

Understanding by Design: School: Mountain Home School District

Designer Name(s): 4<sup>th</sup> Grade Team

Date:

Subject Area: ELA

Grade Level(s): 4<sup>th</sup>

Unit Title/Focus: Science Fair, Unit 4

Estimated Amount of Instructional Time: 6 Weeks

Stage 1 – (Desired Results)

**State Content and Skill Standards:**

**Reading Standards for Literature:**

RL 4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

RL 4.2 Determine a theme of a story, drama, or poem from details in the text; summarize the text.

RL 4.3 Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

RL 4.4 Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., Herculean).

RL 4.5 Explain major differences between poems, drama, and prose, and refer to the structural elements of poems (e.g., verse, rhythm, meter) and drama (e.g., casts of characters, settings, descriptions, dialogue, stage directions) when writing or speaking about a text.

RL 4.9 Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.

RL 4.10 By the end of the year, read and comprehend literature, including stories, dramas, and poetry, in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

**Reading Standards for Informational Text:**

RI 4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

RI 4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.

RI 4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

RI 4.4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a *grade 4 topic or subject area*.

RI 4.5 Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

RI 4.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

RI 4.8 Explain how an author uses reasons and evidence to support particular points in a text.

RI 4.9 Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

RI 4.10 By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

RF 4.3 Know and apply grade-level phonics and word analysis skills in decoding words.

RF 4.3.A Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.

RF 4.4 Read with sufficient accuracy and fluency to support comprehension.

RF 4.4.A Read grade-level text with purpose and understanding.

RF 4.4.B Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.

RF 4.4.C Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

**Writing Standards:**

W 4.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

W4.2.A Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.

W4.2.C Link ideas within categories of information using words and phrases (e.g., *another, for example, also, because*).

W4.2.D Use precise language and domain-specific vocabulary to inform about or explain the topic.

W4.2.E Provide a concluding statement or section related to the information or explanation presented.

W4.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)

W4.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1-3 up to and including grade 4 [here](#).)

W4.6 With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

W4.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic.

W4.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

W4.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

W4.9.A Apply *grade 4 Reading standards* to literature (e.g., "Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text [e.g., a character's thoughts, words, or actions].").

W4.9.B Apply *grade 4 Reading standards* to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text").

W4.10 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 discipline-specific tasks, purposes, and audiences.

**Speaking and Listening Standards:**

SL4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly.

SL4.1.A Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.

SL4.1.B Follow agreed-upon rules for discussions and carry out assigned roles.

SL4.1.C Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

SL4.1.D Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

SL4.3 Identify the reasons and evidence a speaker provides to support particular points.

SL4.4 Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

SL4.5 Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.

## Language Standards:

L4.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

L4.1.A Use relative pronouns (*who, whose, whom, which, that*) and relative adverbs (*where, when, why*).

L4.1.F Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.\*

L4.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

L4.2.A Use correct capitalization.

L4.2.D Spell grade-appropriate words correctly, consulting references as needed.

L4.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.

L4.3.A Choose words and phrases to convey ideas precisely.\*

L4.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

L4.4.A Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.

L4.4.B Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *telegraph, photograph, autograph*).

L4.4.C Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

L4.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

L4.5.C Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms).

L4.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., *wildlife, conservation, and endangered* when discussing animal preservation).

**Enduring Understandings:** (*what are the big ideas, what are the specific understandings desired*)

Students will understand that...

- ✓ The scientific method is an important way to learn information
- ✓ Scientific experiments increase our knowledge of the world around us
- ✓ Science has benefited us in our everyday lives

**Essential Questions:** (*what questions will foster inquiry, understanding, and transfer of learning*)

- Why is the scientific method important? What makes some experiments better than others?
- How could you prove that magnetism exists? How would the world be different without magnets?
- Why is it important to observe the world around us? How does science make the world less mysterious?
- How does science benefit people? How can we make experiments safer to perform?
- Where do scientists get their ideas? Why is it important for scientists to communicate their ideas?

## Big Idea(s)

What steps lead to a good experiment?

**What Students will know:** (*what knowledge will they acquire*)

Key Terms

1. *Anxious, observations, examine, local, crabbier, certain, react, results*
2. *Rarely, attract, pure, core, force, related, current, friction*
3. *Drizzly, techniques, overwhelm, environment, competitor, findings, peered, pursuit*
4. *Genuine, forecasts, eclipse, mast, charted, inventions, charge, shocked*
5. *Pace, common, previous, major, randomly, publication, questionnaire, rejected*

**What Students will be able to do:** (*what will they eventually be able to do as a result of their skills learned/knowledge*)

- ❖ Students will demonstrate a willingness to delve into that which is mysterious.

<b>Stage 2 - Assessment Evidence (acceptable assessment evidence that students understand)</b>	
<i>Performance Tasks: (what authentic performance task (s) will students demonstrate understanding; by what criteria will it be judged?)</i>	<i>Other Evidence: (quizzes, tasks, academic prompts, homework, observations)</i>
<b>Stage 3 - Learning Plan (sequence of teaching and learning activities that will produce desired understandings, engagement and development) Use WHERETO elements to help you:</b>	
<i>Learning Activities:</i>	

W=help the students know WHERE the unit is going and WHAT is expected/Help teacher to know where the students are coming from (prior knowledge, interests)

H=HOOK all students and hold their interest

E=EQUIP students, help them EXPERIENCE the key ideas and EXPLORE the issue

R=Provide opportunities to RETHINK and REVISE their understanding/work

E (2)=Allow students to EVALUATE their work

T=Be TAILORED (personalized) to different needs, interests, and abilities of learners

O=Be ORGANIZED to maximize initial and sustained engagement as well as effective learning

<b>Assessment Tasks that Provide Evidence for Claims including DOK</b>	<input type="checkbox"/> <b>Claim #1/DOK 1, 2, 3, 4 (circle one):</b>
	<input type="checkbox"/> <b>Claim #2/DOK 1, 2, 3, 4 (circle one):</b>
	<input type="checkbox"/> <b>Claim #3/DOK 1, 2, 3, 4 (circle one):</b>
	<input type="checkbox"/> <b>Claim #4/DOK 1, 2, 3, 4 (circle one):</b>
<b>Achievement Level Descriptors</b>	<b>ALD #1:    ALD #2:    ALD #3:    ALD #4:    (circle one):</b>
<b>Materials/Resources</b>	