

HighWire
MAGAZINE

GOING TO EXTREMES

Deep Diver

The thrill of extreme depths

Hero to Zero

When bravery goes wrong

Iceman

Living in the coldest
place on Earth

Volume 8, Issue 5 Teacher Guide

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High Wire Magazine – Going to Extremes Teacher Guide

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Going to Extremes

Teacher Guide

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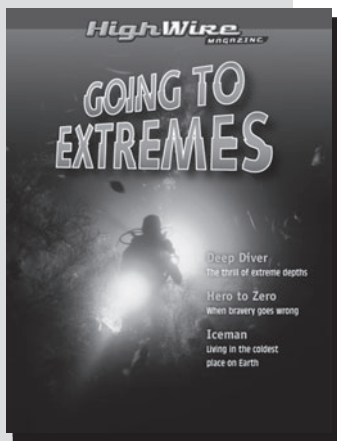
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The lesson plans in this Teacher Guide are supported by the *High Wire Magazine* Program and Assessment Guide. The Program and Assessment Guide contains:

- an overview of the components and features of *High Wire Magazine*
- a scope and sequence chart that outlines the key reading strategies that are highlighted in each issue of *High Wire Magazine*
- supporting information about the needs of adolescent readers
- descriptions of the instructional strategies, approaches, and activities used in the lesson plans
- assessment masters for the key reading strategies.

Brief explanations of instructional strategies are provided in the sidebar of the lesson plans alongside the first use of each strategy.



Going to Extremes

Key Reading Strategy: *Visualizing*

The lesson plans for this issue of *High Wire Magazine* concentrate on the reading strategy of Visualizing. Opportunities to use this strategy are indicated by the symbol ★. For more information about this strategy, see page 7. **Assessment Master 16** in the Program and Assessment Guide can be used for this strategy.

Curriculum Links: social studies, health, science, mathematics

Introducing the Magazine

Setting the Scene

Tell the students that during this unit they will be “going to extremes.” To encourage discussion about the magazine’s theme, ask questions such as the following:

- When you hear the words “going to extremes,” what ideas, thoughts, feelings, or pictures come to mind?
- The phrase “going to extremes” has more than one connotation. Can you tell me what they are? Are they positive or negative? Do the various connotations spark different feelings or ideas?
- If you were given a choice of one really extreme thing to do, what would it be? Why?
- Do you think that people who take part in extreme sports and activities are different from other people? If so, in what way are they different?

Making Connections

Explain that the magazine looks at various types of extreme activities and examines them in a number of genres: nonfiction articles, a fictional story, and an interview. Discuss questions such as the following:

- Do you think society’s idea of what we consider to be extreme has changed over time? How?
- Do you know of any cultures or countries where extreme activities are part of everyday life? Describe them.

Ask the students to write a paragraph giving a definition of their understanding of the phrase “going to extremes.” Have them keep this for use as a self-assessment tool at the end of the unit. When the students have completed reading the selections in the magazine, have them repeat the exercise and then compare it to the one they wrote previously. Discuss whether their understanding of the concept has been enhanced by the materials they have read.

Lesson Focus

Visualizing
Monitoring for meaning
Predicting

About This Selection

This article describes the experiences of a scientist on a research trip to Antarctica. He tells about the continent's environment and the hardships of life there.

Word Talk

Glossary words: *whiteout*, *psychologist*, *crampons*

Other vocabulary:
continent, *summit*,
elements, *fragile*, *global*
warming



Assessment Tip

Look for the student who seems able to describe a mental picture that creates a vivid representation of the text.

Iceman

page 2

Before Reading

Making Connections

Display a map of the southern hemisphere that shows Antarctica. Display a map of the world so students can see the distances between the United States, New Zealand, and Antarctica.

Predicting

Read the title of the selection to the students. Ask questions such as the following:

- What do you think this article will be about?
- What jobs can you think of that “Iceman” might refer to?

During Reading

Visualizing

Read Aloud the text on pages 2 and 3, asking the students to close their eyes and visualize the scene as you read. Ask questions such as the following:

- Was any of this information new to you? Does anything need further explanation?
- What is a whiteout?

Monitoring for Meaning

This is an opportune time to reiterate the strategies that the students can use to extract meaning from a text. Remind them that although it's good to ask questions for clarification, there are things they could do themselves such as rereading, using picture clues, and reflecting on their prior knowledge.

Guided Reading

Using a Guided Reading approach, have the students look over the article briefly, noting any words and ideas that may be unfamiliar to them and any questions they have.

Have the students look at the photographs on pages 2 and 3. Ask questions such as the following:

- Why have text boxes been added to some of the photos?
- Which photos have the most impact? Why?

Focus on the main photograph on page 2, and draw students' attention to the illusion that Mount Erebus appears to be a few yards away from the photographer when in fact it was more than a two-day walk away.

Have the students read the text on pages 4 and 5, including the box about Antarctic Extreme Records. Ask questions such as the following:

- Why do you think people have such extreme emotional reactions to Antarctica?
- Why do scientists study the weather in Antarctica? It's just cold, isn't it?
- What do you imagine “support work” involves?

Text Reformulation

Text reformulation is simply transforming a text into another type of text, for example, from a newspaper article into a poem.

- What special measures do you think are taken to protect buildings and other structures from winds roaring at 180 miles per hour?

Discuss the meaning of the words “crampons” and “psychologist.”

Chris Arcus says if you want to stay for the winter, you have to be sure you can handle it. Ask questions such as the following:

- How do you think it would feel to be constantly in bright sunlight or deep darkness?
- Do you think you could cope during an Antarctic winter? Why/why not?

Ask the students to read to the end of the article, thinking about the following questions, which can be written on the board:

- What do you think Chris meant when he said that although Antarctica is an extreme environment, he felt it was a fragile place?
- How do you think scientists can make sure their activities don't upset the balance of the environment?
- Would you like to go to Antarctica? Why/why not?

After Reading

Text Reformulation

Students could reformulate the text by creating a travel brochure or postcard depicting Antarctica as they visualized it.

Making Connections

Encourage the students to make connections between the text and themselves.

- Have the students write an application to work at McMurdo Station, setting out the reasons why the writer would be a suitable candidate.
- Students could make a list of the things they would need to pack for a visit or a job in Antarctica and explain why.

Key Reading Strategy: Visualizing

Visualizing is something that many (but not all) people do naturally as they read. Really good writers can make readers feel emotion. They can make us feel nauseated in response to a particularly gruesome description, shiver in response to a story about snow or ice, or raise the hairs on the backs of our necks when we read a spooky story. A graphic description of a meal can make our mouths water. Vivid writing helps us visualize, which helps us to understand the text.

Before reading any of the text with the students, make sure they understand that visualizing is creating a mental picture of a scene. Some students may find this challenging and may require some practice. Ask questions such as the following:

- What is visualization?
- When do you do it?
- Do you always create mind pictures when you are reading?
- Have you ever read a book and then seen the movie made from it? Did the movie match your mind pictures, or was it completely different? Are you able to sustain your own pictures after the movie?

Reading and Discussing the Page

Choose volunteers to read the text on page 8. Discuss the students' experiences of visualization while they were reading "Iceman."

Have the students read "Bring a Story to Life" independently, then organize them into groups. Ask each group to appoint a recorder and a spokesperson and work through the three activities.

Move on to "Try It Out." If any students have expressed a reluctance to visualize, or just find it difficult, you could suggest that they close their eyes while someone else reads the text. They could also describe snippets of what they "see."

Read the "For Real" section to the students. Encourage the students to write a movie script, using **BLM 1, Writing a Movie Script**.

Lesson Focus

Visualizing
Making connections

About This Selection

In this story, a boy gets involved in a dangerous competition with a classmate while their teachers aren't around. He learns a hard lesson after things go wrong.

Word Talk

Vocabulary: *churn*,
untouchable, *gurgling*

Sketch to Stretch

Students create a storyboard with a series of sketches that represent the stages in the story.



Assessment Tip

Look for the student who seems able to describe a mental picture that creates a vivid representation of the text.

Hero to Zero

page 10

Before Reading

Predicting

Read the title of the selection to the students and ask them to predict the storyline.

Making Connections

Ask the students to make connections by thinking about the heroes they may have read about in books or magazines or seen on TV or at the movies. Encourage them to speak about the characteristics of heroes. Ask questions such as the following:

- What are the emotions that go with being a hero?
- How do you think “zero” has been used in the text?

During Reading

Visualizing

★Read pages 10 and 12 of the selection aloud, asking the students to create mind pictures as they listen to you read. Stop where there are natural breaks and give the students an opportunity to share their mind pictures. Have them create a Sketch to Stretch by sketching four scenes that they visualized as they were reading.

Guided Reading

In paragraph 2, page 10, the narrator describes his fear of heights. His stomach churns and his head goes funny. Ask:

- What are some other physical manifestations of fear?
- What is Paul trying to achieve by forcing the narrator into frightening situations?

Paragraph 5, page 12:

- How do you think the “same little flicker of fear” the narrator sees on Paul’s face makes him feel?

Have the students read to the end of the story, thinking about the following question, which can be recorded on the board:

- What do you think the class’s response would have been if the narrator had refused to take part in the stunt in the first place?

After Reading

Making Connections

Have the students write about a personal experience of challenging fears or phobias.

Creative/Aesthetic Response

The students can make a visual response to the story using paint, pencil, or some other medium. The students can provide a written explanation to accompany their work.

Lesson Focus

Visualizing
Monitoring for meaning
Predicting

About This Selection

This letter to a safety expert asks about hypothermia. The expert replies with an explanation of its causes and three rules to follow to avoid it while hiking.

Word Talk

Glossary word:
survival blanket

Other vocabulary:
Hypothermia, ensuring, informed, biology, core, exhaustion, symptoms, crucial



Assessment Tip

Look for the student who seems able to describe a mental picture that creates a vivid representation of the text.

Ask an Expert: Surviving the Big Chill

page 16

Before Reading

Visualizing

Tell the students the title of the selection and ask them to describe the mind pictures evoked by it. Look at the graphic and discuss how it might feel to be somewhere like this.

Predicting

Have the students scan the pages to look at the way the text has been organized. Ask questions such as the following:

- What do you think this selection could be about?
- How does the layout support you to understand what it is about?

K-W-L Chart

Tell the students that the first letter is written by someone wanting to find out how to avoid hypothermia when they go hiking in Monogahela National Forest and the second letter is from an expert giving advice. Have the students complete a K-W-L chart to record what they already know about hypothermia and what they would like to find out about it.

During Reading

Double-Entry Journal

Ask the students to create a Double-Entry Journal with columns headed “Words from Text” and “This is Important Because.” Have them reread the selection independently and then make entries in the journal to record words such as “hypothermia” and “exhaustion.”

After Reading

Text Reformulation

Have the students make a poster informing people about how to avoid or treat hypothermia. Encourage them to make the information clear and concise, include diagrams, and use language that is appropriate for an instructional text.

K-W-L Chart

Have the students complete their K-W-L charts and encourage some of the class to share what they have learned.

Lesson Focus

Making connections
Questioning
Predicting
Summarizing information

About This Selection

In an interview, deep-sea diver Susan Loney describes the exciting and dangerous aspects of her career, as well as some of the technical elements of diving.

Word Talk

Glossary words: *scuba, confined, neoprene, cave line, liftbag, algae, silt, tunnel vision, labyrinth*
Other vocabulary: *recreational, exceed, decompress, visibility, document, sensation, companions, incident*



Teaching Tip

This selection makes heavy vocabulary demands. Review with the students the ways they can work with new vocabulary.

Deep Diver

page 18

Before Reading

Making Connections

Ask the students whether they have ever been diving before, and encourage those who have to share their experiences. If there is no response, ask if anyone has an interest in diving and what they already know about diving.

Questioning

Explain to the students that they will be reading an interview with a diver. Ask them to generate as many questions about diving as they can and record these for later reference.

Predicting

Read the title of the selection to the students, and ask whether any of them can predict what the difference might be between ordinary scuba diving and a “deep diving” experience.

During Reading

Summarizing

Read pages 18 and 19 to the students. Then have them work in pairs to summarize the information on decompression by rereading the “Decompression” box and discussing the facts so they can explain the process in their own words. Have them write a simplified summary.

Graphic Organizers

Ask the students to read pages 20 and 21 and, as they do this, to create a T-chart Graphic Organizer headed “Diving Equipment.” In the left column, they can list the items of equipment, and in the right column, the purpose of each piece.

Making Notes

Ask the students to read to the end of the article. As they do this, have them make notes about the information and list it under the orange headings for each section.

When the students have finished reading, encourage them to share their findings with the class.

After Reading

Questioning

Have the students review their lists of questions generated in Before Reading. Which of these are still unanswered? Did reading raise any new questions?

Creative/Aesthetic Response

As a creative response to the selection, students can design a dive tour: decide on the location, research what there is to be seen, and make a list of gear required, accommodation options, as well as other sightseeing options. Have them make a brochure and present it to the class.

Research

Encourage students to research one of Susan's dream dives and find out more about the dive and the surrounding area. The students can create a poster and display it in the classroom.

Featured Graphic Organizer: Scale

A scale allows us to compare information. It gives us a continuum along which we can rank events, such as earthquakes, to compare their severity with a standard set of measurements. A scale can also give a range of options to choose from; for example, it could reflect the likes and dislikes of the person responding to the scale.

Reading and Discussing the Page

Have the students discuss what the selection is about, using only the pictures and title.

Explain that a scale can provide a way of comparing information. Draw students' attention to the language used in the Fujita Tornado Intensity Scale. Words such as *light*, *moderate*, *significant*, *severe*, *devastating*, and *incredible* are subjective words. They describe the damage caused by a tornado, and could be replaced with other terms such as *little damage*, *mild damage*, and *considerable damage*.

Point out that the precise parts of the Fujita Scale are the wind speed indicators. These are the actual measurements that can be made. The other words describe the damage caused and give examples of damage that may occur in winds of varying strengths.

Examine the vocabulary used in the selection and clarify or explain any unfamiliar concepts. Model Thinking Aloud as a way of extracting meaning from the text. Discuss other strategies for comprehension, including Rereading and Marking the Text.

Using **BLM 2**, Scale, the students could use one of the selections in the magazine (for example, "Deep Diver") and develop a scale based on the information in the text.

Lesson Focus

Visualizing
Using graphic organizers

About This Selection

This article describes the formation of tornadoes and explores what storm chasers do to track and observe them while staying safe.

Word Talk

Glossary word: *GPS*
Other vocabulary: *resist*,
relatively, *adrenaline*,
accurately

Extra Help

Use the visual information to help clarify the concepts and vocabulary in the text.

Chasing the Big One

page 26

Before Reading

K-W-L chart

Encourage a discussion about the students' prior experiences of tornadoes, including movies they may have watched or people they have known who have had first-hand experience of tornadoes.

Have the students draw a K-W-L chart to list what they currently know about tornadoes and then make a start on the "Wonder" column.

During Reading

Guided Reading

Read aloud the text on page 26 while the students follow along in their own copies. Ask questions such as the following:

- What do you think the "raw power of nature" means?

Have the students read the text at the top of page 27. Ask questions such as the following:

- Why do you think tornadoes occur mainly in Tornado Alley?
- How would people lose their lives during a tornado?
- What kind of information do you think scientists are trying to gather?
- How do meteorologists predict tornadoes?

Ask the students to read the passage at the bottom of page 27 and through to the end of page 28. Ask questions such as the following:

- What is a GPS? How does it work?
- How do you think storm chasers check satellite maps?
- Having read this article, do you think you would like to be a storm chaser? Why/why not?

After Reading

Graphic Organizers

Students could draw a chain of events following the progress of a developing storm to give a simple summary of what they have read.



Creative/Aesthetic Response

- Have the students write a newspaper article about a tornado ripping through your town.
- The students could watch the movie *Twister* and write a movie review, rating its accuracy.

Research

Encourage the students to research storm chasers on the Internet and create a poster for display in the classroom.

Lesson Focus

Monitoring for meaning

About This Selection

Natural disasters are inevitable, but the damage they cause isn't. This article features diagrams and descriptions of houses protected against floods and tornadoes.

Word Talk

Glossary words: *global warming, decontaminate, adhesive, reinforced*
Other vocabulary: *vulnerable, innovations, unpredictable*

Anticipation Guide

An Anticipation Guide contains several statements that relate to the text topic or theme. Students use the guide to prompt their thinking before they read a text.



Teaching Tip

Find and save some relevant websites in the "Favorites" list of the computer to save students time when researching another natural disaster.

Dealing with the Extremes

page 29

Before Reading

Anticipation Guide

Use **BLM 3** as an Anticipation Guide for students to respond to.

During Reading

Guided Reading

Have the students read page 29 independently. Ask questions such as the following:

- What sorts of explanations do scientists have for extreme weather patterns?
- What do you personally think?

Now ask the students to look closely at the diagrams on pages 30 and 31 and read the text independently. Ask questions such as the following:

- How do these diagrams help you?
- What kind of information do they give you?

Discuss the information on these pages and how it affects their opinion of the anticipation guide statements.

After Reading

Creative/Aesthetic Response

Students could design and draw a diagram of a house able to withstand the force of another type of natural disaster.

Research

Have the students research a famous natural disaster and present their findings to the class in the form of a newspaper article, a diary entry, or a fictional interview with someone who experienced the disaster.

Featured Project: Ice Power

Materials required: a small measuring cup, 30 mL of water, food coloring

Tell the students they will be discovering how powerful ice can be.

Read aloud the first paragraph. Ask students to suggest how they think the ice in Antarctica could crush a boat even though boats can glide easily through liquid water.

Read aloud the remaining text at the top of the page and then organize the students into pairs to carry out the experiment. Ask them to write up what they have done and estimate how much they think the ice will expand in twenty-four hours.

After twenty-four hours, have the students remove their ice experiments from the freezer and calculate the percentage of expansion, using the formula described on page 32. Have them write up their experiment.

Find Out More

Have the students carry out research on Shackleton's expedition. Their findings could be published for display in the classroom.

Writing a Movie Script

Name: _____ Date: _____

What to do:

- Choose a scene from one of the selections in *Going to Extremes*.
- Imagine it as a movie.
- Fill in the chart below to help you script the scene as a movie.

Selection:

Scene (describe the setting):

Character(s) (describe the characters and their relationships):

Action (what happens):

Scale

Name: _____ Date: _____

What to do:

- Choose a set of events or objects you could compare on a scale.
- Think about how you could describe the qualities of the events or objects from one extreme to another (for example, worst to best movies).
- Compare the events or objects on the scale below, writing descriptions in the boxes.

The _____ Scale

The purpose of this scale is to:

Anticipation Guide

Name: _____ Date: _____

What to do:

- ➔ Read each statement in the boxes below.
- ➔ Write your responses to those statements in the "Response before reading" blank.
- ➔ Read "Dealing with the Extremes" (*Going to Extremes*, pages 29–31).
- ➔ Now fill in the "response after reading" blanks.

It is impossible to protect your house against flooding.

Response before reading: _____

Response after reading: _____

No one can predict when a natural disaster will occur.

Response before reading: _____

Response after reading: _____

Global warming is causing unusual weather patterns.

Response before reading: _____

Response after reading: _____

Tornadoes are the most unpredictable and violent storms on Earth.

Response before reading: _____

Response after reading: _____