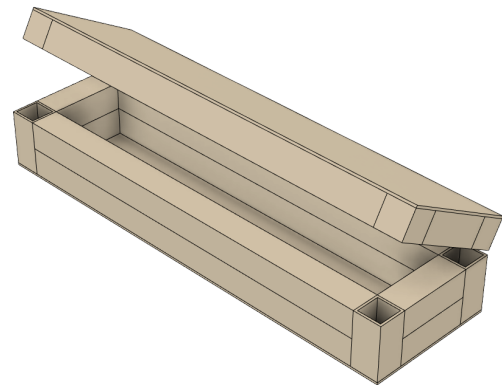




Pencil Box CORiculum

The CORI Pencil Box challenges learners with the following math concepts: Volume, Measurement and Estimation. Design and construct a pencil box to fit your favorite pencils, markers and erasers. Students will learn to measure, construct and decorate their very own pencil box using CORI beams.



Objective:

Students will apply math geometry concepts with a real volume application project.

Grades Levels: 3rd - 8th Grade

Lesson Duration: 2 - 3 hours

Build Time: 45 - 75min

Additional Materials Recommended

- | | |
|---|---|
| <ul style="list-style-type: none">● Hot glue guns● Gluesticks● Scissors | <ul style="list-style-type: none">● Rulers● Pencils● Art supplies (optional) - Decorate your pencil box |
|---|---|

Cori Design Challenge

Using CORI beams, design and construct a pencil box with the appropriate width, length and height to fit your standard pencil size of 7.5" while leaving room for other items such as erasers, expo markers, and pens. You will need to cut the CORI beams at appropriate dimensions and don't forget to measure twice and cut once. Good luck Eduneers!

MATH FOR EVERYONE!

The CORI Pencil Box presents math problems in an experiential way. The CORI Pencil Box lesson integrates common core math standards 3rd through 8th grade. Below are example math

problems and prompts to facilitate applied math conversations with students. The math section will have the following components for teachers to use with students.

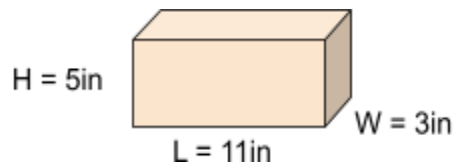
- CoriCreate Math prompts that directly apply with student CORI designs and creations
- Sample math word problems
- Additional open education resources related to lesson plan
- Reflection questions

Math Application CHALLENGE:

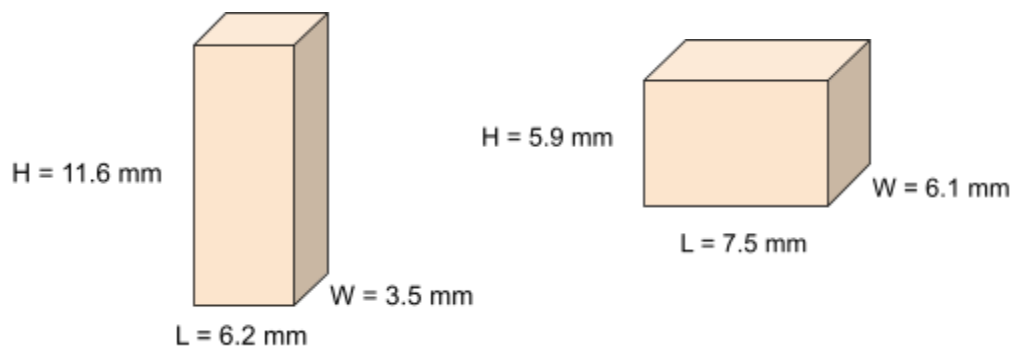
- What is the perimeter of the CORI Pencil Box top component based on your measurements?
- What is the area of the CORI-Box top piece based on your measurements?
- What is the volume of the CORI-Box based on your measurements?

Follow Up Sample Math Problems

- What is the volume of a pencil box with a length of 7 inches, width of 9 inches, and height of 4 inches?
- Find the volume of the following rectangular prism.



- Which rectangular prism has a larger volume? Circle your answer.



Step It Up Math Challenge

An aquarium tank has a height of 24 inches, length of 35 inches, and width of 8.5 inches. A solid aquarium treasure box is placed inside the aquarium with a height of 3.5 inches, length of 4.25

inches, and width of 2.5 inches. The tank is filled with water. What is the volume of the water in the aquarium?

Additional Open Educational Resources

- Basic Volume and Surface Area from Khan Academy:
 - <https://www.khanacademy.org/math/basic-geo/basic-geo-volume-sa>
- Volume and Surface Area from Open Education Resources (OER):
 - <https://www.oercommons.org/courseware/lesson/2484/overview>

Reflection Questions

1. Did the pencils fit into your CORI-Box on the first try?
2. What other items could you build with the CORI-Box design as the foundation?
3. What are real life situations that CORI-Box could be used for if they were real steel beams?
4. What careers do you think use volume in their profession?

Contact us at support@coricreate.com if you have any questions or comments.



www.coricreate.com

