

# Designing activities for specific audiences

[Education](#)



Differentiated instruction remains one of the most frequent subjects of educational research. For 3rd grade math learners, differentiation is the essential element of successful learning. Differentiation will ensure that all unique student talents and skills are involved into the learning process, and that every child has a unique chance to achieve the learning objectives. We are designing a differentiated unit plan for 3rd grade math learners.

The group of low performing students requires special differentiated attention when developing unit and subunit instructions. The low performing children come from socially unstable families and display significant knowledge gaps in math learning. Structured activities, direct instruction, inquiry-based learning principles, and open-ended instructional strategies will be used to develop a set of differentiated instructions for the 3rd grade math learners.

Unit objectives: - students are able to explain what area and volume measurements are; students are able to explain the difference between area and volume; students are able to perform basic area and volume measurements during structured and open ended activities. Math standards to be addressed: learners use concrete objects to perform area and volume measurements; learners understand that similar measurements can be performed by using different approaches; learners possess sufficient knowledge about two- and three-dimensional measurements and symmetry.

Instructional goals: all students are actively involved into the learning process; the instruction is differentiated to match the needs of low performing students; the instruction is differentiated to provide the best performing students with additional learning incentives and to ensure that all

groups of learners are given an opportunity to apply their skills and talents in practice. Unit plan The subtopic presentation will begin with a carefully developed introduction; instruction will be supplemented with independent practice where young learners will be able to test their new skills.

At this stage of the learning process, direct instructional principles will form the basis for differentiating instruction. Generally, “ the goal of direct instruction (DI) is to do more in less time – accelerating student learning by carefully controlling the features of curriculum design and instructional delivery” (Watkins & Slocum, 2004). That means that the structure of the direct instruction will promote active student-teacher interactions, to guarantee that 3rd grade learners quickly grasp the new material and can pass over to the next stage of learning.

Direct Instruction is particularly effective when dealing with the so-called “ at-risk” populations; simultaneously, DI may be applied to deal with gifted math learners. Close teacher-student interactions will show whether students understand the learning material, and whether some of them are prepared to working in separate “ talented” or “ low performing” groups. Direct instructional approaches will be combined with open-ended brainstorming activities where students will have a chance to offer several different answers to one teacher’s task.

In brainstorming, it is important that “ students are encouraged to respond all together, by pointing to things, raising hands and fingers, answering in chorus, moving their bodies, ticking off items or writing responses” (D’Amico, 2008). The students will be requested to perform one common task (several basic area and volume measurements). The class will be divided into several

<https://assignbuster.com/designing-activities-for-specific-audiences/>

small groups: the best-performing students will be asked to explain the most problematic math issues to low-performing students.

Later, the best and the low performing students will form the two different groups and will be offered differentiated instructional materials to achieve the unit learning objectives. At the next stage of the learning process, the learners will be divided into the two different groups and will work on the two different assignments. The first “ low-performing” group will be provided with rulers and supplementary instruments to perform basic area and volume measurements.

The group will be asked to perform several simple measurements (a desk, a window, etc. ). The second “ gifted” group of learners will work with several objects (e. g. , several bottles and boxes of different sizes). Besides performing the basic area and volume measurements, the “ gifted” group will be asked to order the boxes and bottles according to their size, and to explain how area and volume measurements relate to each other.

The students in both groups will be actively involved into gathering various types of information. At this stage of learning, the principles of inquiry-based instruction will be combined with structured activities. “ The main components of inquiry-based learning include: a question related to the topic of inquiry to be explored, followed by an investigation and gathering of information related to the question, continuing with a discussion of findings, and commencing with a reflection on what was learned” (Tomlinson, 2004).

Inquiry-based learning will require that students gather and analyze area and volume information about the research objects (desks or boxes); structured

activities will require that students order their research objects (boxes and bottles) and explain the reasons of their choice to other students; open-ended activities will provide students with an opportunity “ to work at their own pace and find a variety of responses” (D’Amico, 2008). Thus, the instruction will be differentiated to match the student learning needs and to develop a complex vision of effective instructional strategies for 3rd grade math learners.

At the end of the unit, the two groups will be re-united into one class. At the whole-class level of instruction, all learners will participate in a mathematical game. Learners will be asked to perform fast and correct area and volume measurements. Several theoretical questions will be asked to ensure that the students understand the essence and the basic principles of area and volume measurements. The learners will be encouraged to participate in a brainstorming activity: all students will have 5 minutes to perform as many measurements as they can.

These ambitious tasks will provide the learners with incentives to learn, to utilize their mathematical and critical thinking skills, and to move forward towards achieving the learning goals and objectives. Underperforming students will feel enough strength to express their opinions in class, and to offer correct solutions to difficult tasks. Ongoing summative evaluation The summative evaluation procedures will answer one critical question: are 3rd grade math learners able to apply area and volume mathematical knowledge in practice?

The ongoing summative assessment will take place by using several rubrics in the context of knowledge and skills that students will learn at each stage

<https://assignbuster.com/designing-activities-for-specific-audiences/>

of the learning process. At the end of the unit, the student knowledge will be tested with the help of an interactive “ building” game: the students will use outdated newspapers and articles, cutting out furniture pictures, ordering the pictures according to their shape, area and volume, and creating a graphic organizer in the form of a “ virtual room”.

The game will show whether the students understand different measurable characteristics of real objects, what techniques they use to perform measurements, and how they are able to use symmetry concepts when creating a graphic organizer. Conclusion Differentiated instruction is the direct pathway towards effective learning. Each child has unique talents and unique learning needs. These needs should be addressed, so that the child is able to achieve the basic learning objectives.

Differentiated instruction is particularly important when working with “ at-risk” and “ gifted” student populations. Structured, open-ended, and brainstorming activities combined with direct and inquiry-based learning principles will form a complex differentiated instructional vision that will help young learners develop effective mathematical skills and effectively use these skills in practice.