

## **SECONDARY II**

Week of May 18, 2020

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# **Creative Writing**

#### Information for students

If you want to become a better writer, just like any other skill, you have to practice... a lot! Many students ask what to write about.

Here are a couple of creative writing prompts to get you started:

- **Dreamcatcher**: Describe something inspired by a recent dream you had.
- **Dragon**: Envision a dragon. Describe it. Where does it live? Is it friendly or ferocious?
- **Smoke**, **fog and haze**: Describe what it is like being trapped and not being able to see ahead of you. Perhaps you are able to escape?

Need more inspiration? Visit the website in the link below.

#### **Materials required**

- Activity adapted from: <a href="https://thinkwritten.com/365-creative-writing-prompts/">https://thinkwritten.com/365-creative-writing-prompts/</a>
- Paper, pen or pencil, phone, tablet or computer.

## **Information for parents**

Above all, this activity is designed to be simple. We hope it will appeal to your child whatever their grade level. The best things your child can do are:

- Read every day.
- Write every day.
- Talk every day.



# L'autobus du futur

#### Information for students

- Lis l'article <u>L'autobus du futur</u> de la revue *Les Explorateurs* et regarde la <u>vidéo.</u>
- Cherche les mots que tu ne comprends pas dans un dictionnaire papier ou numérique :
  - o Dictionnaire bilingue: Wordreference
  - o Dictionnaire unilingue : Usito
- Réponds aux questions :
  - o Élèves FSL BASE : quizizz.com/join?gc=324799
  - o Élèves FSL ENRICHI : <u>quizizz.com/join?gc=856706</u>
- Pense à un mot qui représente bien l'article lu et écris-le en utilisant le lien : https://www.menti.com/zgheg1z1yp
- Tu peux aussi voir les résultats de tous les participants sous forme de <u>nuage!</u>

#### **Materials required**

- Appareil numérique avec un accès Internet.
- Dictionnaire (papier ou numérique)

## Information for parents

Your child will:

- learn vocabulary related to buses and technology in French.
- improve their reading skills by answering reading comprehension questions.
- use technology to record their answers (Quizizz and Mentimeter).

Students from the enriched program will:

· practise their writing skills.



# **A Toothpick Pattern**

#### Information for students

This activity will help you develop your understanding of growing patterns. You will describe a pattern by building models, using a table of values, making a graph and creating an equation to represent the pattern algebraically.

#### **Materials required**

- Appendix A: The Context
- Appendix B: Tools to Show Your Work
- Paper
- Writing materials
- Toothpicks or other manipulatives (coffee stir sticks, pipe cleaners, Q-Tips, etc.). These are optional, but can be very helpful.
- Internet access (optional)

### Information for parents

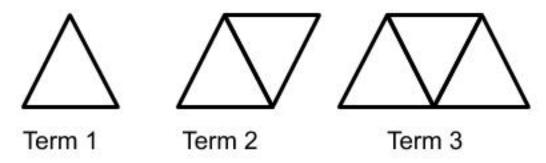
- Help your child organize the necessary materials, if needed.
- Read the instructions together and help them build the pattern, if needed.
- Discuss the patterns together and/or ask your child to describe how they determined the answers to the questions. A possible solution is found in Appendix C.



# **Appendix A: The Context**

## **Toothpick Pattern Task**

The image below shows the first three terms in a growing pattern. Watch this <u>video</u><sup>1</sup> or look at the pattern below to see how it grows. It would be helpful to build the pattern. Then, answer the questions below.



- 1. How many toothpicks are in each of the first three terms of the pattern?
- 2. How many toothpicks are in the 4th, 5th, and 6th terms of the pattern?
- 3. Describe in words what the 10th term will look like.
- 4. Describe how to find the number of toothpicks that are in the 100th term.
- 5. What is the term number of the figure that would be made of 65 toothpicks?
- 6. Write a rule that relates the number of toothpicks to the term number. Explain how each part of your equation relates to the toothpick pattern.
- 7. Graph the function. Explain how the graph relates to the equation you found and what is happening with the toothpick pattern.
- 8. Using this same pattern, how many toothpicks would be in term 0?

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<sup>&</sup>lt;sup>1</sup> Kyle Pearce, "Placing Toothpicks Part 4 – Act 1 – Linear Relations and Patterning," YouTube, October 15, 2015, video, 0:28, <a href="http://www.youtube.com/watch?v=da15Q-g6Hal&feature=youtu.be">http://www.youtube.com/watch?v=da15Q-g6Hal&feature=youtu.be</a>.





# **Appendix B: Tools to Show your Work**

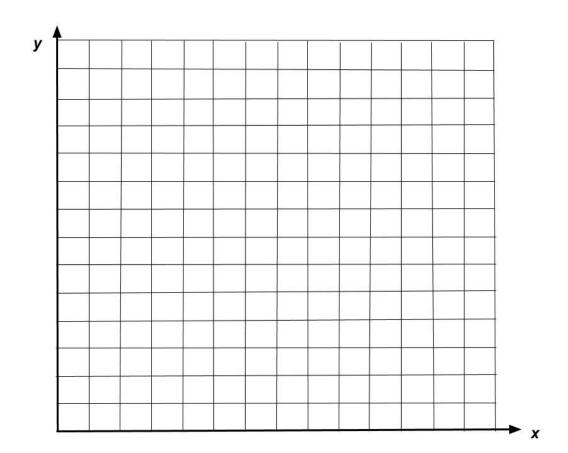
## **Table of Values:**

Term #	Number of Toothpicks Needed



# **Appendix B: Tools to Show your Work-2**

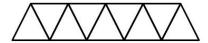
- Equation to Represent the Situation:
- Graph to Represent the Situation:



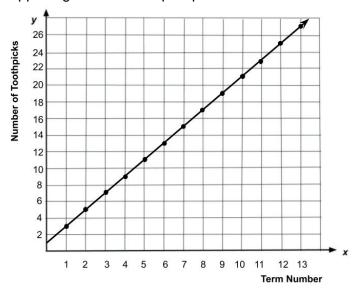


# **Appendix C: Solution**

- 1. Term 1= 3 toothpicks, Term 2= 5 toothpicks, Term 3=7 toothpicks
- 2. Term 4= 9 toothpicks, Term 5= 11 toothpicks, Term 6= 13 toothpicks
- 3. The tenth term will look like 10 interlocking triangles with five pointing up and five pointing down.



- 4. The first triangle is made of three toothpicks. Each additional triangle is made with two additional toothpicks because of the shared side. To find the number of toothpicks in the hundredth term, you need to have two additional toothpicks for every term and 1 extra toothpick at the end for the third side. The number of toothpicks is therefore calculated as follows: 100 x 2 = 200 + 1 = 201.
- 5. 65 toothpicks are needed to make 32 triangles. The term number would be 32, based on the following calculation:  $[(32 \times 2) + 1 = 65]$ .
- 6. The rule is Y=2x+1 where Y= the number of toothpicks and x= the term number. The 2 means two sides for each triangle as each new triangle created needs two additional toothpicks because of the shared sides. The 1 is for the third side of the first triangle, as there are no shared sides in Term 1.
- 7. Graph the function. Explain how the graph relates to the equation you found and what is happening with the toothpick pattern.



8. Using the graph, term 0 would still take 1 toothpick but would create 0 triangles.



# **Energy Resources**

#### Information for students

- Our world needs energy to function. Especially electrical energy. Since energy cannot be created or destroyed, only transformed, there are only a few ways to take existing energy and turn it into electricity.
- There are two kinds of energy resources:
  - 1. Renewable
  - 2. Non-renewable
- Research the following terms:
  - Law of conservation of energy
  - Conductors and insulators
  - Solar, nuclear, thermal, chemical, wind, electrical and mechanical energy
  - o Generators, turbines, power plants
  - o Renewable and non-renewable
- Simulation: follow this link to explore how energy moves and changes <a href="https://phet.colorado.edu/en/simulation/energy-forms-and-changes">https://phet.colorado.edu/en/simulation/energy-forms-and-changes</a>
  - o Draw and explain how water can be used to power a lightbulb.
  - Use coloured rectangles to represent energy types
  - Use arrows to show movement

Energy in Québec: From Nature to the Microwave<sup>2</sup>





<sup>&</sup>lt;sup>2</sup> Images from: *Microwave PNG*, n.d., PNG, 3636 KB, PNGIMG.com, https://pngimg.com/download/15744 and *2492809*, July 11, 2017, JPEG, Pixabay.com, https://cdn.pixabay.com/photo/2017/07/11/08/33/dam-2492809\_960\_720.jpg

#### **Science and Technology**

- Quebec generates its electricity from moving water. Sketch and explain how energy is generated in a hydropower plant, gets to your house and is used in microwaves to heat your food. Be as precise as possible.
  - Is this an example of renewable energy? Explain.
  - What would be an example of non-renewable energy? Explain.
  - What happens to the energy after your food gets heated? Explain.
- What are the pros and cons of both renewable and non-renewable sources of energy? Make a table.
- Design two portable power generators that can be used to charge your cell phone. One device
  must use renewable energy, and the other must use non-renewable energy. Sketch and explain
  your invention. Be as precise as possible.

#### **Materials required**

- Paper, pencil
- Device with internet access

## Information for parents

#### **About the activity**

#### Children should:

- Research the terms in an encyclopedia or on the internet
- Share their sketches and explanations on social media using the hashtag #ScienceAtHomeQC-grade8
- Use recycled cardboard/plastic, an electric motor, some wires, and a small lightbulb (for a flashlight) to build a model hydroelectric generator
- CAUTION: do not plug homemade devices into any electrical outlets

#### Parents can:

- Help their children read the instruction
- Discuss the tasks and what their children can learn from them.
- Navigate to the correct website
- Help build or design simple electrical circuits (optional)
- CAUTION: do not plug homemade devices into any electrical outlets



# Reflect on Stereotypes in Sports and Physical Activity and Get Moving!

#### Information for students

Activity 1: Stereotypes in sports

- Watch <u>this video</u>.
- What are your thoughts after watching the video? What representations of people did you notice (for example, the inclusion of older women participating in team sports)? What stereotypes about participation in sports and physical activity are you aware of? Do the images we see of sports and physical activity provide an accurate representation of our society? Why or why not? Reflect and discuss it with a friend or family member.
  - English Language Arts cross-curricular bonus question: Do you know who wrote the poem that is narrated throughout the video?

#### Activity 2: Get Moving!

- Get ready to develop your coordination and agility by learning how to juggle.
- Find three objects that you can juggle with (hacky sacks, tennis balls, rolled-up socks, etc.).
  - Watch <u>this video</u> and follow along to develop your juggling skills. Pause the video as needed to practise each progression.
  - For more juggling progressions that you could work on, visit the <u>Reste Actif website</u>
    (available in French only) and look at the *Secondaire* section for the week of May 18. This
    could be your start to a career in Cirque du Soleil!

## Materials required

Objects for juggling

## Information for parents

#### About the activity

#### Children should:

- reflect on stereotypes in sports
- practise their juggling skills

#### Parents could:

- discuss stereotypes in sports with their children
- learn how to juggle together with their children



# **Watercolour Print Making**

#### Information for students

- In this activity, you will learn how to make your own note cards and/or pages for journaling
- Let your imagination guide you.

#### **Materials Required:**

- Watercolour paints
- Paint brush
- Water (for watercolour paints and in a small spray bottle)
- Cardstock paper (cut into note sized squares)
- Square piece of cardboard
- Resealable plastic bag (medium or small based on the size of your painting)
- Black marker (fine tip)
- Paper towel

#### **Instructions**

- 1. Place the plastic bag on top of the cardboard.
- 2. Select an initial colour for your project.
- 3. Begin by creating an abstract pattern on the plastic bag with your first colour.
- 4. Select a second complementary colour and add to your pattern.
- 5. Spray a little bit of water onto your painting.
- 6. Take your cardstock paper (now cut into squares) and press firmly onto your painting.
- 7. Carefully peel back your card stock paper from the plastic bag and admire your creation.
- 8. If you want more colour intensity, repeat steps 2 to 7. (You may wish to clean your plastic bag between prints.)
- 9. Let dry.
- 10. Using your black marker, create patterns or write a quick note on your card.

## Information for parents

- Encourage your child to share their art with you.
- If your child created a page for journaling, encourage them to write a journal entry.
- For more watercolour print making ideas, please visit: https://www.youtube.com/watch?v=WZQZXF5B-Nw



# **Bell Ringer: Evaluating Online News**

#### Information for students

Go to Newseum ed.

Explore the suggested websites.

#### Ask yourself:

- What makes news real or fake?
- Is it likely that you have shared fake news?

#### **Materials required**

- Device with Internet access
- Paper and writing materials

## Information for parents

#### Students should:

· Have questions regarding the information they are reading

#### Parents could:

- Help their child find the link to the website
- Read through the activity with their child
- · Discuss the questions together