

Reason quantitatively and use units to solve problems. Working with quantities and the relationships between them provides grounding for work with expressions, equations, and functions (Standards N.Q.1–3)	
Standard N.Q.1: Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.	
Concepts and Skills to Master	
<ul style="list-style-type: none"> • Use units as a way to understand problems and to guide the solution of multi-step problems. • Choose and interpret units consistently in formulas. • Choose and interpret the scale and the origin in graphs and data displays. 	
Related Standards: Current Course	Related Standards: Future Courses
1.N.Q.2 , 1.N.Q.3 , 1.A.CED.2 , 1.ACED.4 , 1.AREI.10 , 1.A.REI.11 , 1.A.REI.12 , 1.F.IF.5 , 1.F.IF.6 , 1.F.IF.7 , 1.F.LE.1 , 1.F.LE.3 , 1.S.ID.1 , 1.S.ID.6 , 1.S.ID.7	All standards related to expressions, equations, functions, and data displays

Support for Teachers

Critical Background Knowledge (Access Background Knowledge)
<ul style="list-style-type: none"> • Graph points in all four quadrants of the coordinate plane (6.NS.8) • Choose appropriate graph/plot for data (6.SP.4) • Compute unit rates involving ratios of lengths, areas, and other quantities (7.RP.1) • Approximately locate irrational numbers on a number line diagram (8.NS.2) • Analyze features of a graph and sketch graphs that have been described verbally (8.F.5) • Construct and interpret scatter plots (8.SP.1)
Academic Vocabulary
Scale, units of measurement
Resources:
Curriculum Resources : http://www.uen.org/core/core.do?courseNum=5600#70106

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Standard N.Q.2: Define appropriate quantities for the purpose of descriptive modeling.	
Concepts and Skills to Master	
<ul style="list-style-type: none"> Choose appropriate measures and units when creating a model for data (descriptive modeling). 	
Related Standards: Current Course	Related Standards: Future Courses
1.N.Q.1 , 1.N.Q.3 , 1.A.CED.3 , 1.F.IF.4 , 1.S.ID.6	III.G.MG.1 , III.G.MG.2 , III.G.MG.3

Support for Teachers

Critical Background Knowledge (Access Background Knowledge)
<ul style="list-style-type: none"> Choose appropriate graph/plot for data (6.SP.4) Construct and interpret scatter plots (8.SP.1)
Academic Vocabulary
Descriptive modeling
Resources:
Curriculum Resources : http://www.uen.org/core/core.do?courseNum=5600#70106

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Standard N.Q.3: Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.	
Concepts and Skills to Master	
<ul style="list-style-type: none"> • Determine whether whole numbers, fractions, or decimals are most appropriate. • Determine the appropriate power of ten to reasonably measure a quantity. • Determine the resulting accuracy in calculations. • Determine what level of rounding should be used in a problem situation. 	
Related Standards: Current Course	Related Standards: Future Courses
I.N.Q.1 , I.N.Q.2 , I.SI.MP.6 , all standards related to expressions, equations, and functions	II.SI.MP.6 , III.SI.MP.6 , all standards related to expressions, equations, and functions

Support for Teachers

Critical Background Knowledge (Access Background Knowledge)
<ul style="list-style-type: none"> • Know relative sizes of measurement units (4.MD.1) • Approximately locate irrational numbers on a number line diagram (8.NS.2) • Use powers of ten to estimate very large or very small quantities (8.EE.3) • Attend to precision (I.SI.MP.6)
Academic Vocabulary
Precision, accuracy
Resources:
Curriculum Resources : http://www.uen.org/core/core.do?courseNum=5600#70106