



**THE CANADIAN  
MINECRAFT CHALLENGE**  
**BLOCKLYMPICS**



**Canadian Minecraft Challenge 2022**  
**Canadian Curriculum Connections**

**Alberta Curriculum Connections**

**Science & Technology**

- Science 3–3 Investigate a practical problem and develop a possible solution. Note: The problem will involve building a rigid or semi-rigid structure, using available materials.
- Science 3–7 Construct structures, using a variety of materials and designs, and compare the effectiveness of the various materials and designs for their intended purposes.
- Science 4–3 Investigate a practical problem and develop a possible solution. Note: The problem will involve building a structure with moving parts, using available materials.

**English Language Arts**

- Read, write, represent, and talk to explore personal understandings of new ideas and information
- Use own experiences as a basis for exploring and expressing opinions and understanding
- Use talk, notes, personal writing and representing to explore relationships among own ideas and experiences, those of others and those encountered in oral, print, and other media texts

**British Columbia Curriculum Connections**

**ADST**

Applied Design

Ideating

Identify needs and opportunities for designing, through exploration

Generate ideas from their experiences and interests

Add to others' ideas

Choose an idea to pursue.

Making

Choose tools and materials

Make a product using known procedures or through modelling of others

Use trial and error to make changes, solve problems, or incorporate new ideas from self or others

Sharing

Decide on how and with whom to share their product

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

Use personal preferences to evaluate the success of their design solutions

Reflect on their ability to work effectively both as individuals and collaboratively in a group

Applied Skills

Use materials, tools, and technologies in a safe manner in both physical and digital environments

Develop their skills and add new ones through play and collaborative work

Applied Technologies

Explore the use of simple, available tools and technologies to extend their capabilities

### **English Language Arts**

*Create and communicate (writing, speaking, representing)*

- Exchange ideas and perspectives to build shared understanding
- Use writing and design processes to plan, develop, and create texts for a variety of purposes and audiences
- Use language in creative and playful ways to develop style
- Communicate in sentences and paragraphs, applying conventions of Canadian spelling, grammar, and punctuation
- Develop and apply expanding word knowledge
- Transform ideas and information to create original texts

## Ontario Curriculum Connections

### Science

#### Understanding Structures and Mechanisms

2.5 use appropriate science and technology vocabulary, including compression, tension, strut, ties, strength, and stability, in oral and written communication

3.1 define a structure as a supporting framework, with a definite size, shape, and purpose, that holds a load (e.g., a running shoe, a tepee, a bicycle, an igloo)

3.2 identify structures in the natural environment (e.g., a tree, a bees' nest/hive) and in the built environment (e.g., a totem pole, a fence, a pyramid, the CN Tower)

3.3 identify the strength of a structure as its ability to support a load

3.4 identify the stability of a structure as its ability to maintain balance and stay fixed in one spot

3.5 identify properties of materials (e.g., strength, flexibility, durability) that need to be considered when building structures 3.6 describe ways in which the strength of different materials can be altered (e.g., by folding, adding layers, twisting/braiding, changing their shape)

3.7 describe ways to improve a structure's strength (e.g., by using triangulation or crossmembers) and stability (e.g., by lowering the centre of gravity) 3.8 explain how strength and stability enable a structure (e.g., bridge, tent) to perform a specific function 3.9 describe ways in which different forces can affect the shape, balance, or position of structures (e.g., a load may cause a cardboard box to buckle) 3.10 identify the role of struts and ties in structures under load (e.g., a strut is added to a wooden frame to resist compression that might cause its collapse; a tie is added to a roof truss to resist tension that might cause the roof to collapse from the weight of the shingles)

#### Mathematics - Algebra (Coding)

**C3.1** solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential, concurrent, and repeating events

#### English Language Arts

Students will:

1. generate, gather, and organize ideas and information to write for an intended purpose and audience
2. draft and revise their writing, using a variety of informational, literary, and graphic forms and stylistic elements appropriate for the purpose and audience

3. use editing, proofreading, and publishing skills and strategies, and knowledge of language conventions, to correct errors, refine expression, and present their work effectively

**Saskatchewan Curricular Connections**

**Science**

SM3.1 Investigate properties of materials and methods of joinery used in structures.

SM3.2 Assess the function and characteristics of strong, stable, and balanced natural and human-built structures

**Language Arts**

CC4.1 Compose and create a range of visual, multimedia, oral, and written texts that explore:

- identity (e.g., Expressing Myself)
- community (e.g., Celebrating and Honouring Others)
- social responsibility (e.g., Within My Circle) through personal experiences and inquiry.

CC4.2 Create a variety of clear representations that communicate straightforward ideas and information relevant to the topic and purpose, including short, illustrated reports, dramatizations, posters, and other visuals such as displays and drawings.

CC4.3 Speak to present and express a range of ideas and information in formal and informal speaking situations (including giving oral explanations, delivering brief reports or speeches, demonstrating, and describing procedures) for differing audiences and purposes.

CC4.4 Use a writing process to produce descriptive, narrative, and expository compositions that focus on a central idea, have a logical order, explain point of view, and give reasons or evidence.

**Manitoba Curricular Connections**

**Science**

3-2-01 Use appropriate vocabulary related to their investigations of materials and structures. Include: strength, balance, stability, structure, frame structure, natural structure, human-built structure, force.

3-2-05 Recognize that balance affects the stability of a structure. Examples: a domino tower that leans to one side is more likely to tip over than one that stands straight.

3-2-06 Explore to determine ways to improve the strength and stability of a frame structure. Examples: use of triangulation or a cross member.

3-2-07 Identify shapes that are part of natural and human-built structures from various cultures and describe how these shapes help to provide strength and stability. Examples: cylinders, triangles, hexagons in outdoor play structure, hexagons in a honeycomb.

3-2-08 Identify characteristics of materials that need to be considered when choosing materials for building structures. Examples: strength, flexibility, durability, surface texture.

3-2-09 Use the design process to build a structure that meets given criteria related to strength, stability, and function.

3-2-10 Describe the effects of various forces on different structures. Examples: bookshelf sagging under the mass/weight of books, tent blowing over in a storm.

3-2-11 Evaluate simple structures to determine if they are safe and appropriate to the user. Examples: classroom furniture.

### **English Language Arts**

#### **Elements**

- Manage information and ideas.
- Invent, take risks, and reflect to create possibilities.

#### **Grade Band Descriptors**

- Learners are making design choices for different purposes.
- Learners are actively partaking in communities to explore ideas and deepen thinking.
- Learners are using different sources to explore ideas and deepen and extend thinking.
- Learners are imagining and exploring different ways to represent thinking and ideas.

### **Quebec Curricular Connections**

#### **Science**

Design and manufacture of instruments, tools, machines, structures (e.g. bridges, towers), devices (e.g. water filtration device), models (e.g. glider) and simple circuits

#### **English Language Arts**

- Application of a logical sequence of events when producing written and media self-expressive and narrative texts (beginning, middle, end)
- Selection of relevant information from resources and own research

- Use of standard structures for developing narrative and information-based written and media texts
- Selection of a process when producing written and media texts

### **New Brunswick Curricular Connections**

#### **Science**

Identify internal forces acting on a structure and describe their effects on the structure: tension, compression, torsion or torque, and shear

Identify external forces acting on a structure and describe their effects on the structure: Gravity, Symmetry, and Load

#### **Language & Writing**

Purpose: to entertain with an imaginative experience:

- Orientation (time, place, and characters) - introduces characters and setting (Once there was a girl named Aleesha. She was watching TV...)
- Problem – establishes a problem at the beginning (Mom, I want to be a butterfly dancer!)  
Events – may include some character description but tends to focus on actions, not always clearly connected, to develop plot
- Resolution – includes a brief but reasonable ending and may have some “loose ends”  
Special Features - may include a title or illustrations - connecting words related to time (first, next, later) - past tense - usually first (I, we) or third person (he, she, they) - action verbs and verbs related to character’s thoughts and feelings - may include dialogue (with change in tense from past to present)

### **Nova Scotia Curricular Connections**

#### **Science**

- Investigate shapes in structures (COM, PCD, CT, TF)
- Evaluate the structure according to design challenge criteria (COM, CT, TF)

#### **English Language Arts**

##### **Outcomes**

- Learners will use writing and other representations to explore, clarify and reflect upon thoughts and experiences.
- Learners will create text, independently and collaboratively, using a variety of types of writing for a range of audiences and purposes.

- Learners will use a range of strategies within the writing process to enhance the clarity, precision, and effectiveness of their writing.

### **Newfoundland and Labrador Curricular Connections**

#### **Science**

23.0 describe the properties of some common materials and evaluate their suitability for use in building structures

27.0 evaluate structures to determine if they are effective and safe, if they make efficient use of materials, and if they are appropriate to the user and the environment

33.0 test the strength and stability of personally built structures

36.0 identify ways of modifying a structure to increase its strength and stability

#### **English Language Arts**

**GCO 8:** Students will be expected to use writing and other forms of representation to explore, clarify, and reflect on their thoughts, feelings, experiences, and learnings; and to use their imaginations.

- use a range of strategies in writing and other ways of representing
- to frame questions and design investigations to answer their questions
- find topics of personal importance
- record, develop and reflect on ideas
- compare their own thoughts and beliefs to those of others
- describe feelings, reactions, values, and attitudes
- practice and apply strategies for monitoring learning
- formulate goals for learning
- select appropriate note-making strategies from a growing repertoire
- make language choices to enhance meaning and achieve interesting effect in imaginative writing and other ways of representing

**8.1** express feelings and imaginative ideas through writing and representing

**8.2** reflect on their learning through writing and representing

## Prince Edward Island Curriculum Connections

### Science

23.0 describe the properties of some common materials and evaluate their suitability for use in building structures

27.0 evaluate structures to determine if they are effective and safe, if they make efficient use of materials, and if they are appropriate to the user and the environment

33.0 test the strength and stability of personally built structures

36.0 identify ways of modifying a structure to increase its strength and stability

### Language & Writing

Purpose: to entertain with an imaginative experience

- Orientation (time, place and characters) – introduces characters and setting (Once there was a girl named Aleesha. She was watching TV...)
- Problem – establishes a problem at the beginning (Mom, I want to be a butterfly dancer!)  
Events – may include some character description but tends to focus on actions, not always clearly connected, to develop plot
- Resolution – includes a brief but reasonable ending and may have some “loose ends”  
Special Features - may include a title or illustrations - connecting words related to time (first, next, later) - past tense - usually first (I, we) or third person (he, she, they) - action verbs and verbs related to character’s thoughts and feelings - may include dialogue (with change in tense from past to present)