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Math-in-CTE Lesson Plan Template

Lesson Title: Reading and using a Ruler	Lesson #2

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Lesson Objective:	Learning how to read and use a ruler
Supplies Needed:	Rulers, pencils, worksheets and scrape wood.

THE "7 ELEMENTS"	TEACHER NOTES (and answer key)
1. **Introduce the CTE lesson.** Good morning class, Today we are celebrating someone's Birthday so who would like a slice of Birthday cake? There are 16 people and only one cake so how are we going to divide the cake up so everyone has an equal part? It's a sure bet that if it's a white cake with cream cheese frosting and I am cutting the cake I will end up with the biggest piece.	
2. Assess students' math awareness as it relates to the CTE lesson. Has anyone ever had to cut a cake, pie, a pizza or maybe a candy bar to share with your brother or sister? In life we are always dividing whole into fractions can anyone give me something's that they can think of that have to be divided? How about wood….when you made a checker board didn't you have to divide the wood into the exact same size square? How about a table….if you didn't cut each leg the same length who well would your table sit on the floor?	

3. **Work through the math example *embedded* in the CTE lesson.** Does anyone know what a typical carpenter's ruler is divided into? How about just a ruler you might use around the house of office? Try to guess. The standard carpenter's ruler is divided into 1/16ths. Sometime you will find one that has the first 12 inches divided into 1/32 and the remaining inches are divided into 1/16. In most of the time in wood working 1/16th is as accurate as you need to be. Why do you think it's important to know read a ruler and to understand fractions work? Who can tell me which is larger ¼" or 5/16"? How about 1/8" or 3/16"? Hopefully by the end of this lesson you will have an understanding and be able reduce fractions.	Show a quick video of Mr. Bean "Home Improvement episode.

4. Work through *related, contextual* math-in-CTE examples. If you want to buy new curtains or blinds for your house you will need to measure your windows. If you go into Home Depot for blinds and say…I need blinds that about this wide and this high (use you arms to show the size). How do you think the Home Depot Associate would respond? What if you bought a dog and had to put a fence in your back yard, what would happen if you didn't measure where to put your post in correctly? What do you think would happen if you poured a concrete patio and the lowest point of the slap was angled towards your house….and we had a monsoon rain storm?	
5. Work through *traditional math* examples. Pre-Algebra / Using and understanding fractions	
6. Students demonstrate their understanding. Students will be given worksheets and rulers; students will need to find different fractions marked on their worksheets.	Worksheets with different fractions marked on them.

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7. Formal assessment. Give students several objects to measure, have them write the dimensions to the nearest dimension with in a 1/16th. Give students a scrape piece of wood and have them cut it into three pieces to fit into three openings (without a hammer).	Several different objects with different dimensions that students can measure.