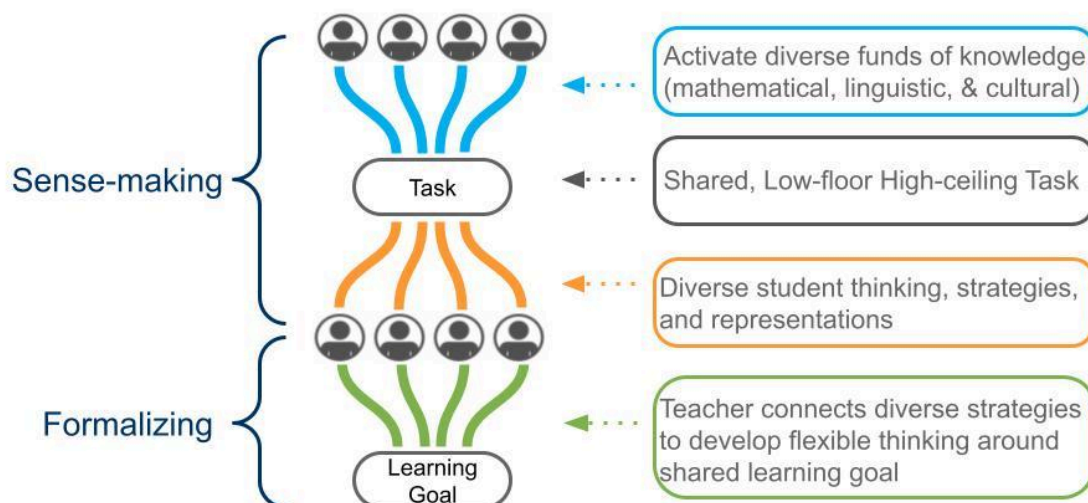# Key Attributes of Sense-making then Formalizing

Key Teacher Actions:	Key Student Actions:
• Generates interest and curiosity, and encourages diverse thinking • Clarifies the purpose, context, language in the task • Communicates clear expectations and structure for exploration • Connects ideas to each other, previous or upcoming learning • Provides time for students to think and ask questions	• Share observations and ask questions • Make connections to contexts or math ideas they have seen before • Communicate their developing ideas and justify their responses • Actively listen to and respond to classmates
• Clarifies expectations and structures for collaboration and keeps track of timing • Integrates additional supports as needed • Supports and encourages individual and collaborative sensemaking • Monitors, listens and asks questions to assess and advance student thinking. • Identifies student strategies and representations connected to the learning goals	• Use independent think time to develop and explore their own thinking (individual sense-making). • Engage in discussion to share, clarify, revise and build on thinking (collaborative sense-making). • Generate and try ideas, and persevere during times of difficulty. • Share and explain their reasoning, not just their solutions. • Apply prior knowledge and make connections between their own strategy and the strategies of others.

• Orchestrates a discussion that:
  ○ makes students thinking explicit
  ○ connects multiple student ideas and work to the learning goals
• Formalizes and records
  ○ key concepts by connecting them to formulas, algorithms and procedures
  ○ important strategies and representations
  ○ informal student language and ideas by connecting them to math terminology and notation
• Provides a structure for student reflection, application, and practice
	• Share their reasoning and strategies.
	• Actively listen, connect, and respond to the thinking of their peers
	• Ask questions
	• Reflect on and record the big ideas of the lesson and the important strategies, language, and notation they used or learned

Key Attributes of Sense-making then Formalizing