

**Table 3.6:**  
**PLC Design Questions for Standard Implementation—**  
**Fourth-Grade Number and Operations—Fractions Example**

Learning Target (What Students Will Be Able to Do)	Teaching Strategies (Approaches Teachers Will Use)	Common Tasks (Tasks All Students Will Use)	Common Formative Assessment (Points to Guide Teacher Feedback to Students)
Understand that to add or subtract fractions they must refer to parts of the same whole.	Cooperative learning investigation followed by whole-class discussion	Students will use fraction bars and a number line with colored pencils to build fractions from unit fractions.	Do all students know when they can add or subtract parts of a whole?
Decompose a fraction by writing it as a sum of fractions with the same denominators.	Student pairs using tasks provided in curricular materials followed by whole-class discussion	Students will use fraction bars and number lines to investigate.	Can all students write a fraction as a sum of fractions with the same denominator?
Use models to represent and find sums involving fractions.	Cooperative learning investigation followed by whole-class instruction	Students will use pictures, fraction bars, and number lines to investigate fraction addition.	Can all students add fractions with like denominators using models?
Use models to represent and find differences involving fractions.	Cooperative learning investigation followed by whole-class instruction	Students will use pictures, fraction bars, number lines, and area models to investigate fraction subtraction.	Can all students subtract fractions with unlike denominators using models?
Solve word problems involving addition and subtraction with fractions.	Applied problem-solving situations	Students will solve a variety of applied problems using the district's online fourth-grade math materials folder.	Can students model and solve one-step applied problem situations using fractions?

**Table 3.7:**  
**PLC Design Questions for Standard Implementation—High School Example**

Learning Target (What Students Will Be Able to Do)	Teaching Strategies (Approaches Teachers Will Use)	Common Tasks (Tasks All Students Will Use)	Common Formative Assessment (Points to Guide Teacher Feedback to Students)
State the properties of a dilation given by a center and a scale factor (G-SRT.1).	Cooperative learning exploration and reporting out	Students will participate in a dilation lab to explore the properties of dilations.	Can all students state the properties in writing and to their peers?
Verify the properties experimentally (G-SRT.2).	Hand-drawn triangles and dynamic geometry software	Teachers use the problems from the electronic file in the district's geometry materials folder.	Can the student verify the properties in other settings?
Determine if two triangles are similar (G-SRT.3).	Triangle lab in small groups	Students should construct similar triangles using a pencil and paper and dynamic geometry software.	Can students correctly identify proportional relationships after identifying two triangles as similar?
State and use the angle-angle similarity criterion (G-SRT.3).	Experiments with similar triangles	Students should construct similar triangles using a pencil and paper and dynamic geometry software.	Can students correctly identify proportional relationships after identifying two triangles as similar?
Prove the theorems in the Similarity, Right Triangles, and Trigonometry domain (G-SRT.4).	Cooperative learning with some whole-class guidance	Teachers use resource 5 from unit materials that the district math team developed for this unit.	Students will prove the theorems.  Can students work in pairs to explain and justify the theorems regarding triangle similarity, highlighting necessary steps and validating their reasons with precise language?
Solve problems using similarity (G-SRT.6).	Small-group practice	Teachers use the problems from the level 3 cognitive-demand online work folder	Can students understand the logical path for solving the problems?
Explain the relationship between sine and cosine of complementary angles (G-SRT.7).	Students in pairs (such as quiz-quiz-trade)	Students will participate in trigonometry lab 2 provided in the district materials for this unit.	Can students state the relationship and justify their reasoning?

Learning Target (What Students Will Be Able to Do)	Teaching Strategies (Approaches Teachers Will Use)	Common Tasks (Tasks All Students Will Use)	Common Formative Assessment (Points to Guide Teacher Feedback to Students)
Identify the trigonometric ratios in right triangles (G-SRT.8).	Students in pairs (such as quiz-quiz-trade)	Students will participate in trigonometry lab 1 provided in the district materials for this unit.	Can students demonstrate to their peers the relationship between sine, cosine, and similar triangles?
Use trigonometric ratios with the Pythagorean theorem to solve triangles (G-SRT.8).	Applied problem-solving situations	Students will participate in trigonometry lab 3 from our team folder for the unit.	Can students solve one- and multiple-step problems?