I. **UNIT THEME** – Dinosaurs and Other Prehistoric Life
   Our understanding of prehistoric life comes from the study of fossils and changes as new information is discovered.

II. **FOCUS AND MOTIVATION**
   - Inquiry charts
   - Observation charts
   - Super Scientist awards
   - Picture File cards
   - Realia
   - Teacher made big book
   - Chants

III. **CONCEPTS (report card indicators in bold)**

   **Systems**
   - **Physical Systems**
     - **Properties of Substances**
       - 1.1.1 Understand simple properties of common natural and manufactured materials and objects.
       - *Sort common objects by physical characteristics.*
   - **Living Systems**
     - **Characteristics of Living Matter**
       - 1.1.6 Understand characteristics of living organisms.
       - *Observe and describe characteristics of living organisms.*
   - **Biological Evolution**
     - 1.3.9 Know that fossils show how organisms looked long ago.
     - *Observe and record how fossils are similar to living organisms.*
   - **Interdependence of Life**
     - 1.3.10 Understand that an organism’s ability to survive is influenced by the organism’s behavior and the ecosystem in which it lives.
     - *Describe the characteristics of organisms that allow them to survive in an ecosystem.*
     - *Describe the role of an organism in a food chain of an organism (i.e., predator, prey, consumer, producer, decomposer, scavenger).*

   **Earth and Space Systems**
   - **History and Evolution of the Earth**
     - 1.3.5 Know that fossils provide evidence of plants and animals that existed long ago.
     - *Identify a fossil in a rock.*
     - *Compare fossils (that represent the remains of prehistoric plants and animals) with similar living organisms.*

   **Inquiry**
   - **Investigating Systems**
     - **Questioning**
       - 2.1.1 Understand how to ask a question about objects, organisms, and events in the environment.
       - *Wonder and ask questions about objects, organisms, and events based on observations of the natural world.*
     - **Explaining**
       - 2.1.3 Understand how to construct a reasonable explanation using evidence.
       - *(Categorize and order observational data from multiple trials.)*
       - *Explain an event or phenomenon using observations as evidence.*
Modeling
2.1.4 Understand that models represent real objects, events, or processes.
   - Describe how a model (e.g., diagram or map and/or physical model) of something is similar to the real thing, such as an object, event, or process, and how it is different (e.g., size, shape, color).
   - Create a simple model (e.g., diagram or map and/or physical model) of a common object, event, or process.

Nature of Science
Limitations and Science and Technology
2.2.2 Understand that observations and measurement are used by scientists to describe the world.
   - Raise questions about the natural world and seek answers by making careful observations and trying things out.
   - Make observations and measurements about natural phenomena.

Evolution of Scientific Ideas
2.2.5 Know that ideas in science change as new scientific evidence arises.
   - Tell how scientific inquiry results in facts, unexpected findings, ideas, evidence, and explanations.

Application
Science, Technology, and Society
All Peoples Contribute to Science and Technology
3.2.1 Know that science and technology are practiced by all peoples around the world.
   - Identify ways that people around the world use science and technology.
   - Identify ways that people around the world use science and technology to invent things and ideas.

Relationship of Science and Technology
3.2.2 Know that people have invented tools for everyday life.
   - Describe ways in which common tools help people in their everyday life.

IV. VOCABULARY
See cognitive content dictionary APPENDIX I page 1.

V. SKILLS (See APPENDIX)
   Washington State Reading Standards 2nd Grade (See APPENDIX page 1)
   Washington State Writing Standards 2nd grade (See APPENDIX page 2)
   ELD Standards (See APPENDIX Pages 3-6)

VI. CLOSURE
   - Process charts and learning
   - Add to living walls
   - Present expert information
   - Letter home
   - Portfolio
   - Add student made sketches to pictorial input charts
   - Share team explorations and personal explorations
   - Authentic and/or alternative means of assessment (formative and summative)
   - Teacher/student developed rubrics
   - District developed end-of-unit assessment
VII. RESOURCES AND MATERIALS -

BOOKS (see kit and school library)

TECHNOLOGY

- Google Images www.google.com (search by specific name)
- United Streaming Video (see Teacher/Staff Resources on SPS web page)
- Discovery Channel www.discoverychannel.com
- Enchanted Learning www.zoomdinosours.com
- www.dinosaurfact.net
- www.search4dinosaurs.com
- www.kidsdinos.com
I. FOCUS AND MOTIVATION
   · Read aloud, variety of sources
   · Big book
   · Scientist Awards
   · Inquiry Chart
   · Cognitive Content Dictionary with signal words
   · Poetry and Chants
   · Observation Charts
   · Realia
   · Picture File Cards
   · Team point chart

II. INPUT
   · Pictorial input chart -
   · Narrative Input - Dinosaur Dream by Dennis Nolan
   · Bones, Bones, Dinosaur Bones by Byron Barton
   · U.S. map
   · World Map
   · Graphic Organizer - Six Kingdoms of Living Things
   · Read Aloud, variety of sources
   · 10-2 lecture with primary language
   · Time line
   · Big books

III. GUIDED ORAL PRACTICE
   · T-graph for social skills
   · Sentence Patterning Chart - Dinosaurs
   · Exploration Report
   · Process grid
   · Mind Map
   · Found Poetry
   · Picture File Cards
   · Poetry Chants
   · Personal Interactions
   · Numbered Heads together

IV. READING AND WRITING
   A. Total Class Modeling
      · Strip books
      · Found Poetry
      · Story Mapping with Narrative
      · Poetry Frames
      · Cooperative Strip Paragraph
      · Flip Chant
      · DRTA (Directed Reading Thinking Activity)
B. Small Group Practice - Anything modeled by teacher
   - Flexible grouping for ELD reinforcement, Primary Language Reading Instruction, Skills Reinforcement
   - Team Tasks
   - Story Mapping
   - Cooperative strip paragraph reading
   - Clunker and Links
   - ELD Group
   - Ear-to-ear reading
   - Focused reading
   - Expert groups

C. Individual Activities - Portfolio
   - Learning Logs
   - Cognitive Content Dictionary - Focused reading with personal CCD
   - Interactive Journals
   - Poetry booklet
   - Reading/writing choice time
   - Response activities

D. Writer’s Workshop (Reports)

V. EXTENDED ACTIVITIES FOR INTEGRATION

VI. CLOSURE
   - Process all charts
   - Personal Exploration
   - Parent letter
   - Home/School Connections
   - Group Presentations of Projects (Dinosaur Museum/Probe/Newspaper)
   - District developed end of unit assessment
<table>
<thead>
<tr>
<th>Part One</th>
<th>Part Two</th>
<th>Part Three</th>
<th>Part Four</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FOCUS/MOTIVATION</strong></td>
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<tr>
<td>• Super Scientist Awards/Three Standards</td>
<td>• Cognitive Content Dictionary w/signal word</td>
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<tr>
<td>• Observation Charts</td>
<td>• Process Home/School Connection -</td>
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<td>• Process Home/School Connection -</td>
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<tr>
<td>• Inquiry Chart (KWL)</td>
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<tr>
<td>• Big Book</td>
<td>• Review Input Charts – with word cards.</td>
<td>• Review Narrative – with word cards and talking bubbles</td>
<td>• Review Aloud</td>
</tr>
<tr>
<td>• Portfolios</td>
<td>• Poetry – highlight, sketch, picture file cards</td>
<td>• Chants</td>
<td>• Read Aloud</td>
</tr>
<tr>
<td>• Chants</td>
<td>• Read Aloud</td>
<td>• Strip Book simile</td>
<td>• Read Aloud</td>
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<td><strong>INPUT</strong></td>
<td><strong>INPUT</strong></td>
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<tr>
<td>• Graphic Organizer – Timeline</td>
<td>• Apatosaurus Input Chart</td>
<td>• Narrative</td>
<td>• Team Action Plan</td>
</tr>
<tr>
<td>• Graphic Organizer – USA map</td>
<td>• Graphic Organizer – add to map and timeline as needed (p.9)</td>
<td>• Story Map</td>
<td>• Sentence Patterning chart</td>
</tr>
<tr>
<td>• 10/2 Lecture</td>
<td>• 10/2 Lecture</td>
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<td><strong>GUIDED ORAL PRACTICE</strong></td>
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<tr>
<td>• T-GRAPH – social skills</td>
<td>• Expert Groups / Team Tasks</td>
<td>• Expert Groups / Team Tasks</td>
<td>• Team Action Plan</td>
</tr>
<tr>
<td>• Exploration Report</td>
<td>• Sentence Patterning chart</td>
<td>• Sentence Patterning chart</td>
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<tr>
<td>• Pictorial Input</td>
<td>• Narratives</td>
<td>• Mind Map</td>
<td>• Ear to Ear Reading</td>
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<tr>
<td></td>
<td>• Story Map</td>
<td>• Process Grid</td>
<td>• Listen and Sketch</td>
</tr>
<tr>
<td></td>
<td>• T-Graph</td>
<td></td>
<td>• DRTA</td>
</tr>
</tbody>
</table>

**CLOSURE:** Interactive Journal – Home/School Connection – Add to Charts – Read alouds
# Correlation of Activities

<table>
<thead>
<tr>
<th>SPS Unit Activity</th>
<th>GLAD Unit Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In The Know</td>
<td>KWL chart</td>
</tr>
<tr>
<td>2. Guess My Occupation</td>
<td>Narrative Input: <em>Bones, Bones, Dinosaur Bones</em></td>
</tr>
<tr>
<td>3. Sorting Dinosaurs</td>
<td>Comparison Input</td>
</tr>
<tr>
<td>4. Constructing a Graph: Dino vs. Non-dino</td>
<td>Have You Heard? Big Book</td>
</tr>
<tr>
<td>5. Explore Together</td>
<td>Tooth “Yes, It Is”</td>
</tr>
<tr>
<td>6. Characteristics of Dinosaurs</td>
<td>Dinosaur “Yes Ma’am”</td>
</tr>
<tr>
<td>7. Match the Dinosaur</td>
<td></td>
</tr>
<tr>
<td>8. Forming Sedimentary Rock</td>
<td></td>
</tr>
<tr>
<td>9. How Fossils Are Formed</td>
<td></td>
</tr>
<tr>
<td>10. Making Fossil Prints</td>
<td></td>
</tr>
<tr>
<td>11. “Body”saurus</td>
<td></td>
</tr>
<tr>
<td>12. How Big Is Big?</td>
<td></td>
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<tr>
<td>13. How Many Feet Will Fit?</td>
<td></td>
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<tr>
<td>14. Developing a Dinosaur Time Scale</td>
<td>Time line</td>
</tr>
<tr>
<td>15. Mapping the Dinosaurs</td>
<td>U.S. map</td>
</tr>
<tr>
<td>16. What’s It For?</td>
<td></td>
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<tr>
<td>17. Dinosaur Defenses</td>
<td></td>
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<tr>
<td>18. How Dinosaurs Lived</td>
<td></td>
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<tr>
<td>19. Predators vs. Prey</td>
<td></td>
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<tr>
<td>20. Dinosaur Text to Picture</td>
<td>Expert Groups</td>
</tr>
<tr>
<td>21. Making a Dinosaur Habitat</td>
<td></td>
</tr>
<tr>
<td>23. Where Did They Go?</td>
<td></td>
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<tr>
<td>24. What’s Your Theory?</td>
<td>Home Connection</td>
</tr>
<tr>
<td>New Word</td>
<td>TPR</td>
</tr>
<tr>
<td>----------</td>
<td>------------------------------------------</td>
</tr>
</tbody>
</table>
| Paleontologist | Pulling on hat  
Looking through  
magnifying glass  
Digging           |                  | A person who studies prehistoric times |                                  |
| Omnivore  | Hand to mouth  
Fist through hand  
Chomping          |                  | An animal that eats both plants and meat |                                |
| Theropod  | Walking fingers  
chomping           |                  | Two legged meat eating dinosaur |                                 |
| Cycad     | Hands open up and out                     |                  | Non flowering plant with palm like leaves |                              |
| Fossil    | Looking through magnifying glass  
Palm pushes away |                  | Any evidence of past life          |                                  |
| Sauropod  | Hand on neck, elongated,  
hand goes out showing long tail |                  | Longneck, long tailed dinosaur |                                 |
| Coprolite | Fist to hand (like rock paper scissors)  
All fingers come down like a tent on palm of other hand |                  | Fossilized animal droppings |                                 |
| Sedimentary | Wiggly hand going downward                |                  | Matter that settles to the bottom of a liquid |        |
## Dinosaur Process Grid

<table>
<thead>
<tr>
<th>Group</th>
<th>Example/Description</th>
<th>Period</th>
<th>Habitat</th>
<th>Enemies</th>
<th>Food/Diet</th>
<th>Defenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Neck (sauropods)</td>
<td>Apatosaurus</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Armored (thyreophorans)</td>
<td>Stegosaurus</td>
<td></td>
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<tr>
<td>Duck-bills (ornithopod)</td>
<td>Iguanodon</td>
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<tr>
<td>Fast/Fierce (theropod)</td>
<td>Coelophysis</td>
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<tr>
<td>Head bone frills</td>
<td>Triceratops</td>
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<tr>
<td>( marginocephalian)</td>
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<td></td>
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</tbody>
</table>
Washington State Reading Standards 2nd Grade

1.1.4 Apply understanding of phonics.
1.2.2 Apply vocabulary strategies in grade level text.
1.3.1 Understand and apply new vocabulary.
1.3.2 Understand and apply content/academic vocabulary.

2.1.3 Apply comprehension monitoring strategies during and after reading: determine importance using theme, main ideas, and supporting details in grade-level informational/expository text and/or literary/narrative text.
2.1.4 Apply comprehension monitoring strategies before, during, and after reading: use prior knowledge/schema.
2.1.5 Apply comprehension monitoring strategies before, during, and after reading: predict and infer.
2.1.6 Apply comprehension monitoring strategies before, during, and after reading: monitor for meaning, create mental images.
2.1.7 Apply comprehension monitoring strategies during and after reading: summarize informational/expository text and literary/narrative text.

2.2.1 Know story sequence.
2.2.2 Understand and apply features of printed and electronic text to locate and comprehend text.
2.2.3 Understand story elements.
2.2.4 Understand text organizational structures.
2.3.1 Understand and analyze the relationship between and among literary/narrative text and informational/expository text.
2.3.2 Understand how to locate specific information.
2.4.1 Understand how to draw simple conclusions and give a response to text.
2.4.2 Understand that there are purposes for writing.
2.4.3 Understand there are facts and opinions.

3.1.1 Understand how to select and use appropriate resources.
3.2.1 Understand information gained from reading to perform a specific task.

4.1.1 Understand how to monitor own reading progress.
4.1.2 Understand how to set grade-level appropriate reading goals.
4.2.1 Understand that readers have favorite books.
**APPENDIX**

**Page 2**

**Washington State Writing Standards 2nd grade**

1.1.1 Applies at least one strategy for generating ideas and planning writing.
1.2.1 Produces a draft of multiple sentences or several paragraphs over time.
1.3.1 Revises text by adding and deleting words and phrases.
1.4.1 Applies understanding of editing appropriate for grade level (see 3.3).
1.5.1 Publishes own writing.
2.1.1 Understands that writing changes for different audiences.
2.2.1 Demonstrates understanding of different purposes for writing.
2.3.1 Uses a variety of forms/genres.
2.4.1 Knows important personal information.
3.1.1 Analyzes ideas, selects topic, adds detail, and elaborates.
3.1.2 Organizes multiple sentences on one topic showing beginning, middle, and ending.
3.2.1 Writes with voice.
3.2.2 Uses a variety of words.
3.2.3 Uses more than one sentence type and structure.
3.3.1 Uses legible handwriting.
3.3.2 Spells words appropriate for the grade level accurately, with challenging words spelled phonetically.
3.3.3 Applies capitalization rules.
3.3.4 Applies punctuation rules.
3.3.5 Applies usage rules.
3.3.6 Uses complete sentences in writing.
3.3.7 Understands paragraph conventions.
4.1.1 Understands criteria are used to select a preferred piece of writing.
4.1.2 Uses specific criteria for analyzing own writing.
4.2.1 Identifies specific goals for next piece of writing.
APPENDIX
Page 3

ELD Standards
ELD Listening/Speaking Standards - Grades K-5 Washington State

Beginning –
- Very limited understanding of English
- Learns to distinguish and produce English phonemes
- Uses words, gestures, and actions
- Practices repetitive social greetings
- Imitates verbalizations of others to communicate:
  - Basic needs
  - Participate in discussions and activities
  - Respond to simple directions

Advanced Beginning -
- Uses words and/or phrases
- Uses appropriate social greetings
- Participates in social discussions on familiar topics and in academic discussions
- Develops correct word order in phrases
- Begins to use content-related vocabulary
- Retells simple stories and identifies the main points

Intermediate -
- Uses simple sentences with inconsistent use of syntax, tense, plurals, and subject/verb agreement
- Tells a story, informs, explains, entertains, and participates in social and academic discussions
- Begins to use root words, affixes, and cognates to determine the meaning of new words

Advanced -
- Uses descriptive sentences with common grammatical forms with some errors
- Participates in academic and social discussions using appropriate ways of speaking based on audience and subject matter
- Tells a story, informs, explains, entertains, and persuades
- Uses simple figurative language and idiomatic expressions in discussions
- Uses root words, affixes, and cognates to determine the meaning of new words

Transitional -
- Speaks clearly and comprehensibly using standard English grammatical forms with random errors
- Applies content-related vocabulary in a variety of contexts and situations
- Gives oral presentations
**APPENDIX**

**Page 4**

**ELD Reading Standards – Grades 3-5 Washington State**

**Beginning –**
- Expresses self using words, drawings, gestures, and actions:
  - Sequences simple text
  - Answers literal questions
  - Makes simple predictions
- Aware of familiar sounds
- Recognizes and produces rhyming words containing familiar sounds
- Uses and comprehends highly contextualized vocabulary
- Follows simple written directions (e.g., color, cut, glue)
- Reads sight words
- Begins to understand concepts of print

**Advanced Beginning –**
- Expresses self using words and/or phrases to identify:
  - Characters
  - Setting
  - Main idea and details
  - Compare and contrast
  - Cause and effect
- Aware of familiar and unfamiliar sounds
- Employs word-meaning strategies
- Applies inflectional endings to words
- Increases sight-word and content-area vocabulary
- Distinguishes between genres
- Reads highly contextualized text composed of simple sentences
- Applies concepts of print

**Intermediate –**
- Expresses self using simple sentences
- Produces unfamiliar sounds
- Decodes word patterns
- Employs word-meaning strategies
- Begins to read familiar text fluently
- Increases vocabulary through reading across content areas
- Uses text features to:
  - Gain meaning
  - Monitor for comprehension
  - Describe images from text
  - Connects text to prior knowledge
- Distinguishes between:
  - Fiction/non-fiction
  - Fact/opinion
  - Fantasy/reality
-Infers and makes generalizations from text
- Reads text at student’s reading level across content areas
APPENDIX
Page 5

ELD Reading Standards cont.

Advanced –
- Expresses self using descriptive sentences
  - Identifies theme
  - Recognizes literary devices
  - Compares and contrasts
- Uses a variety of strategies to monitor comprehension
- Recognizes phonemes within multi-syllabic words
- Uses word parts to determine word meanings
- Reads with increasing fluency
- Independently confirms word meanings
- Uses a variety of resources for research
- Follows multi-step written directions
- Text increases in length and complexity

Transitional –
- Adjusts reading rate as needed
- Uses specialized vocabulary, uses multiple meaning words appropriately
- Analyzes literary elements
- Uses comprehension and questioning strategies, summarizes text, analyzes and applies persuasive devices
- Explains cause and effect, citing evidence from text
- Develops research skills
- Follows increasingly complex written directions
- Comprehends grade level text
ELD Writing Standards - Grades K-5 Washington State

Beginning –
- Draws, labels
- Writes familiar words and sight words
- Writes to name, describe, or complete a list
- Begins to use invented spelling, capital letters, participates in group editing
- Audience may be self, teacher, or known person
- Sequences pictures to assist with organization
- Uses graphic organizers to convey main ideas and details
- Participates in group writing process

Advanced Beginning -
- Writes unfamiliar words and phrases
- Begins to write based on a model or frame
- Demonstrates inconsistent use of:
  - Caps, punctuation, and correct spelling
- Participates in group brainstorming
- Writes rough draft and revises

Intermediate –
- Writes simple sentences
- Demonstrates increasing control of:
  - Caps, punctuation, and correct spelling
  - Word order
  - Subject/verb agreement
- Develops own voice in writing
- Distinguishes between writing for different audiences and purposes
- Uses basic transitions
- Writes individually and in a group process
- Writes rough draft independently

Advanced –
- Uses descriptive sentences
- Writes for a variety of audiences and purposes
- Uses grade level conventions inconsistently
- Refines voice in writing
- Uses a topic sentence and supporting details
- Follows the five step writing process (with assistance in editing and revising)

Transitional –
- Uses specialized vocabulary across content areas
- Uses standard grammar and conventions with lapses characteristic of ELL students