# Area of Learning: APPLIED DESIGN, SKILLS, AND TECHNOLOGIES

**Grades 4–5** 

### **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.

Curricular Competencies	Content
Students are expected to be able to do the following:	Students are expected to use the learning standards for
Applied Design	Curricular Competencies from Applied Design, Skills, and Technologies 4–5 in combination with grade-level
Understanding context	content from other areas of learning in cross-curricular
<ul> <li>Gather information about or from potential users</li> </ul>	activities to develop foundational mindsets and skills in
Defining	design thinking and making.
<ul> <li>Choose a design opportunity</li> <li>Identify key features or user requirements</li> <li>Identify the main objective for the design and any constraints</li> </ul>	
Ideating	
<ul> <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>	
Prototyping	
<ul> <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>	
Testing	
Test the product	
Gather peer feedback and inspiration     Make changes and test again repeating until actisfied with the product.	(continued)
<ul> <li>Make changes and test again, repeating until satisfied with the product</li> </ul>	(continueu)

# Area of Learning: APPLIED DESIGN, SKILLS, AND TECHNOLOGIES

**Grades 4–5** 

# **Learning Standards (continued)**

Curricular Competencies	Content
Making  Construct the final product, incorporating planned changes	
Sharing	
<ul> <li>Decide on how and with whom to share 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>	
Applied Skills	
<ul> <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>	
Applied Technologies	
<ul> <li>Use familiar tools and technologies 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>	



## **Area of Learning: ARTS EDUCATION**

Grade 4

#### **BIG IDEAS**

Creative expression is a means to explore and share one's identity within a community.

**Artists** experiment in a variety of ways to discover new possibilities.

Dance, drama, music, and visual arts are each unique languages for creating and communicating.

Exploring **works of art** exposes us to diverse values, knowledge, and perspectives.

Curricular Competencies	Content
Students will be able to use creative processes to:	Students are expected to know the following:
<ul> <li>Exploring and creating</li> <li>Choose artistic elements, processes, materials, movements, technologies, tools, techniques and environments using combinations and selections for specific purposes in art making</li> <li>Create artistic works collaboratively and as an individual using ideas inspired by imagination, inquiry, experimentation, and purposeful play</li> <li>Explore identity, place, culture, and belonging through arts experiences</li> <li>Explore relationships among cultures, societies, and the arts</li> </ul>	<ul> <li>elements and principles that together create meaning in the arts, including but not limited to:         <ul> <li>dance: body, space, dynamics, time, relationships, form, and movement principles</li> <li>drama: character, time, place, plot, tension, mood and focus</li> <li>music: beat/pulse, duration, rhythm, tempo, pitch, timbre, dynamics, form, texture</li> <li>visual arts: elements of design: line, shape, space, texture, colour, form; principles of design: pattern, repetition, balance, contrast, emphasis, rhythm,</li> </ul> </li> </ul>
<ul> <li>Peasoning and reflecting</li> <li>Observe, listen, describe, inquire and predict how artists (dancers, actors, musicians, and visual artists) use processes, materials, movements, technologies, tools, techniques, and environments to create and communicate</li> <li>Develop and refine ideas, processes, and technical skills in a variety of art forms to improve the quality of artistic creations</li> <li>Reflect on creative processes and make connections to other experiences</li> <li>Connect knowledge and skills from other areas of learning in planning, creating, interpreting, and analyzing works for art</li> </ul>	variety  • processes, materials, technologies, tools and techniques to support arts activities  • choreographic devices  • a variety of dramatic forms  • notation to represent sounds, ideas, movements, elements, and actions  • image development strategies  • symbolism and metaphor create and represent meaning  • traditional and contemporary Aboriginal arts and arts-making processes  • a variety of regional and national works of art and artistic traditions from diverse
Communicating and documenting	cultures, communities, times, and places
<ul> <li>Adapt learned skills, understandings, and processes for use in new contexts and for different purposes and audiences</li> <li>Interpret and communicate ideas using symbolism to express meaning through the arts</li> <li>Express, feelings, ideas, and experiences in creative ways</li> <li>Describe and respond to works of art and explore artists' intent</li> <li>Experience, document and present creative works in a variety of ways</li> <li>Demonstrate increasingly sophisticated application and/or engagement of curricular content</li> </ul>	personal and collective responsibility associated with creating, experiencing, or presenting in a safe learning environment

### **Area of Learning: CAREER EDUCATION**

Grades 4–5

#### **BIG IDEAS**

Public identity is influenced by personal choices and decisions.

Exploring our strengths and abilities can help us identify our goals.

Leadership requires listening to and respecting the ideas of others. Family and community relationships can be a source of support and guidance when solving problems and making decisions.

Good learning and work habits contribute to short- and long-term personal and career success.

Curricular Competencies	Content
<ul> <li>Students are expected to be able to do the following:</li> <li>Identify and appreciate their personal attributes, skills, interests, and accomplishments and their growth over time</li> <li>Recognize the need for others who can support their learning and personal growth</li> <li>Recognize the intersection of their personal and public digital identities and the potential for both positive and negative consequences</li> <li>Demonstrate respect for differences in the classroom</li> <li>Use innovative thinking when solving problems</li> <li>Set realistic short- and longer-term learning goals, define a path, and monitor progress</li> <li>Make connections between effective work habits and success</li> <li>Demonstrate safe behaviours in a variety of environments</li> </ul>	Content  Students are expected to know the following:  Personal Development  • goal-setting strategies  • problem-solving and decision-making strategies  • emergent leadership skills  Connections to Community  • cultural and social awareness  • generational roles and responsibilities  • safety hazards and rules at school, at home, and in the community
<ul> <li>Demonstrate safe behaviours in a variety of environments</li> <li>Question self and others about the role of technology in the changing workplace</li> <li>Appreciate the influence of peer relationships, family, and community on personal choices and goals</li> </ul>	



### **Area of Learning: ENGLISH LANGUAGE ARTS**

**Grade 4** 

#### **BIG IDEAS**

Language and **text** can be a source of creativity and joy.

Exploring **stories** and other **texts** helps us understand ourselves and make connections to others and to the world.

**Texts** can be understood from different perspectives.

Using language in creative and playful ways helps us understand how language works.

Questioning what we hear, read, and view contributes to our ability to be educated and engaged citizens.

Curricular Competencies	Content
Using oral, written, visual, and digital texts, students are expected individually and collaboratively to be able to:	Students are expected to know the following:
Comprehend and connect (reading, listening, viewing)	Story/text
<ul> <li>Access and integrate information and ideas from a variety of sources and from prior knowledge to build understanding</li> <li>Use a variety of comprehension strategies before, during, and after reading, listening, or viewing to deepen understanding of text</li> <li>Consider different purposes, audiences, and perspectives in exploring texts</li> <li>Apply a variety of thinking skills to gain meaning from texts</li> <li>Identify how differences in context, perspectives, and voice influence meaning in texts</li> <li>Recognize the role of language in personal, social, and cultural identity</li> <li>Use personal experience and knowledge to connect to text and deepen understanding of self, community, and world</li> <li>Respond to text in personal and creative ways</li> <li>Recognize how literary elements, techniques, and devices enhance meaning in texts</li> <li>Show an increasing understanding of the role of organization in meaning</li> <li>Demonstrate awareness of the oral tradition in First Peoples cultures and the purposes of First Peoples texts</li> <li>Identify how story in First Peoples cultures connects people to land</li> </ul>	<ul> <li>forms, functions, and genres of text</li> <li>text features</li> <li>literary elements</li> <li>literary devices</li> <li>evidence</li> </ul> Strategies and processes <ul> <li>reading strategies</li> <li>oral language strategies</li> <li>metacognitive strategies</li> <li>writing processes</li> </ul> Language features, structures, and conventions <ul> <li>features of oral language</li> <li>paragraph structure</li> </ul>
Create and communicate (writing, speaking, representing)	sentence structure and grammar
<ul> <li>Exchange ideas and perspectives to build shared understanding</li> <li>Use writing and design processes to plan, develop, and create texts for a variety of purposes and audiences</li> <li>Use language in creative and playful ways to develop style</li> <li>Communicate in sentences and paragraphs, applying conventions of Canadian spelling, grammar, and punctuation</li> <li>Develop and apply expanding word knowledge</li> <li>Use oral storytelling processes</li> <li>Transform ideas and information to create original texts</li> </ul>	• conventions



## **Area of Learning: MATHEMATICS**

**Grade 4** 

Fractions and decimals are types of **numbers** that can represent quantities.

mathematical concepts

Development of computational fluency and multiplicative thinking requires analysis of patterns and relations in multiplication and division.

Regular changes in patterns can be identified and represented using tools

and tables.

Polygons are closed shapes with similar attributes that can be described, measured, and compared.

decisions

Analyzing and interpreting experiments in **data** probability develops an understanding of chance.

### **Learning Standards**

**BIG IDEAS** 

Curricular Competencies	Content
Students are expected to do the following:	Students are expected to know the following:
Reasoning and analyzing     Use reasoning to explore and make connections     Estimate reasonably     Develop mental math strategies and abilities to make sense of quantities     Use technology to explore mathematics     Model mathematics in contextualized experiences	<ul> <li>number concepts to 10 000</li> <li>decimals to hundredths</li> <li>ordering and comparing fractions</li> <li>addition and subtraction to 10 000</li> <li>multiplication and division of two- or three-digit numbers by one-digit numbers</li> <li>addition and subtraction of decimals to hundredths</li> </ul>
<ul> <li>Understanding and solving</li> <li>Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving</li> <li>Visualize to explore mathematical concepts</li> <li>Develop and use multiple strategies to engage in problem solving</li> <li>Engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures</li> </ul>	<ul> <li>addition and subtraction facts to 20 (developing computational fluency)</li> <li>multiplication and division facts to 100 (introductory computational strategies)</li> <li>increasing and decreasing patterns, using tables and charts</li> <li>algebraic relationships among quantities</li> <li>one-step equations with an unknown number, using all</li> </ul>
<ul> <li>Communicating and representing</li> <li>Communicate mathematical thinking in many ways</li> <li>Use mathematical vocabulary and language to contribute to mathematical discussions</li> <li>Explain and justify mathematical ideas and decisions</li> <li>Represent mathematical ideas in concrete, pictorial, and symbolic forms</li> </ul>	operations  how to tell time with analog and digital clocks, using 12- and 24-hour clocks regular and irregular polygons perimeter of regular and irregular shapes line symmetry one-to-one correspondence and many-to-one
<ul> <li>Connecting and reflecting</li> <li>Reflect on mathematical thinking</li> <li>Connect mathematical concepts to each other and to other areas and personal interests</li> <li>Incorporate First Peoples worldviews and perspectives to make connections to</li> </ul>	<ul> <li>correspondence, using bar graphs and pictographs</li> <li>probability experiments</li> <li>financial literacy — monetary calculations, including making change with amounts to 100 dollars and making simple financial</li> </ul>

### Area of Learning: PHYSICAL AND HEALTH EDUCATION

Daily participation in physical activity at moderate to vigorous intensity levels benefits all aspects of our wellbeing.

Knowing what we enjoy doing and knowing about our opportunities to participate in those activities helps us develop an active lifestyle.

Understanding ourselves and the various aspects of health helps us develop a balanced lifestyle.

**BIG IDEAS** 

Personal choices and social and environmental factors influence our health and well-being.

Developing healthy relationships helps us feel connected, supported, and valued.

Curricular Competencies	Content
Students are expected to be able to do the following:	Students are expected to know the following:
<ul> <li>Physical literacy</li> <li>Develop and apply a variety of fundamental movement skills in a variety of physical activities and environments</li> <li>Apply a variety of movement concepts and strategies in different physical activities</li> <li>Apply methods of monitoring exertion levels in physical activity</li> <li>Develop and demonstrate safety, fair play, and leadership in physical activities</li> <li>Identify and describe preferred types of physical activity</li> <li>Healthy and active living</li> <li>Participate daily in physical activity at moderate to vigorous intensity levels</li> <li>Identify and describe opportunities for and potential challenges to participation in preferred types of physical activity at school, at home, and in the community</li> <li>Explain the relationship of healthy eating to overall health and well-being</li> <li>Identify and describe factors that influence healthy choices</li> <li>Examine and explain how health messages can influence behaviours and decisions</li> </ul>	<ul> <li>proper technique for fundamental movement skills, including, non-locomotor, locomotor, and manipulative skills</li> <li>movement concepts and strategies</li> <li>ways to monitor physical exertion levels</li> <li>how to participate in different types of physical activities, including individual and dual activities, rhythmic activities, and games</li> <li>benefits of physical activity and exercise</li> <li>practices that promote health and well-being, including those relating to physical activity, sleep, healthy eating, and illness prevention</li> <li>food portion sizes and number of servings</li> <li>communicable and non-communicable illnesses</li> <li>media messaging and body image</li> <li>strategies and skills to use in potentially hazardous, unsafe or abusive situations, including identifying common lures or tricks used by potential abusers</li> <li>strategies for responding to bullying, discrimination, and violence</li> <li>potential effects of psychoactive substance use, and strategies for preventing personal harm</li> <li>factors that influence self-identity, including body image and social media</li> <li>physical, emotional, and social changes that occur during puberty, including those involving sexuality and sexual identity</li> </ul>
Identify and apply strategies for pursuing personal healthy-living goals	(continued)



# **Area of Learning: PHYSICAL AND HEALTH EDUCATION**

# $Learning\ Standards\ (continued)$

Curricular Competencies	Content
<ul> <li>Social and community health</li> <li>Identify and describe avoidance or assertiveness strategies to use in unsafe and/or uncomfortable situations</li> <li>Describe and assess strategies for responding to discrimination, stereotyping, and bullying</li> <li>Describe and apply strategies for developing and maintaining positive relationships</li> <li>Describe and apply strategies that promote a safe and caring environment</li> </ul>	
<ul> <li>Mental well-being</li> <li>Describe and assess strategies for promoting mental well-being</li> <li>Describe and assess strategies for managing problems related to mental well-being and substance use</li> <li>Explore and describe strategies for managing physical, emotional, and social changes during puberty</li> <li>Describe factors that positively influence mental well-being and self-identity</li> </ul>	



**Area of Learning: SCIENCE** 

**Grade 4** 

## **BIG IDEAS**

All living things sense and respond to their environment.

Matter has mass, takes up space, and can change phase.

Energy can be transformed.

The motions of Earth and the moon cause observable patterns that affect living and non-living systems.

Curricular Competencies	Content
<ul> <li>Students are expected to be able to do the following:</li> <li>Questioning and predicting <ul> <li>Demonstrate curiosity about the natural world</li> <li>Observe objects and events in familiar contexts</li> <li>Identify questions about familiar objects and events that can be investigated scientifically</li> <li>Make predictions based on prior knowledge</li> </ul> </li> <li>Planning and conducting <ul> <li>Suggest ways to plan and conduct an inquiry to find answers to their questions</li> <li>Consider ethical responsibilities when deciding how to conduct an experiment</li> <li>Safely use appropriate tools to make observations and measurements, using formal measurements and digital technology as appropriate</li> <li>Make observations about living and non-living things in the local environment</li> <li>Collect simple data</li> </ul> </li> </ul>	<ul> <li>sensing and responding: <ul> <li>humans</li> <li>other animals</li> <li>plants</li> </ul> </li> <li>biomes as large regions with similar environmental features</li> <li>phases of matter</li> <li>the effect of temperature on particle movement</li> <li>energy: <ul> <li>has various forms</li> <li>is conserved</li> </ul> </li> <li>devices that transform energy</li> <li>local changes caused by Earth's axis, rotation, and orbit</li> <li>the effects of the relative positions of the sun, moon, and Earth including local First Poonlos</li> </ul>
Processing and analyzing data and information	moon, and Earth including local First Peoples perspectives
<ul> <li>Experience and interpret the local environment</li> <li>Identify First Peoples perspectives and knowledge as sources of information</li> <li>Sort and classify data and information using drawings or provided tables</li> <li>Use tables, simple bar graphs, or other formats to represent data and show simple patterns and trends</li> <li>Compare results with predictions, suggesting possible reasons for findings</li> </ul>	(continued)

# Area of Learning: SCIENCE

**Grade 4** 

# **Learning Standards (continued)**

Curricular Competencies	Content
<ul> <li>Evaluating</li> <li>Make simple inferences based on their results and prior knowledge</li> <li>Reflect on whether an investigation was a fair test</li> <li>Demonstrate an understanding and appreciation of evidence</li> <li>Identify some simple environmental implications of their and others' actions</li> </ul>	
Applying and innovating	
<ul> <li>Contribute to care for self, others, school, and neighbourhood through individual or collaborative approaches</li> <li>Co-operatively design projects</li> <li>Transfer and apply learning to new situations</li> <li>Generate and introduce new or refined ideas when problem solving</li> </ul>	
Communicating	
<ul> <li>Represent and communicate ideas and findings in a variety of ways, such as diagrams and simple reports, using digital technologies as appropriate</li> <li>Express and reflect on personal or shared experiences of place</li> </ul>	

## **Area of Learning: SOCIAL STUDIES — First Peoples and European Contact**

**Grade 4** 

#### **BIG IDEAS**

The pursuit of valuable natural resources has played a key role in changing the land, people, and communities of Canada.

Interactions between First Peoples and Europeans led to conflict and co-operation, which continue to shape Canada's identity.

Demographic changes in North America created shifts in economic and political power. British Columbia followed a unique path in becoming a part of Canada.

<ul> <li>Students are expected to be able to do the following:</li> <li>Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions</li> <li>Construct arguments defending the significance of individuals/groups, places, events, or developments (significance)</li> <li>Ask questions, corroborate inferences, and draw conclusions about the content and origins of different sources (evidence)</li> <li>Sequence objects, images, or events, and determine continuities and changes between different time periods or places (continuity and change)</li> <li>Differentiate between intended and unintended consequences of events, decisions, or developments, and speculate about alternative outcomes (cause and consequence)</li> <li>Construct narratives that capture the attitudes, values, and worldviews commonly held by people at different times or places (perspective)</li> <li>Make ethical judgments about events, decisions, or actions that consider the conditions of a particular time and place (ethical judgment)</li> </ul>