Math – Grade 8 - Unit 1 – ELL Scaffolds

	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 1 CCSS: 8.G.1 WIDA ELDS: 3 Speaking	Utilize the properties of rotation, reflection, and translation to model and relate pre-images of lines, line segments, and angles to their resultant image through physical representations and/or geometry software.		Identify and explain orally the relationship between an image and pre-image using the properties of rotation, reflection and translation *using a model, software, sentence frame and/or word wall.* *Note: ELLs will need direct instruction regarding the multiple meaning of "translation" and "plane".*		**VU:** Counterclockwise, rotation/turn, reflection/ flip, translation/slide, coordinate plane, vertex
					LFC: Cause and effect transitional phrases, prepositional phrases
					LC: Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Identify and explain orally the relationship between an image and pre-image using the properties of rotation, reflection and translation in L1 and/or use gestures, Manipulatives and selected, technical words.	Identify and explain orally the relationship between an image and pre-image using the properties of rotation, reflection and translation in L1 and/or use selected, technical vocabulary in phrases and short sentences.	Identify and explain orally the relationship between an image and pre-image using the properties of rotation, reflection and translation using key, technical vocabulary in a series of simple sentences.	Identify and explain orally the relationship between an image and pre-image using the properties of rotation, reflection and translation using key, technical vocabulary in expanded and some complex sentences.	Identify and explain orally the relationship between an image and pre-image using the properties of rotation, reflection and translation using technical vocabulary in multiple, complex sentences.
Learning Supports	Teacher Modeling Student-created dictionary Demonstration Small group Word/picture wall L1 text and/or support Manipulatives	Teacher Modeling Student-created dictionary Small group Word/picture wall L1 text and/or support Sentence frames Manipulatives	Teacher Modeling Small group Sentence Starter Word wall Manipulatives	Teacher Modeling Small group Manipulatives	Teacher Modeling Manipulatives

	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 2 CCSS: 8.G.2 WIDA ELDS: 3 Writing Speaking	Apply an effective sequence of rotations, reflections, and transitions to prove that two dimensional figures are congruent.		<u>Describe</u> a sequence of rotation, reflections, and translations and <u>explain</u> in writing why the figures are congruent *using a model and <u>Manipulatives</u>.*		**VU:** Congruent, sequence words, coordinates, vertices
					LFC: Sequential transitional terms; cause/effect "so"; past tense; clauses; plural
					LC: Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Describe a sequence of rotation, reflections, and translations and explain why the figures are congruent in L1 and/or use drawings, pictures and selected, technical words.	Describe a sequence of rotation, reflections, and translations and explain why the figures are congruent in L1 and/or use selected, technical vocabulary in phrases and short sentences.	Describe a sequence of rotation, reflections, and translations and explain why the figures are congruent using key technical vocabulary in a series of simple sentences.	Describe a sequence of rotation, reflections, and translations and explain why the figures are congruent using key, technical vocabulary in expanded and some complex sentences.	Describe a sequence of rotation, reflections, and translations and explain why the figures are congruent using technical vocabulary in multiple, complex sentences.
Learning Supports	Teacher Modeling Manipulatives Small group Word/picture wall L1 text and/or support Pictures/illustrations	Teacher Modeling Manipulatives Small group Word/picture wall L1 text and/or support Sentence frames	Teacher Modeling Manipulatives Small group Word wall Sentence Starters	Teacher Modeling Manipulatives Small group	Teacher Modeling

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	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 3 CCSS: 8.G.3 WIDA ELDS: 3 Listening Reading	Use the coordinate plane to locate pre-images of two-dimensional figures and determine the coordinates of a resultant image after applying dilations, rotations, reflections, and translations.		Locate pre-images of two-dimensional figures after listening to oral descriptions and reading explanations *using models and Charts/Posters*. After applying transformations, identify the coordinates of the resultant image *using modeling and word wall*.		**VU:** Dilations, two-dimensional; x and y axis, parallelogram, image/preimage
					LFC: Questions with clauses and passive voice
					LC: Varies by ELP level

	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Locate pre-images of two-dimensional figures after listening to oral descriptions and reading explanations in L1 and/or which use models and selected, technical words. After applying transformations, identify the coordinates of the resultant image.	Locate pre-images of two-dimensional figures after listening to oral descriptions and reading explanations in L1 and/or which use selected, technical vocabulary in phrases and short sentences with an example. After applying transformations, identify the coordinates of the resultant image.	Locate pre-images of two-dimensional figures after listening to oral descriptions and reading explanations which use key technical vocabulary in a series of simple sentences. After applying transformations, identify the coordinates of the resultant image	Locate pre-images of two-dimensional figures after listening to oral descriptions and reading explanations which use key technical vocabulary in expanded and some complex sentences. After applying transformations, identify the coordinates of the resultant image.	Locate pre-images of two-dimensional figures after listening to oral descriptions and reading explanations which use technical vocabulary in multiple, complex sentences. After applying transformations, identify the coordinates of the resultant image.
Learning Supports	Teacher Modeling Charts/Posters Small group Word/picture wall L1 text and/or support Pictures/illustrations Multilingual Math Glossary (link to)	Teacher Modeling Charts/Posters Small group Word/picture wall L1 text and/or support Sentence frames Multilingual Math Glossary (link to)	Teacher Modeling Charts/Posters Small group Word wall Multilingual Math Glossary (link to)	Teacher Modeling Charts/Posters Small group Multilingual Math Glossary (link to)	Charts/Posters Multilingual Math Glossary (link to)

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	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 4 CCSS: 8.G.3 WIDA ELDS: 3 Listening Reading Writing	Recognize dilation as a reduction or an enlargement of a figure and determine the scale factor.		Identify and label dilations as a reduction or enlargement and determine the scale factor after listening to oral explanations and reading the prompt *using models, word wall and* _Charts/Posters_.		**VU:** Not shown, quadrilateral, scale factor, transformation, label **LFC:** Passive voice **LC:** Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Identify and label dilations as a reduction or enlargement and determine the scale factor after listening to oral explanations and reading the prompts in L1 and/or with gestures, pictures and selected, technical words.	Identify and label dilations as a reduction or enlargement and determine the scale factor after listening to oral explanations and reading the prompts in L1 and/or which use selected, technical vocabulary in phrases and short sentences.	Identify and label dilations as a reduction or enlargement and determine the scale factor after listening to oral explanations and reading the prompts which use key technical vocabulary in a series of simple sentences.	Identify and label dilations as a reduction or enlargement and determine the scale factor after listening to oral explanations and reading the prompts which use key technical vocabulary in expanded and some complex sentences.	Identify and label dilations as a reduction or enlargement and determine the scale factor after listening to oral explanations and reading the prompts which use technical vocabulary in multiple, complex sentences.
Learning Supports	Teacher Modeling Charts/Posters Small group Word/picture wall L1 text and/or support Pictures/illustrations	Teacher Modeling Charts/Posters Small group Word/picture wall L1 text and/or support Sentence frames	Teacher Modeling Charts/Posters Small group Word wall	Teacher Modeling Charts/Posters Small group	Charts/Posters

	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 5 CCSS: 8.G.4 WIDA ELDS: 3 Listening Reading Writing	Apply an effective sequence of transformations to determine similar figures in which corresponding angles are congruent and corresponding sides are proportional. Write similarity statements based on such transformations.		<u>Follow</u> multi-step oral and written directions using transformations and <u>compare</u> similar figures in writing *using word wall, sentence frames and <u>Charts/Posters</u>.*		**VU:** Similar, origin, justify
					LFC: Passive voice**,** modals
					LC: Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Follow multi-step oral and written directions using transformations and compare similar figures in writing in L1 and/or follow one-step oral and written directions which use pictures and selected, technical vocabulary.	Follow multi-step oral and written directions using transformations and compare similar figures in writing in L1 and/or follow two-step oral and written directions use selected, technical vocabulary in phrases and short sentences.	Follow step-by-step oral and written directions using transformations and compare similar figures in writing using key technical vocabulary in simple sentences.	Follow multi-step oral and written directions using transformations and compare similar figures in writing using key technical vocabulary in expanded sentences.	Follow multi-step oral and written directions using transformations and compare similar figures in writing using technical vocabulary in complex sentences.
Learning Supports	Charts/Posters Teacher Modeling Small group Word/picture wall L1 text and/or support Pictures/illustrations	Charts/Posters Teacher Modeling Small group Word/picture wall L1 text and/or support Sentence frames	Charts/Posters Teacher Modeling Small group Word wall	Charts/Posters Teacher Modeling Small group	Charts/Posters

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	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 6 CCSS: 8.G.5 WIDA ELDS: 3 Speaking Writing	Justify facts about angles created when parallel lines are cut by a transversal.		Explain facts about angles that are created when parallel lines are cut by a transversal *using phrase wall, Sentence Starters and models.* http://learnzillion.com/lessons/1237-find-the-measurements-of-vertical-and-adjacent-angles		**VU:** Transversal, vertical **LFC:** Passive voice, cause/effect transitional phrases **LC:** Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Explain facts about angles that are created when parallel lines are cut by a transversal in L1 and/or use drawings and selected, technical words.	Explain facts about angles that are created when parallel lines are cut by a transversal in L1 and/or use selected, technical vocabulary in phrases and short sentences with illustrations.	Explain facts about angles that are created when parallel lines are cut by a transversal using key technical vocabulary in a series of simple sentences.	Explain facts about angles that are created when parallel lines are cut by a transversal using key technical vocabulary in expanded and some complex sentences.	Explain facts about angles that are created when parallel lines are cut by a transversal using technical vocabulary in multiple, complex sentences.
Learning Supports	Teacher Modeling Small group Word/picture wall Phrase wall L1 text and/or support Pictures/illustrations	Teacher Modeling Small group Word/picture wall Phrase wall L1 text and/or support Sentence frames	Teacher Modeling Small group Phrase wall	Teacher Modeling Small group	Teacher Modeling

	Student Learning Objective (SLO)		Language Objective		Language Needed
SLO: 7 CCSS: 8.G.5 WIDA ELDS: 3 Speaking Writing	Justify facts about the exterior angles of a triangle, the sum of the measures of the interior angles of a triangle and the angle-angle relationship used to identify similar triangles.		<u>Explain</u> facts about the exterior angle of a triangle and the sum of the measures of the interior angles. <u>Identify</u> similar triangles by using the angle-angle relationship *using demonstrations, technology, word walls, Charts/Posters and sentence frames*. http://learnzillion.com/lessons/1241-find-the-measurements-of-alternate-interior-and-alternate-exterior-angles		**VU:** Sum, value, measure, interior, exterior, missing **LFC:** Cause and effect sentences **LC:** Varies by ELP level
	ELP 1	ELP 2	ELP 3	ELP 4	ELP 5
Language Objectives	Explain facts about the exterior angle of a triangle and the sum of the measures of the interior angles. Identify similar triangles by using the angle-angle relationship in L1 and/or use gestures, pictures and illustrated single words.	Explain facts about the exterior angle of a triangle and the sum of the measures of the interior angles. Identify similar triangles by using the angle-angle relationship in L1 and/or use selected technical vocabulary in phrases and short sentences with illustrations.	Explain facts about the exterior angle of a triangle and the sum of the measures of the interior angles. Identify similar triangles by using the angle-angle relationship using key, technical vocabulary in simple sentences.	Explain facts about the exterior angle of a triangle and the sum of the measures of the interior angles. Identify similar triangles by using the angle-angle relationship using key, technical vocabulary in expanded sentences.	Explain facts about the exterior angle of a triangle and the sum of the measures of the interior angles. Identify similar triangles by using the angle-angle relationship using technical vocabulary in complex sentences.
Learning Supports	Demonstrations Charts/Posters Peer/teacher support Word/picture wall L1 text and/or support Pictures/illustrations	Demonstrations Charts/Posters Peer/ teacher support Word/picture wall L1 text and/or support Sentence frames	Demonstrations Charts/Posters Small group Word wall	Demonstrations Charts/Posters Small group	Demonstrations Charts/Posters