Fuel Sense Making Stages of Expertise Pythagorean Theorem Consider a learning goal of a lesson you're using this week. What might each stage of expertise look like? Can understand and use the Pythagorean Theorem in familiar Notices potential relationships situations. At first they may need between the sides but cannot reminders about recognizing the **Consciously** hypotenuse (as being the longest seem to pinpoint it. Might **Consciously** estimate reasonably well side length opposite the right **Competent** angle). Can apply the theorem in without seeing the pattern **Masterful** familiar contexts. algebraically. They know that 3 there is a pattern but need to Recognizes the relationships between understand it conceptually. ne squares of all three sides of a right riangle, visually and algebraically. Car apply the Pythagorean Theorem and **Consciously** its converse to many contexts as well ONSCIOUSNESS Incompetent as unfamiliar situations (diagonals in rooms, spatial explorations, investigate proofs like binomial formula). **Unconsciously** Incompetent **Unconsciously** COMPETENCE Competent Might notice the unknown side and just measure it manually. May notice the Might decide to sketch the visual relationships between sides representation of the theorem to (one is bigger than the other figure out the third side every time. two) but not know how to They can understand it find the third side. conceptually but maybe feel making uncomfortable with the "variables" or algebraic formula. that MATTER **Making Math Moments That Matter** @MrOrr_Geek @mathletepearce _