



5 Light HWEO (23-24)

Duration: 6 Weeks, 6 hours

Unit dates: 23rd Aug 2023 - 4th Oct 2023

Subjects: Library Media, Social Studies, Science, English, Visual Art, Music

Grades: 4

Planning



Transdisciplinary theme

How we express ourselves

Transdisciplinary theme focus

- our appreciation of the aesthetic
- the ways in which we reflect on, extend and enjoy our creativity



Central idea

Understanding scientific principles can help us to create and express



Learner profile attributes

Risk-takers, Communicators



Key concepts

Perspective, Function, Change



Related concepts

Concepts

- **Perspective:** creativity
- **Function:** light
- **Change:** expression



Lines of inquiry

- The literal and symbolic uses of light (light; function)
- The manipulation of light to express (expression, change)
- The different ways we express our creativity (creativity, perspective)



Approaches to learning

Self-management skills

Self-Management Skills

Self-Management Skills (General)

Teaching the ATL skills

SEL Journeys - Unit 2 Self-Management



Learning goals and success criteria

(bold equals what we're keeping for 22-23, not bolded has been moved to HTWW)

What we want students to know

1. The length of a shadow changes in relationship to the position of the sun.
2. The position of the sun in the sky changes because of the rotation of the Earth on its axis.
3. Day and night is caused by the rotation of the Earth on its axis.
4. Earth's orbit around the sun causes the length of daylight to change during the year
5. **Themes such as light and dark can be presented differently in stories, myths and traditional literature**

What we want students to understand:

1. Earth's movements create patterns in how light is seen
2. **light can be used figuratively to convey meaning**
3. **light can be manipulated artistically**

What we want students to be able to do:

1. Describe the relationship between the length of shadows and the apparent movement of the sun in the sky.
2. Explain that day and night is a result of the rotation of the Earth on its axis.
3. Use data to determine that the length of changes over the year.
4. Describe that the length of day changes over the length of the year because of the Earth's orbit around the sun.
5. **compare and contrast similar themes in literature in stories, myths and traditional literature from different cultures**

6. identify how light is used in the arts to convey a message



Subject standards

Visual Art

Creating

Reflect- Refine- Continue

- VA:Cr3.1.4a - Revise artwork in progress on the basis of insights gained through peer discussion. *(VA:Cr3.1.4a)*

Responding

Perceive

- VA:Re.7.2.4a - Analyze components in visual imagery that convey messages. *(VA:Re.7.2.4a)*

Analyze

- VA:Re8.1.4a - Interpret art by referring to contextual information and analyzing relevant subject matter, characteristics of form, and use of media. *(VA:Re8.1.4a)*

Social Studies

History

Perspectives

- HIST 4.1 - Explain connections among historical contexts and people's perspectives at the time. *(HIST 4.1)*

Music

Connecting

Connect

- MU:Cn11.0.4a - Demonstrate understanding of relationships between music and the other arts, other disciplines, varied contexts, and daily life. *(MU:Cn11.0.4a)*

English

Reading: Literature

Craft and Structure:

- CCSS.ELA-LITERACY.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. *(CCSS.ELA-LITERACY.RL.4.5)*
- CCSS.ELA-LITERACY.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). *(CCSS.ELA-LITERACY.RL.4.4)*

Integration of Knowledge and Ideas:

- CCSS.ELA-LITERACY.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. *(CCSS.ELA-LITERACY.RL.4.9)*
- CCSS.ELA-LITERACY.RL.4.7 - Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text. *(CCSS.ELA-LITERACY.RL.4.7)*

Writing

Production and Distribution of Writing

- CCSS.ELA-LITERACY.W.4.4 - 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.) (*CCSS.ELA-LITERACY.W.4.4*)
- CCSS.ELA-LITERACY.W.4.5 - 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.) (*CCSS.ELA-LITERACY.W.4.5*)

Research to Build and Present Knowledge

- CCSS.ELA-LITERACY.W.4.9.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"). (*CCSS.ELA-LITERACY.W.4.10*)
- CCSS.ELA-LITERACY.W.4.9.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]."). (*CCSS.ELA-LITERACY.W.4.9.A*)

Text Types and Purposes

- CCSS.ELA-LITERACY.W.4.1 - Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (*CCSS.ELA-LITERACY.W.4.1*)
- CCSS.ELA-LITERACY.W.4.1.A - Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose. (*CCSS.ELA-LITERACY.W.4.1.A*)
- CCSS.ELA-LITERACY.W.4.1.B - Provide reasons that are supported by facts and details. (*CCSS.ELA-LITERACY.W.4.1.B*)
- CCSS.ELA-LITERACY.W.4.1.C - Link opinion and reasons using words and phrases (e.g., for instance, in order to, in addition). (*CCSS.ELA-LITERACY.W.4.1.C*)
- CCSS.ELA-LITERACY.W.4.1.D - Provide a concluding statement or section related to the opinion presented. (*CCSS.ELA-LITERACY.W.4.1.D*)

Science

Waves and their Applications in Technologies for Information Transfer

Developing and Using Models

- 4-PS4-1 Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.
- 4-PS4-2 Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.

Constructing Explanations and Designing Solutions

- 4-PS4-3 Generate and compare multiple solutions that use patterns to transfer information.

Earth's Place in the Universe

Analyzing and Interpreting Data

- 5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.



Connections: Transdisciplinary and past

Library- Students will explore spaces and light through literature throughout this unit. They listened to books- for example- Zoo in the Sky and Margaret and the Moon.

Implementing

LE Learning experience library**1.3 Shadow Investigation 2**

Amy Rios

Today's work revisits your flashlight/water bottle experiment from yesterday....but today, we're taking it outside! I expect you to try this on your own, but I'm including both videos and pictures of what I did so you can use it if you're unable to conduct the experiment yourself. Read all the slides before you begin. ¡Hola! El trabajo de hoy retoma el experimento con la linterna / botella de agua de ayer ... pero hoy, ¡lo llevaremos afuera! Espero que intentes esto por tu cuenta, pero he incluido videos e imágenes de lo que hice para que puedas usarlo si no puedes realizar el experimento ti mismo. Leas todas las diapositivas antes de comenzar.

**3.2 Daylight and Seasons Investigation 19-20 distance**

Amy Rios

**4.2 Assessment**

Amy Rios

Hello, fourth graders! Today you'll review the important concepts from the past several days about how the Earth spinning on its axis AND orbiting the sun changes the amount of sunlight the Earth receives over a year. This is useful information for tomorrow's final activity.

**2.3 Shadows, Earth, Sun Check in 19-20 distance**

Amy Rios

Today you'll answer some questions on a Google form. This is an important activity, and your teacher will score your answers using this rubric: 0=does not understand concept; 1 = partially understands concept; 2= mostly or completely understands concept.

Teacher notes

ask Susan to share Google form

**2.1 Shadows 19-20 distance**

Amy Rios

**2.2 Earth's Revolution 19-20 distance**

Amy Rios

A big learning in this Unit of Inquiry for students is that the Earth is turning and that the Sun....does not! Today's work will help you understand that better.

**4.1 Sunrise/Sunset Investigation 19-20 distance**

Amy Rios

Hello, fourth graders! Today you will be using a table of sunrise/sunset information to complete a table. Work carefully because you'll need this information later in the week. Check out the Google slide show and get started. The print is very small on the calendar; just zoom into the document so it's easier to read.

**1.4 Distance of Shadow investigation 19-20 distance**

Amy Rios



1.2 Shadow Investigation 1 Let's talk about shadows-19-20

Amy Rios

Hello,

Today you'll experiment with shadow. Check out the Google Doc for more info. I expected today (Tuesday, May 19) to be a bit overcast, so this is in an indoor activity. Have fun!

Ps....I don't trust shadows....they seem kind of shady!

Hola,

Hoy experimentarás con la sombra. Echa un vistazo a Google Doc para más información. Esperaba que hoy (martes 19 de mayo) estuviera un poco nublado, así que esto es una actividad bajo techo. ¡Que te diviertas!



3.1 Daylight Investigation 1 19-20 distance

Amy Rios

Last week's learning was that the Earth turns on its axis once every 24 hours. This turn causes night and day. This week we are going to look at the amount of daylight we get over the course of the year, how it changes, and why.



3.3 Sunshine and Location Investigation

Amy Rios

Today you will compare two charts showing sunrise/sunset from two different cities in different parts of the world, and do some thinking about them. Take a look at the Google slide show....and try to get through the day without getting this song stuck in your head!



3.2 Sunlight and Seasons 19-20 distance

Amy Rios

Hi, everyone! For today, we're working on answering "What causes daylight to change from summer to winter?" You'll be watching a short video and answering some questions. Don't forget to check out the bonus question!



SAS.U2.RML1 A writer defines a word within the text to help you understand it.

Amy Rios

U2 – Using Context to Understand Vocabulary

SAS.U2.RML1 A writer defines a word within the text to help you understand it.



LA.U21.RML5 Human and animal characters and normal objects are often magical.

Amy Rios

U21- Studying Fantasy

LA.U21.RML5 Human and animal characters and normal objects are often magical.



LA.U21.RML7 Fantasy stories often reveal a lesson or something true about the world.

Amy Rios

U21- Studying Fantasy

LA.U21.RML7 Fantasy stories often reveal a lesson or something true about the world.



LA.U11.RML3 Illustrators create art to show the mood.

Amy Rios

U11 – Studying Illustrators and Analyzing an Illustrator’s Craft
LA.U11.RML3 Illustrators create art to show the mood.



1.1 Provocation-Investigating light-19-20 distance

Amy Rios

Hello, and welcome to your final Unit of Inquiry, "How We Express Ourselves" for the school year! We will be studying LIGHT as both a scientific concept and an artistic one!

Try to do this assignment as early in the day as possible. You'll see why on slide 4 of the Google Doc.

There are several slides, but just a little bit of work on slide 3-7.

Hola, y bienvenidos a su Unidad de Investigación final, "Cómo nos expresamos" para el año escolar.

¡Estudiaremos LIGHT como un concepto científico y artístico!

Intenta hacer esta tarea lo más temprano posible en el día. Verá por qué en la diapositiva 4 de Google Doc. Hay varias diapositivas, pero solo un poco de trabajo en la diapositiva 3-7.



LA.U21.RML4 Fantasy stories can be set in the real world or in a completely imagined world.

Amy Rios

U21- Studying Fantasy

LA.U21.RML4 Fantasy stories can be set in the real world or in a completely imagined world.



SAS.U4.RML2 Put your words together so it sounds like talking.

Amy Rios

U4 – Maintaining Fluency

SAS.U4.RML2 Put your words together so it sounds like talking.



SAS.U2.RML3 A writer uses a word that is opposite or nearly opposite in meaning to help you understand a word you don't know.

Amy Rios

U2 – Using Context to Understand Vocabulary

SAS.U2.RML3 A writer uses a word that is opposite or nearly opposite in meaning to help you understand a word you don't know.



LA.U21.RML2 The definition of fantasy is what is always true about it.

Amy Rios

U21- Studying Fantasy

LA.U21.RML2 The definition of fantasy is what is always true about it.



SAS.U4.RML1 Notice how the author wants you to read the sentence.

Amy Rios

U4 – Maintaining Fluency

SAS.U4.RML1 Notice how the author wants you to read the sentence.



LA.U11.RML7 Illustrators show time passing in the pictures to help you understand the story.

Amy Rios

U11 – Studying Illustrators and Analyzing an Illustrator’s Craft

LA.U11.RML7 Illustrators show time passing in the pictures to help you understand the story.

**SAS.U4.RML3 Make your reading sound smooth and interesting.**

Amy Rios

U4 – Maintaining Fluency

SAS.U4.RML3 Make your reading sound smooth and interesting.

**LA.U21.RML3 Fantasy stories cannot happen in the real world.**

Amy Rios

U21- Studying Fantasy

LA.U21.RML3 Fantasy stories cannot happen in the real world.

**LA.U11.RML6 Illustrators use short scenes for different purposes.**

Amy Rios

U11 – Studying Illustrators and Analyzing an Illustrator's Craft

LA.U11.RML6 Illustrators use short scenes for different purposes.

**SAS.U2.RML5 Word parts help you understand what a word means.**

Amy Rios

U2 – Using Context to Understand Vocabulary

SAS.U2.RML5 Word parts help you understand what a word means.

**LA.U11.RML4 Illustrators use perspective in their art to communicate an idea or a feeling.**

Amy Rios

U11 – Studying Illustrators and Analyzing an Illustrator's Craft

LA.U11.RML4 Illustrators use perspective in their art to communicate an idea or a feeling.

**LA.U21.RML1 Fantasy stories are alike in many ways.**

Amy Rios

U21- Studying Fantasy

LA.U21.RML1 Fantasy stories are alike in many ways.

**SAS.U2.RML4 A writer gives an example to help you understand what a word means.**

Amy Rios

U2 – Using Context to Understand Vocabulary

SAS.U2.RML4 A writer gives an example to help you understand what a word means.

**LA.U21.RML6 Fantasy stories are often about good versus evil.**

Amy Rios

U21- Studying Fantasy

LA.U21.RML6 Fantasy stories are often about good versus evil.

**SAS.U2.RML2 A writer uses a word that is similar in meaning to help you understand a word you don't know.**

Amy Rios

U2 – Using Context to Understand Vocabulary

SAS.U2.RML2 A writer uses a word that is similar in meaning to help you understand a word you don't know.

**LA.U11.RML5 Illustrators use specific details to make something appear real.**

Amy Rios

U11 – Studying Illustrators and Analyzing an Illustrator’s Craft

LA.U11.RML5 Illustrators use specific details to make something appear real.

**SAS.U2.RML6 Greek and Latin roots help you understand what a word means.**

Amy Rios

U2 – Using Context to Understand Vocabulary

SAS.U2.RML6 Greek and Latin roots help you understand what a word means.

**LA.U6.RML4 Poets use imagery to make you see, hear, and feel things.**

Amy Rios

U6 – Studying Poetry

LA.U6.RML4 Poets use imagery to make you see, hear, and feel things.

**LA.U10.RML2 Writers use punctuation to make their writing interesting.**

Amy Rios

U10- Reading Like a Writer: Analyzing the Writer’s Craft

LA.U10.RML2 Writers use punctuation to make their writing interesting.

**LA.U10.RML1 Writers choose precise words to create a mood.**

Amy Rios

U10- Reading Like a Writer: Analyzing the Writer’s Craft

LA.U10.RML1 Writers choose precise words to create a mood.

**LA.U4.RML3 Notice the text features the author/illustrator uses to create narration, sound, and dialogue.**

Amy Rios

U4 – Reading Graphic Texts

LA.U4.RML3 Notice the text features the author/illustrator uses to create narration, sound, and dialogue.

**LA.U10.RML6 Writers use unconventional grammar for effect.**

Amy Rios

U10- Reading Like a Writer: Analyzing the Writer’s Craft

LA.U10.RML6 Writers use unconventional grammar for effect.

**LA.U7.RML3 A limerick is a rhyming poem that is usually surprising, funny, and nonsensical.**

Amy Rios

U7 – Exploring Different Kinds of Poetry

LA.U7.RML3 A limerick is a rhyming poem that is usually surprising, funny, and nonsensical.

**LA.U10.RML3 Writers use different techniques to create humor.**

Amy Rios

U10- Reading Like a Writer: Analyzing the Writer’s Craft

LA.U10.RML3 Writers use different techniques to create humor.

**LA.U11.RML2 Illustrators create art to add to the meaning of the text.**

Amy Rios

U11 – Studying Illustrators and Analyzing an Illustrator's Craft

LA.U11.RML2 Illustrators create art to add to the meaning of the text.

**LA.U6.RML1 Poems are alike in many ways.**

Amy Rios

U6 – Studying Poetry

LA.U6.RML1 Poems are alike in many ways.

**LA.U6.RML6 Poets repeat words with the same sounds.**

Amy Rios

U6 – Studying Poetry

LA.U6.RML6 Poets repeat words with the same sounds.

**LA.U6.RML5 Poets use rhythm so you can enjoy the language.**

Amy Rios

U6 – Studying Poetry

LA.U6.RML5 Poets use rhythm so you can enjoy the language.

**LA.U7.RML1 A lyrical poem is a songlike poem that has rhythm and sometimes rhyme.**

Amy Rios

U7 – Exploring Different Kinds of Poetry \

LA.U7.RML1 A lyrical poem is a songlike poem that has rhythm and sometimes rhyme.

**LA.U10.RML8 Writers use repetition in interesting ways.**

Amy Rios

U10- Reading Like a Writer: Analyzing the Writer's Craft

LA.U10.RML8 Writers use repetition in interesting ways.

**LA.U4.RML4 Notice how the author/illustrator uses color and lines.**

Amy Rios

U4 – Reading Graphic Texts

LA.U4.RML4 Notice how the author/illustrator uses color and lines.

**LA.U7.RML2 A free verse poem doesn't have to rhyme or have rhythm.**

Amy Rios

U7 – Exploring Different Kinds of Poetry

LA.U7.RML2 A free verse poem doesn't have to rhyme or have rhythm.

**LA.U4.RML2 Notice the text features the author/illustrator uses to help you follow the action.**

Amy Rios

U4 – Reading Graphic Texts

LA.U4.RML2 Notice the text features the author/illustrator uses to help you follow the action.

**LA.U10.RML7 Writers use personification to describe something in a clear and interesting way.**

Amy Rios

U10- Reading Like a Writer: Analyzing the Writer's Craft

LA.U10.RML7 Writers use personification to describe something in a clear and interesting way.

**LA.U11.RML1 Study illustrators to learn about their craft.**

Amy Rios

U11 – Studying Illustrators and Analyzing an Illustrator's Craft

LA.U11.RML1 Study illustrators to learn about their craft.

**LA.U10.RML5 Writers use words from languages other than English to add authenticity.**

Amy Rios

U10- Reading Like a Writer: Analyzing the Writer's Craft

LA.U10.RML5 Writers use words from languages other than English to add authenticity.

**LA.U7.RML4 Haiku is an ancient Japanese form of non- rhyming poetry that creates a picture and often conveys emotion.**

Amy Rios

LA.U7.RML4 Haiku is an ancient Japanese form of non- rhyming poetry that creates a picture and often conveys emotion.

**LA.U6.RML3 Poets use line breaks and white space to show you how to read the poem.**

Amy Rios

U6 – Studying Poetry

LA.U6.RML3 Poets use line breaks and white space to show you how to read the poem.

**LA.U7.RML5 A concrete poem is shaped to show what the poem is about.**

Amy Rios

U7 – Exploring Different Kinds of Poetry

LA.U7.RML5 A concrete poem is shaped to show what the poem is about.

**LA.U10.RML4 Writers use similes and metaphors to compare one thing to another.**

Amy Rios

U10- Reading Like a Writer: Analyzing the Writer's Craft

LA.U10.RML4 Writers use similes and metaphors to compare one thing to another.

**LA.U4.RML1 Study the illustrations closely to understand what is happening.**

Amy Rios

U4 – Reading Graphic Texts

LA.U4.RML1 Study the illustrations closely to understand what is happening.

**LA.U6.RML2 The definition of poetry is what is always true about it.**

Amy Rios

U6 – Studying Poetry

LA.U6.RML2 The definition of poetry is what is always true about it.



Resources

 [5 18 20 Week 1, Day 1 ppt](#)

 [Google Docs – create and edit documents online, for free.](#)

 [1](#)

 [1](#)

 [1](#)

 [2](#)

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