TEACHER'S GUIDE

PIONEER AND TRAILBLAZER | VOL. 20 NO. 2

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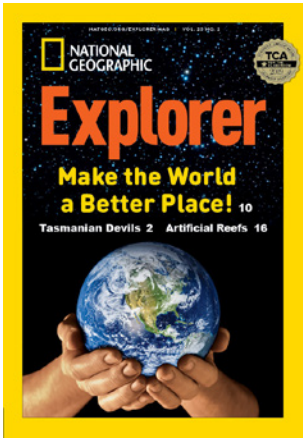


LEXILE® FRAMEWORK LEVELS

PIONEER

What the Devil! 550L

Make the World a Better Place! 540L

Artificial Reefs 540L

TRAILBLAZER

What the Devil! 560L

Make the World a Better Place! 570L

Artificial Reefs 660L

STANDARDS SUPPORTED

- **Common Core State Standards (CCSS)**
- **Next Generation Science Standards (NGSS)**
- **C3 Framework for Social Studies State Standards (C3)**

See each lesson for the specific standard covered.

Educational consultant **Stephanie Harvey** has helped shape the instructional vision for this Teacher's Guide. Her goal is to ensure you have the tools you need to enhance student understanding and engagement with nonfiction text.

NATIONAL GEOGRAPHIC

Visit **EXPLORERMAG.ORG** to access digital issues of Explorer magazine in **English** and **Spanish**. Engage students with digital read-alouds, videos, and interactive activities.

NATIONAL GEOGRAPHIC LEARNING FRAMEWORK

INTRODUCTION

BACKGROUND

Since 1888, the National Geographic Society has funded scientists and explorers and shared their findings with the world. To support educators who use our resources, we have created a Learning Framework, which lays out what we believe students should learn from their experiences with the Society.

PURPOSE

The Learning Framework was designed to convey the Society's core beliefs and values. It is built around a set of attitudes, skills, and knowledge that embody the explorer mindset.

To determine the learning outcomes within the Learning Framework, we dug deep into national standards in key subject areas. We also sought advice from subject matter and child development experts, along with the combined expertise of NG instructional designers, researchers, and content developers. To learn more, go to: https://www.nationalgeographic.org/education/learningframework/.

IMPLEMENTATION

Each article in this magazine has a knowledge-based link to the Learning Framework.

MINDSET OF AN EXPLORER: KEY FOCUS AREAS

ATTITUDES (A)

CURIOSITY An explorer remains curious about how the world works throughout his or her life. An explorer is adventurous, seeking out new and challenging experiences.

RESPONSIBILITY An explorer has concern for the welfare of other people, cultural resources, and the natural world. An explorer is respectful, considers multiple perspectives, and honors others regardless of differences.

EMPOWERMENT An explorer acts on curiosity, respect, responsibility, and adventurousness and persists in the face of challenges.

SKILLS (S)

OBSERVATION An explorer notices and documents the world around her or him and is able to make sense of those observations.

COMMUNICATION An explorer is a storyteller, communicating experiences and ideas effectively through language and media. An explorer has literacy skills, interpreting and creating new understanding from spoken language, writing, and a wide variety of visual and audio media.

COLLABORATION An explorer works effectively with others to achieve goals.

PROBLEM SOLVING An explorer is able to generate, evaluate, and implement solutions to problems. An explorer is a capable decision maker—able to identify alternatives and weigh trade-offs to make a well-reasoned decision.

KNOWLEDGE (K)

THE HUMAN JOURNEY An explorer understands where we came from, how we live today, and where we may find ourselves tomorrow.

OUR CHANGING PLANET An explorer understands the amazing, intricate, and interconnected systems of the changing planet we live on.

WILDLIFE AND WILD PLACES An explorer reveals, celebrates, and helps to protect the amazing and diverse creatures we share our world with.

Second Grade Standard Supported

- **CCSS Reading Informational Text: Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text**. (2–1)

Third Grade Standard Supported

- **CCSS Reading Informational Text:** Ask and answer such questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3–1)

What You Will Need

- "Make the World a Better Place" article
- Think Sheet (Teacher's Guide, pages 6-7)
- Pencils

CONNECT & ENGAGE (5 minutes)

Display the first page of the article "Make the World a Better Place!" in the digital magazine.

Say: Today we are going to read an interesting article about making the world a better place. Let's flip through the article and notice the photos, headings, formats, and any other features that grab your attention. Take some time to turn and talk about what you are noticing.

Kids turn and talk.

Say: Let's also look at the title and the information on this page. Can you turn that title into a question that can guide our reading? What do you think that question would be?

Kids should come up with some form of the question "How can we make the world a better place?"

Say: As we read on, let's keep that question in mind.

MODEL (10 minutes)

Say: When we read nonfiction, it's often good to take notes about what we are reading. Taking notes helps us remember the information we are learning. We can also jot down questions that we still wonder about, as well as any answers to those questions that we find as we continue reading.

Say: For this article, we are going to use a three-column chart to take our notes. This chart is called FQR, which stands for Facts/Questions/Responses. I'll show you how we can use this chart to take notes as we read, learn, and wonder.

Say: First off, I'm going to remind myself of that question we came up with when we read the title. It was "How can we make the world a better place?"

Say: I'm going to keep that in mind as I read this next part to see if there are any facts that could answer that question.

Read aloud "Think Big" (Pioneer)/"Think Globally" (Trailblazer) in the article.

Say: Now, I have some new information I can write in the Facts column that also answers the question "How can we make the world a better place?" I'm going to write "To make the world a better place, it's important to know about places in the world." And I get some good tips on what to do, too. I can find out where that place is in the world, what places are near it, what life is like there, and so on.

Say: My next step is to jot down any questions I have that might be answered later or that I can research later myself. One question I have is "What are some different ways to find out about what life is like in different places?" I know some information is easy to find, but other information might not be.

Say: The third column of the chart is for responses. This is one of my favorite things to do when taking notes. Responses are any thoughts, connections, reactions, or inferences we have about what we read. While reading this, I thought about my friends from different places around the world. I thought about how interesting it was to hear about where they lived and how it made me want to visit those places. That's what I am going to write in the Responses column of the chart.

Say: It's your turn. Turn and talk with a partner about what your responses were to this section of the text. What thoughts, connections, or reactions did you have?

Kids turn and talk.

GUIDE (10 minutes)

Make sure kids have access to their own Think Sheets.

Say: Let's try this together with this next section of text. I'll read aloud, and then we can talk about it and jot down our thinking on the FQR chart.

Read aloud "Listen Closely" (Pioneer)/"Listen" (Trailblazer).

Say: Okay! What facts did you find?

Kids share out. Kids should share that every person has a story that when shared tells us who they are.

Say: Now, what questions do you wonder about and what responses do you have? Turn and talk about that. Then we can share out and write them on the FQR chart.

Kids turn and talk. They might have questions about how to be a good listener. Their responses might be about some of their own experiences with being a good listener. They might also connect to a time when someone was a good listener to them. Allow time for kids to share out and write on their FQR chart.

Say: We are clearly adding information to answer our original question, aren't we? What's another answer to "How can we make the world a better place?"

Kids should answer that being a good listener makes the world a better place.

COLLABORATE (25 minutes)

Say: Let's look at this next part. What is the heading?

For Pioneer: "Ways to Be a Better Listener," and for Trailblazer: "Five Ways to Boost Your Listening Skills"

Say: That's interesting, because many of you had a question in your FQR chart about how to be a good listener. It seems we might get some answers to that question in this section of text. Now it's your turn to continue reading with a partner. Read this section of text, turn and talk, and then write the facts, your questions, and your responses on the FQR chart. Say: Say: Continue this way until you get to the end of the article.

Allow time for kids to read, turn and talk, and write. Confer with partners to see if they have any questions as they read, talk, and write. When all partner groups have finished the article, bring the class together again.

Say: Wow! That was a lot of new information to learn and wonder about. Now that we've finished the article, let's return to our original question "How can we make the world a better place?" Let's list the answers we found.

Pioneer

- *Know about places in the world.*
- *Be a good listener.*
- *Be a critical thinker.*
- *Be part of a team.*
- *Find a safe way to speak up.*

Trailblazer

- *Know about places in the world.*
- *Be a good listener.*
- *Be a critical thinker.*
- *Join a team.*
- *Find a safe way to speak up.*
- *Ask questions until you find the answers.*
- *Don't say one thing and do another.*

Say: *I'm so impressed with the way you put all of this together, from finding facts and considering new questions around those facts to talking and writing about your responses. Nice work, class!*

SHARE THE LEARNING (10 minutes)

Say: Let's get together and talk about what we learned. I learned that there are many ways we can make the world a better place. Who else would like to share something they learned?

Allow time for kids to share their learning.

Say: Remember that as we read nonfiction, we can take notes about the facts we learned, the questions we still wonder about, and our responses to what we are reading, learning, and wondering about.

Name _____ Date _____

THINK SHEET

Use the chart to write facts, questions, and responses.

FACTS	QUESTIONS	RESPONSES

Nombre _____ Fecha _____

HOJA DE PENSAR

Escribe hechos, preguntas y respuestas en la tabla.

HECHOS	PREGUNTAS	RESPUESTAS

NATIONAL GEOGRAPHIC Explorer

This frame is a template of the language arts lesson. It has the instructional moves and language of the lesson, but the specific content has been removed. This way you can use the Lesson Frame for the other articles in the issue or for any nonfiction text you might be teaching.

What You Will Need

- Nonfiction text
- Think Sheet template
- Pencils

CONNECT & ENGAGE (5 minutes)

Display the first page of the article "_____."

Say: Today we are going to read an interesting article about _____. Let's flip through the article and notice the photos, headings, formats, and any other features that grab your attention. Take some time to turn and talk about what you are noticing.

Kids turn and talk.

Say: Let's also look at the title and the information on this page. Can you think of a question that can guide our reading? What do you think that question would be?

Kids should come up with a question.

Say: As we read on, let's keep that question in mind.

MODEL (10 minutes)

Say: When we read nonfiction, it's often good to take notes about what we are reading. Taking notes helps us remember the information we are learning. We can also jot down questions that we still wonder about, as well as any answers to those questions that we find as we continue reading.

Say: For this article, we are going to use a three-column chart to take our notes. This chart is called FQR, which stands for Facts/Questions/Responses. I'll show you how we can use this chart to take notes as we read, learn, and wonder.

Say: First off, I'm going to remind myself of that question we came up with. It was "_____?" I'm going to keep that in mind as I read this next part to see if there are any facts that could answer that question.

Read aloud the section you are focusing on.

Say: Now, I have some new information I can write in the Facts column that also answers the question "_____?" I'm going to write "_____."

Say: My next step is to jot down any questions I have that might be answered later or that I can research later myself. One question I have is "_____?" I know some information is easy to find, but other information might not be.

Say: The third column of the chart is for responses. This is one of my favorite things to do when taking notes. Responses are any thoughts, connections, reactions, or inferences we have about what we read. While reading this, I thought about _____. That's what I am going to write in the Responses column of the chart.

Say: It's your turn. Turn and talk with a partner about what your responses were to this section of the text. What thoughts, connections, or reactions did you have?

Kids turn and talk

GUIDE (10 minutes)

Make sure kids have access to their own Think Sheets.

Say: Let's try this together with this next section of text. I'll read aloud, and then we can talk about it and jot down our thinking on the FQR chart.

Read the text aloud.

Say: Okay! What facts did you find?

Kids share out.

Say: Now, what questions do you wonder about and what responses do you have? Turn and talk about that, and then we can share out and write them on the FQR chart.

Kids turn and talk. Allow time for kids to share out and write on their FQR chart.

COLLABORATE (25 Minutes)

Say: Now it's your turn to continue reading with a partner. Read the text, turn and talk, and then write the facts, your questions, and your responses on the FQR chart. Continue this way until you get to the end of the article.

Allow time for kids to read, turn and talk, and write. Confer with partners to see if they have any questions as they read, talk, and write. When all partner groups have finished the article, bring the class together again.

Say: Wow! That was a lot of new information to learn and wonder about. I'm so impressed with the way you put all of this together, from finding facts and considering new questions around those facts to talking and writing about your responses. Nice work, class!

SHARE THE LEARNING (10 minutes)

Say: Let's get together and talk about what we learned. I learned _____. Who else would like to share something they learned? Look at your Think Sheets to find facts, questions, or responses you had that you would like to share.

Allow time for kids to share their learning.

Say: Remember that as we read nonfiction, we can take notes about the facts we learned, the questions we still wonder about, and our responses to what we are reading, learning, and wondering about.

WHAT THE DEVIL!

SCIENCE

Standards Supported

- **NGSS LS4.D: Biodiversity and Humans:** There are many different kinds of living things in an area, and they exist in different places on land and in water. (2-LS4-1)
- **NGSS LS4.C: Adaptation:** For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3)

What You Will Need

- Interactive Digital Magazine
- Content Assessment Master (pages 10–11)
- Article Test (pages 18–19)

SCIENCE BACKGROUND

Tasmanian devils are carnivorous scavengers only found on the island of Tasmania. Famous for their feisty temperaments, they will fly into a rage when threatened by a predator, fighting for a mate, or fighting for a meal.

Tasmanian devils nearly became extinct in the late 1800s, when people considered them to be livestock-killing pests. They were saved after the government made them a protected species in 1941. But, their numbers plummeted once again in the mid-1990s after a rare form of contagious cancer began to spread through their populations. The disease, which caused large masses to form around their mouths and head, made it hard for them to eat. Many Tasmanian devils starved to death.

In 2003, the Tasmanian state government began a program to save the devils. Some devils seem to be adapting to recover on their own, and scientists are still attempting to create a vaccine.

ENGAGE

Encourage students to review the article and turn and talk with a partner to discuss what they see. Invite students to ask questions or share what they already know about Tasmanian devils.

EXPLORE

Display the **"What the Devil!" article** with the interactive digital magazine. As a class, brainstorm ideas about what kind of disease might be making Tasmanian devils sick and characteristics that might help the devils fight against the disease.

EXPLAIN

After reading, remind students that Tasmanian devils are marsupials. **Ask:** *What is a marsupial?* (a mammal whose young finish developing in a pouch on their mother's abdomen). Have students turn and talk as they identify the Tasmanian devil's body parts and discuss how each part helps the animal survive. (These details can be found in the **"All About Tasmanian Devil's" sidebar**.) **Ask:** *What disease made so many Tasmanian devils sick?* (cancer) *Why did the cancer spread so quickly?* (It spread when the devils bit each other, and they bite each other every time they fight over food.) In small groups, have students discuss how people helped save the devils. Challenge them to explain why it is important that some devils are getting better on their own.

ELABORATE

Remind students that Tasmanian devils are scavengers that eat or dead animals. Have students turn and talk as they discuss the importance of scavengers in an ecosystem. Challenge students to explain what might happen to this ecosystem if Tasmanian devils weren't there to clean it up.

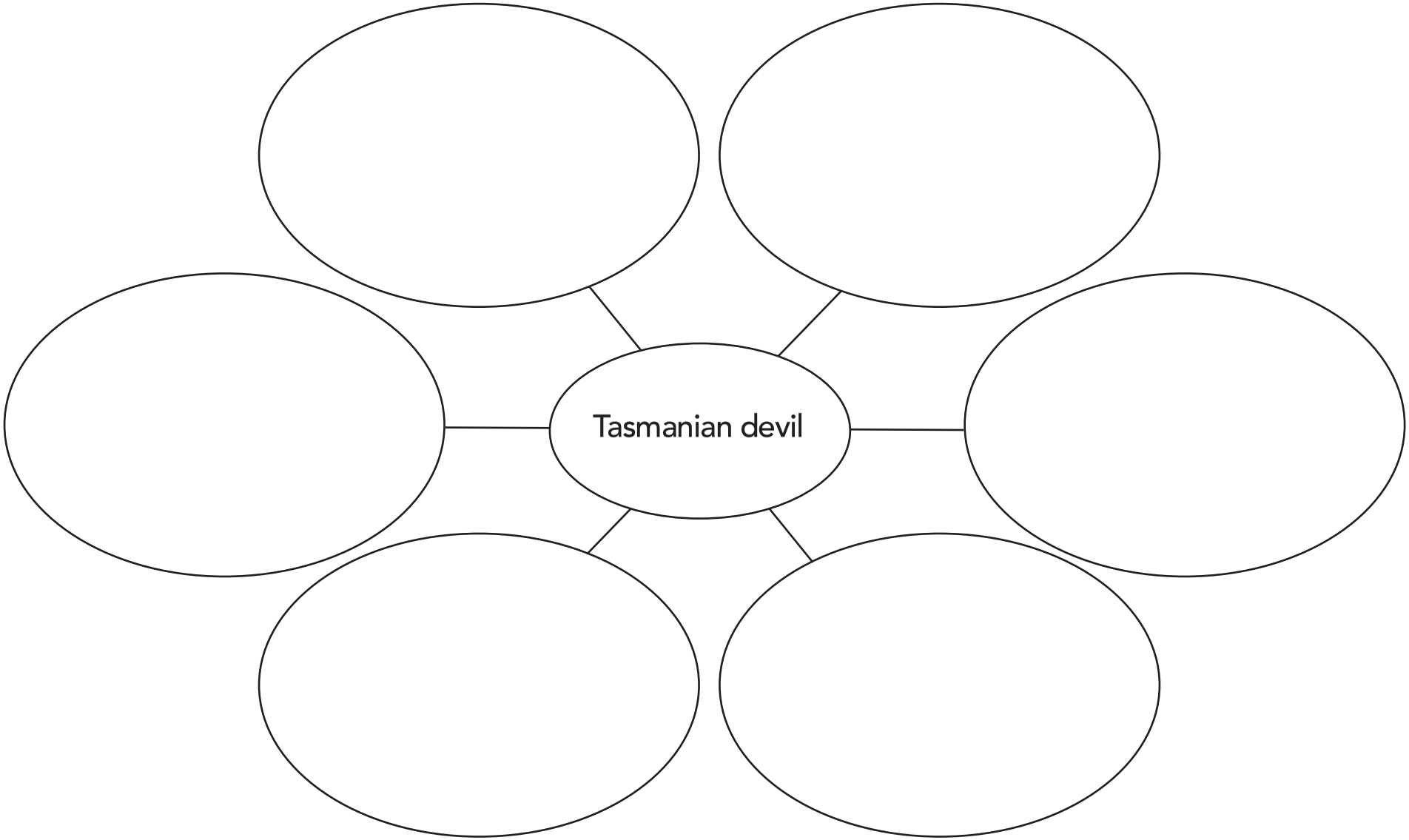
EVALUATE

Have students complete the **Content Assessment** for this lesson. Encourage them to share and compare the results in small groups.

Name _____ Date _____

CONTENT ASSESSMENT: WHAT THE DEVIL!

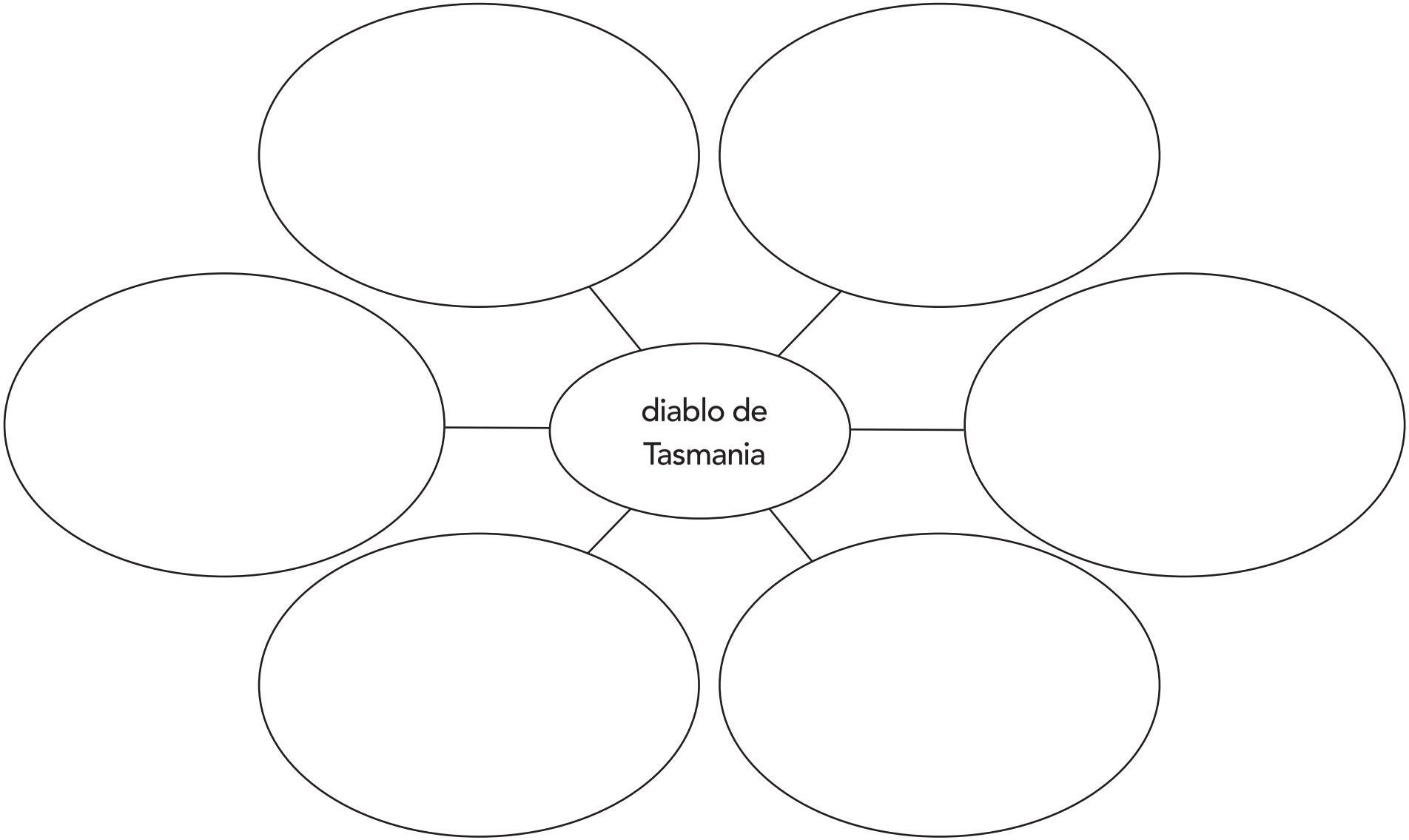
Write about or draw six ways the Tasmanian devil's characteristics help it survive.



Nombre _____ Fecha _____

EVALUACIÓN DE CONTENIDO: ¡QUÉ DIABLOS!

Escribe o dibuja seis características de los diablos de Tasmania que les ayuden a sobrevivir.



MAKE THE WORLD A BETTER PLACE!

SOCIAL STUDIES

NATIONAL GEOGRAPHIC Explorer

Standard Supported

- **C3: Communicating Conclusions & Taking Informed Action: Taking Informed Action:** Identify ways to take action to help address local, regional, and global problems. (D4.7.K-2)
- **C3: Communicating Conclusions & Taking Informed Action: Taking Informed Action:** Explain different strategies and approaches students and others could take in working alone and together to address local, regional, and global problems, and predict possible results of their actions. (D4.7.3-5)

What You Will Need

- Interactive Digital Magazine
- Content Assessment Master (pages 13–14)
- Article Test (pages 20–21)

SOCIAL STUDIES BACKGROUND

In the year 2020, the world came face to face with a global health pandemic. People from all walks of life protested in spite of that, as they called for equality and social change. In times like these, it is more important than ever for students to be able to see things from others' points of view. For only then, will they be able to lead and create positive changes that will help make the world a better place.

In this article, students are introduced to some of the tools they can use to achieve those changes. Based on the book "100 Ways to Make the World Better!" by Lisa M. Gerry, the article provides tips on how students can broaden their minds, open their hearts, and make informed decisions that will help them create the world they wish to see.

ENGAGE

Encourage students to review the article and turn and talk with a partner to discuss what they see. Invite students to ask questions and share examples of people who have helped make the world a better place.

EXPLORE

Display the **"Make the World a Better Place!" article** with the interactive digital magazine. As a class brainstorm a list of things students would like to change to make the world a better place.

EXPLAIN

After reading, guide students as they examine the first section of the article. **Ask:** *What does it mean to think big, or globally?* (Possible response: It means to think about the world beyond where you live.) *Why is this important?* (Possible response: When you learn about other people's lives and beliefs, you understand how and why events may affect them differently than it affects you.) Review each section or sidebar in the article in this same way. Then revisit the list students created before reading the article. Pick one item. **Ask:** *How could you use what you learned in the article to make a difference in this area?* Invite students to share their ideas. Examine other items on the list. Encourage students to discuss how the world would be a better place if one or more of these changes were made.

ELABORATE

Invite students to identify the two sections in the article that are connected to the sidebars that contain lists of helpful tips. (Listen Closely/Listen; Think about the Facts/Think About Things Critically) As a class, write a list of helpful tips related to the content in each of the other sections.

EVALUATE

Have students complete the **Content Assessment** for this lesson. Encourage them to share and compare the results in small groups.

Name _____ Date _____

CONTENT ASSESSMENT: MAKE THE WORLD A BETTER PLACE!

Identify and draw pictures of three things you want to change. Write a list of tips that will help people make each change.

	Change 1:	Change 2:	Change 3:
Draw			
Write			

Nombre _____ Fecha _____

EVALUACIÓN DE CONTENIDO: ¡HAZ DEL MUNDO UN LUGAR MEJOR!

Piensa en tres cosas que quieras cambiar y haz un dibujo de cada una de ellas.
Escribe una lista de sugerencias para que la gente haga cambios.

	Cambio 1:	Cambio 2:	Cambio 3:
Dibuja			
Escribe			

ARTIFICIAL REEFS

SCIENCE

Standards Supported

- **NGSS ETS1.A: Defining and Delimiting Engineering Problems:** A situation that people want to change or create can be approached as a problem to be solved through engineering. (K-2-ETS1-2)
- **NGSS LS2.C: Ecosystem Dynamics, Functioning, and Resilience:** When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, and yet others move into the transformed environment, and some die. (secondary to 3-LS4-4)

What You Will Need

- Interactive Digital Magazine
- Content Assessment Master (pages 16–17)
- Article Test (pages 22–23)

SCIENCE BACKGROUND

An artificial reef is a man-made structure built to mimic characteristics of a natural reef. Because many natural coral reefs are threatened, artificial reefs play an important role in preventing coastal erosion, holding sediment on beaches, and creating habitats for fish and other aquatic life.

Some artificial reefs, like the underwater MUSA museum—a collection of 12 galleries containing nearly 1,364 artificial habitats off the coast of Cancun, Mexico—were planned. Others, like some sunken ships, were not. Regardless of their origins, over time, they can grow into healthy, stable ecosystems for the organisms that live in and around them.

ENGAGE

Encourage students to review the article and turn and talk with a partner to discuss what they see. Invite students to ask questions or share what they already know about the words "artificial" and "reef."

EXPLORE

Display the **"Artificial Reefs" article** with the interactive digital magazine. Invite students to examine the article's photos. Challenge them to identify different objects used to create the artificial reefs they see.

EXPLAIN

After reading, remind students that an artificial reef is an underwater structure made by people, typically built to promote marine life in an area. **Ask:** *Why are artificial reefs needed?* (They help protect natural reefs.) *How?* (Some keep waves from wearing away at the shoreline. Others hold sand onto beaches or create homes for ocean wildlife.) Point out that some artificial reefs are built on purpose and others are the result of accidents. Have students turn and talk to identify examples of each. **Ask:** *What are some of the challenges designers would face when building an artificial reef?* (Possible responses: Picking the right location and materials; getting permission to build the reef; etc.) As a class, brainstorm ideas about why designers would create statues to build an artificial reef that became the MUSA underwater museum. Then discuss how artificial reefs change the ecosystem around them over time.

ELABORATE

Remind students that, as the article stated, many beginning divers cause damage to natural coral reefs. Challenge students to create a list of rules for beginning divers to follow that will keep them from hurting natural reefs.

EVALUATE

Have students complete the **Content Assessment** for this lesson. Encourage them to share and compare the results in small groups.

Name _____ Date _____

CONTENT ASSESSMENT: ARTIFICIAL REEFS

Draw a picture of an artificial reef. Then answer the questions.

What is the artificial reef made of? _____

_____

_____

How do you think it can protect natural reefs? _____

_____

_____

How do you think it will change over time? _____

_____

_____

Nombre _____ Fecha _____

EVALUACIÓN DE CONTENIDO: ARRECIFES ARTIFICIALES

Haz un dibujo de un arrecife artificial. Luego contesta a las preguntas.

¿De qué está hecho el arrecife artificial? _____

_____

_____

¿Cómo puede proteger a un arrecife natural? _____

_____

_____

¿Cómo crees que cambiará con el tiempo? _____

_____

Name _____ Date _____

ARTICLE TEST: WHAT THE DEVIL!

Read each question. Fill in the circle next to the correct answer and then write your response on the lines.

1. Where do Tasmanian devils live?

Ⓐ on an island

Ⓑ in the ocean

Ⓒ in trees

2. What kind of animal are they?

Ⓐ reptiles

Ⓑ amphibians

Ⓒ marsupials

3. How did they make each other sick?

Ⓐ They scratched each other.

Ⓑ They licked each other.

Ⓒ They bit each other.

4. How did breeding programs help save the devils?

Ⓐ They made sure all devils had cancer.

Ⓑ They gave devils a safe place to breed.

Ⓒ They trapped sick devils so they could be released.

5. Why is it important that some devils are getting better on their own?

_____

_____

_____

_____

Nombre _____ Fecha _____

PRUEBA DEL ARTÍCULO: ¡QUÉ DIABLOS!

Lee cada pregunta. Encierra en un círculo la letra de la opción correcta y escribe la respuesta a la última en los espacios en blanco.

1. ¿Dónde viven los diablos de Tasmania?

Ⓐ en una isla

Ⓑ en el océano

Ⓒ en los árboles

2. ¿Qué clase de animales son?

Ⓐ reptiles

Ⓑ anfibios

Ⓒ marsupiales

3. ¿Cómo se enfermaron entre sí los diablos de Tasmania?

Ⓐ arañándose

Ⓑ lamiéndose

Ⓒ mordiéndose

4. ¿Cómo ayudó la cría en cautividad a salvar a los diablos?

Ⓐ Intentaron que todos los diablos tuvieran cáncer.

Ⓑ Dieron a los diablos un lugar seguro para reproducirse.

Ⓒ Atraparon a diablos enfermos para liberarlos.

5. ¿Por qué es importante que algunos diablos se curen por sí solos?

_____

_____

_____

_____

Name _____ Date _____

ARTICLE TEST: MAKE THE WORLD A BETTER PLACE!

Read each question. Fill in the circle next to the correct answer and then write your response on the lines.

1. What can learning about the world help you do?

Ⓐ listen carefully

Ⓑ make sense of the news

Ⓒ be distracted

2. Which of these is NOT a way to be a better listener?

Ⓐ Try to understand.

Ⓑ Be open-minded.

Ⓒ Interrupt.

3. What can you do if you need help making a change?

Ⓐ Be a critical thinker.

Ⓑ Join a team.

Ⓒ Go it alone.

4. What do you do when you stand up for what's right?

Ⓐ get into trouble for something you didn't do

Ⓑ speak up when you see something wrong

Ⓒ bully people who are different from you

5. What is one way you can make the world a better place today?

_____

_____

_____

_____

Nombre _____ Fecha _____

PRUEBA DEL ARTÍCULO: ¡HAZ DEL MUNDO UN LUGAR MEJOR!

Lee las preguntas. Encierra en un círculo la letra de la opción correcta y escribe la respuesta a la última en los espacios en blanco.

1. ¿Para qué sirve aprender sobre el mundo?

Ⓐ para escuchar atentamente

Ⓑ para entender las noticias

Ⓒ para estar distraído

2. ¿Cuál de estas respuestas NO es una manera de aprender a escuchar?

Ⓐ intentar comprender

Ⓑ tener la mente abierta

Ⓒ interrumpir

3. ¿Qué puedes hacer para ayudar a cambiar el mundo?

Ⓐ pensar críticamente

Ⓑ apuntarme a un equipo

Ⓒ hacer las cosas por mi cuenta

4. ¿Qué haces al defender lo que es justo?

Ⓐ meterme en problemas por algo que no hice

Ⓑ alzar la voz ante algo que no está bien

Ⓒ meterme con las personas diferentes a mí

5. ¿Cuál sería hoy en día una buena manera de mejorar el mundo?

_____

_____

_____

_____

Name _____ Date _____

ARTICLE TEST: ARTIFICIAL REEFS

Read each question. Fill in the circle next to the correct answer and then write your response on the lines.

1. Which of these words best describes an artificial reef?

Ⓐ man-made

Ⓑ natural

Ⓒ damaged

2. Why do people build artificial reefs?

Ⓐ to increase pollution

Ⓑ to pull sand off of beaches

Ⓒ to protect natural reefs

3. What is the MUSA artificial museum made of?

Ⓐ an oil rig

Ⓑ a shipwreck

Ⓒ statues

4. Which of these sentences is true?

Ⓐ Artificial reefs can replace natural reefs.

Ⓑ All artificial reefs are built on purpose.

Ⓒ Plants and animals can thrive around artificial reefs.

5. How do you build an artificial reef?

_____

_____

_____

_____

Nombre _____ Fecha _____

PRUEBA DEL ARTÍCULO: ARRECIFES ARTIFICIALES

Lee cada pregunta. Encierra en un círculo la letra de la opción correcta y escribe la respuesta a la última en los espacios en blanco.

1. ¿Cuál de las siguientes respuestas describe mejor un arrecife artificial?

Ⓐ hecho por el hombre

Ⓑ natural

Ⓒ perjudicial

2. ¿Para qué se construyen los arrecifes artificiales?

Ⓐ para aumentar la contaminación

Ⓑ para sacar arena de las playas

Ⓒ para proteger los arrecifes naturales

3. ¿Qué hay en el museo submarino MUSA?

Ⓐ una plataforma petrolífera

Ⓑ un barco hundido

Ⓒ estatuas

4. ¿Cuál de las siguientes oraciones es verdadera?

Ⓐ Los arrecifes artificiales pueden sustituir a los naturales.

Ⓑ Todos los arrecifes artificiales se planifican.

Ⓒ Las plantas y animales prosperan en los arrecifes artificiales.

5. ¿Cómo se construye un arrecife artificial?

_____

_____

_____

_____

PIONEER AND TRAILBLAZER

ANSWER KEY / CLAVE DE RESPUESTAS

NATIONAL GEOGRAPHIC Explorer

WHAT THE DEVIL!

Content: page 10
Students may write or draw. Content should come from the article.

Article Test: page 18
1. A; 2. C.; 3. C; 4. B; 5. Possible response: Scientists are working on a medicine, but they don't have one yet. If some devils are getting better, that means they are adapting and may be able to overcome the cancer on their own.

MAKE THE WORLD A BETTER PLACE!

Content: page 13
Students should identify and draw pictures of three things they would like to change. They should write a list of helpful tips about each item.

Article Test: page 20
1. B; 2. C; 3. B; 4. B; 5. Answers will vary.

ARTIFICIAL REEFS

Content: page 16
Students should draw a picture of an artificial reef.
Question 1: Students should identify the materials used to build the reef they drew.
Question 2: Students may note that their reef keeps waves from wearing away at the shoreline, holds sand onto beaches, or creates homes for ocean wildlife.
Question 3: Students should explain that coral will grow on the reef and the number of fish and other aquatic animals living near it will increase over time.

Article Test: page 22
1. A; 2. C; 3. C; 4. C; 5. A large object is placed on the flat sea bottom. It attracts plankton and small fish. This brings larger fish. Algae and corals grow. Over time, a reef forms.

¡QUÉ DIABLOS!

Contenido: página 11
Los estudiantes pueden escribir o dibujar. Sus respuestas deben referirse al artículo.

Prueba del artículo: página 19
1. A; 2. C; 3. C; 4. B; 5. Respuesta posible: Los científicos están tratando de desarrollar un medicamento, pero aún no lo tienen. Si se recuperan por sí solos eso querrá decir que se están adaptando y que podrán superar el cáncer sin ayuda.

¡HAZ DEL MUNDO UN LUGAR MEJOR!

Contenido: página 14
Los estudiantes deben identificar y dibujar tres cosas que les gustaría cambiar del mundo. Deben escribir una lista de sugerencias para que esos cambios sean realidad.

Prueba del artículo: página 21
1. B; 2. C; 3. B; 4. B; 5. Las respuestas variarán.

ARRECIFES ARTIFICIALES

Contenido: página 17
Los estudiantes deben dibujar un arrecife artificial.
Pregunta 1: Los estudiantes deben identificar los materiales utilizados para construir el arrecife que han dibujado.
Pregunta 2: Los estudiantes quizá mencionen que sus arrecifes evitarán la erosión costera, retendrán la arena en las playas o crearán hábitats de fauna marina.
Pregunta 3: Los estudiantes deben explicar que el coral crecerá en el arrecife y que el número de peces y otros animales acuáticos que vivan cerca de él aumentará con el tiempo.

Prueba del artículo: página 23
1. A; 2. C; 3. C; 4. C 5. Un objeto grande es colocado en una zona llana del fondo marino. Atrae al plancton y a pequeños pececillos. Estos, a su vez, atraen a peces más grandes. Crecen algas y corales. Con el tiempo, se forma un arrecife.