

# Coast Salish Basket Motifs (Art) and Mathematics

## Introduction



This is a free resource for teachers and students and is part of the [Callysto](#) project, a federally-funded initiative to foster computational thinking and data literacy in Canadian Grade 5-12 classrooms.

Special gratitude goes to the [Tla'amin Nation](#) and its members, Ms. Betty Wilson, Ms. Gail Blaine, and Mr. Tyler Peters, for generously sharing their knowledge and wisdom on traditional basket weaving, making this project possible. It's essential to acknowledge that this work was conducted on the unceded territory of the Musqueam, Skwxú7mesh, Tsleil-Waututh, and Kwikwetlem nations.

Coast Salish baskets hold significant importance within Indigenous communities, serving multifunctional roles for storage, transportation, trade, and ceremonial purposes. They embody the cultural richness and artistic expressions of the Coast Salish people, showcasing intricate motifs passed down through generations.

An important feature of woven baskets is the occurrence of beautiful geometric motifs/patterns. The motifs we observe on many Coast Salish baskets are highly regular and can be described very simply in terms of basic geometric shapes and mathematical operations. Within these notebooks, you'll learn about and explore woven basket patterns or motifs. We'll deconstruct the motifs into simple shapes and introduce you to the math and coding formulas to create patterns.

For more information about the art of Coastal Salish Baskets, visit:

1. [Coast Salish Baskets | Whatcom Museum](#)
2. [Coast Salish weaving tools & technologies | Burke Museum](#)
3.  [Ancient Coast Salish Basketry with Master Suquamish Basket-Maker](#)
4.  [Tla'amin Treaty Settlement Lands](#)

## Learning Outcomes/Curriculum Connections

- Art
  - Grade 5: Students investigate how changes in societies of the past have influenced the creation and sharing of artworks.
  - Grade 6: Before colonization, the Indigenous people had rich and historical traditions of visual arts that continue to be celebrated today.
  - Grade 8 Art: Students will employ space, proportion, and relationships for image making.
  
- Math
  - Grade 5 Geometry: Students investigate symmetry as a geometric property.
    - Recognize symmetry in First Nations, Métis, and Inuit designs.
    - Investigate symmetry in familiar 2-D and 3-D shapes using hands-on materials or digital applications.
  - Grade 7 Shape and Space: Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them

## Required Materials

1. A charged computer, with internet access, for each student or group
2. An internet browser, preferably Google Chrome
3. A Google or Microsoft account (Callysto does not collect any personal information)

## In-Class Activities

Activity 1: Atomic Motifs - (60 mins)

[Link to the notebook](#) for both activities

In this notebook, we explore Indigenous woven baskets– three-dimensional (3D) objects with two-dimensional (2D) geometric motifs or patterns, many are highly regular and repeated in symmetrical arrangements. We study these patterns through geometric operations like flip, reflection, and stacking. Understanding and applying these operations offer insights into the artistic craftsmanship behind the woven patterns found on Salish baskets.

## Activity 2: Design a 3D Basket - (60 mins)

Building on the skills from the previous activity, you'll design motifs for 3D baskets. Starting with basic shapes, unleash your imagination and artistic flair. With gained knowledge and understanding of motifs, create a personalized Salish basket that showcases your artistic expression. Witness your original motif basket come to life, transforming your imagination into a captivating 3D Salish basket.

### Reflections

- What parts of your project do you think worked really well and why?
- This project incorporates mathematical skills. Explain how you used these skills when creating your own 3D Salish basket.
- If you had the chance to redo the project, what aspects would you want to change or modify in your design, and what would you keep the same? Explain why you feel that way.
- Can you identify how the things you learned in this project could be useful in your other schoolwork or real-life situations?
- Are there other forms of Indigenous art or crafts that share similar geometric shapes or designs?

## Next Steps

For more information, you can check out our [YouTube videos](#), [online courses](#), or [callysto.ca](#) for [learning modules](#), [tutorials](#), [lesson plans](#), [exercises](#) and events.

## Contact

If you encounter any issues or have any suggestions, please get in touch with us at [contact@callysto.ca](mailto:contact@callysto.ca) or [twitter.com/callysto\\_canada](https://twitter.com/callysto_canada).