

# Manipulatives

Hands-on manipulatives in the math classroom are essential tools for discovery and understanding key math concepts. They create a tactile experience to help students conceptualize information, allowing them to build mental models.

Our approach to manipulatives in Amplify Desmos Math Texas provides:

- A space where students can use any manipulative they want to explore and play to better understand a concept.
- A way for teachers to see how students are understanding a concept through the use of manipulatives.
- Specific manipulatives for specific moments.

Lessons in Amplify Desmos Math Texas thoughtfully integrate the use of manipulatives where appropriate to enhance students' understanding of key math concepts. Our approach aligns with the 2013 position statement issued by the National Council of Supervisors of Mathematics (NCSM): "[I]n order to develop every student's mathematical proficiency, leaders and teachers must systematically integrate the use of concrete and virtual manipulatives into classroom instruction at all grade levels".<sup>1</sup>

The contents of Amplify Desmos Math Texas manipulative kits include materials that can be used to illustrate math concepts, "whether made specifically for mathematics (e.g., connecting cubes) or for other purposes."<sup>2</sup>

The kits contain materials for a class of 24 students, with an add-on kit for larger class sizes also available.



<sup>1</sup> NCSM. (2013). Improving student achievement in mathematics using manipulatives in classroom instruction [Position paper].

<sup>2</sup> V. de W., J. A., Karp, K. S., Bay-Williams, J. M., & Wray, J. A. (2022). *Elementary and middle school mathematics: Teaching developmentally*. Pearson.

# MANIPULATIVES

Component	GK	G1	G2	G3	G4	G5
4-inch clock			✓			
6-inch protractor					✓	✓
Algebra tiles						
Base ten cubes					✓	✓
Base ten flats				✓	✓	✓
Base ten rods		✓	✓	✓	✓	✓
Base ten units		✓		✓	✓	✓
Bucket balance				✓		
Clear plastic straws	✓					
Clock		✓	✓			
Compass						
Dot cubes		✓				
Double ten frames		✓	✓			
Five frames	✓					
Foam number cubes			✓	✓	✓	
Geoblocks	✓	✓				
Geoboards				✓		
Geosolids	✓	✓				
Gram weights				✓		
Inch color tiles			✓	✓	✓	
Number cards	✓	✓	✓	✓	✓	✓
Paper clips						
Pattern blocks	✓	✓		✓	✓	
Patty paper						
Place value mat		✓				
Play dough	✓					
Ruler			✓	✓	✓	
Snap cubes	✓	✓	✓	✓	✓	✓
Tape measure			✓			
Ten frames	✓	✓	✓			
Two-color counters	✓	✓	✓	✓	✓	✓