

Grade 7 – Unit 5 – ELL Scaffold

| | Student Learning Objective (SLO) | | Language Objective | | Language Needed |
|---|---|---|--|---|---|
| SLO: 1 CCSS: 7.EE.4 WIDA ELDS: 1-3 Listening, Speaking, Reading, Writing | Use variables to represent quantities in a real-world or mathematical problem; write and fluently solve simple equations and inequalities, interpret the solutions in the context of the problem and graph the solution set on a Number Line . [Please note this unit addresses standard 7.EE.4 again to assess fluency.] | | <u>Demonstrate comprehension of</u> how to use variables to represent quantities, solve word problems with equations and inequalities, <u>interpret and explain</u> the solutions in the context of the problem and graph the solution set on a Number Line <i>using a</i> Number Line, Bar Graph/Pictograph, <i>website, and</i> Math Journal . | | VU: Coordinates, hourly rate, flat fee, value, variable |
| | | | | | LFC: Present tense form of verbs, passive construction (are shown) |
| | | | | | LC: Varies by ELP level |
| | ELP 1 | ELP 2 | ELP 3 | ELP 4 | ELP 5 |
| Language Objectives | Write about how to solve word problems with equations and inequalities and interpret the solutions by graphing the solution set on a Number Line in L1 and/or use gestures, examples and selected technical words. | Write about how to solve word problems with equations and inequalities and interpret the solutions by graphing the solution set on a Number Line in L1 and/or use selected technical vocabulary in phrases and short sentences. | Write about how to solve word problems with equations and inequalities and interpret the solutions by graphing the solution set on a Number Line using key, technical vocabulary in simple sentences. | Write about how to solve word problems with equations and inequalities and interpret the solutions by graphing the solution set on a Number Line using key, technical vocabulary in expanded sentences. | Write about how to solve word problems with equations and inequalities and interpret and explain the solutions by graphing the solution set on a Number Line using technical vocabulary in complex sentences. |
| Learning Supports | Number Line Bar Graph Math Journal Cloze Sentences White Board Word/Picture Wall L1 text and/or support Pictures | Number Line Bar Graph Math Journal White Board Word/Picture Wall L1 text and/or support Sentence Frame | Number Line , tape diagrams, circle graphs Math Journal Sentence Starter White Board Word/Picture Wall | Number Line , tape diagrams, circle graphs Math Journal White Board | Number Line , tape diagrams, circle graphs White Board |

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| | Student Learning Objective (SLO) | | Language Objective | | Language Needed |
|---|--|--|--|--|--|
| SLO: 2 CCSS: 7.EE.3 WIDA ELDS: 1-3 Speaking, Reading, Writing | Use tools strategically to solve multi-step real-world and mathematical problems involving positive and negative rational numbers in any form (converting between forms as needed) and determine the reasonableness of the answers. [Please note this unit addresses standard 7.EE.3 again to assess fluency.] | | Describe and explain orally and in writing how to solve multi-step problems with positive and negative rational numbers, in any form, by creating diagrams and using algebra tiles, Word Wall, and charts. <i>Note: ELL students need guided practice in developing and solving equations in order to build mathematical fluency. The following resource provides simulations in computer-assisted learning using manipulatives (algebra tiles).</i> <i>Teacher resource for online algebra tiles and related lessons: http://illuminations.nctm.org</i> | | VU: PEMDAS, inequality |
| | | | | | LFC: Ordinal numbers, transition words, embedded clauses in sentences |
| | | | | | LC: Varies by ELP level |
| | ELP 1 | ELP 2 | ELP 3 | ELP 4 | ELP 5 |
| Language Objectives | Describe and explain orally and in writing how to solve multi-step problems with positive and negative rational numbers in L1 and/or use gestures, examples and selected technical words. | Describe and explain orally and in writing how to solve multi-step problems with positive and negative rational numbers in L1 and/or use selected technical vocabulary in phrases and short sentences. | Describe and explain orally and in writing how to solve multi-step problems with positive and negative rational numbers using key, technical vocabulary in simple sentences. | Describe and explain orally and in writing how to solve multi-step problems with positive and negative rational numbers using key, technical vocabulary in expanded sentences. | Describe and explain orally and in writing how to solve multi-step problems with positive and negative rational numbers using technical vocabulary in complex sentences. |
| Learning Supports | Algebra tiles Cloze Sentences White Board Word/Picture Wall L1 text and/or support Pictures/illustrations | Algebra tiles Sentence Frame White Board Word/Picture Wall L1 text and/or support | Algebra tiles Sentence Starter White Board Word/Picture Wall | Algebra tiles Small group/triads White Board | Algebra tiles White Board |

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|--|---|---|---|---|---|
| SLO: 3 CCSS: 7.G.6 7.EE.3 7.EE.4 WIDA ELDS: 1-3 Listening, Speaking, Reading, Writing | Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. | | <p><u>Explain</u> orally and in writing how to solve real-world problems involving area, volume, and surface area of geometrical shapes and prisms using <i>manipulatives</i>, <i>technology</i> and a Word/Picture Wall.</p> <p>Complete an online simulation, such as a Gizmo. Present findings in a Small group or triads. Source: http://www.explorellearning.com</p> <p><i>Student resource for online visual dictionary:</i> http://math2.org/math/geometry/areasvols.htm</p> | | VU: Coordinate plane, cubic feet, quadrilateral, polygons, prisms, square units, surface area, volume |
| | | | | | LFC: Passive construction (is shown) |
| | | | | | LC: Varies by ELP level |
| | ELP 1 | ELP 2 | ELP 3 | ELP 4 | ELP 5 |
| Language Objectives | Explain orally and in writing how to solve real-world problems involving area, volume, and surface area of geometrical shapes and prisms in L1 and/or use gestures, examples and selected technical words. | Explain orally and in writing how to solve real-world problems involving area, volume, and surface area of geometrical shapes and prisms in L1 and/or use selected technical vocabulary in phrases and short sentences. | Explain orally and in writing how to solve real-world problems involving area, volume, and surface area of geometrical shapes and prisms using key, technical vocabulary in simple sentences. | Explain orally and in writing how to solve real-world problems involving area, volume, and surface area of geometrical shapes and prisms using key, technical vocabulary in expanded sentences. | Explain orally and in writing how to solve real-world problems involving area, volume, and surface area of geometrical shapes and prisms using technical vocabulary in complex sentences. |
| Learning Supports | Math Journal Partner work Cloze Sentences White Board Word/Picture Wall L1 text and/or support Pictures/illustrations | Math Journal Partner work Sentence Frame White Board Word/Picture Wall L1 text and/or support | Math Journal Small group/triads Sentence Starter White Board Word/Picture Wall | Math Journal Small group/triads White Board Word/Picture Wall | Math Journal Small group/triads White Board |

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|--|--|--|--|---|---|
| SLO: 4 CCSS: 7.G.5 WIDA ELDS: 1-3 Speaking, Reading, Writing | Write and solve simple algebraic equations involving supplementary, complementary, vertical, and adjacent angles for multi-step problems and finding the unknown measure of an angle in a figure. | | <u>Demonstrate comprehension</u> of how to solve simple algebraic equations in multi-step problems involving supplementary, complementary, vertical, and adjacent angles Use illustrations and tools (protractors) to <u>demonstrate and explain</u> steps in the solution and present findings in a small group/triads. | | VU: Adjacent, degrees, complimentary, intersect, supplementary, vertex, vertical, unknown <hr/> LFC: Present tense form of verbs <hr/> LC: Varies by ELP level |
| | ELP 1 | ELP 2 | ELP 3 | ELP 4 | ELP 5 |
| | Language Objectives | Demonstrate comprehension of how to solve algebraic equations in multi-step problems for unknown angles. Use illustrations and tools to demonstrate and explain steps in the solution and present findings in L1 and/or use gestures, examples and selected technical words. | Demonstrate comprehension of how to solve algebraic equations in multi-step problems for unknown angles. Use illustrations and tools to demonstrate and explain steps in the solution and present findings in L1 and/or use selected technical vocabulary in phrases and short sentences. | Demonstrate comprehension of how to solve algebraic equations in multi-step problems for unknown angles. Use illustrations and tools to demonstrate and explain steps in the solution and present findings using key, technical vocabulary in simple sentences. | Demonstrate comprehension of how to solve algebraic equations in multi-step problems for unknown angles. Use illustrations and tools to demonstrate and explain steps in the solution and present findings using key, technical vocabulary in expanded sentences. |
| Learning Supports | Small group/triads Protractors Math Journal Cloze Sentences White Board Word/Picture Wall L1 text and/or support | Small group/triads Protractors Math Journal Sentence Frame White Board Word/Picture Wall L1 text and/or support | Small group/triads Protractors Math Journal Sentence Starter White Board Word/Picture Wall | Small group/triads Protractors Math Journal White Board Word/Picture Wall | Protractors Math Journal |

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|--|---|--|--|---|---|
| SLO: 5 CCSS: 7.G.4 WIDA ELDS: 1-3 Listening, Speaking, Reading | Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle. | | Demonstrate comprehension of how to find the area and circumference of a circle, solve problems given one measurement (either area or circumference), and explain the relationship between the circumference and area of a circle <i>using modeling, realia and a Word/Picture Wall.</i> | | VU: Area, circumference, expression, radius, square root |
| | | | | | LFC: Verb to have, passive construction (the reverse of squaring) |
| | | | | | LC: Varies by ELP level |
| | ELP 1 | ELP 2 | ELP 3 | ELP 4 | ELP 5 |
| Language Objectives | Discuss how to find the area and circumference of a circle, and solve problems given one measurement in L1 and/or use gestures, examples and selected technical words. | Discuss how to find the area and circumference of a circle, and solve problems given one measurement in L1 and/or use selected technical vocabulary in phrases and short sentences. | Discuss how to find the area and circumference of a circle, and solve problems given one measurement using key, technical vocabulary in a series of simple sentences. | Discuss how to find the area and circumference of a circle, and solve problems given one measurement using key, technical vocabulary in expanded sentences. | Discuss how to find the area and circumference of a circle, and solve problems given one measurement using technical vocabulary in complex sentences. |
| Learning Supports | Math Journal Cloze Sentences White Board Word/Picture Wall L1 text and/or support Pictures/illustrations | Math Journal Partner work Sentence Frame White Board Word/Picture Wall L1 text and/or support | Math Journal Sentence Starter Small group/triads White Board Word/Picture Wall | Math Journal White Board Word/Picture Wall | Math Journal White Board |

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| | Student Learning Objective (SLO) | | Language Objective | | Language Needed |
|--|--|---|---|--|---|
| SLO: 6 CCSS: 7.G.3 WIDA ELDS: 1-3 Speaking, Reading, Writing | Describe, using drawings or written descriptions, the 2-dimensional figures that result when 3-dimensional figures (right rectangular prisms and pyramids) are sliced from multiple angles given both concrete models and a written description of the 3-dimensional figure. | | Demonstrate comprehension of and explain how a two-dimensional figure results from slicing a three-dimensional figure, from multiple angles, using concrete models, technology, and small group/triads . <i>Drawing Resource:</i> http://www.mathsisfun.com/geometry/cross-sections.html | | VU: Cross-section, faces, isosceles, perpendicular, perspective, plane, pyramid, trapezoid, vertex LFC: Complex subjects in sentences (the cross-section of a pyramid is...) LC: Varies by ELP level |
| | ELP 1 | ELP 2 | ELP 3 | ELP 4 | ELP 5 |
| | Language Objectives | Describe using drawings how to draw and explain 2-dimensional and 3-dimensional figures and determine if slices are possible cross-sections in L1 and/or use gestures, examples and selected technical words. | Describe and explain orally and in writing how to draw and describe 2-dimensional and 3-dimensional figures and determine if slices are possible cross-sections in L1 and/or use selected technical vocabulary in phrases and short sentences. | Describe and explain orally and in writing how to draw and describe 2-dimensional and 3-dimensional figures and determine if slices are possible cross-sections using key, technical vocabulary in a series of simple sentences. | Describe and explain orally and in writing how to draw and describe 2-dimensional and 3-dimensional figures and determine if slices are possible cross-sections using key, technical vocabulary in expanded sentences. |
| Learning Supports | Math Journal Partner work Cloze Sentences White Board Word/Picture Wall L1 text and/or support Pictures/illustrations | Math Journal Partner work Sentence Frame White Board Word/Picture Wall L1 text and/or support | Math Journal Partner work Sentence Starter White Board Word/Picture Wall | Math Journal Small group/triads White Board Word/Picture Wall | Math Journal Small group/triads White Board |