p> <ul style="list-style-type: none"> <li>Use familiar tools and <b>technologies</b> to extend their capabilities when completing a task</li> <li>Choose appropriate technologies to use for specific tasks</li> <li>Demonstrate a willingness to learn new technologies as needed</li> </ul>	