

Mathematics CFA Template

Pre-Instruction

1. List the Standard. Underline the nouns (what students will know) and highlight the verbs (what student will do):

5.MD.5b Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.

2. Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

3. I Can Statements – Put learning targets in student friendly terms.

I can find the volume of rectangular prisms by using the formulas: $V = l \times w \times h$ or $V = b \times h$

Depth of Knowledge of the standard (Highlight the Level of the Learning Target):

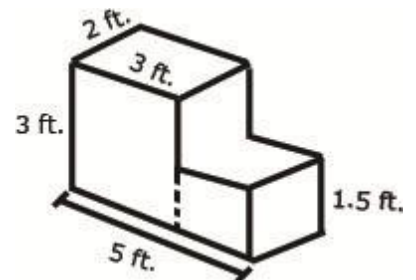
Level 1 Recall; **Level 2 – Skill/Concept**; **Level 3 – Strategic Thinking**; **Level 4 – Extended Thinking**

4. List the skills students need to know in order to begin this standard:

Students can identify the number of units for length and width.
Students understand that volume is a filling process.
Students understand that area covers.
Students can calculate area.
Students can identify a rectangular prism.

5. What type of assessment am I going to write? [selected response (m/c, t/f, y/n, matching, fill in ___) **or** constructed response (**short**: word, phrase, sentence, single problem; **extended**: multi-step operations in math, problem solving)] List the assessment questions.

With your 24 cubes, make as many rectangular prisms as possible with a volume of 24 cubic units. Record the possible dimensions in a table. Label the columns – Length, width, height
Determine the volume of concrete needed to build the steps in the diagram below.



6. Scoring Guide

Exceeds Expectations: Student finds all possible combinations, records in table and solves, shows and explains correctly more than one way to find the volume of concrete.

Proficient: Student finds all possible combinations and completes the table for the rectangular prism and finds the correct volume of concrete for the steps with correct work and explanation.

Approaching Proficiency: Student finds all possible combinations and completes table but does not show understanding for solving for the volume of concrete.

Not Proficient: Does not complete table with all possible combinations or solve for the volume of concrete correctly.

Name: _____ Date: _____

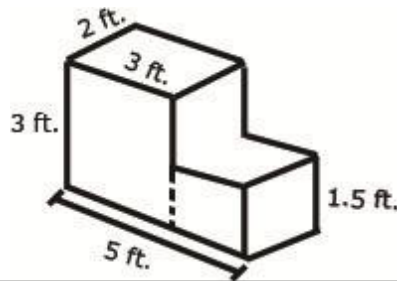
Power Standard: 5.MD.5b

Directions: With your 24 cubes, make as many rectangular prisms as possible with a volume of 24 cubic units. Record the possible dimensions in the table below.

Length	Width	Height

Answer the open response question. Show all work and explain.

Determine the volume of concrete needed to build the steps in the diagram below.



Exceeds Expectations: Student finds all possible combinations, records in table and solves, shows and explains correctly more than one way to find the volume of concrete.

Proficient: Student finds all possible combinations and completes the table for the rectangular prism and finds the correct volume of concrete for the steps with correct work and explanation.

Approaching Proficiency: Student finds all possible combinations and completes table but does not show understanding for solving for the volume of concrete.

Not Proficient: Does not complete table with all possible combinations or solve for the volume of concrete correctly.

Power Standard: 5.MD.5b Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.

Tracking Sheet

Class: _____ Grade: _____

Student	1 st Attempt				2 nd Attempt				3 rd Attempt			
	Not Proficient	Approaching Proficiency	Proficient	Exceeds Expectations	Not Proficient	Approaching Proficiency	Proficient	Exceeds Expectations	Not Proficient	Approaching Proficiency	Proficient	Exceeds Expectations

- Exceeds Expectations:** Student finds all possible combinations, records in table and solves, shows and explains correctly more than one way to find the volume of concrete.
- Proficient:** Student finds all possible combinations and completes the table for the rectangular prism and finds the correct volume of concrete for the steps with correct work and explanation.
- Approaching Proficiency:** Student finds all possible combinations and completes table but does not show understanding for solving for the volume of concrete.
- Not Proficient:** Does not complete table with all possible combinations or solve for the volume of concrete correctly.