ESL Curriculum Units Template

Grade Level <u>1</u>　　　　**Units** # <u>1 & 2</u>　　　　**ESL Levels** <u>1-4</u>

Unit Title: <u>Understanding Addition and Subtraction</u>

Essential Questions of the CCSS Unit:

Why do we add?

Why do we subtract?

How are addition and subtraction related?

Essential Question of the Unit in Accessible Language

What do we do if we have two parts and put them together?

What do we do if we have a large group and need to share some parts of it?

If we add two parts to get the total, can we subtract a part from the total to get the other part?

Standards Identification

CCSS included in this Unit
1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown

number to represent the problem.

1.OA.3 Apply properties of operations as strategies to add and subtract. *Examples: If 8+3=11 is known, then 3+8=11 is also known. (Commutative property of addition) To add 2+6+4, the second two numbers can be added to make a ten, so 2+6+4= 2+10=12. (Associative property of addition)*

1.OA.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2)

1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8+6=8+2+4=10+4=14); decomposing a number leading to a ten (e.g., 13-4=13-3-1=10-1=9); using the relationship between addition and subtraction (e.g., knowing that 8+4=12, one knows 12-8=4); and creating equivalent but easier or known sums (e.g., adding 6+7 by creating the known equivalent 6+6+1=12+1=13).

1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6=6, 7=8-1, 5+2=2+5, 4+1=5+2.*

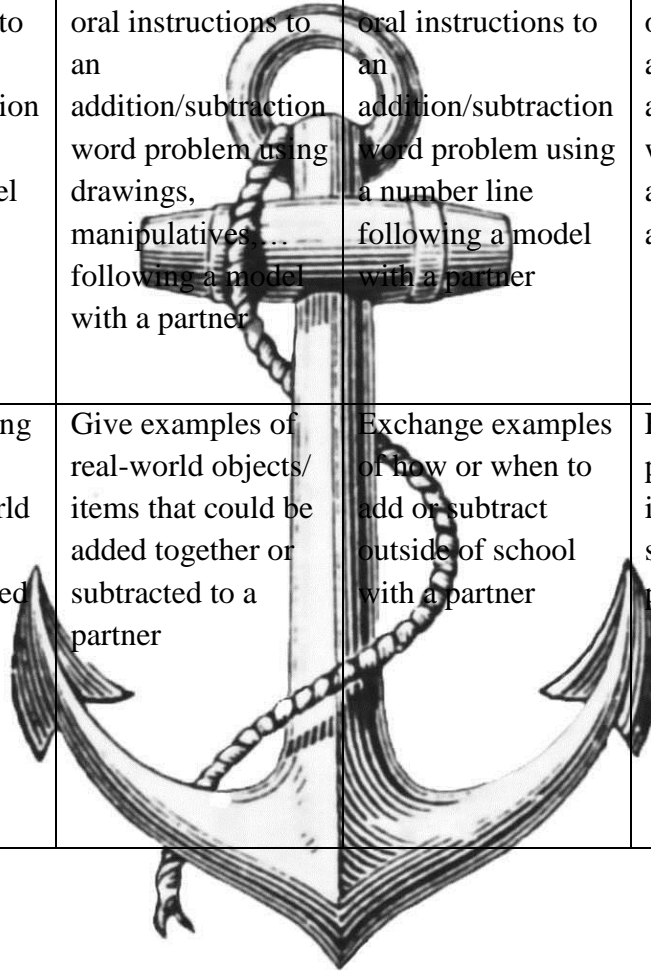| **WIDA ELD standards that can be aligned to the CCSS in this Unit and domains addressed**					
Grade 1 ELD Standard 1: Social and Instructional Language-Speaking, Listening, Reading Grade 1 ELD Standard 3 Language of Mathematics- Speaking, Listening, Reading, Writing					
Existing strands of MPIs that match up to the topic(s) of this Unit					
	Level 1-Entering	*Level 2-*	*Level 3-*	*Level 4-*	*Level 5-*

		Emerging	Developing	Expanding	Bridging
Sample Topic: Basic operations (addition & subtraction) **Domain:** Speaking **Framework:** 2007	Recite math-related words or phrases related to basic operations from pictures of everyday objects and oral statements	Restate or paraphrase basic operations from oral statements referring to pictures of everyday objects (e.g., "Ten pencils *and* ten more are twenty.")	Describe representations of basic operations from pictures of everyday objects and oral descriptions (e.g., "There are seven dogs *altogether*.")	Compare/contrast language of basic operations from pictures and oral descriptions (e.g., "Tell me different ways to say this math sentence…")	Explain basic operations involved in problem solving using pictures and grade-level oral descriptions.
Sample Topic: Basic operations (addition & subtraction) **Domain:** Speaking **Framework:** 2007	Follow oral directions according to simple commands using manipulatives or real life objects (related to addition and subtraction)	Follow oral directions according to complex commands using manipulatives or real life objects (related to addition and subtraction)	Follow oral directions by comparing them with visual cues, nonverbal cues or modeling (related to addition and subtraction)	Follow oral directions without visual support and check with a peer (related to addition and subtraction)	Follow a series of oral directions without support (related to addition and subtraction)

Transformed strand(s) of MPIs to match up to the unit

	Level 1-Entering	Level 2-	Level 3-	Level 4-	Level 5-

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		Emerging	*Developing*	*Expanding*	*Bridging*
Sample Topic: Classroom Activities **Domain:** Reading **Framework:** 2012	Identify numerals and mathematical symbols from illustrated texts related to games or activities to be implemented during the unit with a partner	Identify labeled pictures of numerals and groups of objects to add and subtract from illustrated texts related to games or activities implemented during the unit with a partner	Identify key words related to addition and subtraction in illustrated texts related to games and activities implemented during the unit with a partner	Identify key phrases related to addition and subtraction in illustrated texts related to games and activities implemented in the unit with a partner	Identify short sentences related to addition and subtraction in illustrated texts related to games and activities implemented in the unit with a partner
Sample Topic: Estimation/Money **Domain:** Reading **Framework:** 2007	Match labeled pictures with general words related to addition and subtraction to pictures of varying quantities	Match words or phrases related to addition or subtraction to illustrated word banks of varying quantities	Identify language associated with addition and subtraction in illustrated phrases or sentences	Distinguish between language of addition and language of subtraction in illustrated sentences	Order illustrated sentences involving the language of addition or subtraction used to solve grade level problems

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Sample Topic: Basic Operations (addition & subtraction) Domain: Listening Framework: 2012	Follow one step oral instructions to role play an addition/subtraction word problem following a model with a partner	Follow two step oral instructions to an addition/subtraction word problem using drawings, manipulatives,… following a model with a partner	Follow three step oral instructions to an addition/subtraction word problem using a number line following a model with a partner	Follow multi-step oral instructions to an addition/subtraction word problem using a number line with a partner	Change addition/subtraction word problems to demonstrate knowledge of fact families
Sample Topic: Number Sense Domain: Speaking Framework: 2007	Provide identifying information that involves real world addition and subtraction related vocabulary to a partner	Give examples of real-world objects/ items that could be added together or subtracted to a partner	Exchange examples of how or when to add or subtract outside of school with a partner	Explain how to play games that involve addition or subtraction to a partner	Tell or make up stories that involve addition or subtraction

Sample Topic: Quantity Domain: Writing Framework: 2007	Produce pictures with numerals or reproduce word associated with addition or subtraction from models	Take dictation or make notes of examples with phrases associated with addition and subtraction in everyday situations	Provide examples of quantities in context when they are added or subtracted using phrases or short sentences	Describe uses of addition and subtraction in everyday situations with illustrated examples using sentences	Explain importance of everyday math using addition and subtraction in real-life situations using a series of related sentences
Sample Topic: Whole numbers Domain: Writing Framework: 2007	Find and reproduce addition and subtraction words from an assortment of visuals	Distinguish addition and subtraction words from other math words using graphic or visual support and word banks	Group numbers together to form phrases or short sentences related to addition or subtraction with visual or graphic support	Compare numbers used to add or subtract in visuals using sentences	Describe illustrated scenes or events using terminology related to addition or subtraction in a series of related sentences

Socio-cultural implications of these standards

Be mindful of objects used in activities (You don't want to interfere with their cultural beliefs e.g., Muslim students may not want to use manipulates such as pigs due to religious beliefs)

When grouping students, make sure you take into consideration their interest and/or

language proficiency and background.

Left to right directionality.

Be aware of students' current exposure (or lack of) to vocabulary and/or manipulatives used in the curriculum.

Content standards written in accessible language

CCS standards in student friendly language that can be posted in the classroom during Unit instruction.

1.OA.1 We will be using addition and subtraction to find and show our answers.

1.OA.3 We will be writing turn-around facts for our math sentences.

1.OA.5 We will explain the counting strategies we use to get our answers (e.g., forward, backwards, by 2s, 5s,10s, and counting on)

1.OA.6 We will give answers by counting on.

1.OA.7 We will describe addition as two parts joining together to make a total (that balances/equal).

Topics and themes to present in the Unit

Grade level topics, themes, and activities that can be used during this unit of instruction and the possible materials to be used that are aligned to this topic or theme
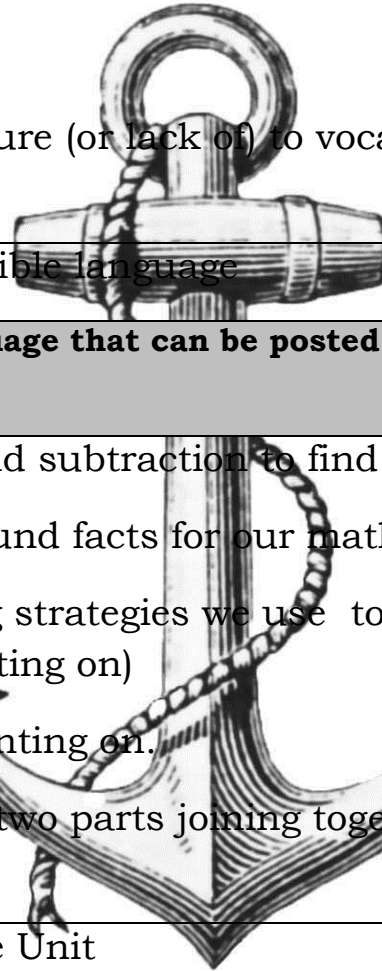
These are activities related to *Growing With Mathematics*

ACTIVITIES

Read Aloud

Domino Draw

Domino Sort

Circus Match-O (making addition equations from objects clowns are juggling)

Roll and Count on

Inside/Outside Circle
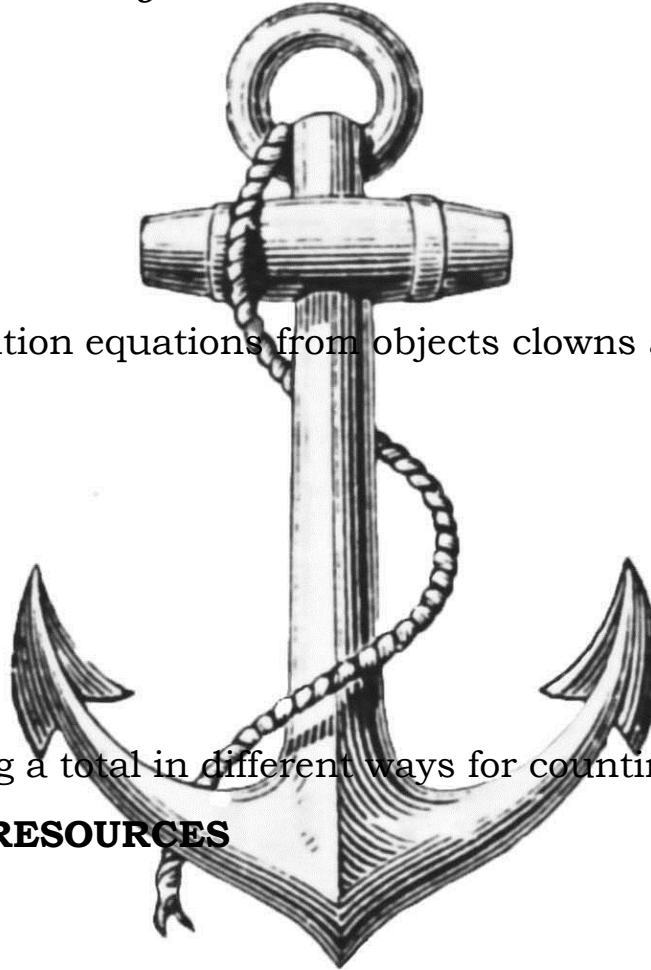
Adding 1 or 2

Number line jump

Jumping Frogs

Pom-Poms on Wings (Showing a total in different ways for counting)

CLASSROOM MATERIALS/RESOURCES

Domino sets

Domino worksheets

Circus Mat

Addition sentence cards (2+3)

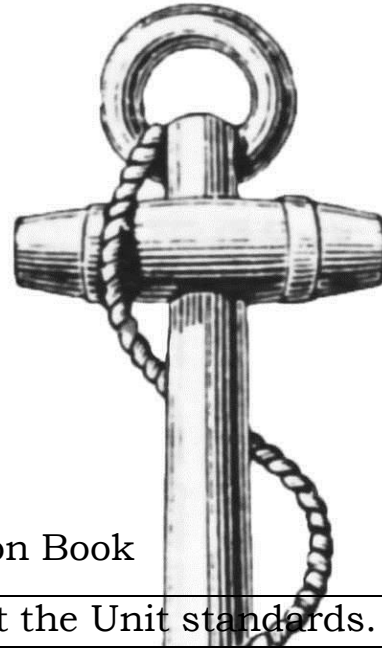Dice/Large cubes (# 1-9)

Counters

Number picture cards

Bean bags/Target mat

Giant Floor number line

Whiteboards/markers

Pom-poms/winged insect mat

Growing with Mathematics Discussion Book

Knowledge and skills needed to meet the Unit standards.

What students need to know; that is, what are the key concepts/skills embedded in the standard(s)
Counting 1-1 correspondence Naming numbers Math vocabulary
Supports and strategies that lend themselves to scaffolding language and accessing content for instruction and assessment in this unit
Inside/Outside Circle (SIOP) Think/Pair/Share (SIOP)

Realia – using real world examples and manipulatives

Number lines
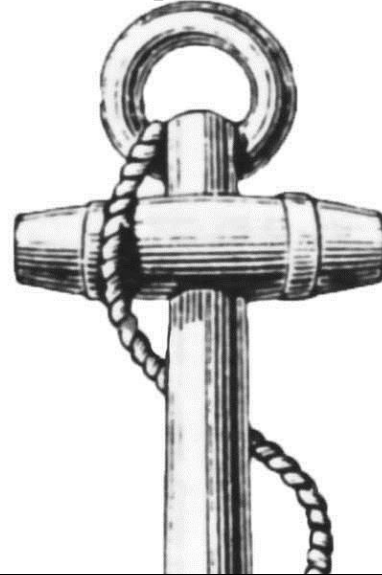
Counters/manipulatives

Coins

Part-part-total mats

Pictures/visuals

Teacher modeling

Math vocabulary word wall

Differentiated Language

Academic language of the tasks differentiated according to the students' levels of language proficiency Vocabulary/grammatical forms/genres that must be pre-taught for students to fully understand concepts

Word/Phrase Level (Vocabulary)
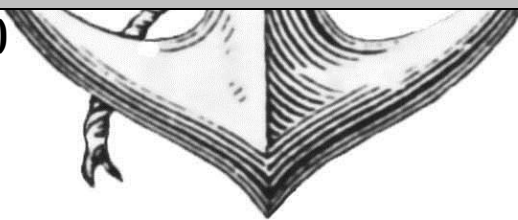Equal
Part-part-total
Plus
Minus
Altogether
Add
Subtract

Take away

Sentence Level/grammatical forms
Reading number sentences
Understanding number sentences and word problems that are read aloud to students

Discourse Level(genres/text)
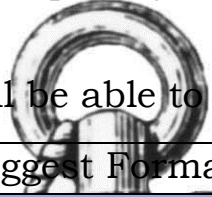Word problems associated with addition and subtraction

Content and language objective for the unit

Overall content objectives for the unit of instruction

- ✓ Students will model and understand the relationship between part-part and total.

- ✓ Students will write addition facts to model situations that show two parts.

- ✓ Students will use drawings, words, or an addition equation to solve problems.

- ✓ Students will be able to vary the order of addition equations to better understand of equality (balance) 1+3=4, 3+1=4, 4=1+3, 4= 3+1

Overall language objectives based on the academic language strand(s) of MPIs

- ✓ Students will describe addition as two parts joining together to make a total (that balances/equal).

- ✓ Entering and Emerging students will be able to name the part-part-total.

- ✓ Students will be able to orally read math addition and subtraction facts and numbers

- ✓ Students will describe addition as two parts joining together to make a total (that balances/equal).

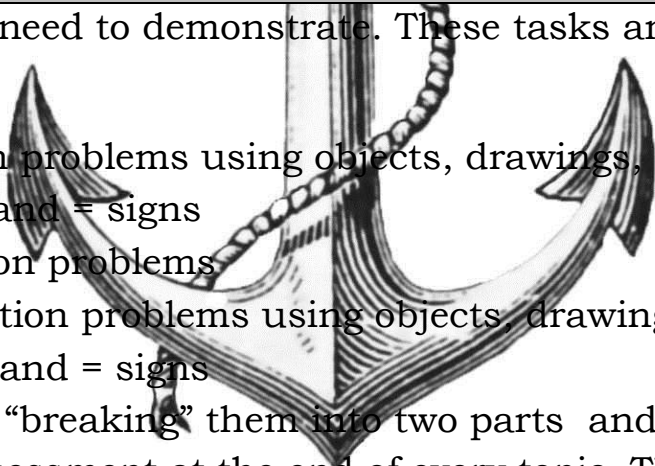- ✓ Entering and Emerging students will be able to name the part-part-total.

Common Summative Assessment and Suggest Formative Assessments

Performance Tasks: Formative/Summative Assessments

Common Summative Assessment: How students demonstrate meeting the objectives and standards through performance tasks and projects

Description of how WIDA speaking and/or writing rubric could be used for scoring the (Summative Assessment if appropriate

These are the tasks students need to demonstrate. These tasks are on our districts Progress Monitoring Sheets:

- Model and solve addition problems using objects, drawings, and equations
- Use and interpret the + and = signs
- Count on to solve addition problems
- Model and solve subtraction problems using objects, drawings, and equations
- Use, and interpret the – and = signs
- Decompose numbers by "breaking" them into two parts and represent with an equation

Students are given a topic assessment at the end of every topic. The assessment addresses the above tasks.

Ways to check for students' language development and academic achievement throughout the unit of

instruction (Formative Assessment)

Teacher will observe and keep a checklist to ensure that students use academic language while preforming tasks and SIOP strategy activities like inside/outside circle.

Teacher will monitor students to make sure they are using the words on the word wall in daily speaking and writing exercises.

Students will complete practice and application activities daily to show understanding of concepts and language presented.

Students will use the Elmo or I-PAD to present their findings to the class during the review and assessment portion of daily lessons.