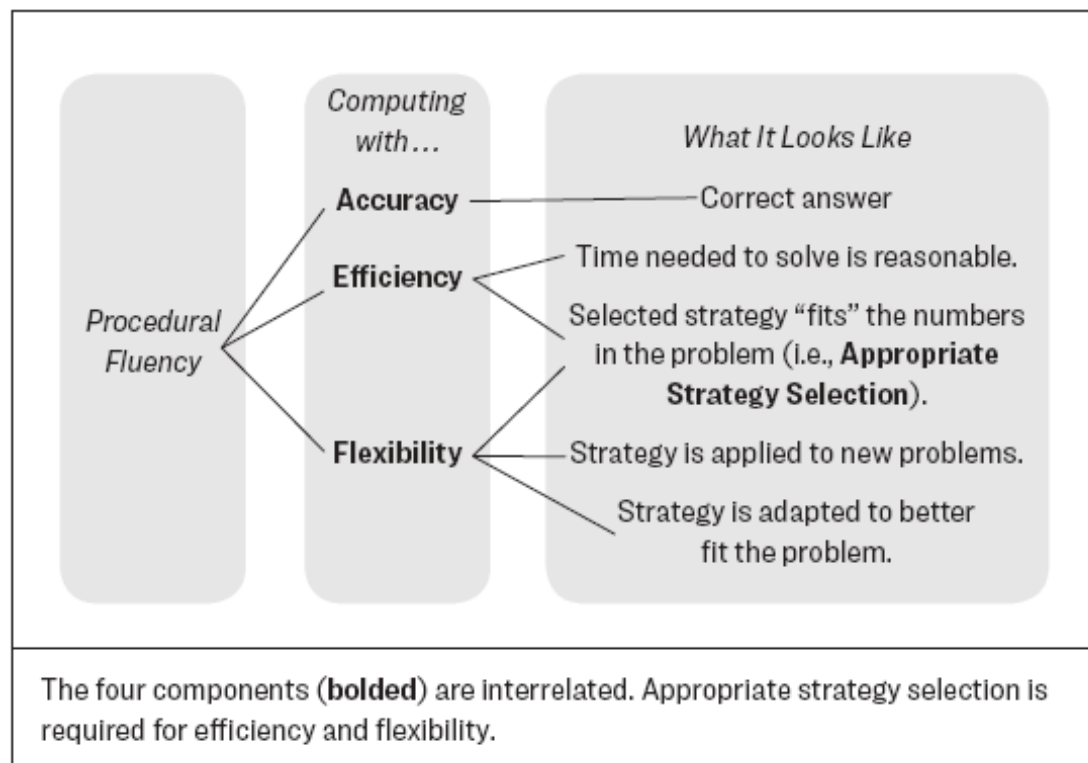


# Engaging Families in Math Fact Fluency

Jennifer Bay-Williams

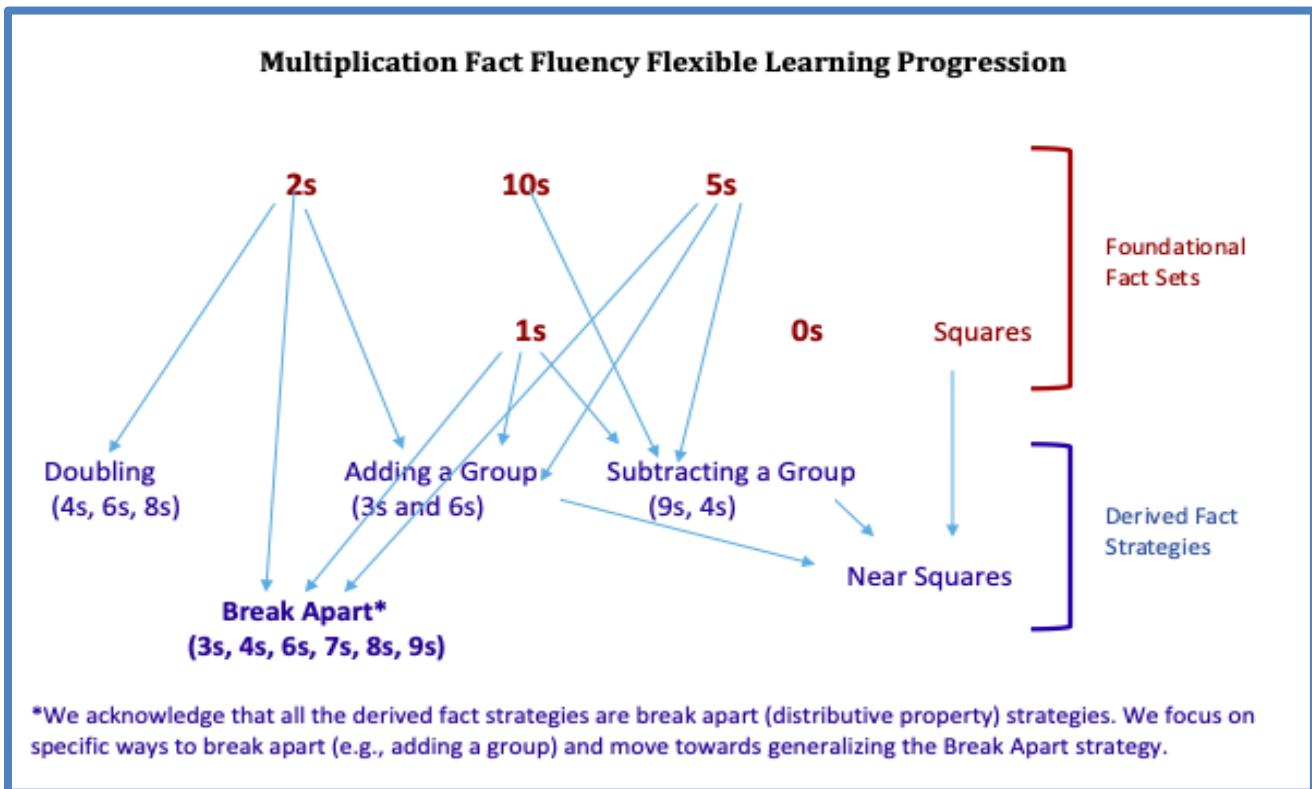
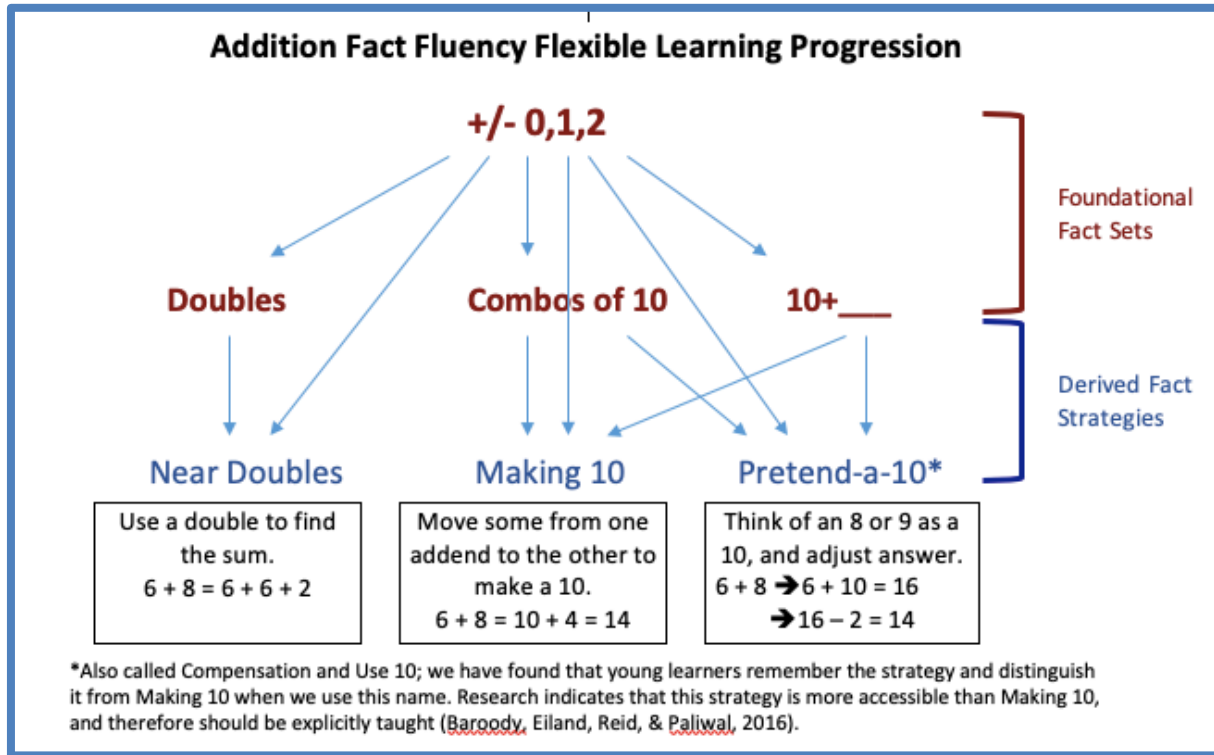
The Five Fundamentals	
1	Mastery must focus on fluency!
2	Fluency develops in three phases.
3	Knowing foundational facts must precede derived facts.
4	Timed tests do not assess fluency
5	Students need substantial and enjoyable practice.

Figure 1.1. What Procedural Fluency Is and What It Looks Like



**Basic Fact Fluency** requires using strategies flexibly, accurately, efficiently and appropriately, eventually being able to solve problems automatically. (AKA 'master').

# Strategy-Based Progressions for Math Fact Fluency



Visuals from Bay-Williams, M. & Kling, G. (2019). *Math Fact Fluency: 60+ Games and Assessment Tools to Support Learning and Retention*. ASCD & NCTM.