CCSS.Math.Content.5.MD.A.1

Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

Class/ Theory of Teaching and Learning	What Class Might Look Like	5th Graders' Possible Responses
Mr. Skinner's 5th Grade (Behaviorist)	Teacher stands in front of class and transmits rules to students After that - practice problems for whole class - students who raise hand and have correct answer get candy Play game - convert/ build certain measurements using conversions in groups - right answer get to move on, wrong answers get another example and keep trying Quiz as exit ticket, graded in front of them, complete/redo wrong answers for HW	Stressed Expectations clear Instant feedback if I am right/wrong Shaming grading in front of student? Motivation of getting candy
Mr. Piaget's 5th Grade (Cognitivist)	We're going to talk about measurements Start small - introduce millimeter Think about width of pencil lead - what do you know that's same size? Pen is centimeter, 10 mm = 1 pen cm Continue to ask can you think of anything else Soup can = dm, pen = cm, pencil lead = 1mm Talk about it in the other way, too	Get to connect to what I know already Conceptualizable, more visual Skills of multiplication? Actual examples to numbers connection can be hard Requires thinking, might be able to apply
Mr. Vygotsky's 5th Grade (Social Cognitivist)	All students come to class, don't give much instruction, pair up and measure each other in cm Give them fake clothing order form where all sizes are only listed in meters - what's wrong with this? What do we need to do?	Very real-world example Interactive with others Get up and move around Clothing form - pretend that you're shopping (imagine this social world)

	Write conversions on board, explain conversion (e.g., centi = 1/100) Have them go back to order forms and sizes they wrote down, place order for clothes to partner, bring to teacher to check	Could take home and reinforce home experiences with measurement Presumes kids have own knowledge special to them (experts of the measurements) Do they know how to measure things - transfer? Using tools others have made
Mr. Dewey's 5th Grade (Progressive/ Experiential Education)	Split into groups, measuring some object (e.g. whiteboard length), with pieces of paper Each group has a different measurement (e.g., all cms, all dm) - write down how many pieces of paper it takes to fill up Pair groups, compare how many numbers, find relationships Whole class shares what they did, review with real-world examples (e.g., cooking, measuring in houses - most useful unit) One in depth ex. with football field - feet/yards	Connecting piece of paper to football field might be hard Pairing/comparing gets minds working, but difficult to put together
Mr. Freire's 5th Grade (Problem Posing/ Critical Pedagogy)	Room with one big round table, all sitting together (no head/ podium) First 10 min - teacher sharing knowledge - acknowledging what they don't know Open floor to others to ask questions, respond, prompt discussion Cookies, cakes, things fun for kids to measure All get up (incl. teacher), choose favorite object, measure it, convert it, sit down together - present findings to the room as if we're all little teachers	5th graders hearing teachers say they don't know/ seen as same level Having everyone talk might be confusing (rather than clarifying right answer) Age role - ready to be teacher to others? Might not work for concrete right/wrong things