SECONDARY III Week of June 8, 2020

Table of Contents

Questions for Critical Thinking	2
Cultiver son jardin	3
Linear Relationships	4
Appendix A – Matching Activity	5
Appendix A – Matching Activity (cont.)	6
Appendix B – Interpreting the Situations	8
Appendix C – Solutions	9
Exploring Engineering	10
1791-1840 – The Constitutional Act	13
Appendix 1 – Determine Changes and Continuities	15
Appendix 2 – Answer Key	19

Questions for Critical Thinking

Information for students

Whenever we read, watch, or listen to anything, we should ask a few questions to help us think critically. Thinking critically helps us determine whether we need more information. It can also help us deepen our appreciation or judge whether the information is correct and useful to us.

Watch this short CBC video called <u>Canadians Get Creative in Solving Food Waste Problem</u>. As you watch, keep the following critical thinking questions in mind:

- Who is presenting this message?
- What is their belief or position?
- What is the purpose of this video?
- What sort of voices (perspectives) are featured in this video?
- Are there any voices (perspectives) not featured that could or should be?
- Who is the target audience for the message?
- What video production choices are being used to present the message?
- Given the purpose and audience, do you believe this video is effective?
- Are there any parts you find particularly effective? Any parts you find ineffective? Why?
- Are there any lingering questions you have?

Materials required

- Device or other tools for writing
- Device with Internet access (optional)

Information for Parents

Parents can extend the discussion by examining the credibility of online news and information sources. What can we do to make sure the information we receive is accurate and reliable?

French as a Second Language

Cultiver son jardin

Consignes à l'élève

Objectif de l'activité: comprendre un texte vu, lu et entendu en français.

Durée: 1 heure.

Déroulement de l'activité:

- 1. Visionnez le documentaire suivant : https://apprendre.tv5monde.com/fr/exercices/b1-intermediaire/canada-cultivez-votre-jardin
- 2. Répondez aux questions de compréhension et de vocabulaire. Les réponses sont fournies à la fin de chaque exercice. Vous pouvez lire la transcription fournie, au besoin.

Pour aller plus loin

- 1. Testez vos connaissances en français en répondant au court questionnaire suivant. Les réponses et les explications sont fournies immédiatement après avoir soumis votre réponse. https://langue-francaise.tv5monde.com/jouer/guiz/zero-faute
- 2. N'hésitez pas à tester les autres questionnaires.

Matériel requis

• Un appareil avec accès à internet

Information for parents

Children should:

- read and listen to a text on gardening in French
- do a reading quiz in French

Parents could:

- read the instructions with their child
- watch the documentary with their child, time permitting
- share their opinions about the subject

Mathematics

Linear Relationships¹

Information for students

In this activity, you will match descriptions of different situations with their corresponding graph. You will also interpret the different features of the graph in order to explain what they mean in the given situation.

Instructions

- Match each of the 6 situations with their corresponding graph. Both the descriptions of the situations and the graphs can be found in Appendix A
- The axes on the graphs are purposely not labelled, so as not to accidently provide clues. Add labels to the axes once you have matched the situations with the graphs
- From the 6 situations, pick one proportional relationship (direct variation) and one nonproportional relationship (indirect variation), and answer the questions in Appendix B

Materials required

- Appendix A: Matching Activity
- Appendix B: Interpreting the Situations
- Writing materials
- Calculator

Information for parents

About the activity

Children could:

- complete the activity on their own
- refer to various sources to review the concept of linear relations or linear functions (class notes, textbooks, Internet sources, etc.)

Parents should:

- help their children organize the required materials, if necessary
- read the instructions to their children, if necessary
- have their children explain how they went about solving each problem

Solutions to the problems can be found in Appendix C

¹ Adapted from: Open-up Resources, accessed May 27, 2020 <u>https://openupresources.org/math-curriculum/6-8-math/</u>

Appendix A – Matching Activity

Information for students

Below are 6 descriptions of different situations and 6 graphs.

Instructions:

- Match each situation with the corresponding graph
- o Add labels to the axes once you have matched the situations with the graphs
- Pick one proportional relationship (direct variation) and one non-proportional relationship (indirect variation), and answer the questions in Appendix B

Situation A

Lin's dad bought a tablet. He pays the same amount each month for a subscription to a movie streaming service. The graph represents how much money he spent, *y*, for the streaming service after subscribing for *x* months. The slope of the line is 10.

Situation C

Diego put his new piggy bank on his desk. Each week, he adds the same amount of money to his bank. The graph represents the amount in the piggy bank, *y*, after *x* weeks. The slope of the line is 5.

Situation E

Elena adds a quarter to her piggy bank every day. The graph represents the number of dollars, *y*, in her piggy bank *x* days after she put the piggy bank in the closet. The slope of the line is 0.25.

Situation B

The graph represents the perimeter, y, of a square whose side length is x. The slope of the line is 4.

Situation D

Noah started by taking the money he saved helping a neighbour out and put it in his new piggy bank. Each month, he adds the same amount of money to his bank. The graph represents the amount in the piggy bank, *y*, after *x* months. The slope of the line is 15.

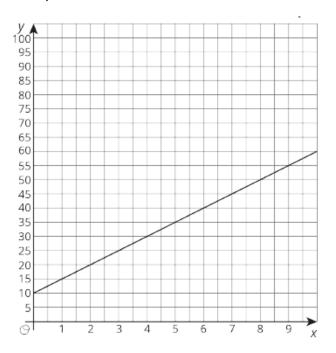
Situation F

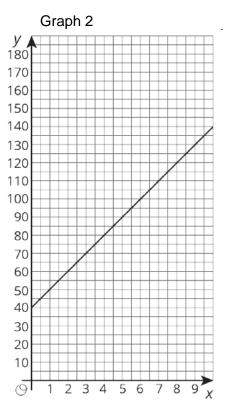
Lin's mom pays the same amount each month for Internet service for her business tablet. The graph represents how much money she spent, *y*, for *x* months of service. The slope of the line is 40.

Mathematics

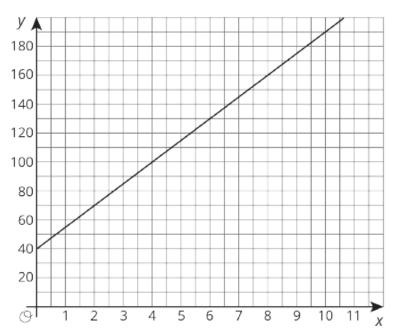
Appendix A – Matching Activity (cont.)

Graph 1

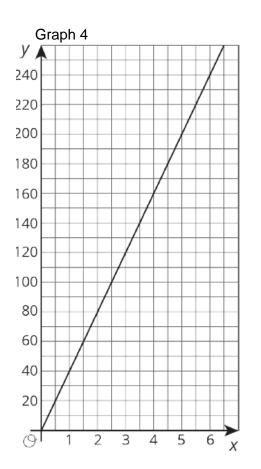


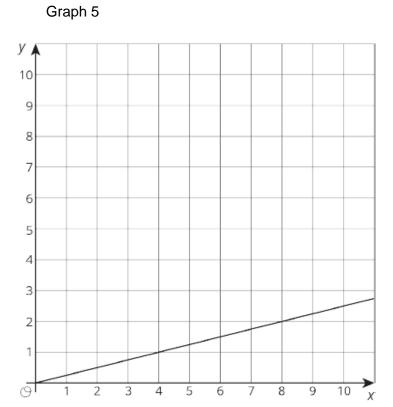


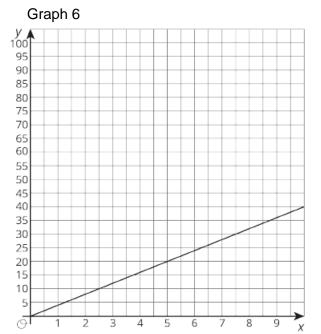
Graph 3











Appendix B – Interpreting the Situations

- Pick one proportional relationship (direct variation) and one non-proportional relationship (indirect variation) for which you matched a situation with a graph in the previous part of the activity.
- Answer the following questions for each relationship.
 - 1. How can you find the slope from the graph? Explain or show your reasoning.
 - 2. Explain what the slope means in the situation.
 - 3. Find the point where the line crosses the vertical axis (y-axis). What does that point tell you about the situation?

Appendix C – Solutions

Matching Activity Solutions

Matches:

Situation A – Graph 2	Situation B – Graph 6
Situation C – Graph 1	Situation D – Graph 3
Situation E – Graph 5	Situation F – Graph 4

Interpreting the Situation: Solutions

Situation A – non-proportional	Situation B - proportional
1. y increases by 10 when x increases by 1.	1. The graph passes through the points (0, 0)
2. The slope is the cost per month of the	and (5, 20).
streaming service.	2. Every increase of 1 unit in the side length
3. The line crosses the vertical axis at (0, 40).	adds 4 units to the perimeter.
The tablet costs \$40.	3. The line crosses the vertical axis at (0, 0). The perimeter of a square of side length 0 is 0.
Situation C – non-proportional	Situation D – non-proportional
1. y increases by 5 when x increases by 1.	1. <i>y</i> increases by 15 when <i>x</i> increases by 1.
2. Diego puts in \$5 each week.	2. Noah adds \$15 each week.
3. The line crosses the vertical axis at (0, 10).	3. The line crosses the vertical axis at (0, 40).
There was initially \$10 in the piggy bank.	He started with \$40 in the piggy bank.
Situation E - proportional	Situation F - proportional
1. y increases by 0.25 when x increases by 1.	1. <i>y</i> increases by 40 when <i>x</i> increases by 1.
2. The amount of money she added per day was \$0.25.	2. Lin's mom pays \$40 each month for Internet service.
3. The line crosses the vertical axis at (0,0).	3. The line crosses the vertical axis at (0,0).
There was no money in the piggy bank to start.	Lin's mom paid no money before the contract started.

Exploring Engineering

Information for students

Water slides are great during hot summer days, but if they are not careful designed, they can cause some serious injuries. That is why engineers must have safety in mind when they design and build them.

Use the image² to the right to answer the following questions:

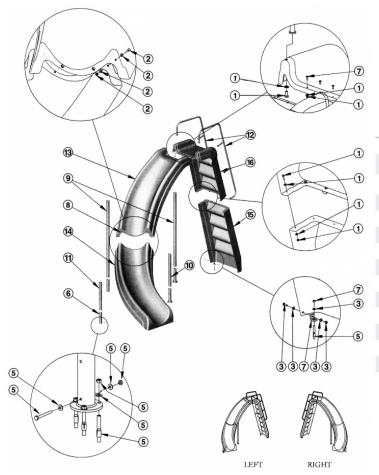
- Describe the general function of a water slide.
- Make a list of the linking components and how they link the parts together.
- Does this slide have any guiding controls? Explain your answer.
- What are the best materials to build a water slide? Explain your answer.
- What safety consideration must go into designing and building a water slide?

Be like an engineer:

- Try designing your own water slide.
 - Use proper technical drawing techniques to make your drawing as professional as possible
 - What would your slide look like if it beat the world record for height and number of loops? Sketch and explain
 - o Describe the function of each component in your invention
 - Explain your choice of materials

²Images from: Interfab.com, "Wild Ride Water Slide," n.d., PNG, <u>https://www.paspdirect.com/nextstep/product.html?id=384</u> Accessed on May 27, 2020.

Science and Technology



Key	Part Number	Description
1	N/A	Step & Handrail Assembly Hardware Kit
2	SH102SS	Flume & Leg Assembly Hardware Kit
3	SH103SS	Step to Deck Hardware Kit
5	N/A	Deck Anchor Hardware Kit
6	N/A	9" Stainless Steel Deck Anchor Assembly Kit
7	N/A	Slide Step Anchor Kit
8	N/A	4-hole gasket Closed Cell Neoprene Sponge Foam
9	N/A	54.5" Leg
10	N/A	24.5 Leg
11	N/A	22" Leg
12	N/A	Handrail
13	N/A	Left Lower Runway
14	N/A	Left Upper Runway
15	N/A	Step Lower Section
16	N/A	Step Upper Section

Use a CAD program to make your ideas come to life (optional).

- There are a few good free technical drawing programs that you may download to sketch your technical drawings (for example, SketchUp: <u>https://www.sketchup.com/products/sketchup-for-web</u>).
- Try designing your water slide with this program.
- Make sure your dimensions are realistic.
- If you get tired of water slides, design other technical objects and, if possible, share them on social media using #ScienceAtHomeQC-grade9.

Materials required

- Pencil and Paper
- Device with Internet access (optional)

Information for parents

About the activity

Children should:

- research the topic online or in encyclopedias
- look up some technical drawings from publicly available patents
- design and sketch technical objects to solve household engineering problems (e.g. food dispenser for a pet)

Parents could:

- discuss the topic with their children
- read the questions out loud, if necessary
- help their children navigate to the correct website
- help their children build a scaled model of their designs out of cardboard
- brief video explanations:
 - o SketchUp https://www.youtube.com/user/SketchUpVideo
 - o Technical drawings https://www.youtube.com/watch?v=1Hm5Zyjmjac

1791-1840 – The Constitutional Act

Information for students

Following the American Revolution, several Loyalists left the newly formed United State of America and resettled in the Province of Quebec. This eventually led to the implementation of the Constitutional Act, in 1791.

- Intellectual operation: Determine changes and continuities.
- Task: In this task, you will determine whether the administrative structure, territory and demographic composition of the colony under the Quebec Act changed or remained the same after the Constitutional Act was implemented in 1791. Support your answer with facts AND mention a specific point in time.
 - Using the documents in Appendix 1, compare the administrative structure, territory and demographic composition of the colony under the Quebec Act and the Constitutional Act. Determine whether there was change or continuity in each of these areas by completing the tables provided
 - Once you have completed the tables, write a text that explains whether the Constitutional Act kept things relatively the same or brought about more change. Don't forget to support your answer with facts and mention a specific point in time
 - You may use your Reflections.qc.ca textbook, workbook or the following website to learn more about the Constitutional Act: https://www.thecanadianencyclopedia.ca/en/article/constitutional-act-1791

Take it to the next level:

• Take your analysis further by researching and answering the following questions: Why was the Constitutional Act implemented? What were the shortcomings of the newly established parliamentary system?

Materials required

Useful resources, depending on personal preferences and availability:

- Device with Internet access
- Writing materials (paper, pencil, etc.)
- Textbook or workbook

Information for parents

About the activity

Children could:

- add to their knowledge by doing the extra activity suggested above
- learn more about the American Revolution and its effect on the Province of Quebec by watching the following video: <u>Canada: A People's History - Episode 5 - A Question of Loyalties</u>

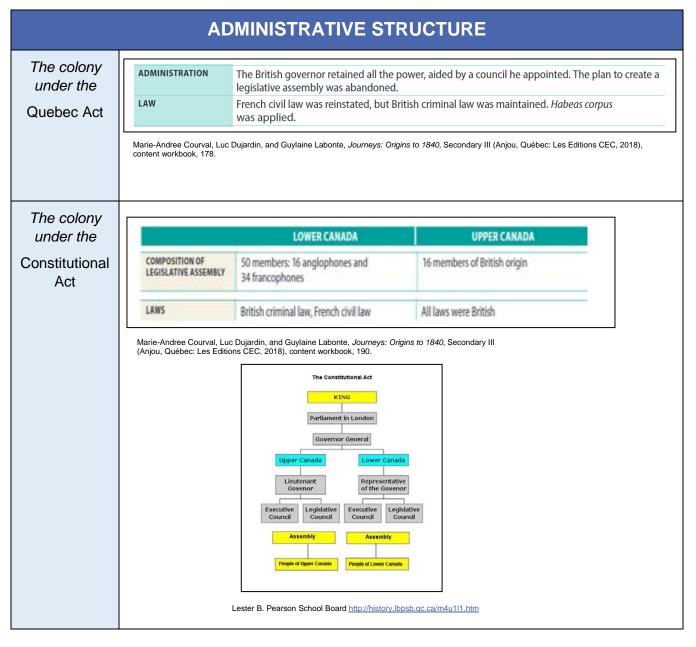
Parents should:

• help with the language used in the documents and review potential answers with their child

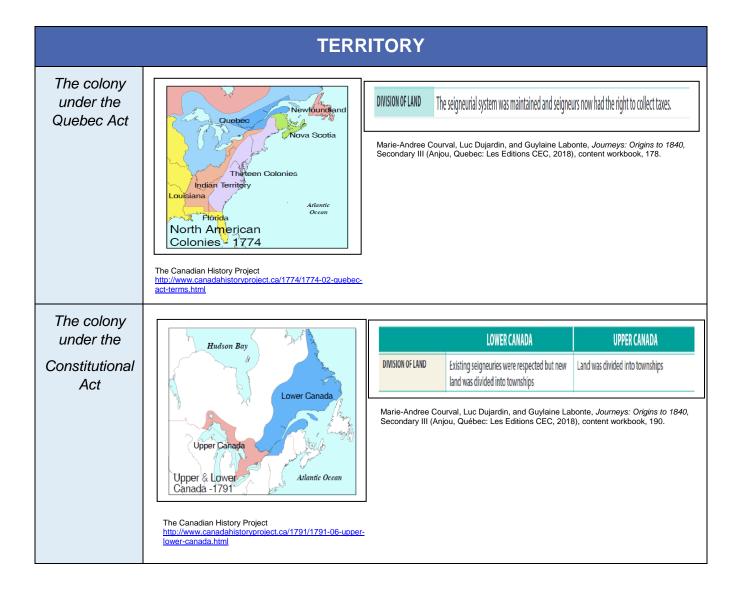
Appendix 1 – Determine Changes and Continuities

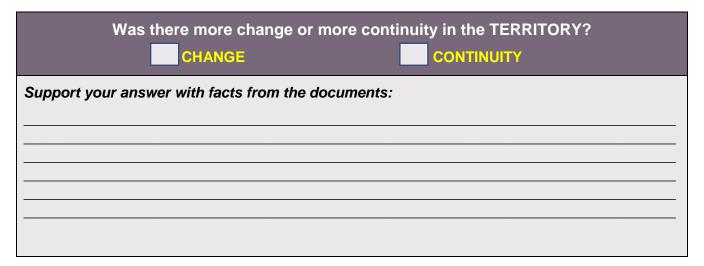
Information for students

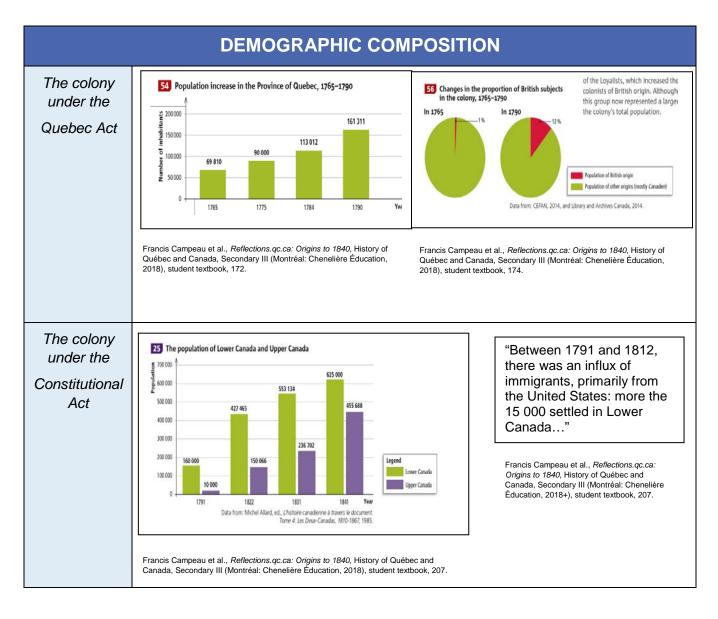
Compare the administrative structure, territory and demographic composition of the colony under the Quebec Act and the Constitutional Act. Determine whether there was change or continuity in each of these areas by completing the tables provided.



Was there more change or more continuity in the ADMINISTRATIVE STRUCTURE?
Support your answer with facts from the documents:







Was there more change or more continuity in the DEMOGRAPHIC COMPOSITION?
Support your answer with facts from the documents:
Using your completed tables as a guide, write a text that explains whether the Constitutional Act kept things relatively the same (continuity) or brought about more change. Don't forget to support your answer with facts and mention a specific point in time.
Was there more change or more continuity in the colony after the <i>Constitutional Act</i> was implemented?
CHANGE CONTINUITY
Support your answer with facts that refer to the administrative structure, territory and demographic composition. Don't forget to mention a specific point in time.
Listery of Outboo and Canad

Appendix 2 – Answer Key

Compare the administrative structure, territory and demographic composition of the colony under the Quebec Act and the Constitutional Act. Determine whether there was change or continuity in each of these areas by completing the tables provided.

Was there more change or more continuity in the ADMINISTRATIVE STRUCTURE?
Support your answer with facts from the documents: Students can answer Continuity OR Change but MUST support their answers. Answers may vary.
CHANGE:
 Elected legislative assembly was implemented Each colony had its own government Laws in Upper Canada were all British CONTINUITY:
French civil law and British criminal law continued to be used in Lower Canada
Was there more change or more continuity in the TERRITORY?
Support your answer with facts from the documents: Students can answer Continuity OR Change but MUST support their answers. Answers may vary.
CHANGE:
Was divided into Upper and Lower CanadaNew land was divided into townships
CONTINUITY:
Existing seigneuries were allowed to remain

Was there more change or more continuity in the DEMOGRAPHIC COMPOSITION?
Support your answer with facts from the documents: Students can answer Continuity OR Change but MUST support their answers. Answers may vary.
CHANGE:
 Population increased Increase in the anglophone population CONTINUITY:
 Francophone population continued to represent the majority of the population Most anglophones were immigrants from the USA Francophone population continued to grow
Was there more change or more continuity in the colony after the <i>Constitutional Act</i> was implemented?
Support your answer with facts that refer to the administrative structure, territory and demographic composition. Don't forget to mention a specific point in time.
Students can answer Continuity OR Change but MUST support their answers. Answers may vary but should include examples from the tables above.