

Home Learning Activities: Week 5

Grade 6J – Mr. Methot



*This week we are beginning to look at **percents (pourcentages)**. Percent means "out of 100". Thinking back to **ratios (rapports)**, a percent is a **part-to-whole (partie-à-tout)** ratio that compares a number to 100. In grade 6, we will be looking at percents that are always less than 100%, which means that they are less than a whole. Percents are very closely related to **decimals (nombres décimaux)**, **fractions**, and **ratios (rapports)**. You can always interchange between these different forms that are equivalent, and we can also show percents using pictorial representations. In the file named "**Pourcentages 6e Année**", I have shown some examples of converting between the different forms that are equivalent and represent the same quantity of a whole.

Here is a video you can watch that will help you further understand percents. <https://www.youtube.com/watch?v=wSVnbruRG60> (La conversion de pourcentages en fractions et en nombres décimaux)

Here is a link that provides a lesson in English on percents as reinforcement. There are videos to watch ("Try This", "What is a Percent?", and "Representing Percents") and practice questions to try. Check out lesson #3. <https://courseware.cemc.uwaterloo.ca/27?gid=75>

Monday

- **Netmath questions:** Continue with the activities/lessons on www.netmath.ca. Here are the lessons you can focus on this week. If you complete all of these, you can always revisit incomplete lessons from past weeks.
 1. Explorer la notation décimale et la notation de pourcentage
 2. Associer un nombre décimal ou un pourcentage à une fraction
 3. Définir la notion de rapport

Bonus: Les défis de Sonya (1)

Tuesday

- **Puzzles + games:** Here are a couple of new ones to try. You can always go back and revisit puzzles and games from previous weeks that you enjoyed or want to complete.
 1. **Breakout EDU game:** This week you can attempt to solve an online puzzle that requires you to use the clues to unlock a series of digital locks. It is lots of fun! The game focuses on the theme of fractions.

To access the game, you will need to create a student account and join the class I've created. You will find the instructions to create your account in the file titled "**Breakout EDU Account Instructions**". Here is the class code: **P3KS95**. When you need to create a password, my suggestion is to use the same password that you use for Office 365. Once your account is created, you should see that you have joined Classe 6J. Click on the class, and you will see the game that I have assigned for you to play called "Keyla's Carnival Games".

If you need some help solving the puzzles, I can provide you with some hints and explanations. I also have access to the combinations for each

lock if you are stuck. Once you are finished the game, here are a few reflection questions that you can think about:

- a) When have you encountered something like a number line in real life?
- b) How many fractions can you come up with that are equivalent to $\frac{1}{2}$?
- c) How would you represent a number between 1 and 2 on a number line?

2. **Chess and checkers:** Grab a partner and play! Or you can play online for free against the computer!

Wednesday

- **STEAM challenge:** Your challenge this week is to conduct an investigation to determine the fastest way to melt ice cubes without adding heat. Be sure to only change one thing and control your variables! One idea might be to analyze how long it takes an ice cube to melt in a container with the lid on compared to an ice cube in a container without the lid on. There are several possibilities, so be creative! There is some information included in the attached file named "**Défi de STEAM semaine 4**". I have included the English version of the document as well with the name "**STEAM challenge week 4**". Be sure to use the third page for grades 6-8. I'd love to hear about your ideas so feel free to share on Teams with the class!
- **Numeracy activity:** You can also try the numeracy experiment to observe water displacement in a cup. This question is included in the same files as above.

Thursday

- **Netmath questions:** Continue with wherever you left off. If you happened to have completed all the activities/lessons that I've given you so far, then you

can explore the website and find a new topic that interests you to try. Click on "Livres" on the left-hand side of the screen to find all the different math topics.

Friday

- **Paper airplane challenge:** To build upon what we have been looking at with flight and the forces of flight, I have a challenge for you. I want you to design and construct a paper airplane. You can begin by sketching your design first if you want. Then once you have constructed your paper airplane, find a parent or sibling, and head outside to test it out! You will throw your airplane 5 times and record the flight distance and flight time for each throw. After you have completed your 5 throws, calculate the average flight distance and average flight time (add them up and divide by 5).

Next, return inside and construct a new paper airplane. The goal is to change your design to reduce the amount of drag on your airplane. If you successfully reduce the amount of **drag (la traînée)**, then your paper airplane should fly further for a longer time. Once you have your second airplane constructed, go back outside and repeat the 5 throws, continuing to record flight distance and time. Calculate your average flight distance and average flight time for this plane. Now compare your average flight distances and average flight times for both paper airplanes. Did your second plane travel a further distance for a longer time than the first plane? Why do you think you were able to reduce drag, or maybe how come drag was increased?

If you want, you can continue this process by designing and constructing a third paper airplane to see if you can improve upon your previous designs. Test again and record the flight distances and times. For an added bonus challenge, try to design and construct a paper airplane that is able to turn left or right while flying. I would love to hear about and see your airplanes you've constructed and tested, so you are welcome to share pictures or videos on Teams with the class, and you can even explain something you learned!

Extras

- **Research question of the week:** This week instead of researching a question, I would like you to reflect on the paper airplane challenge. **What did you find challenging about it? How were you able to reduce the amount of drag? Which of your designs worked best and why? If you were to repeat the activity, how would you improve your airplane design?** You can share your thoughts/reflections about the activity on Teams!
- **Math problem of the week:** Each week I will give you a challenging math problem to try created by the University of Waterloo, good luck!
<https://cemc.uwaterloo.ca/resources/potw/2019-20/French/POTWB-19-NN-01-P-f.pdf>
Here is the solution to last week's problem:
<https://cemc.uwaterloo.ca/resources/potw/2019-20/French/POTWB-19-GS-28-S.pdf>
- **Paper airplane models:** Here is a website that shows how to fold and construct a variety of paper airplane models.
<https://www.diynetwork.com/made-and-remade/learn-it/5-basic-paper-airplanes>



Happy Home Learning!



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