

# Inquiry Project

OLTD 508

By Karen Boucher



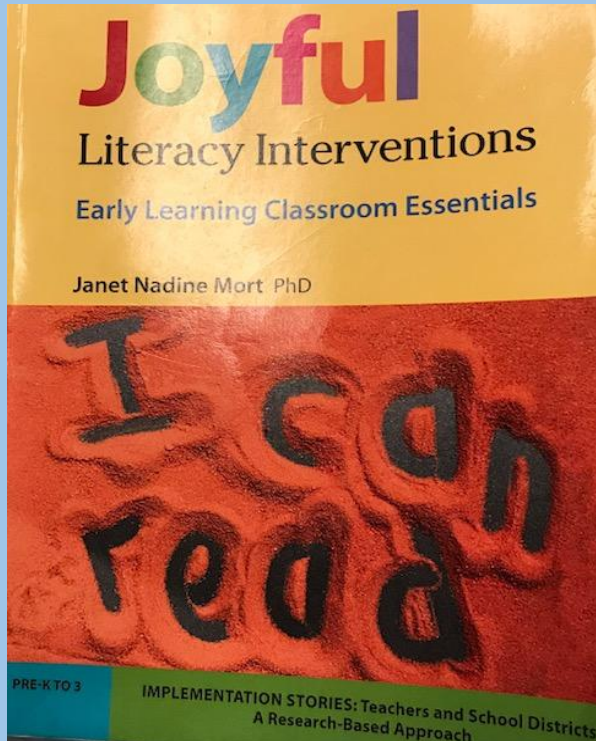
# Inquiry Question

Can game based learning and gamification in the classroom increase motivation and improve literacy skills in a primary classroom?



Four years ago, the staff at my school were concerned about the low literacy levels of our students. We knew that collaboratively we would have to change our teaching practices to help our students improve their reading and writing skills. A few staff members, including myself, had an opportunity to attend a two day conference in Vancouver called *Joyful Literacy Interventions*. The presenter, Janet Mort inspired us to add games to our daily literacy practice to enhance learning and build the essential foundational literacy skills, especially for our most vulnerable children.

# Joyful Interventions



**“Vulnerable children do not need “skill and drill.” They need joyful interventions, plenty of laughter, friendship, and promise: the promise of a joyful and literate future - forever. Struggling children need to believe that they can “do it.” Intriguing play centers embedded with skills in a game environment work for all children.” (Janet Mort, 2016)**

***“Games work!*** Tim Rasinski, a renowned literacy researcher, emphasizes the importance of using a game approach to skill development.

**“I have found that word identification instruction seems to be most engaging, authentic and effective when it feels like a game for students and teachers. Think of the games we play, Scrabble, Boggle, Crossword puzzles, Wheel of Fortune [and so on]. If adults love games that involves words, why wouldn’t students? Making words, word ladders, word sorts, word bingo, word walls all have the feel of a game that makes the students want to engage.”**(Vacca & Vacca, 2012)

# Essential literacy skills in the primary classroom

**Phonological Awareness:** the ability to hear, recognize and play with the sounds in our oral language. (hearing/listening skill)

**Alphabet Principle:** letter name, sound, word that begins with the sound and find it in text.

**Phonemic Awareness:** the understanding that spoken words consist of a sequence of speech sounds and an awareness of the individual sounds or phonemes. (segment words into sounds, manipulate sounds to make words)

**Phonics:** the ability to apply letter-sound knowledge when translating print into speech. (decoding)

**Oral Language:** the ability to produce and comprehend spoken language

(Janet Mort, 2016)

# What is game based learning?

“**Game based learning** (GBL) is a type of game play that has defined learning outcomes. It is designed to balance subject matter with gameplay and the ability of the players to retain and apply said subject matter to the real world. Effective game based applications can draw the student to work toward a goal, choosing actions and experiencing consequences along the way.” (EdTechReview, 2013)

Students need effective, interactive experiences that motivate them and actively engage them in the learning process. Trybus, J. (2009)

# What is gamification?

“**Gamification** is the use of game design and mechanics to enhance non-game contexts by increasing participation, engagement, loyalty and competition. These methods can include points, leaderboards, direct competitions and stickers or badges.” (Suzanne Holloway)





## GAMIFICATION IN THE CLASSROOM

### SMALL CHANGES, BIG RESULTS

Learning needs to become more like games if we want schools to **better equip our kids for the unknown future**. By including gamification techniques in the classroom, teachers can offer a fun and engaging way of learning, and students will amaze everyone with outstanding learning results. Here are four gamification techniques that come with small changes, yet bring **big results**.

#### A test vs. a quest

There's something in the air right before taking a test when everyone feels millions of butterflies in their stomachs. A quest is a horse of a totally different color.

Students will not **fear a quest**; they will feel challenged to rise above it and **conquer it**. That's why you should never underestimate the power of the words used in a course.



#### Grades vs. XP (eXperience Points)



Student performance is traditionally assessed by starting from the perfect 100% and going downwards until reaching the real level of student's knowledge. XP comes with a spin.

Students start from zero and only go up, **getting a boost in their confidence**. At the same time, XP can be transformed into normal grades, for the satisfaction of the school's grading system.

#### F.A.I.L. = First Attempt In Learning

Failure is rarely regarded as an option; the fear of failure can cause students to skip classes, avoid tests and even drop school. This is certainly not the case with games.

Faced with a "Game Over" screen, **kids feel the urge to play again and improve upon their last performance**. Their motivation grows bigger and they "Level Up" in learning as well.



#### A centralized system



From something as simple as a shared spreadsheet to something as complex as an LMS, teachers need a centralized system to **keep track of and analyze** the performance of all students.

**Technology assists teachers in gathering data from each student** — where do they struggle, how fast they progress — and deliver more personalized learning experiences.

The infographic organizer I retrieved from elearning describes gamification in the classroom.

To read the infographic, click on the link below.

Retrieved from:

<https://elearninginfographics.com/wp-content/uploads/gamification-in-the-classroom.png>

# Potential benefits of successful gamification in the classroom from Wikipedia

- giving students ownership of their learning
  - opportunities for identity work through taking on alternate selves
  - freedom to fail and try again without negative repercussions
  - chances to increase fun and joy in the classroom
  - opportunities for differentiated instruction
  - making learning visible
  - providing a manageable set of subtasks and tasks
  - inspiring students to discover intrinsic motivators for learning
  - motivating students with dyslexia with low levels of motivation

Retrieved from [https://en.wikipedia.org/wiki/Gamification\\_of\\_learning](https://en.wikipedia.org/wiki/Gamification_of_learning)

# Games vs. Game Based Learning vs. Gamification

## Games

- Games are just for fun, and may or may not have defined rules and objectives.
- Winning and losing is part of the game
- Game play comes first, rewards are secondary

## Game Based Learning

- Games have defined learning objectives
- Losing may or may not be possible because the point is to motivate people to take some action and learn as a result
- Sometimes just playing the game is intrinsically rewarding

## Gamification

- May just be a collection of tasks with points or some form of reward
- Losing may or may not be possible because the point is to motivate people to take some action and do something
- Being intrinsically rewarding is optional

# Consider the learning style of the learners in the classroom when choosing the game approach

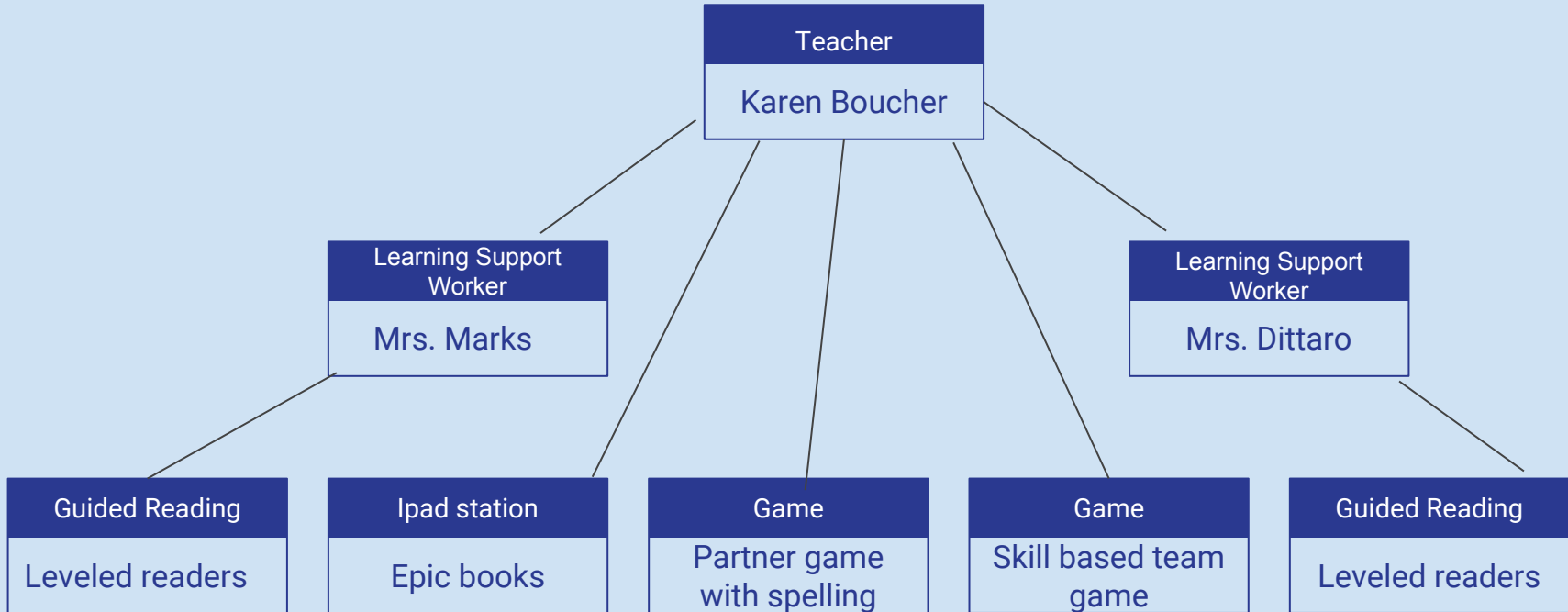
When planning to teach with games, a teacher must consider the learning style of the students to determine which game they are most likely to enjoy and gain the most value out of. The three learning styles are visual, auditory and kinesthetic learners.

**Visual Learners:** Enjoy games with lots of graphics, bright colors, fun artwork and maybe charts.

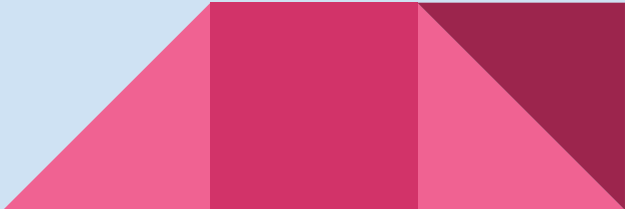
**Auditory Learners:** Enjoy games where they listen to snippets of stories and hear others have discussions about different aspects of the game.

**Kinesthetic Learners:** Enjoy games where they get to be hands-on and have lots of pieces to move and manipulate.  
(Duetzmann, 2016)

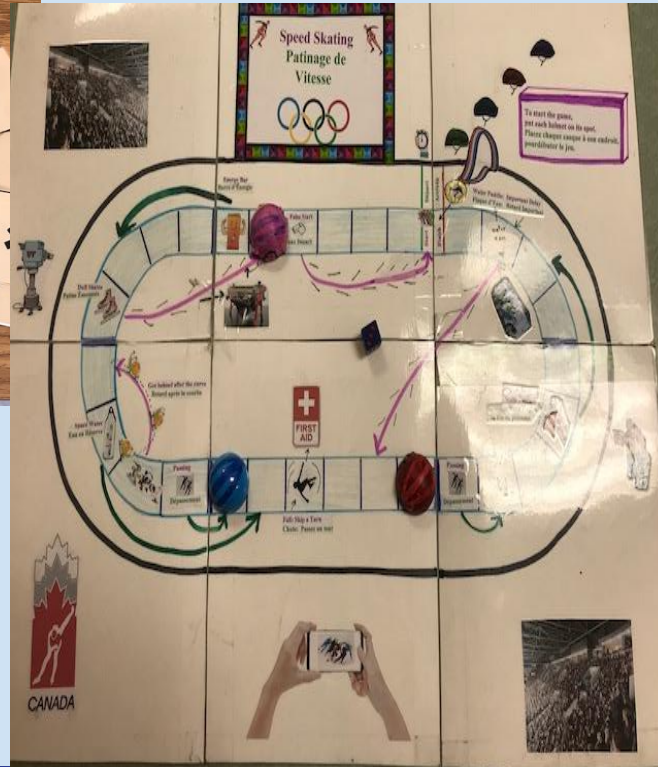
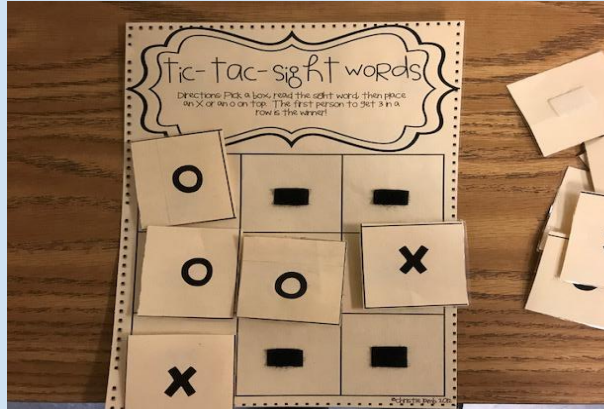
# The Literacy Team



# Game-Based Learning

- **Fun, exciting and motivating**
  - **Highly engaging**
  - **Collaborative**
  - **Transfer learning to the real world**
  - **Individualized learning**
  - **Immediate feedback**
  - **Cost effective**
  - **Low physical risk/liability**
  - **Multiple levels and challenges**
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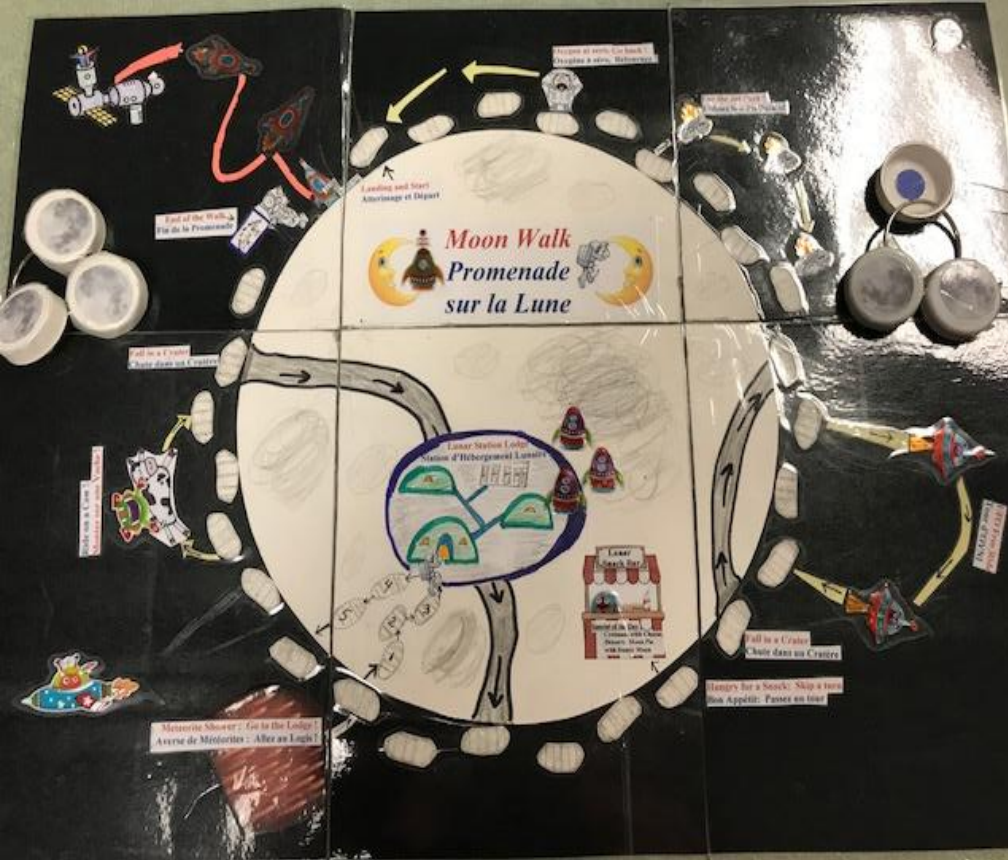
# What does it look like in the primary classroom?



A simple easy to create game like x and o's can be used to practice skills.

During the winter olympics, we used a variety of games that the students would find appealing.

Take a walk on the moon and be careful that you don't fall in a crater or run out of oxygen!  
Cover your gum ball with each word you spell correctly, or sentence you write, etc.





Color Snail. Students spin the spinner and move to the color if they have read and spelled the word correctly. Students can be challenged to write sentences with the words and find them in a book.



Students love the paper version of minecraft and playing with the manipulatives.



This game that is used for literacy practice, also incorporates Halloween safety and dangers.







Students practice their sight words by traveling around the world. They have passports to enter each country.

## What do the students in my grade one/two class say about games?

I like games because we learn while we are playing the games and we get to be special characters. (Tristen)

I learn more about reading by practicing my words and reading the words on the games. (Gregory)

I like to play games because I like to roll the dice, like a six and then I get to move far. (Noelia)

I like it because there is a chest in one spot and you can get treasure if you get to it. (Holden)

I like games because it is just something I like. Also because I can use a dice and learn numbers and I like to play all the games on my tablet at home. (Emma)

## How do I know if my students are learning through games?

Janet Mort quoted in her book *Putting on the Blitz* that “effective teaching in early childhood education, as in the elementary grades, requires a skillful combination of explicit instruction, sensitive and warm interactions, responsive feedback, and verbal engagement/stimulation intentionally directed to ensure children’s learning in a classroom environment that is not overly structured or regimented.” WLM started “blitzing” our primary students in the late spring of 2015 to ensure they have the essential foundational skills for reading.

She created circle charts as a tool that can guide assessments and track each child’s progress through the primary years in the essential literacy skills. The ongoing assessment guides or informs the teacher to prepare for small group instruction in a play based learning environment. The goal is to achieve mastery by the end of grade two.

## Results from WLM Elementary

Results from my school tracked with the circle charts show that most students can learn the alphabet principle, phonological awareness, phonemic awareness and sight words through games. We have a “blitz” room where small groups go four times a week and we have teachers who use games in their classroom to teach as well.

The students who have not made progress and are struggling need other supports. We try to seek support through professional specialists - hearing, eyesight, occupational therapist, school counsellor for emotional issues as well as counselling from outside sources. Children who require different interventions and supports are our tier three students.





# What does the research say?

“Some of the biggest names in psychology, including Jean Piaget and Jerome Bruner, believe that play is a child’s work. The best way to teach kids, they say, is through hands-on, active learning. That is where game based learning comes in. With this approach, learning and play aren’t at odds with each other; in fact, games are the vehicle and environment for learning.” (Nott, 2016)

According to Bruner, students who engage in play-based activities have the following benefits:

- Increased motivation
- More creativity
- Enhanced problem solving skills
- A greater sense of personal responsibility
- The joy of autonomy and independence

In the article *Using iPad Applications to Increase Literacy Skills for Children PreK to Grade 3 with Disabilities*, Angi-Stone-MacDonald describes technology as particularly useful in supporting participation in literacy activities in the classroom because the computer or device can provide adaptations to make students more independent in academic activities. The study reviews various literacy apps chosen for one student with autism. There are hundreds of apps in the app store used for educational purposes. For the apps, students need some fine motor control to be able to touch the screen. One challenge when using apps (ie. Book Creator, Pictello, Popplet) to create books or write stories, students need adult support. These apps allow for high levels of customization but don't provide immediate corrective feedback like literacy skill development apps that teach phonemic awareness, vocabulary and spelling. Research shows that interactive electronic storybooks are more engaging and enhance emergent literacy skills in young children. Access to educational apps and technology like iPads increases every day, as they become cheaper and more thoroughly incorporated into the fabric of life. In conclusion she states that apps for literacy can enhance learning for all but especially children with disabilities. A key reminder from the article is that parents and educators need to be critical consumers, using strategies and information from credible sources to find the best and most appropriate apps for a child's strengths and needs. (Stone-MacDonald, 2015)

“Increasingly, students have access to tablets and smartphones at home, giving educators an excellent opportunity to use these technologies to connect school and home learning activities. It is argued that technology needs to be used in a careful and deliberate way to ensure learning and development of early literacy skills.”

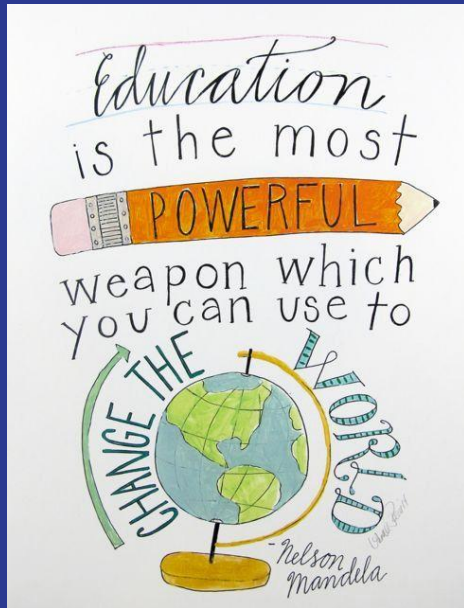
“Using an instructional framework for tablet use is important. A teacher first explains and models the activity, followed by guided and independent practice by the student. This gradually shifts the instruction from teacher-centered to student-centered and allows teachers to scaffold and guide students’ understanding of the material. The teacher can make adjustments and provide feedback as necessary. In conclusion, it is strongly recommended that use of technology be coupled with effective instruction to ensure that students are actually learning, not just pushing buttons and going through the motions on the app.”

“Tablets and apps, when used effectively and in the context of high-quality literacy instruction, can offer additional ways for students to practice early literacy concepts. However, in the absence of a solid teaching framework, we worry that at best, apps will waste precious classroom time, and at worst, students will learn incorrect information and develop misconceptions. Teacher explains, models, guides and allows for independent practice.”  
(Northrop, Killeen, 2013)

***Can game based learning inform and benefit my teaching practices while offering alternative learning experiences for students?***

In conclusion, I would definitely agree that using games and circle charts for assessment to inform my teaching practice will provide more individualized instruction for each student. I would like to spend more time exploring educational apps for literacy learning. I need to make sure I understand the benefits of a chosen app, find ways to use it effectively for student progress/success and be prepared to justify the use of games in the classroom to adults who don't see the need!

# Final thoughts to keep on learning!



Children *learn*  
as they  
*play.*

Most importantly,  
in play children

*learn*  
how to  
*learn.*

~ O. Fred Donaldson

[handsonaswegrow.com](http://handsonaswegrow.com)

## Resources:

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Thayer, A. (n.d.) 7 Early Literacy Games That You Can Teach Anywhere. Teachingmama.org Retrieved from: <https://teachingmama.org/7-early-literacy-games-that-you-can-play-anywhere/>

T. L. (2017). Play based approaches to literacy and numeracy. doi:10.18411/a-2017-023

## Images:

Slide 1: <https://pixabay.com/en/faq-question-icon-sign-flat-3620230/>

Slide 2: <https://pixabay.com/en/scrabble-education-text-read-921254/>

Slide 4: Screenshot of Joyful Interventions by Janet Mort

Slide 8: <https://pixabay.com/en/trophy-sport-cup-competition-2891880/>

Slide 8: <https://pixabay.com/en/target-arrive-reach-set-target-2045924/>

Slide 9: Infographic retrieved from:

<https://elearninginfographics.com/wp-content/uploads/gamification-in-the-classroom.png>

Slide 19-20 are photos of games we use at WLM.

Slide 24: Photo of circle charts

Slide 29: Retrieved from:

<https://www.pinterest.ca/pin/AZ7vqexwSLBnO45GzHbWllChG4hU1xFeBQaujoltWlh-xugacQwS8>

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<https://www.pinterest.ca/pin/482448178812936725/>