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Science Readers: Content and Literacy in Science— Grade 1 (Spanish)

This sample includes the following:

Teacher's Guide Cover (1 page)

Table of Contents (2 pages)

How to Use This Product (5 pages)

Lesson Plan (11 pages)

Reader (13 pages)

To Create a World ⁱⁿ which
Children Love to Learn!

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SCIENCE READERS

Content *and* Literacy *in* Science

Grade 1



Teacher's
Guide

Spanish
Version

Teacher Created Materials
PUBLISHING

Table of Contents

INTRODUCCIÓN

Series Welcome	5
Fostering Content-Area Literacy	6
Science in the 21st Century	12
Using the 5Es in a Classroom	14
The 5Es and This Book	15
How to Use This Product	16
About the Books	26
Introduction to Standards Correlations	34
Correlations to Standards	35



CIENCIAS NATURALES

<i>¿Cómo se forma una planta?</i>	
Lesson Plan	39
Student Reproducibles	44
<i>Dentro de una planta</i>	
Lesson Plan	50
Student Reproducibles	55
<i>Cuidar a las crías: Lo que hacen los padres animales</i>	
Lesson Plan	61
Student Reproducibles	66
<i>Crecimiento y cambio</i>	
Lesson Plan	72
Student Reproducibles	77
<i>Todo queda en familia</i>	
Lesson Plan	83
Student Reproducibles	88



CIENCIAS FÍSICAS

<i>Cómo se mueve el sonido</i>	
Lesson Plan	94
Student Reproducibles	99
<i>¡Mensaje recibido!</i>	
Lesson Plan	105
Student Reproducibles	110
<i>La luz forma un arco iris</i>	
Lesson Plan	116
Student Reproducibles	121
<i>Sombras</i>	
Lesson Plan	127
Student Reproducibles	132
<i>Cómo se mueve el calor</i>	
Lesson Plan	138
Student Reproducibles	143

Table of Contents *(cont.)*

CIENCIAS de la TIERRA y del ESPACIO

Las estaciones

Lesson Plan	149
Student Reproducibles	154

Nuestro sol

Lesson Plan	160
Student Reproducibles	165

La Tierra y la luna

Lesson Plan	171
Student Reproducibles	176

¡Mira hacia arriba!

Lesson Plan	182
Student Reproducibles	187

Reciclamos

Lesson Plan	193
Student Reproducibles	198

PRÁCTICAS CIENTÍFICAS

Detectives científicos

Lesson Plan	204
Student Reproducibles	209

APÉNDICES

Culminating Activity: Diseña un pueblo	215
Activity Sheets <i>Diseña un pueblo</i>	217
Pauta: <i>Diseña un pueblo</i>	220
Answer Key	221
References Cited	229
Digital and Audio Content	231

Kit Components



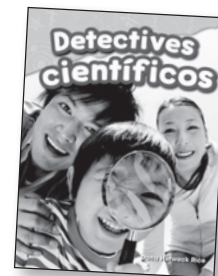
Life Science books



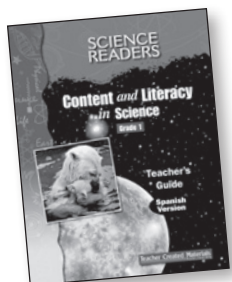
Physical Science books



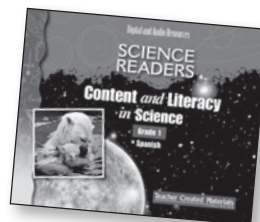
Earth and Space Science books



Scientific Practices book



Teacher's Guide



Digital and Audio Resources

Unit Organization

Overview Page

Science strand

Learning objectives

Standards

Suggested timeline for lesson

Learning Objective
Students will:
• determine the main topic and key details of the book;
• connect what they read with prior knowledge to answer questions;
• identify the features of plants.

Standards
• Reading: Identify the main topic and recall key details of a text.
• Writing: With guidance and support from adults, recall information from experiments or gather information from provided sources to answer a question.
• Language: Communicate information, ideas, and concepts necessary for academic success in the content area of Science.

Lesson Timeline

Day 1	Day 2	Day 3
Task: Introductory and Lab Activities (page 40)	Task: Before Reading (page 41)	Task: During Reading (page 42)
Summary of Student Learning Activities: Sort the parts of a plant.	Summary of Student Learning Activities: Identify the main topic and a supporting detail for each section of the book and use the book to answer questions.	Summary of Student Learning Activities: Identify the main topic and a supporting detail for each section of the book and use the book to answer questions.
Task: After Reading (page 43)	Task: Activity From the Book (page 43) and Assessments (page 44)	Task: Activity From the Book (page 43) and Assessments (page 44)
Summary of Student Learning Activities: Complete a chart about the details of a plant's cycle.	Summary of Student Learning Activities: Identify plant parts that match up and label the illustrations.	Summary of Student Learning Activities: Identify plant parts that match up and label the illustrations.

Introductory and Lab Activities

Materials

- copies of the activity sheet (pages 40-41)
- scissors
- chart paper
- glue
- flowering potted plants

Engage

- Show students a flowering potted plant. Do not tell them it is a plant. Ask students to describe it in every way they can. Record their responses on the board.
- Explain that a plant is a living thing like an animal, but it has different parts. Ask students to name the parts of the plant. Record their responses on the board. Tell students that they will be learning about the different plant parts.

Lab Activity: Explore & Explain

- Put students in small groups. Distribute flowering potted plants, scissors, and copies of the activity sheet (pages 40-41) to groups. Have groups study and discuss the parts of the plant.
- Show students how to carefully cut apart the plant and place its parts onto the activity sheet (pages 40-41). Instruct students to discuss each of the parts and where they should be placed.
- Ask students the following questions as they sort and classify the plant parts:
 - ¿Qué partes pueden ser parte de un tallo?
 - ¿Cómo se relaciona una flor a un tallo?
 - ¿Qué elementos están los raíces?
 - ¿Cuáles son las hojas?
- Bring the class together for instruction. Ask students to compare their work with others to place the parts of the plant. Clarify any misconceptions. Encourage the idea that each of the parts has a role and unique features.
- On chart paper for the plant parts students have learned. Record students' observations of each part. Have students draw a plant and label its parts on a separate sheet of paper.

Before Reading

Materials list

Vocabulary Word Bank

Elaborate on the concept with a vocabulary and a prereading activity

Materials

- copies of the activity sheet (pages 40-41)
- scissors
- chart paper
- glue
- flowering potted plants

Vocabulary Word Bank

Before Reading

- Identify the main topic and key details of the book. Ask students to connect what they read with prior knowledge to answer questions. Identify the features of plants.
- Read the book. Identify the main topic and key details of the book. Ask students to connect what they read with prior knowledge to answer questions. Identify the features of plants.
- Read the book. Identify the main topic and key details of the book. Ask students to connect what they read with prior knowledge to answer questions. Identify the features of plants.

During Reading

During Reading

- Read the book. Identify the main topic and key details of the book. Ask students to connect what they read with prior knowledge to answer questions. Identify the features of plants.
- Read the book. Identify the main topic and key details of the book. Ask students to connect what they read with prior knowledge to answer questions. Identify the features of plants.
- Read the book. Identify the main topic and key details of the book. Ask students to connect what they read with prior knowledge to answer questions. Identify the features of plants.

After Reading

Materials list

Elaborate with an After Reading activity on Day 4

Evaluate with Assessments on Day 5

Materials

- copies of the activity sheet (pages 40-41)
- scissors
- chart paper
- glue
- flowering potted plants

After Reading

- Identify the main topic and key details of the book. Ask students to connect what they read with prior knowledge to answer questions. Identify the features of plants.
- Read the book. Identify the main topic and key details of the book. Ask students to connect what they read with prior knowledge to answer questions. Identify the features of plants.
- Read the book. Identify the main topic and key details of the book. Ask students to connect what they read with prior knowledge to answer questions. Identify the features of plants.

Student Reproducibles and Assessments

Clear directions

Multiple-choice quiz

Data Analysis activity

Wide write-on lines

Partes de la planta

Ciclo de vida de una planta

Prueba: ¿Cómo se forma una planta?

Los partes de plantas que comemos

Pacing Plan

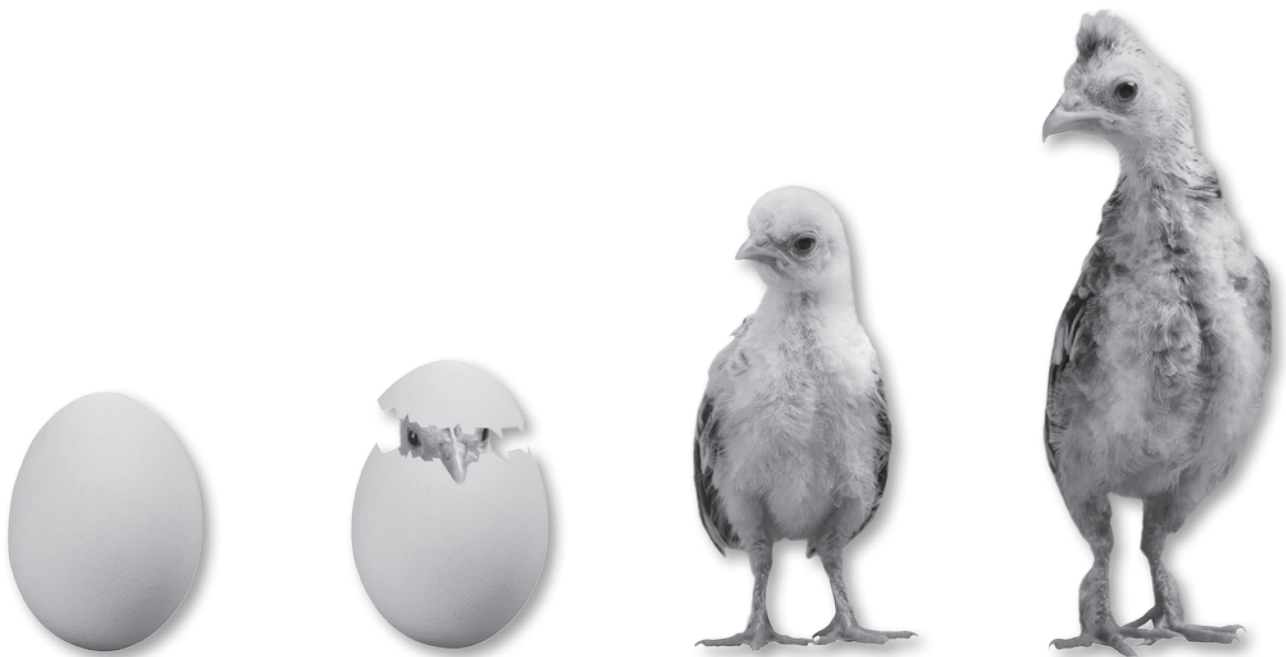
The following pacing plan shows an option for using this product. Teachers should customize this pacing plan according to their students' needs. One lesson has been included for each of the 16 books. Each day of the lesson requires 20 to 30 minutes of time and spans 5 instructional days, for a total of approximately 30–40 hours over the course of 80 days.

Instructional Time	Frequency	Setting
20–30 min./day	5 days/week	Whole-class, small-group or one-on-one instruction

Day 1	Day 2	Day 3	Day 4	Day 5
Introductory and Lab Activities	Before Reading	During Reading	After Reading	Activity from the Book and Assessments

Lab Safety

To ensure safety in the science classroom, a *Contrato de seguridad en la ciencia* has been provided in the Digital Resources (*seguridad.pdf*). Distribute copies of this contract to students prior to beginning any science instruction. Discuss with students how to be respectful and responsible during science activities. Ask students and their parents/guardians to sign and return the contract for your records.



Science Strands

The books and lessons in this kit cover the three strands of science which encompass the Disciplinary Core Ideas. The icons in the lessons and on the back of the books denote each strand. One book in this kit is devoted completely to scientific practices. This book describes how to think like a scientist and study the natural world.



Differentiation

Students learn best when material is scaffolded appropriately. If a student is confronted with material that is too difficult, he or she may become frustrated and give up. However, if a student is not challenged enough, he or she may become bored and lose interest in the subject. Differentiation is not about making the work easy for students. Instead, it is about challenging all students appropriately.

The books in this kit are leveled to target and support different groups of learners. The chart on page 26 contains specific information on the reading levels of the books included in this kit. The lesson plans for these books have **differentiation strategies** to help **above-, on-, and below-level learners** comprehend the material. These strategies will ensure that students are actively engaged in learning while receiving the support or enrichment that they need.

Language learners have different instructional needs. Although these students may struggle with reading, that is not always the case. Language learners need different support depending on their level of language proficiency. The lesson plans in this kit offer suggestions to differentiate instruction for the unique needs of language learners.

SCIENCE READERS

Differentiation Tools in This Kit

- Audio recordings of texts model fluency and support auditory learners.
- An Interactiv-eBook for each book supports students through video, audio, and other digital functions.
- Graphic organizers support visual learners and language learning.
- Hands-on lab activities engage tactile learners.
- Leveled books support above-, on-, and below-level learners.
- Differentiation strategies embedded in each lesson support a variety of learners.

Assessment

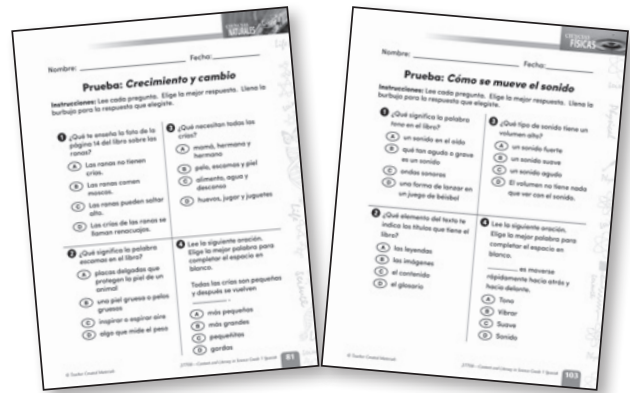
Assessment is an important part of this unit of study. The Science Readers series offers multiple assessment opportunities. You can gain insight into students' learning through multiple-choice quizzes, small-group observations, analysis of written assignments, and a culminating activity. These formal and informal assessments provide you with the data needed to make informed decisions about what to teach and how to teach it. This is the best way for you to know who is struggling with various concepts and how to address the difficulties that students are experiencing with the curriculum.

Multiple-Choice Quizzes—At the end of each book's lesson in this Teacher's Guide is a short quiz with multiple-choice questions. These short assessments may be used as open-book evaluations or as review quizzes in which students read and study the content prior to taking the quiz. Additionally, the quizzes may be used as a more formal assessment to provide evidence of learning.

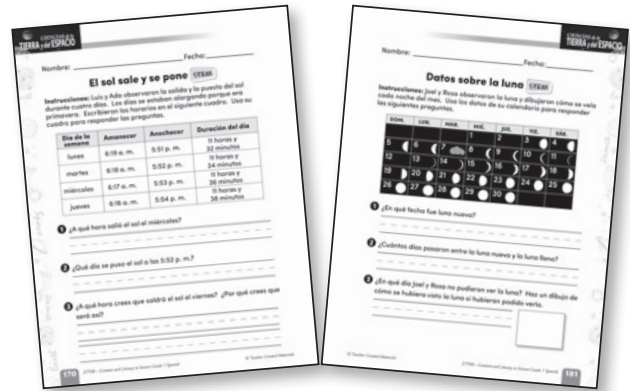
Data Analysis Activities—Each activity includes content-related data and text-dependent questions. These questions help students develop and strengthen critical thinking skills.

Culminating Activity—The culminating activity asks students to apply what they have learned throughout the units in an engaging and interactive way. Students use what they have learned to create new ideas in a real-life context.

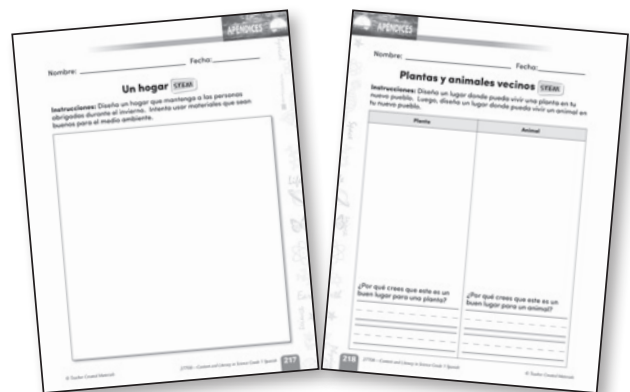
Progress Monitoring—There are several points throughout each lesson where useful evaluations can be made. These evaluations can be made based on group, paired, and individual discussions and activities.



Multiple-Choice Quizzes



Data Analysis Activity



Culminating Activity



Learning Objectives

Students will:

- use text features to locate facts and information in the book.
- recall information from the text and experiences to answer a question.
- identify patterns of the moon and Earth.

Standards

- **Reading:** Know and use various text features to locate key facts or information in a text.
- **Writing:** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
- **Content:** Use observations of the sun, moon, and stars to describe patterns that can be predicted.
- **Language:** Communicate information, ideas, and concepts necessary for academic success in the content area of Science.

Lesson Timeline

Day 1

Task

Introductory and Lab Activities (page 172)

Summary of Student Learning Activities

Observe how the moon's shadow creates the phases that we see.

Day 2

Task

Before Reading (page 173)

Summary of Student Learning Activities

Preview the book and hunt for text features.

Day 3

Task

During Reading (page 174)

Summary of Student Learning Activities

Use text features to locate information and answer a question using information from the book.

Day 4

Task

After Reading (page 175)

Summary of Student Learning Activities

Practice using the index to find information in the book.

Day 5

Task

Activity from the Book (page 175) and **Assessments** (pages 180–181)

Summary of Student Learning Activities

Create a chart listing the phases of the moon that they observed and take the assessments.

Materials

- copies of the activity sheet *Observaciones en el laboratorio* (page 176)
- paper
- coloring supplies
- ball
- lamp

Day 1

Observe how the moon's shadow creates the phases that we see.

Introductory Activity

Engage

1. Have students close their eyes and imagine that they are outside at night. Ask them what they see. When students mention the moon, ask everyone to picture in their heads what the moon looks like.
2. Have students open their eyes and draw a picture of the moon on a sheet of paper.
3. Have students share their drawings. Remind them of the other shapes the moon may have, such as a circle, a partial circle, or a crescent. Explain that the moon looks different each night and they will learn why.

Lab Activity

Explore & Explain

1. Before the activity, darken the room. Place a lamp without a shade in the center of the room. You may wish to do this activity as a whole class or place students in small groups, providing space to conduct the observations. Distribute a playground ball to each group. Tell students to pretend that the ball is the moon, the lamp is the sun, and they are Earth.
 - ¿Qué sombras ven en la pelota?
 - ¿Qué observan sobre las figuras que forman las sombras?
 - ¿En qué se parecen y en qué se diferencian la luna y la pelota?
 - ¿Qué le pasa a la sombra mientras dan vueltas?
2. Instruct students to hold the ball slightly above their heads, if necessary, to keep their own shadows from interfering. Have them spin slowly in a circle while holding the ball. Ask them to discuss the shapes that the shadows make on the ball.
3. Ask questions to guide students to the idea that only the part of the moon that is lit by the sun can be seen.
4. Bring the class together for instruction. Ask students to share their understanding of why the moon looks different. Explain how the moon's shadow creates the different shapes, or phases, that we see. Clarify any misconceptions students may have about the moon.
5. Distribute copies of the activity sheet *Observaciones en el laboratorio* (page 176) to students. Read the directions aloud. Have students draw the ball's shadows from four different locations.

Day 2

Preview the book and hunt for text features.

Materials

- books *La Tierra y la luna*
- copies of the activity sheet *En busca de elementos del texto* (page 177)
- index cards
- chart paper

Vocabulary Word Bank

- eje
- fases
- luna llena
- luna nueva
- planeta
- rota

Before Reading

Elaborate

1. Write the vocabulary words on index cards. Discuss the words and explain their definitions. Then, place students in small groups and distribute a set of index cards to each group.
2. Ask groups to sort the words on the cards in a way that makes sense. After groups have finished, have each group explain how they arranged the words.
3. Display the book *La Tierra y la luna* for students and read the title aloud. Explain that nonfiction books use text features to help readers understand the text and find information.
4. Create a list of text features on chart paper. Be sure to list *leyendas*, *encabezados*, *recuadros laterales*, *palabras en negrita*, *glosario*, *índice*, and *contenido*. Explain the purpose of each. Have students help you identify examples of each text feature in the book. **Note:** Save the list of text features to use later in the lesson.
 - Pull **below-level learners** and **language learners** into a group. Have them create a visual glossary for the text features by drawing a small sketch or illustration of each text feature and labeling it.
5. Distribute the books *La Tierra y la luna* and copies of the activity sheet *En busca de elementos del texto* (page 177) to students. Read the directions aloud. Have students work in small groups to complete a text features scavenger hunt, noting the page numbers where they find each feature.

Materials

- books *La Tierra y la luna*
- copies of the activity sheets *Palabras sobre la Tierra y la luna* and *Un día en la Tierra* (pages 178–179)

Day 3

Use text features to locate information and answer a question using information from the book.

During Reading

Elaborate

1. Distribute the books *La Tierra y la luna* to students. Conduct a choral reading for the first reading of the book. Point out the text features on the pages as you read. Then, discuss how and why authors include text features and how they help readers locate information in a text.
2. Ask students what they know about a glossary. Model how to use the glossary. Think aloud to explain how a glossary can help a reader determine the meaning of unknown words.
 - You may choose to display the Interactiv-eBook for a more digitally enhanced reading experience.
3. Have students read in pairs for the second reading. Instruct students to take turns reading pages aloud with their partners. Ask them to discuss which text features in the book would be the most helpful when trying to locate information.
4. Distribute copies of the activity sheet *Palabras sobre la Tierra y la luna* (page 178) to students. Read the directions aloud. Have pairs use the glossary to complete the activity sheet together.
 - For **below-level learners** and **language learners**, you may choose to play the audio recording as students follow along to serve as a model of fluent reading. This may be done in small groups or at a listening station. The recordings will help struggling readers practice fluency and aid in comprehension.
5. Distribute copies of the activity sheet *Un día en la Tierra* (page 179) to students. Read the directions aloud. Lead the class in examining and analyzing the text features on page 7 of the book. Have students write what they learned from each text feature.
 - Have **above-level learners** create another text feature that would help readers understand the text on page 7.

Materials

- books *La Tierra y la luna*
- copies of the activity sheets *Prueba: La Tierra y la luna* and *Datos sobre la luna* (pages 180–181)

Days 4&5

Practice using the index to find information in the book. Create a chart listing the phases of the moon that they observed and take the assessments.

After Reading

Elaborate & Evaluate

1. Review the meanings of the vocabulary words with students. Then, use the words in sentences. Use some of the words correctly, and some of them incorrectly. Have students respond by either showing you a thumbs up if they think you used the word correctly, or a thumbs down if you used the word incorrectly.
2. Distribute the books *La Tierra y la luna* to students. Select one word from the index on page 23. Explain to students that the index shows where to find topics in the book, whereas the glossary gives the meanings of words. Model how to find the page on which the word appears and find it in the text.
3. Hold index races where a student calls out a topic and the remaining students race to find it in the text using the index. Discuss each topic. Ask students to explain how the index helped them find the topics more quickly than if they searched page by page.

Activity from the Book

Read the prompt ¡Tu turno! aloud from page 24 of the *La Tierra y la luna* book. Have students work in pairs to discuss the phases of the moon, and create a chart listing all the phases they have seen.

1. A short posttest, *Prueba: La Tierra y la luna* (page 180), is provided to assess student learning from the book.
2. A data analysis activity, *Datos sobre la luna* (page 181), is provided to assess students' understanding of how to analyze scientific data. Read the directions aloud. Point to the calendar and read the labels for the days of the week. Explain that the data is on a calendar with days and dates listed for the month of April. Explain to students that the chart shows what the moon looked like each of the days. **Note:** You may need to preteach reading calendars prior to giving this assessment.
3. The Interactiv-eBook activities may be used as a form of assessment (optional).

STEM

Nombre: _____ Fecha: _____

Observaciones en el laboratorio

Instrucciones: Dibuja la sombra de una pelota en cuatro lugares diferentes. Luego, responde la siguiente pregunta.

1	3
2	4

¿Qué aprendiste sobre por qué la luna se ve diferente todas las noches?

Nombre: _____ Fecha: _____

En busca de elementos del texto

Instrucciones: Escribe el número de la página donde encontraste cada elemento del texto en el libro.

Elemento del texto	Página
contenido	<hr/> <hr/> <hr/> <hr/>
título	<hr/> <hr/> <hr/> <hr/>
leyenda	<hr/> <hr/> <hr/> <hr/>
recuadro lateral	<hr/> <hr/> <hr/> <hr/>
palabras en negrita	<hr/> <hr/> <hr/> <hr/>
glosario	<hr/> <hr/> <hr/> <hr/>
índice	<hr/> <hr/> <hr/> <hr/>

Nombre: _____ Fecha: _____

Palabras sobre la Tierra y la luna

Instrucciones: Lee las palabras que están a continuación. Escribe cada palabra debajo de su definición.

eje luna llena luna nueva fases planeta rota

1 las ocho figuras del lado luminoso de la luna

2 un objeto grande y redondo en el espacio que viaja alrededor de una estrella

3 la luna cuando está totalmente oscura

4 gira o da vueltas

5 la línea imaginaria alrededor de la cual gira la Tierra

6 la luna cuando se ve como un círculo brillante completo

Nombre: _____ Fecha: _____

Un día en la Tierra

Instrucciones: Escribe lo que aprendiste de cada elemento del texto en la página 7.

Elemento del texto	Lo que aprendí
imagen	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
recuadro lateral	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
leyenda	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

Nombre: _____ Fecha: _____

Prueba: *La Tierra y la luna*

Instrucciones: Lee cada pregunta. Elige la mejor respuesta. Llena la burbuja para la respuesta que elegiste.

1 ¿Qué significa la palabra *rota*?

- A se contonea
- B se queda quieta
- C gira
- D se convierte en una estrella

3 ¿Qué sucede cuando la Tierra rota?

- A La noche se vuelve día y el día se vuelve noche.
- B Es de día en toda la Tierra.
- C La luna orbita alrededor del sol.
- D El sol también rota.

2 ¿Qué elemento del texto te ayuda a encontrar la página donde aparece una palabra?

- A el glosario
- B la leyenda
- C un cuadro
- D el índice

4 Lee la siguiente oración. Elige la mejor palabra para completar el espacio en blanco.































La Tierra dura 24 _____ en dar una vuelta completa.

- A segundos
- B horas
- C días
- D años

Nombre: _____ Fecha: _____

Datos sobre la luna STEM

Instrucciones: Joel y Rosa observaron la luna y dibujaron cómo se veía cada noche del mes. Usa los datos de su calendario para responder las siguientes preguntas.

DOM.	LUN.	MAR.	MIÉ.	JUE.	VIE.	SÁB.
			1 	2 	3 	4 
5 	6 	7 	8 	9 	10 	11 
12 	13 	14 	15 	16 	17 	18 
19 	20 	21 	22 	23 	24 	25 
26 	27 	28 	29 	30 		

1 ¿En qué fecha fue luna nueva?

2 ¿Cuántos días pasaron entre la luna nueva y la luna llena?

3 ¿En qué día Joel y Rosa no pudieron ver la luna? Haz un dibujo de cómo se hubiera visto la luna si hubieran podido verla.





La Tierra y la luna



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Teacher Created Materials

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Contenido

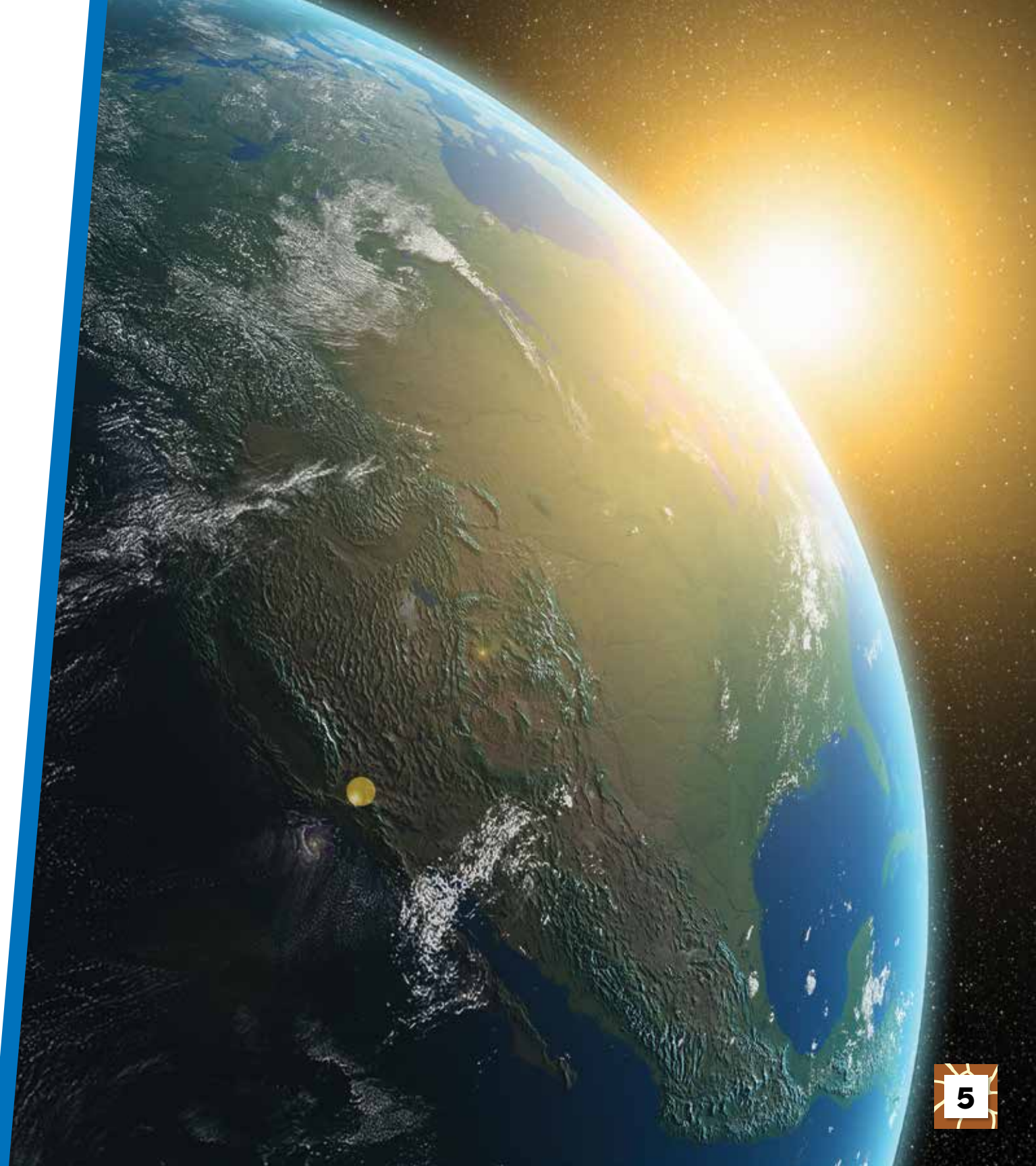
Nuestro hogar	4
Día y noche	6
Buenas noches, luna	12
¡En marcha!	18
¡Hagamos ciencia!	20
Glosario	22
Índice	23
¡Tu turno!	24



Nuestro hogar

Todos vivimos en la Tierra. La Tierra es un **planeta** redondo en el espacio que **rota**, o gira. También se desplaza alrededor de una gran estrella brillante llamada el sol.

La Tierra siempre se está moviendo.



Día y noche

No puedes sentirlo, pero la Tierra siempre está en movimiento. Tarda 24 horas en dar un giro completo.

Mientras rota, la parte de la Tierra de frente al sol recibe luz y calor. En esa parte del planeta es de día.



Es de día en Nueva York.

La Tierra rota sobre su eje, como un trompo.



Eje



Los ejes de la Tierra

La Tierra rota sobre su eje. Un eje es una línea imaginaria alrededor de la cual gira la Tierra.

Al mismo tiempo, la otra parte de la Tierra está oculta del sol. En esa parte de la Tierra es de noche.

Mientras la Tierra rota, la noche se convierte en día y el día se convierte en noche.



Es de noche en China.

Es de día en un lado de la Tierra.
Es de noche al otro lado de la Tierra.

Por la mañana, parece que el sol sale. Sale por el este. El sol alcanza su punto más alto en la tarde.

Al atardecer, el sol parece ocultarse en el cielo. Se pone por el oeste.

tarde

mañana

atardecer

Buenas noches, luna

Cuando el sol se pone, es más fácil ver la luna en el cielo. No siempre tiene el mismo aspecto. ¡Cambia todas las noches!

Día o noche

Principalmente vemos la luna de noche. Pero algunas veces podemos verla durante el día.

La luna cambia porque se mueve alrededor de la Tierra. Estos cambios se llaman **fases**.



Esto muestra las fases de la luna.

El sol ilumina la mitad de la luna, tal como ilumina la Tierra. La otra mitad de la luna está en la oscuridad.

A medida que la luna se mueve alrededor de la Tierra, vemos parte del lado iluminado.

Aquí solamente podemos ver parte del lado iluminado de la luna.



Caminata lunar

Solamente 12 personas han caminado sobre la luna.



Como una vez al mes, todo el lado de la luna iluminado por el sol está frente a la Tierra. Esta fase se llama **luna llena**.

Cuando la parte iluminada por el sol está oculta de la Tierra, no podemos ver la luna. Esta fase se llama **luna nueva**.

Cuando hay luna nueva, parece que la luna no está en el cielo.

luna llena



luna nueva



¡En marcha!

La Tierra está en constante movimiento. ¡Y la luna también! A causa de todo este movimiento, tenemos días y noches. Tenemos diferentes fases de la luna. Y tenemos un lugar especial al que llamamos *hogar*.



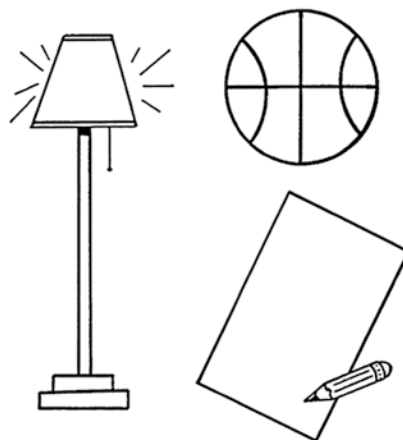
Así es como se ve la Tierra desde la luna.

¡Hagamos ciencia!

¿Por qué a veces la luna tiene diferentes aspectos? ¡Intenta esto y verás!

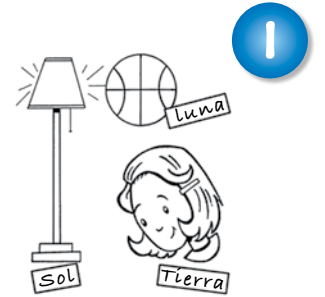
Qué conseguir

- lámpara
- papel y lápiz
- pelota

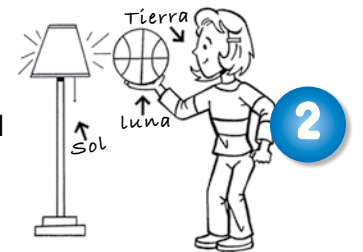


Qué hacer

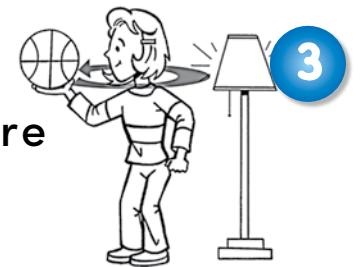
- 1 Supón que la pelota es la luna, tu cabeza es la Tierra y la lámpara es el sol. Coloca la lámpara en el medio de la habitación con todas las otras luces apagadas.



- 2 Sostén la pelota y muévela al frente de la luz.



- 3 Gírala toda lentamente. Observa las sombras sobre la pelota. Son como las sombras en la luna.



- 4 Haz dibujos de las sombras que viste. Observa tus dibujos. ¿Qué puedes notar?



Glosario

eje: la línea imaginaria alrededor de la cual gira la Tierra

fases: las ocho figuras del lado iluminado de la luna

luna llena: la luna cuando luce como un círculo brillante y completo

luna nueva: la luna cuando está completamente oscura

planeta: un objeto grande y redondo en el espacio que se mueve alrededor de una estrella

rota: gira o da vueltas

Índice

China, 9

eje, 7

fases, 13, 16–18, 24

luna, 12–18, 24

Nueva York, 6

planeta, 4, 7

sol, 4, 7–8, 10–12, 14, 16–17

Tierra, 4–9, 13–18



¡Tu turno!



Fases de la luna

Observa la luna todos los días.
Dibuja su forma. Observa cómo cambia.
¿Cuántas fases puedes ver?