Curriculum Guide
Grade 3 & 4

The American International School of Freetown
“Preparing student for success in an ever-changing world”

2019/2020
All curriculum is rooted in the Mission and Beliefs of our school

Mission Statement
AISF develops students’ love of learning in an internationally recognized, safe, student-centered and interactive learning environment. Students develop a global perspective that fosters empathy and prepares them for success in an ever-changing world.

Beliefs
We believe that:

- Respect for everyone’s progress, and care for their safety and wellbeing, are essential for a successful and interactive learning environment.
- The diversity of our community enriches our learning experience, and develops global perspectives.
- Each member of our community is both a teacher and a learner, participating in an ongoing process of self-realization.
- Collaboration and teamwork are vital for progress in an ever-changing, interconnected world.
Preface from the Director

All AISF curriculum is designed and written by the AISF faculty specifically for our student population from Pre-Kindergarten through Grade 8. AISF curriculum references educational standards from the United States. Currently the standards referenced include Common Core in English and Math, Next Generation Science, and McREL Standards for Social Studies. Both Social Studies and Science use TCI blended learning to seamlessly combine technology with traditional classroom learning. Faculty base their curriculum design on three core principles.

1. **Know your students**, including every student in every class.
2. **Plan backwards**. Start with the goals. The first step is to create the intended learning outcomes for every unit planned.
3. **Teach for mastery**. Teachers offer continuous feedback and coaching ensuring that students master each new set of new skills and knowledge before moving on to subsequent learning.

The templates used for AISF curriculum writing are grounded in Understanding by Design (UbD). Every Unit Plan opens with the Intended Learning Outcomes (ILO) for the students. The ILOs describe what the students will understand at the end of the unit, whether the unit topic is fractions, the basic anatomy of green plants, or the novel Charlotte’s Web. The Learning Outcomes are taken from the US Standards noted above. After writing the learning outcomes, teachers create the learning activities, the educational resources, and the assessments to reach those outcomes (planning backwards).

Assessment is integrated into teaching and learning from the beginning of every unit to the end. Teachers assess students’ prior knowledge, student progress toward the learning outcomes, and student mastery of the intended learning outcome. Report cards at our school follow this emphasis on assessment according to intended learning outcomes (standards). Your child is rated on the report card according to how she performs relative to the standard (learning outcome): does not meet, meets with assistance, meets, or exceeds the standard.

Our aim is student mastery. AISF is dedicated to making certain that every student can move on to build successfully on their learning at AISF whether that means at the next grade level or in their new school elsewhere. Your child’s growth and success motivate all curriculum development.
Academic Scope and Sequence Overview

AISF’s multi-grade classes from PreKindergarten to Grade 8 follow curriculum based on standards and benchmarks which correspond to each grade level. Differentiation is integral to the learning in each class from Pre-K to Grade 8. For more details about unit progression, and which standards are covered when please refer to the AISF Curriculum Guides also available at this link.

Math
Pre-Kindergarten follows an Early Years program of play-based activities to develop early math skills. This includes exploring patterns, solving puzzles, playing games, counting and sequencing songs and rhymes, Numberjacks, and Numberblocks, using a range of materials and manipulatives. Students in Kindergarten through Grade 6 follow the program of Eureka Math, which is based on the Singapore Math paradigm. Grades 7 and 8 use Holt McDougal textbooks for Pre-Algebra (Grade 7) and Algebra (Grade 8). AISF uses the US Common Core Math standards and benchmarks to inform all math instruction.

English Language Arts
Pre-Kindergarten are taught phonics and early writing through the Jolly Phonics and Letterland schema, and through a wide variety of play-based activities. The curriculum in Kindergarten to Grade 8 English Language Arts is tied to the US Common Core English Language Arts standards and benchmarks. Students all follow the 6+1 traits of writing model and assessment rubrics for writing. From Kindergarten to Grade 2 phonics, leveled readers, and guided reading are taught. Grades 3 through 8 learn reading through novel studies, supplemented with informational texts.

Science
Pre-Kindergarten and Kindergarten develop their knowledge and understanding of the world through topic-based learning through play, enhanced by Discovery kit resources. Assessment for Kindergarten through Grade 8 is based on Next Generation Science Standards. Grades 1 to 8 follow the TCI science program.

Social Studies
McREL standards and benchmarks are used to inform instruction for Kindergarten through Grade 8. Pre-Kindergarten and Kindergarten follow a bespoke child-led curriculum created by our in-house Early Years specialist teachers. Topics include the history of toys/transport; important people and people who help us in our community, ourselves, our families, our environment and celebrations. These topics flow smoothly into the TCI program, which delves more deeply into the topics of family and community. Social Studies from Grade 1 through 8 follow the full TCI program.
Grade 3&4
### Grade Level 3

**Subject:** English Language Arts  
**Theme:** Busybody Nora  
*The Boxcar Children*

### Stages:

#### Stage 1 – General Learning Outcomes (US Common Core Domains)

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<td>• Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take (R9)</td>
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<td>• Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences (W3)</td>
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<td>• Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach (W5)</td>
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<td>• Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others (W6)</td>
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<td>• Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation (W7)</td>
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<td>• Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, build on others’ ideas and expressing their own clearly and persuasively (SL1)</td>
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<td>• Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate (L4)</td>
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### Intended Learning Outcomes (Specific US Common Core Standards by Number)

**Students will:**

- Demonstrate understanding of a story and its characters (RL3.1, RL3.2, RL3.3, RL3.4, RL3.5, RL3.6)
- Identify themes, settings, and plots of stories (RL3.9, RI3.4)
- Write an organized, clear story or piece of informative writing using evidence and appropriate vocabulary (W3.1, W3.2, W3.3, W3.4, W3.5)
- Use technology to publish writing and for research (W3.6, W3.10)
- Contribute to a group discussion and present an idea verbally (SL3.1, SL3.4, SL3.6)
- Use standard English conventions such as capitalization and punctuation in all writing (L3.2, L3.4)

**Essential Questions:**
- How can inferences and interpretation of a text be supported by evidence?
- How can the theme of a novel be identified and analyzed through the course of a story?
- How can a piece of writing convey ideas and/or analysis?
- How can the writing process inform and improve my writing?
- How do conventions in writing improve communication?
- How do discussions help develop the understanding of a text, theme, or character?
- How do digital, multimedia and visual presentations aid in the analysis of a topic, text or theme?
- How do context clues, peer discussion, and a dictionary help in the understanding of a word and how to use it appropriately in speaking and writing?

**STAGE 2 – ASSESSMENT EVIDENCE**

**Assessment Tasks**
- Describe a chapter and how it fits into the story by identifying what happens before and after in a piece of writing or a visual format with captions
- Compare two novels by the same author in an informative piece of writing
- Write a narrative that includes dialogue
- Submit writing pieces that are typed on a computer
- Create and deliver a presentation about a library book read independently
- Use new vocabulary in writing and speaking
- Additional tests/quizzes as needed
- Self-assessment on completion of unit

**STAGE 3 – LEARNING PLAN**

**Learning Activities**
- Understand learning objectives for the unit and each lesson
- Research the authors of our novels
- Make predictions about a novel after looking at the novel cover, blurb, and author
- Read, discuss and analyze the class novels as we read them
- Practice speaking in formal English during discussions
- Create diagrams, drawings and concept maps as well as written answers to analysis and comprehension questions.
- As we read, make predictions about what you think will happen and why
- Summarize the novel after we have finished and identify the conflict in the story
- Group work to discuss themes, explore characters and their interactions, and to create a character analysis
- As a group create a plot diagram and continue to add to it as the story develops
- Identify new vocabulary, discover the meaning of new words and use them repeatedly in speaking and writing
- Play vocabulary games and spelling games
- Explore 6+1 traits of writing through activities covering each trait
- Practice grammar and conventions using IXL and workbooks
- Keep a writing journal
- Go over expectations and practice giving presentations
- Read independently using the class and school libraries as well as RazKids online
Resources
- *Busybody Nora*, Johanna Hurwitz, 1976
Grade Level 3

Subject: English Language Arts

Theme: *The Mouse and the Motorcycle*
Ramona Quimby, Age 8

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Essential Questions:
• How can inferences and interpretation of a text be supported by evidence?
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STAGE 2 – ASSESSMENT EVIDENCE

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STAGE 3 – LEARNING PLAN

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• Play vocabulary games and spelling games
• Explore 6+1 traits of writing through activities covering each trait
• Use Microsoft Word to publish assessed writing pieces
• Practice grammar and conventions using IXL and workbooks
• Go over expectations and practice giving presentations
• Read independently using the class and school libraries as well as RazKids online

Resources
• *The Mouse and the Motorcycle*, Beverly Cleary
• *Ramona Quimby, Age 8*, Beverly Cleary
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Essential Questions:
- How can inferences and interpretation of a text be supported by evidence?
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- How can a piece of writing convey ideas and/or analysis?
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- How do discussions help develop the understanding of a text, theme, or character?
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STAGE 2 – ASSESSMENT EVIDENCE

Assessment Tasks
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- Additional tests/quizzes as needed
- Self-assessment on completion of unit

STAGE 3 – LEARNING PLAN

Learning Activities
- Understand learning objectives for the unit and each lesson
- Research the authors of our novels
- Make predictions about a novel after looking at the novel cover, blurb, and author
- Read, discuss and analyze the class novels as we read them
- Practice speaking in formal English during discussions
- Create diagrams, drawings and concept maps as well as written answers to analysis and comprehension questions.
- As we read, make predictions about what you think will happen and why
- Summarize the novel after we have finished and identify the conflict in the story
- Group work to discuss themes, explore characters and their interactions, and to create a character analysis
- As a group create a plot diagram and continue to add to it as the story develops
- Identify new vocabulary, discover the meaning of new words and use them repeatedly in speaking and writing
- Play vocabulary games and spelling games
- Explore 6+1 traits of writing through activities covering each trait
- Use Microsoft Word to publish assessed writing pieces
- Practice grammar and conventions using IXL and workbooks
- Go over expectations and practice giving presentations
- Read independently using the class and school libraries as well as RazKids online

Resources
- Charlotte’s Web, EB White (1952)
- The Borrowers, Mary Norton (1953)
- Selected other resources from the classroom and school libraries as well as online as needed
Grade Level 4

Subject: English Language Arts

Trimester 1

Theme: *Babe the Gallant Pig*

*The Cricket in Times Square*

**Stage 1 – General Learning Outcomes (US Common Core Domains)**

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<td>Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence (W1)</td>
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<td>Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content (W2)</td>
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<td>Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences (W3)</td>
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<td>Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach (W5)</td>
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<td>Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others (W6)</td>
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<td>Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences (W10)</td>
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- Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing (L2)
- Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate (L4)

**Student Outcomes (the numbers refer to Common Core Standards)**

Students should be able to:
- Demonstrate understanding of a story or nonfiction writing using evidence from the text (RL4.1) (RL4.2) (RL4.3) (RL4.4) (RL4.5) (RL4.6)
- Identify themes, settings, and plots of stories (RL4.9) (RI4.4)
- Write an organized, clear story or piece of informative writing using evidence and appropriate vocabulary (W4.1) (W4.2) (W4.3) (W4.4) (W4.5)
- Use technology to publish writing, and for research (W4.6) (W4.10)
- Contribute to a group discussion and present an idea verbally (SL4.1) (SL4.4) (SL4.6)
- Use standard English grammar such as capitalization and punctuation in all writing (L4.2) (L4.4)

**Essential Questions**

- How are inferences and interpretation of a text supported by evidence?
- How can the theme of a novel be identified and analyzed through the course of the story?
- How can a piece of writing convey ideas and/or analysis?
- How can the writing process improve my writing?
- How do conventions in writing improve communication?
- How do discussions help develop in the understanding of a text, theme or character?
- How do context clues, peer discussion and a dictionary help in understanding a word and using it appropriately in speaking and writing?

**Stage 2 – Assessment Evidence**

**Assessment Tasks**

- Create a timeline of events within a novel using a visual or multimedia format
- Compare how themes and topics are explored in different novels or short stories in an informative piece of writing
- Write a narrative with dialogue, transitional words and a conclusion
- Publish all major writing pieces, after editing them
- Create and deliver an organized and detailed presentation about a library book read independently
- Use new vocabulary in writing and speaking
- Additional tests/quizzes as needed
- Self-assessment on completion of unit

**Stage 3 – Learning Plan**

**Learning Activities**

- Understand learning objectives for the unit and each lesson
- Research the authors of our novels
- After looking at the novel cover, blurb and author make predictions about the novel
- Read, discuss and analyze the class novels as we read them
- *Babe: The Gallant Pig & Cricket in Times Square*
- Practice speaking in formal English during discussions
- Create diagrams, drawings and concept maps, as well as written answers to analysis and comprehension questions
- Make predictions as we read about what you think will happen and why
- Summarize the novel after we have finished and identify conflict in the story
- Group work to discuss themes, explore characters and their interactions, and to create a character analysis
- As a group create a plot diagram and continue to add to it as the story develops
- Identify new vocabulary, discover the meaning of new words and use them repeatedly in speaking and writing
- Play vocabulary games and spelling games
- Explore 6+1 traits of writing through activities covering each trait
- Use Microsoft word to publish assessed writing pieces
- Practice grammar and conventions using IXL and workbooks
- Go over expectations and practice giving presentations
- Read independently using the class and school libraries
- Watch the movie of the novel, where available

Resources
- *Babe: The Gallant Pig*, Dick King-Smith (2001)
- *Cricket in Times Square*, George Selden (1960)
- Selected other resources from the classroom and school libraries as needed
# English Language Arts Trimester 2

## Grade 4

Unit Length: 1 Trimester

### Stage 1 – Desired Results

<table>
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<tr>
<th>Common Core Domains</th>
<th>Desired Results</th>
</tr>
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<tbody>
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<td>▪ Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text (R1)</td>
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<td>▪ Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas (R2)</td>
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<td>▪ Analyze how and why individuals, events, and ideas develop and interact over the course of a text (R3)</td>
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<td>▪ Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone (R4)</td>
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<td>▪ Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g. a section, chapter, scene, or stanza) relate to each other and the whole (R5)</td>
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<td>▪ Assess how point of view or purpose shapes the content and style of a text (R6)</td>
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<td>▪ Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take (R9)</td>
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<tr>
<td>▪ Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence (W1)</td>
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<td>▪ Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content (W2)</td>
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<td>▪ Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences (W3)</td>
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<td>▪ Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience (W4)</td>
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<td>▪ Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach (W5)</td>
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<td>▪ Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others (W6)</td>
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<td>▪ Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences (W10)</td>
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<td>▪ Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others’ ideas and expressing their own clearly and persuasively (SL1)</td>
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<td>▪ Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience (SL4)</td>
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<td>▪ Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate (SL6)</td>
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<td>▪ Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing (L2)</td>
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### Student Outcomes (the numbers refer to Common Core Standards)

Students should be able to:

- Demonstrate understanding of a story or nonfiction writing using evidence from the text (RL4.1) (RL4.2) (RL4.3) (RL4.4) (RL4.5) (RL4.6)
- Identify themes, settings, and plots of stories (RL4.9) (RI4.4)
- Write an organized, clear story or piece of informative writing using evidence and appropriate vocabulary (W4.1) (W4.2) (W4.3) (W4.4) (W4.5)
- Use technology to publish writing, and for research (W4.6) (W4.10)
- Contribute to a group discussion and present an idea verbally (SL4.1) (SL4.4) (SL4.6)
- Use standard English grammar such as capitalization and punctuation in all writing (L4.2) (L4.4)

### Essential Questions
- How are inferences and interpretation of a text supported by evidence?
- How can the theme of a novel be identified and analyzed through the course of the story?
- How can a piece of writing convey ideas and/or analysis?
- How can the writing process improve my writing?
- How do conventions in writing improve communication?
- How do discussions help develop in understanding of a text, theme or character?
- How do context clues, peer discussion and a dictionary help in understanding a word and using it appropriately in speaking and writing?

**Stage 2 – Assessment Evidence**

**Assessment Tasks**
- Create a timeline of events within a novel using a visual or multimedia format, then use this to write a summary of the novel
- Compare how themes and topics are explored in different novels or short stories in an informative piece of writing
- Write a narrative with dialogue, transitional words and a conclusion
- Publish all major writing pieces, after editing them
- Create and deliver an organized and detailed presentation about a novel read in class
- Use new vocabulary in writing and speaking
- Additional tests/quizzes as needed
- Self-assessment on completion of unit

**Stage 3 – Learning Plan**

**Learning Activities**
- Understand learning objectives for the unit and each lesson
- Research the authors of our novels
- After looking at the novel cover, blurb and author make predictions about the novel
- Read, discuss and analyze the class novels as we read them
- *Because of Winn-Dixie* and *Ben and Me*
- Practice speaking in formal English during discussions
- Create diagrams, drawings and concept maps, as well as written answers to analysis and comprehension questions
- Make predictions as we read about what you think will happen and why
- Summarize the novel after we have finished and identify conflict in the story
- Group work to discuss themes, explore characters and their interactions, and to create a character analysis
- As a group create a plot diagram and continue to add to it as the story develops
- Identify new vocabulary, discover the meaning of new words and use them repeatedly in speaking and writing
- Play vocabulary games and spelling games
- Explore 6+1 traits of writing through activities covering each trait
- Use Microsoft word to publish assessed writing pieces
- Practice grammar and conventions using IXL and workbooks
- Go over expectations and practice giving presentations
- Read independently using the class and school libraries
- Watch the movie of the novel, where available

**Resources**
- *Because of Winn-Dixie*, Kate DiCamillo (2000)
- *Ben and Me*, Robert Lawson (1939)
- *Grade 4 Reading*, Spectrum (2007)
- *Narrative Writing*, Saddleback Educational Publishing (2013)
- *Thinking Critically About…*, New Path Learning Graphic Organizers (2009)
- Selected other resources from the classroom and school libraries as needed
English Language Art TRIMESTER 3

GRADE 4
Unit Length: 1 Trimester

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<td>Create and deliver an organized and detailed presentation about a book read in class</td>
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### Resources

- *Dear Mr. Henshaw*, Beverly Clearly (1983)
- *The Little Prince*, Antoine de Saint Exupery (1943)
- *Grade 4 Reading*, Spectrum (2007)
- *Narrative Writing*, Saddleback Educational Publishing (2013)
- *Thinking Critically About…*, New Path Learning Graphic Organizers (2009)
- Selected other resources from the classroom and school libraries as needed
## MATH TRIMESTER 1

**GRADE 3**

Unit Length: 1 Trimester

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<tr>
<td>• Multiply and divide within 100</td>
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<tr>
<td>• Solve problems including the four operations, and identify and explain patterns in arithmetic</td>
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<td>• Use place value understanding and properties of operations to perform multi-digit arithmetic</td>
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<td>• Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects</td>
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<tr>
<td>• Represent and interpret data</td>
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<td>• Geometric measurement: understand concepts of area and relate area to multiplication and addition</td>
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<td>• Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures</td>
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<th>Intended Learning Outcomes (Specific US Common Core Standards by Number)</th>
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<tr>
<td>Students will:</td>
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<td>• Interpret products of whole numbers (3.OA.1)</td>
</tr>
<tr>
<td>• Interpret whole-number quotients of whole numbers (3.OA.2)</td>
</tr>
<tr>
<td>• Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities (3.OA.3)</td>
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<td>• Determine the unknown whole number in a multiplication or division equation relating three whole numbers (3.OA.4)</td>
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<tr>
<td>• Apply properties of operations as strategies to multiply and divide (3.OA.5)</td>
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<td>• Understand division as an unknown-factor problem (3.OA.6)</td>
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<td>• Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division or properties of operations (3.OA .7)</td>
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<td>• Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding (3.OA.8)</td>
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<td>• Identify arithmetic patterns and explain them using properties of operations (3.OA.9)</td>
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<tr>
<td>• Use place value understanding to round whole numbers to the nearest 10 or 100 (3.NBT.1)</td>
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<tr>
<td>• Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, an/or the relationship between addition and subtraction (3.NBT.2)</td>
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<tr>
<td>• Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes (3.MD.1)</td>
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<td>• Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. (3.MD.3)</td>
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<tr>
<td>• Recognize area as an attribute of plane figures and understand concepts of area measurement (3.MD.5)</td>
</tr>
<tr>
<td>• A square with side length 1 unit, called “a unit square”, is said to have “one square unit” of area, and can be used to measure area (3.MD.5a)</td>
</tr>
<tr>
<td>• A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units. (3.MD.5b)</td>
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<tr>
<td>• Measure areas by counting unit squares (3.MD.6)</td>
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<tr>
<td>• Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths (3.MD.7a)</td>
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<tr>
<td>• Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters (3.MD.8)</td>
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Essential Questions:
- What is place value and how does it affect numbers?
- What is the relationship between addition and subtraction?
- What is the relationship between multiplication and division?
- How can the size of an object be measured and communicated?
- How can a shape be made larger, smaller, flipped, or rotated?
- What is a plane?
- What is the relationship between angles in a shape?

### STAGE 2 – ASSESSMENT EVIDENCE

#### Assessment Tasks
- Ongoing and daily observation of exercises and activities
- Everyday Math Unit 1 Test
- Everyday Math Unit 2 Test
- Everyday Math Unit 3 Test
- Everyday Math Unit 4 Test

### STAGE 3 – LEARNING PLAN

#### Learning Activities
- Grade 3 Everyday Math Unit 1: Routines, Review, and Assessment
- Grade 3 Everyday Math Unit 2: Adding and Subtracting Whole Numbers
- Grade 3 Everyday Math Unit 3: Linear Measures and Area
- Grade 3 Everyday Math Unit 4: Multiplication and Division

#### Resources
- Everyday Math Grade 3 resources
- IXL online practice
- Base ten blocks
- Pattern Blocks
- Fraction cards
- Manipulatives
- Place Value Charts
- Other materials and resources as necessary
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<td>• Reason with shapes and their attributes</td>
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**Intended Learning Outcomes (Specific US Common Core Standards by Number)**

Students will:

- Determine the unknown whole number in a multiplication or division equation relating three whole numbers (3.OA.4)
- Apply properties of operations as strategies to multiply and divide (3.OA.5)
- Understand division as an unknown-factor problem (3.OA.6)
- Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division or properties of operations (3.OA.7)
- Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding (3.OA.8)
- Identify arithmetic patterns and explain them using properties of operations (3.OA.9)
- Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations (3.NBT.3)
- Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b (3.NF.1)
- Understand a fraction as a number on the number line; represent fractions on a number line diagram (3.NF.2)
- Represent a fraction 1/b on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line (3.NF.2.A)
- Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line (3.NF.2.B)
- Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
- Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line (3.NF.3.A)
- Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3. Explain why the fractions are equivalent, e.g., by using a visual fraction model (3.NF.3.B)
- Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram (3.NF.3.C)
- Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions (3.NF.3.D)
- Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes (3.MD.1)
- Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. (3.MD.3)
- Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units – whole numbers, halves, or quarters.
- Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning (3.MD.7b)
- Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters (3.MD.8)
- Understand that shapes in different categories may share attributes, and that the shared attributes can define a larger category. Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories (3.G.1)
- Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole (3.G.2)

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- What is place value and how does it affect numbers?
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- How can a shape be made larger, smaller, flipped, or rotated?
- What is a plane?
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### STAGE 2 – ASSESSMENT EVIDENCE

#### Assessment Tasks
- Ongoing and daily observation of exercises and activities
- Everyday Math Unit 5 Test
- Everyday Math Unit 6 Test
- Everyday Math Unit 7 Test
- Everyday Math Unit 8 Test

### STAGE 3 – LEARNING PLAN

#### Learning Activities
- Grade 3 Everyday Math Unit 5: Place Value in Whole Numbers and Decimals
- Grade 3 Everyday Math Unit 6: Geometry
- Grade 3 Everyday Math Unit 7: Multiplication and Division
- Grade 3 Everyday Math Unit 8: Fractions

#### Resources
- Everyday Math Grade 3 resources
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- Fraction cards
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- Place Value Charts
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# Math Trimester 3

**GRADE 3**

Unit Length: 1 Trimester

## STAGE 1 – GENERAL LEARNING OUTCOMES (US COMMON CORE DOMAINS)

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</tr>
<tr>
<td>• Geometric measurement: understand concepts of area and relate area to multiplication and addition</td>
</tr>
</tbody>
</table>

## Intended Learning Outcomes (Specific US Common Core Standards by Number)

**Students will:**

- Interpret whole-number quotients of whole numbers (3.OA.2)
- Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities (3.OA.3)
- Apply properties of operations as strategies to multiply and divide (3.OA.5)
- Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division or properties of operations (3.OA.7)
- Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, an/or the relationship between addition and subtraction (3.NBT.2)
- Multiply one-digit whole numbers by multiples of 10 in the range 10-90 using strategies based on place value and properties of operations (3.NBT.3)
- Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b (3.NF.1)
- Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size (3.NF.3)
- Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms, and liters. Add, subtract, multiply and divide to solve one-step word problems involving masses or volumes that are given in the same units (3.MD.2)
- Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one-and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. (3.MD.3)
- A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units. (3.MD.5b)
- Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths (3.MD.7a)
- Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning (3.MD.7b)
- Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a x b and a x c. Use area models to represent the distributive property in mathematical reasoning 3.MD.7c)
- Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems (3.MD.7d)

## Essential Questions:

- What is place value and how does it affect numbers?
- What is the relationship between addition and subtraction?
- What is the relationship between multiplication and division?
- How can the size of an object be measured and communicated?
- How can a shape be made larger, smaller, flipped, or rotated?
- What is a plane?
- What is the relationship between angles in a shape?

### STAGE 2 – ASSESSMENT EVIDENCE

**Assessment Tasks**

- Ongoing and daily observation of exercises and activities
- Everyday Math Unit 9 Test
- Everyday Math Unit 10 Test
- Everyday Math Unit 11 Test

### STAGE 3 – LEARNING PLAN

**Learning Activities**

- Grade 3 Everyday Math Unit 9: Multiplication and Division
- Grade 3 Everyday Math Unit 10: Measurement and Data
- Grade 3 Everyday Math Unit 11: Probability; Year-Long Projects, Revisited

**Resources**

- Everyday Math Grade 3 resources
- IXL online practice
- Base ten blocks
- Pattern Blocks
- Fraction cards
- Manipulatives
- Place Value Charts
- Other materials and resources as necessary
**STAGE 1 - GENERAL LEARNING OUTCOMES (US COMMON CORE DOMAINS)**

<table>
<thead>
<tr>
<th>Common Core Domains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use the four operations with whole numbers to solve problems</td>
</tr>
<tr>
<td>Gain familiarity with factors and multiples</td>
</tr>
<tr>
<td>Generate and analyze patterns</td>
</tr>
<tr>
<td>Generalize place value understanding for multi-digit whole numbers</td>
</tr>
<tr>
<td>Use place value understanding and properties of operation to perform multi-digit arithmetic</td>
</tr>
<tr>
<td>Understand decimal notation for fractions</td>
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<tr>
<td>Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit</td>
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<td>Draw and identify lines and angles, and classify shapes by properties of their lines and angles</td>
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**Intended Learning Outcomes (Specific US Common Core Standards by Number)**

**Students will:**

- Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations (4.OA.1)
- Find all factor pairs of a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite (4.OA.4)
- Generate a number of shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself (4.OA.5)
- Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right (4.NBT.1)
- Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place using >, =, and < symbols to record the results of comparisons (4.NBT.2)
- Fluently add and subtract multi-digit whole numbers using the standard algorithm (4.NBT.4)
- Use decimal notation for fractions with denominators 10 or 100 (4.NF.6)
- Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols <, =, and > and justify the conclusions (4.NF.7)
- Know relative sizes of measurement units within one system of units including km, m, cm; kg, g, lb, oz; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table (4.MD.1)
- Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale (4.MD.2)
- Make a line plot to display a data set of measurements in fractions of a unit. Solve problems involving addition and subtraction of fractions by using information presented in line plots (4.MD.4)
- Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures (4.G.1)
- Classify two-dimensional figures based on the presence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles (4.G.2)

**Essential Questions:**

- What is place value and how does it affect numbers?
- What is the relationship between addition and subtraction?
- What is the relationship between multiplication and division?
- How can the size of an object be measured and communicated?
- How can a shape be made larger, smaller, flipped, or rotated?
- What is a plane?
- What is the relationship between angles in a shape?

### STAGE 2 – ASSESSMENT EVIDENCE

**Assessment Tasks**

- Ongoing and daily observation of exercises and activities
- Everyday Math Unit 1 Test
- Everyday Math Unit 2 Test
- Everyday Math Unit 3 Test
- Everyday Math Unit 4 Test

### STAGE 3 – LEARNING PLAN

**Learning Activities**

- Grade 4 Everyday Math Unit 1:
- Grade 4 Everyday Math Unit 2:
- Grade 4 Everyday Math Unit 3: Multiplication and Division; Number Sentences and Algebra
- Grade 4 Everyday Math Unit 4:

**Resources**

- Everyday Math Grade 4 resources
- IXL online practice
- Base ten blocks
- Pattern Blocks
- Fraction cards
- Manipulatives
- Place Value Charts
- Other materials and resources as necessary
## Math Trimester 2

**GRADE 4**

**Unit Length:** 1 Trimester

### STAGE 1 – GENERAL LEARNING OUTCOMES (US COMMON CORE DOMAINS)

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<td>• Generalize place value understanding for multi-digit whole numbers</td>
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<tr>
<td>• Use place value understanding and properties of operation to perform multi-digit arithmetic</td>
</tr>
<tr>
<td>• Extend understanding of fraction equivalence and ordering</td>
</tr>
<tr>
<td>• Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers</td>
</tr>
<tr>
<td>• Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit</td>
</tr>
<tr>
<td>• Represent and interpret data</td>
</tr>
<tr>
<td>• Geometric measurement: understand concepts of angle and measure angles</td>
</tr>
<tr>
<td>• Draw and identify lines and angles, and classify shapes by properties of their lines and angles</td>
</tr>
</tbody>
</table>

### Intended Learning Outcomes (Specific US Common Core Standards by Number)

**Students will:**

- Multiply or divide to solve word problems involving multiplicative comparison (4.OA.2)
- Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding (4.OA.3)
- Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right (4.NBT.1)
- Read a write multi-digit whole numbers using base-ten numerals, number names and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place using >, =, and < symbols to record the results of comparisons (4.NBT.2)
- Use place value understanding to round multi-digit whole numbers to any place (4.NBT.3)
- Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models (4.NBT.5)
- Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equation, rectangular arrays, and/or area models (4.NBT.6)
- Explain why a fraction a/b is equivalent to a fraction (n x a)/(n x b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions (4.NF.1)
- Compare two fractions with different numerators and different denominators. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, = or <, and justify the conclusions (4.NF.2)
- Understand a fraction a/b with a>1 as a sum of fractions 1/b. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole (a). Decompose a fraction into a sum of fractions with the same denomination in more than one way, recording each decomposition by an equation. Justify decompositions (b). Add and subtract mixed numbers with like denominators (c). Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators (d). (4.NF.3a,b,c,d)
- Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Understand a fraction a/b as a multiple of 1/b (a). Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number (b). (4.NF.4ab)
- Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require
expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale (4.MD.2)

- Apply the area and perimeter formulas for rectangles in real world and mathematical problems (4.MD.3)
- Make a line plot to display a data set of measurements in fractions of a unit. Solve problems involving addition and subtraction of fractions by using information presented in line plots (4.MD.4)
- Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. And angle that turns through 1/360 of a circle is called a “one-degree angle” and can be used to measure angles (a). And angle that turns through n one-degree angles is said to have an angle measure of n degrees (b). (4.MD.5ab)
- Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure (4.MD.6)
- Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems (4.MD.7)
- Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures (4.G.1)
- Classify two-dimensional figures based on the presence of absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles (4.G.2)

Essential Questions:
- What is place value and how does it affect numbers?
- What is the relationship between addition and subtraction?
- What is the relationship between multiplication and division?
- How can the size of an object be measured and communicated?
- How can a shape be made larger, smaller, flipped, or rotated?
- What is a plane?
- What is the relationship between angles in a shape?

STAGE 2 – ASSESSMENT EVIDENCE

Assessment Tasks

- Ongoing and daily observation of exercises and activities
- Everyday Math Unit 1 Test
- Everyday Math Unit 2 Test
- Everyday Math Unit 3 Test
- Everyday Math Unit 4 Test

STAGE 3 – LEARNING PLAN

Learning Activities

- Grade 4 Everyday Math Unit 1:
- Grade 4 Everyday Math Unit 2:
- Grade 4 Everyday Math Unit 3:
- Grade 4 Everyday Math Unit 4:

Resources

- Everyday Math Grade 4 resources
- IXL online practice
- Base ten blocks
- Pattern Blocks
- Fraction cards
- Manipulatives
- Place Value Charts
- Other materials and resources as necessary
STAGE 1 – GENERAL LEARNING OUTCOMES (US COMMON CORE DOMAINS)

Common Core Domains
- Generate and analyze patterns
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers
- Understand decimal notation for fractions
- Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit
- Represent and interpret data
- Draw and identify lines and angles, and classify shapes by properties of their lines and angles

Intended Learning Outcomes (Specific US Common Core Standards by Number)

Students will:
- Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself (4.OA.5)
- Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Understand a fraction a/b as a multiple of 1/b (a). Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number (b). Solve word problems involving multiplication of a fraction by a whole number (c). (4.NF.4abc)
- Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100 (4.NF.5)
- Use decimal notation for fractions with denominators 10 or 100 (4.NF.6)
- Know relative sizes of measurement units within one system of units. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table (4.MD.1)
- Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale (4.MD.2)
- Apply the area and perimeter formulas for rectangles in real world and mathematical problems (4.MD.3)
- Make a line plot to display a data set of measurements in fractions of a unit. Solve problems involving addition and subtraction of fractions by using information presented in line plots (4.MD.4)
- Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry (4.G.3)

Essential Questions:
- What is place value and how does it affect numbers?
- What is the relationship between addition and subtraction?
- What is the relationship between multiplication and division?
- How can the size of an object be measured and communicated?
- How can a shape be made larger, smaller, flipped, or rotated?
- What is a plane?
- What is the relationship between angles in a shape?

STAGE 2 – ASSESSMENT EVIDENCE

Assessment Tasks
- Ongoing and daily observation of exercises and activities
- Everyday Math Unit 9 Test
- Everyday Math Unit 10 Test
- Everyday Math Unit 11 Test
- Everyday Math Unit 12 Test

STAGE 3 – LEARNING PLAN
Learning Activities
- Grade 4 Everyday Math Unit 9:
- Grade 4 Everyday Math Unit 10:
- Grade 4 Everyday Math Unit 11: 3D Shapes, Weight, Volume, and Capacity
- Grade 4 Everyday Math Unit 12: Rates

Resources
- Everyday Math Grade 4 resources
- IXL online practice
- Base ten blocks
- Pattern Blocks
- Fraction cards
- Manipulatives
- Place Value Charts
- Other materials and resources as necessary
Stage 1 – General Learning Outcomes (Next Generation Science Standards)

3-LS2-1. Construct an argument that some animals form groups that help members survive.
3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.
3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

Essential Questions:
Where do organisms live?
How does living in a group help some animals survive?
How do environments change?
What happens to organisms in changing environments?
How do people learn about extinct organisms?
What do fossils show about environments of long ago?

Stage 2 – Assessment Evidence

Assessment Tasks
Performance Assessment: Take up the role of a junior paleontologist and design an exhibit about Columbian Mammoths.
Performance Assessment: Take part in a paleontology dig. Use the evidence you uncover to find out why Columbian Mammoths died off.

Stage 3 – Learning Plan

Learning Activities
Learn about four different environments: hot desert, coral reef, temperate forest, and tropical rainforest. With a partner, match organisms to the environments they would best survive in.
Model how living in a school of fish can protect a fish from predators. Gather evidence to construct an explanation about the importance of living in groups for an animal’s survival.
Examine pictures that show changes to environments. Then, in pairs, create an act-it-out about one environmental change, and the rest of the class guesses which change you are demonstrating.
Analyze data so that you are able to recommend a design for a new animal crossing in a state park.
Acting as a paleontologist, uncover fossils of plants and animals that lived on Earth millions of years ago.
Categorize the fossils according to your findings
Use pictures of dinosaur teeth to predict what the dinosaur ate and present your findings to the class.
Then, think about other features that can be used to learn about the environment a dinosaur lived in.

Resources
- TCI Science kit boxes, textbooks and student notebooks
Grade Level: 3 & 4
Year B
Subject: Science
Theme: Plant and Animal Structures

Stage 1 – General Learning Outcomes (Next Generation Science Standards)

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
4-LS1-2. Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.
4-PS4-2. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.

Essential Questions
What Plant Structures Are Used for Support and Growth?
What Plant Structures Are Used for Protection?
What Plant Structures Are Used for Reproduction?
How Do Plants Respond to Their Environment?
What Animal Structures Are Used for Digestion and Circulation?
What Animal Structures Are Used for Support, Movement, and Protection?
What Animal Structures Are Used for Reproduction?
What Animal Structures Are Used for Sensing the Environment?
How Do Animals Respond to Their Environment?

Stage 2 – Assessment Evidence

Assessment Tasks
Performance Assessment: Designing a Legendary Creature.
Derrick is working on his new comic book. Help him design new creatures for his comic by exploring different plant and animal structures.

Stage 3 – Learning Plan

Learning Activities
Observe and ask questions about plant structures. Analyze a diagram and a video about photosynthesis. Conduct a celery investigation to learn about the vascular system.
Explore the various structures plants use for protection. Use what you've learned to design and present a method of protecting a hypothetical plant.
Dissect a flower and draw its reproductive parts. Explain how the components of a flower’s reproductive system interact. Form an argument about the structures plants use for reproduction.
Use your body to model how a plant might respond to its environment. The model will provide evidence that plants use various structures to respond to the environment around them.
Watch several silent videos depicting how animals carry out digestion and circulation. Then, write and record a narration for each video and share it with the class. Observe and ask questions about pill bugs. Look for evidence that pill bugs have structures and systems they use for support, protection, and movement.
Fly around the world to different ecosystems in a hot air balloon. Descend to the ground and observe the reproductive structures of various animals.

Build a pinhole camera. Use this camera as a model for understanding how an eye sees images.

Use your senses to find Snowball, a lost pet rabbit. Use a model of how animals respond to their environment to describe how a rabbit would react to different sensory information. Then, look at your evidence and construct an argument about where to find Snowball.

**Resources**
- TCI Science kit boxes, textbooks and student notebooks
### STAGE 1 – GENERAL LEARNING OUTCOMES (NEXT GENERATION SCIENCE STANDARDS)

**DOMAIN:**
Physical Science

<table>
<thead>
<tr>
<th>Intended Learning Outcomes (Specific Next Generation Science Standard by Number)</th>
</tr>
</thead>
</table>

**Performance Expectation**

3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.

3-PS2-2. Make observations and/or measurements of an object’s motion to provide evidence that a pattern can be used to predict future motion.

3-PS2-3. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.

3-PS2-4. Define a simple design problem that can be solved by applying scientific ideas about magnets

**Disciplinary Core Idea**

**PS2.A. Forces and Motion**

Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object’s speed or direction of motion. (Boundary: Qualitative and conceptual, but not quantitative addition of forces are used at this level.)

**PS2.B. Types of Interactions**

Electric and magnetic forces between a pair of objects do not require that the objects be in contact. The sizes of the forces in each situation depend on the properties of the objects and their distances apart and, for forces between two magnets, on their orientation relative to each other.

Objects in contact exert forces on each other.

**Essential Questions:**
- What do forces do?
- What happens when forces are balanced or unbalanced?
- How can you predict patterns of motion?
- What can magnetic forces do?
- What can electric forces do?

### STAGE 2 – ASSESSMENT EVIDENCE

**Assessment Tasks**
- Chapter tests and quizzes

### STAGE 3 – LEARNING PLAN

**Learning Activities**
- Understand learning objectives for the unit and each lesson
- Complete a KWL chart at relevant stages throughout the unit
- Engage in activities and investigations
- Maintain a science journal with vocabulary, notes, and data collected.
- Research using the library, classroom resources, interviews and the internet
- Present and compare information in written, spoken and visual projects
- Watch relevant video clips and interviews
- Use TCI interactive website to explore further reading and knowledge check assignments
- Grade 3 TCI Unit 2, Lessons 1-5
Resources
- www.teachtci.com – students all have their own log in information
- Teacher led TCI presentations
- Unit 2: Forces and Motion, TCI (2011)
- Selected other resources from the internet, classroom and school libraries as needed
## STAGE 1 – GENERAL LEARNING OUTCOMES (NEXT GENERATION SCIENCE STANDARDS)

### DOMAIN:
Earth Science

### Intended Learning Outcomes (Specific Next Generation Science Standard by Number)

**Performance Expectation**

**3-5-ETS1-3.** Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved

**3-ESS2-1.** Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season

**3-ESS2-2.** Obtain and combine information to describe climates in different regions of the world.

**3-ESS3-1.** Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.

### Disciplinary Core Idea

**ESS2.D: Weather and Climate**

Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next.

Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years.

**ESS3.B: Natural Hazards**

A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts.

### Essential Questions:

- What makes weather?
- How is temperature measured?
- How is wind measured?
- How are rain and snow measured?
- How is weather predicted?
- How are weather and climate related?
- How does extreme weather affect people?
- How can people reduce extreme weather damage?

## STAGE 2 – ASSESSMENT EVIDENCE

### Assessment Tasks

- Chapter tests and quizzes

## STAGE 3 – LEARNING PLAN

### Learning Activities

- Understand learning objectives for the unit and each lesson
- Complete a KWL chart at relevant stages throughout the unit
- Engage in activities and investigations
- Maintain a science journal with vocabulary, notes, and data collected.
- Research using the library, classroom resources, interviews and the internet
- Present and compare information in written, spoken and visual projects
- Watch relevant video clips and interviews
- Use TCI interactive website to explore further reading and knowledge check assignments
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## Civics
Important ideas of civics are based on understanding government at various levels, the political system, rules and laws, civic engagement, and democratic principles.

## Economics
The idea of “resources” as including human, physical, and natural resources is essential for understanding the economic decisions people, businesses, and governments make in local, national, and global markets.

## Geography
Using maps and other representations of Earth, understanding the relationship between culture and the environment, analyzing how human populations change, and learning that some environmental changes occur on a global scale are all essential aspects of geography.

## History
Reasoning about chronological patterns, explaining how people’s perspectives can change, working with historical sources, identifying causes and effects, and developing claims from evidence are some of the skills students develop as they study history.

### Essential Questions
- What Is a Community?
- How Are Communities Different?
- What Is a Map?
- What Is Geography?
- How Do People Use Our Environment?

### Stage 2 – Assessment Evidence

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>Classwork and Activities</td>
</tr>
<tr>
<td>Student work in Student Notebook</td>
</tr>
<tr>
<td>TCI assessments</td>
</tr>
</tbody>
</table>

### Stage 3 – Learning Plan

<table>
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<tbody>
<tr>
<td>In a Problem Solving Group activity, students design a community that includes places to live, work, and play.</td>
</tr>
<tr>
<td>In a Visual Discovery activity, students learn about the features, advantages, and disadvantages of urban, rural, and suburban communities.</td>
</tr>
<tr>
<td>In a Social Studies Skill Builder, students work in pairs to read and answer questions about maps.</td>
</tr>
<tr>
<td>In a Social Studies Skill Builder, pairs identify geographic features and locate them on a physical map.</td>
</tr>
<tr>
<td>In a Response Group activity, students explore how people use natural resources in various environments and discover the effects of pollution.</td>
</tr>
</tbody>
</table>

### Resources
- Teacher led TCI presentations
- *Our Community*, TCI (2011)
- *Our Community Interactive Notebook*, TCI (2011)
- *Evan-Moor Daily Geography Practice Student Practice Book* Grade 3&4
- Selected other resources from the internet, classroom and school libraries as needed
Grade Level: 3 & 4  
Year B  
Subject: Social Studies  
Trimester: 1  
Theme: Regions of Our Country

<table>
<thead>
<tr>
<th>Stage 1 – The Four Core Disciplines of Social Studies</th>
</tr>
</thead>
</table>
| **Civics**  
Important ideas of civics are based on understanding government at various levels, the political system, rules and laws, civic engagement, and democratic principles. |
| **Economics**  
The idea of “resources” as including human, physical, and natural resources is essential for understanding the economic decisions people, businesses, and governments make in local, national, and global markets. |
| **Geography**  
Using maps and other representations of Earth, understanding the relationship between culture and the environment, analyzing how human populations change, and learning that some environmental changes occur on a global scale are all essential aspects of geography. |
| **History**  
Reasoning about chronological patterns, explaining how people’s perspectives can change, working with historical sources, identifying causes and effects, and developing claims from evidence are some of the skills students develop as they study history. |

<table>
<thead>
<tr>
<th>Essential Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do social scientists do?</td>
</tr>
<tr>
<td>How do geographers study the regions of the United States?</td>
</tr>
<tr>
<td>How have different groups contributed to the United States?</td>
</tr>
<tr>
<td>What are different parts of the Northeast like?</td>
</tr>
<tr>
<td>How do people live in the Northeast?</td>
</tr>
<tr>
<td>What factors have shaped the culture of the Southeast?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stage 2 – Assessment Evidence</th>
</tr>
</thead>
</table>
| **Assessment Tasks**  
Classwork and Activities  
Student work in Student Notebook  
TCI assessments |

<table>
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<tr>
<th>Stage 3 – Learning Plan</th>
</tr>
</thead>
</table>
| **Learning Activities**  
In a Response Group activity, students discuss artifacts from the perspective of each of these social science traditions: economics, geography, political science, and history.  
In a Social Studies Skill Builder, students work in pairs to interpret a series of special purpose maps depicting five regions of the United States and attempt to identify the locations where five images of the United States were taken.  
In a Social Studies Skill Builder, students work in pairs to read about one of five ethnic groups American Indians, Latinos, European Americans, African Americans, and Asian Americans and draw images and symbols to represent that group's experience.  
In a Writing for Understanding activity, groups of students sit on a "train" and listen to a tour guide while they view images of places in the Northeast to learn key concepts and facts about the region. |
In an Experiential Exercise, students use their bodies and desks to simulate the population density of the Northeast and several comparative locales.

In a Writing for Understanding activity, students "travel" by boat and bus while listening to a tour guide and viewing images depicting life in the Southeast. The tour stops at three sites, where students engage in interactive experiences and learn key concepts and facts about the region.

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</table>
SOCIAL STUDIES TRIMESTER 2

GRADE 3-4
Unit Length: 1 Trimester

<table>
<thead>
<tr>
<th>Stage 1 – Desired Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCREL Domains</td>
</tr>
<tr>
<td>- History (H)</td>
</tr>
<tr>
<td>- Geography (G)</td>
</tr>
<tr>
<td>- Civics (C)</td>
</tr>
<tr>
<td>- Economics (E)</td>
</tr>
<tr>
<td>Student Outcomes (numbers refer to MCREL Standards)</td>
</tr>
<tr>
<td>- Understands family life now and in the past, and the importance of democratic values (H1.1, H1.2, H4.4, H4.5, H4.14)</td>
</tr>
<tr>
<td>- Understands the characteristics and uses of maps, globes, and other geographic tools (G1.1, G1.2, G1.3)</td>
</tr>
<tr>
<td>- Understands how humans modify the physical environment (G14.1)</td>
</tr>
<tr>
<td>- Understands ideas about civic life, politics, law enforcement and government (C1.1, C1.3, C1.7, C3.1, C3.2)</td>
</tr>
<tr>
<td>- Understands basic features of market structures and exchanges domestically and internationally (E4.4, E2.3)</td>
</tr>
</tbody>
</table>

Essential Questions
- How are communities different, and how do they change?
- What tools do geographers use, and how?
- How are goods made and exchanged?
- What does a good citizen do?

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<tr>
<td>Assessment Tasks</td>
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<tr>
<td>- Complete a simulation of a factory, and then create a storyboard explaining how a factory operates</td>
</tr>
<tr>
<td>- Create a poster explaining the different jobs people do in our community and the services they offer</td>
</tr>
<tr>
<td>- Create a PowerPoint explaining how to be a smart consumer, include pictures from field trip</td>
</tr>
<tr>
<td>- Explore how Freetown has changed over time and create an interactive timeline</td>
</tr>
<tr>
<td>- Chapter tests and quizzes</td>
</tr>
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<td>- Self-assessment at end of unit</td>
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<td>Learning Activities</td>
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<tr>
<td>- Understand learning objectives for the unit and each lesson</td>
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<tr>
<td>- Complete a KWL chart at relevant stages throughout the unit</td>
</tr>
<tr>
<td>- Examine maps and practice map reading skills</td>
</tr>
<tr>
<td>- Practice making maps and identify the importance of tools such as title, key and compass rose</td>
</tr>
<tr>
<td>- Read information and discuss together, explain to one another what we understood by the information</td>
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<tr>
<td>- Create visual representations of material including storyboards, flow diagrams, Venn diagrams and concept maps</td>
</tr>
<tr>
<td>- Interview people with different jobs in our school to understand how services are provided in a community</td>
</tr>
<tr>
<td>- Field Trip to Freetown Mall to better understand how and why goods are bought and sold, and how to be a smart consumer</td>
</tr>
<tr>
<td>- Research using the library, classroom resources, interviews and the internet</td>
</tr>
<tr>
<td>- Present and compare information in written, spoken and visual projects</td>
</tr>
<tr>
<td>- Watch relevant video clips and interviews</td>
</tr>
<tr>
<td>- Use TCI interactive website to explore further reading and knowledge check assignments</td>
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  - TCI Lessons 6 – 10 |

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<td>- <a href="http://www.teachtcicom">www.teachtcicom</a> – students all have their own log in information</td>
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<td>- First Atlas for Sierra Leone Schools, MacMillan (1993)</td>
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SOCIAL STUDIES TRIMESTER 3
GRADE 3-4
Unit Length: 1 Trimester

Stage 1 – Desired Results

MCREL Domains
- History (H)
- Geography (G)
- Civics (C)
- Economics (E)

Student Outcomes (numbers refer to MCREL Standards)
- Understands family life now and in the past, and the importance of democratic values (H1.1, H1.2, H4.4, H4.5, H4.14)
- Understands the characteristics and uses of maps, globes, and other geographic tools (G1.1, G1.2, G1.3)
- Understands how humans modify the physical environment (G14.1)
- Understands ideas about civic life, politics, law enforcement and government (C1.1, C1.3, C1.7, C3.1, C3.2)
- Understands basic features of market structures and exchanges domestically and internationally (E4.4, E2.3)

Essential Questions
- How can one person make a difference?
- How do leaders help their communities?
- What does a good citizen do?
- What do communities share?

Stage 2 – Assessment Evidence

Assessment Tasks
- Students will identify problems their community and propose solutions.
- Students will conduct a mock demonstration urging community leaders to improve the school playground.
- Students will create a Good Citizen book recording all the good citizen acts they will perform.
- Students will discover the economic interdependence of communities by exchanging product cards.
- Chapter tests and quizzes
- Self-assessment at end of unit

Stage 3 – Learning Plan

Learning Activities
- Understand learning objectives for the unit and each lesson
- Complete a KWL chart at relevant stages throughout the unit
- Read information and discuss together, explain to one another what we understood by the information
- Create visual representations of material including storyboards, flow diagrams, Venn diagrams and concept maps
- Create an award for someone who has helped your community
- Conduct interviews about being good citizens
- Design a postcard about an aspect of your community to share with other communities
- Interview people with different jobs in our school to understand how services are provided in a community
- Research using the library, classroom resources, interviews and the internet
- Present and compare information in written, spoken and visual projects
- Watch relevant video clips and interviews
- Use TCI interactive website to explore further reading and knowledge check assignments
TCI Lessons 6 – 10

Resources

- [www.teachtci.com](http://www.teachtci.com) – students all have their own log in information
- Teacher led TCI presentations
- *Our Community*, TCI (2011)
- *Our Community Interactive Notebook*, TCI (2011)
- *Social Studies and the Environment*, Conservation Society of Sierra Leone
- Storyboards, [www.storyboardthat.com](http://www.storyboardthat.com)
- Selected other resources from the internet, classroom and school libraries as needed