



YALE NATIONAL INITIATIVE

to strengthen teaching in public schools®

Curriculum Units by Fellows of the National Initiative
2024 Volume V: Evolutionary Medicine

Using Proportions to compare medicine doses in adults and children

Guide for Curriculum Unit 24.05.05, published September 2024

by Yavet Respes

Clinical trials are needed to make new medications, devices, and diagnostic tools available. Historically, participants in clinical trials have come from a homogeneous group, and there is a recognized need for increased diversity and representation in these clinical research studies. The evolution of clinical trials towards more inclusive and diverse participant pools is critical. The absence of diversity in clinical trials makes it difficult for clinicians and researchers to know which medications and devices are safe and effective for specific populations. This evolutionary shift in clinical trial practices aims to enhance the generalizability and applicability of research findings to a broader range of individuals.

This unit is designed to teach students how to calculate medicine doses for adults and infants using ratios and proportions. Through a series of lessons, students will build background knowledge, practice dosage calculations, and apply their learning to real-world scenarios. The unit concludes with a summative assessment that tests students' ability to accurately solve dosage problems.

My students are often the caretakers of themselves and their younger siblings. They are often responsible for determining how much over-the-counter (OTC) and prescription medications to give themselves and their younger siblings. By the end of the unit, I hope students see the importance of following dosing guidelines for themselves and their younger siblings.

(Developed for Math, grade 7; recommended for Math, grade 7)

<https://teachers.yale.edu>

©2024 by the Yale-New Haven Teachers Institute, Yale University, All Rights Reserved. Yale National Initiative®, Yale-New Haven Teachers Institute®, On Common Ground®, and League of Teachers Institutes® are registered trademarks of Yale University.

For terms of use visit https://teachers.yale.edu/terms_of_use