

Contextual Teaching and Learning

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[Research](#)
[Teaching Place Value](#)
[References](#)

[QCC Standards](#)
[Evaluation](#)

[Research](#)

Why do most students despise learning mathematics in school? In general, math seems to be one of the most important subjects to learn because numbers are used every day throughout a lifetime. Yet most people find it hard to really connect to this branch of learning and embrace it as an enjoyable topic. Most adults remember math as a time when children sat in desks, learned an isolated concept (algebra, geometry, trigonometry, etc.), and then completed problems in a text book. However, research shows that the ideas of “steadily working through the textbook, page by page, and assigning sheets of drill exercises from the workbooks or worksheets for practice are fundamentally wrong” (Daniels, 83). Math can actually be a pleasurable experience for students if the teachers would simply change the delivery of the concepts and demonstrate how they are related to every day life. For example, students do not understand why they need to learn what a decimal is and how it’s used unless someone tells them that it makes a difference in their weekly allowance. Asking a student if he would rather have \$10.00 per week or \$0.10 per week for completing chores suddenly makes learning about decimals important to him. Students should be able to connect each math concept with a real life experience.

“Contextual teaching and learning ...helps teachers relate subject matter content to real world situations; and motivates students...” (Berns, 1). This type of learning style also incorporates the social issues that students are going to face when outside of school. Once students become ready to interact with people on their own, they do so in a group or with a partner. Why, then, do teachers still insist on keeping students separated in the classroom and problem solving by themselves? Even in an office setting, in which each person has their own desk, computer, and materials; the employees rarely work on projects without the help and ideas of their colleagues. The saying “two heads are better than one” holds true in the classroom as well. In order to help students today become more productive members of society they need to learn basic interaction, problem-solving, and socialization skills. Although the subject content in which they learn is extremely important, the subject matter is of no use if the student cannot apply the content or skills when he is not in a classroom.

Another important element of contextual teaching and learning is parent involvement. The best way to learn how to apply new skills in “the real world” is to practice. Since the parents are the teachers when students are at home, we must ask parents “to involve themselves in contextual-learning experiences with their children.” (Parnell, 147) Parents need to know that going to the grocery store, putting gas in the car, ordering food at a restaurant, etc. are all important learning opportunities for their children. Teaching the parents how to recognize a learning experience and make it known to the child that he is learning a specific skill would be tremendously beneficial. The schools also have an obligation to invite representatives from the local businesses into the classroom. The delegates can bring in a specific point of view that the teachers and parents may not have about particular jobs. They can tell students exactly what skills they use each day in a real world job to make the subject matter meaningful to them. The model of contextual teaching and learning cannot be accomplished by just one teacher. It takes many teachers across grade levels, parents, administrators, and the local business community to teach children what they need to know to be productive members of society.

[Back to top](#)

Standards

Mathematics:

14 Determines and estimates amounts of money up to \$5.00. Include amounts spent, change received, and equivalent amounts.

20 Relates concrete and pictorial models to numbers through thousands, and relates numbers to models; names numbers orally.

21 Identifies place value through hundred thousands and identifies the number of hundred thousands, thousands, hundreds, tens, and ones in a given number.

27 Compares and orders whole numbers through 9,999

34 Selects appropriate operation (addition, subtraction, or multiplication) for a given problem situation.

47 Adds and subtracts whole numbers (one-, two-, and three-digits, with or without regrouping), initially using manipulatives and then connecting the manipulations to symbolic procedures.

49 Applies mental computation strategies (such as counting up, counting back, simple compatible numbers, doubles, making ten, multiples of ten) to addition and subtraction, and to simple multiplication and division.

50 Selects appropriate methods and tools for computing with whole numbers from among mental computation, estimation, calculators, and paper and pencil according to the context and nature of the computation and use the selected methods or tools.

[Back to top](#)

Language Arts:

1 Adapts or changes oral language to fit situation by following the rules of conversation with peers and adults.

3 Follows multiple oral directions

11 Uses grade/age appropriate standard American English when communicating orally.

37 Uses learned phonetic strategies to spell correctly.

38 Writes legibly: Correctly forms letters and numbers; correctly spaces words and sentences.

39 Writes a short paragraph about a topic.

41 Writes in a variety of genres

42 Applies correct principles of grammar, parts of speech, and usage and mechanics.

43 Communicates ideas by using the writing process.

44 Uses available technology to assist in writing.

Social Studies:

23 Describes the local community in regard to origin, growth, and change over time.

25 Uses various print and non-print reference sources to locate information.

36 Chooses the appropriate resources from which to gather data.

41 Assumes leadership roles in accomplishing tasks.

42 Shows respect toward others.

43 Observes set rules of procedures.

[Back to top](#)

Teaching Place Value in 3rd Grade through Contextual Teaching

Day 1

The students will learn the concepts of the hundreds, tens, and ones place.

Begin day 1 with reviewing place value blocks to assess which students need more work on understanding hundreds, tens, and ones place. Call out various numbers and ask the students to create the number with the place value blocks. Students will work with a partner to carry out the same task. They will take turns making up numbers and calling it out to their partner. The partner will create the number and then switch roles.

Day 2

The students will relate place value concepts to money.

Relate the place value that the students learned in day 1 to money. Show the students 20 one dollar bills in one hand and 2 one dollar bills in the other. Ask the students which pile they would rather have. Write the numbers 20 and 2 on the board and explain, using the piles of numbers that 20 is much bigger than 2. Help them understand that simply adding a zero onto the end of a number makes a big difference in the amount of things that you have. Brainstorm with the students what kinds of things you could buy for \$2 and things you could buy for \$20. The students will form groups and cut pictures from magazines to categorize in groups of things you could buy for \$2, \$20, and \$200.

Day 3

Students will determine the number of items that can be bought for a certain amount of money.

Quickly review place value with the class. In partner groups, the students will look through sales papers to determine the number of school supply items that can be bought for \$25 dollars. They will list the items that they want to buy and the price of each item. The groups will then use calculators to add how much money they have spent. This activity will be a game in which the group to get the most items for \$25 will be the winners and will get to choose a school supply prize of their choice. The prizes will consist of notebooks, packs of paper, pencils, pens, etc.

Day 4

Students will learn how to subtract money using the counting back strategy.

Model for the class by having a volunteer come to the front of the room and pretend to buy something. The teacher acts as a cashier and tells the student that they owe \$7 (This is just an example – any amount of money will do). As the student gives the teacher \$10, the teacher demonstrates how to subtract money by counting back. Give the student \$3 by counting 8, 9, and 10 as you place the money in his hand. Then discuss that the student now has an item and \$3 left over. Then complete the subtraction problem on the board. This could also lead into a discussion of subtracting across zeros if you so desired. The students will then role play being in a store. Using play money and items in the classroom, each student will get a turn at being the cashier and the customer. Each child should practice subtracting using the counting back method that was explained. As the role play is happening, discuss the social skills and manners that go along with being in each of these roles. For example, explain that you should say hello and ask how the person is doing, customer service, etc.

Day 5

Students will apply skills learned in the classroom in a real world situation.

The students will take a field trip to a restaurant or a grocery store to buy something using the skills that were learned throughout the week. The class will go to Doug's Place Restaurant because it is located a block from the school and the students are able to walk to the location. Any store in the local community would work. The students will order a dessert from the restaurant and pay by themselves. They will also be required to count the change back to make sure that they received the correct amount. After everyone has ordered, we will enjoy our dessert!

Day 6

Students will tell about their experience through writing

The students will write a paragraph on their thoughts about the field trip. They must include the type of dessert they ordered, how much it cost, and how much change they received from the cashier. The early finishers can type the paragraph on the computer to be displayed.

Evaluation

The students will be evaluated using a rubric in which they get a score on if they can count change correctly, their social skills with the cashier, and the writing assignment.

[Back to top](#)

[References](#)

Berns, Robert G. (2001). "Contextual Teaching and Learning: Preparing Students for the New Economy"; The Highlight Zone p. 3.

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Parnell, Dale (1999). Why Do I Have to Learn This? Teaching the Way People Learn Best. Texas: CORD Communications.

[Back to top](#)