

HighWire
MAGAZINE

Good Thinking!

What Is Genius?

Brilliant mind or just talent?

Brains Matter

Exploring the body's
control center

**Animal
Intelligence**

Creatures that think
like we do

Volume 8, Issue 1 Teacher Guide

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Good Thinking!

Teacher Guide

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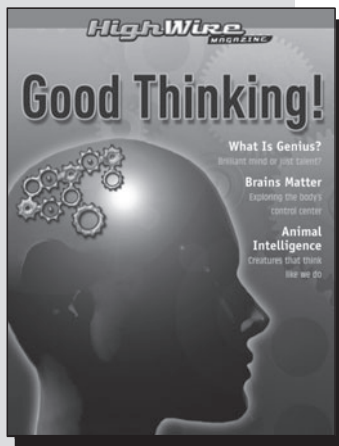
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The lesson plans in this Teacher Guide are supported by the *High Wire Magazine* Program and Assessment Guide. The Program and Assessment Guide contains:

- 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.



Good Thinking!

Key Reading Strategy: *Making Judgments*

The lesson plans in this issue of *High Wire Magazine* highlight the reading strategy Making Judgments. Opportunities to use this strategy are indicated by the symbol ★. For more information on this strategy, see page 10.

Assessment Master 10 in the Program and Assessment Guide can be used for this strategy.

Curriculum Link: social studies

Introducing the Magazine

Setting the Scene

Tell the students the title of this issue of *High Wire Magazine* is “Good Thinking!” and the theme is intelligence. The selections in the magazine are all about people who are either extraordinarily talented or geniuses. Originally the word “genius” meant guiding spirit, but the meaning has changed to mean someone who is so intelligent that the person sees and understands things differently from the average person. This issue of *High Wire Magazine* examines the difference between genius and talent, and gives the students plenty of opportunity to make judgments of their own on the topic.

Making Connections

Tell the students that as they work their way through this magazine, they will need to keep in mind what genius means to them. Establish a list of ideas to help them make a personal definition. Ask the students questions such as the following:

- What is the first thing that comes to mind when you hear the word “genius”?
- What other words mean the same thing as genius?
- Brainstorm the attributes of a genius. What makes a genius different from other talented people?
- Who would you label a genius? What makes this person a genius?

The selections in this issue of *High Wire Magazine* include a variety of genres, although most of them are nonfiction. Spend some time previewing a variety of nonfiction forms of writing before you start reading the selections.

Lesson Focus

Making connections

About This Selection

Surveying some of the world's best known geniuses, this article presents varying definitions of genius and some theories on how geniuses get their abilities.

Word Talk

Glossary words: *IQ, talent, intellectual, nurture, prodigies, genes, elements, radioactivity, shrapnel, leukemia, potential*

Other vocabulary:

recognized, creative, natural abilities, masterpieces, circumstances, debated, contribution, perfected, transformed

Extra Help

Another way of introducing new vocabulary is to tell students you have found words beginning with the letters *_,_,_*. Give them time to brainstorm words beginning with these letters, and discuss the reasons for their choices.



Teaching Tip

To help students identify text features (for this activity as well as later ones), make a chart listing all the text features and their functions that are applicable throughout the magazine.

What Is Genius?

page 2

Before Reading

Making Connections

To help students make connections with their prior knowledge and experience, ask questions such as the following:

- When you hear the word genius, who do you think of and why?
- How do you differentiate between genius and extraordinary talent?

New Vocabulary

One way of teaching new vocabulary is to explain the word and then have the students write an explanation and create a visual.

K-W-L Chart

Explain to the students how a K-W-L (Know-Wonder-Learned) chart works, then ask them to complete the “Know” column and make a start on the “Wonder” column. Encourage them to group the entries in the “Know” column and label the groups. Classifying is part of the learning process. Encourage them to add to the “Wonder” column as they proceed through the text. This chart may be used as an ongoing resource throughout the reading.

Text Features

Have the students look through the article, focusing on the features of the text such as title, fonts (size, bold, italics, headings), subheadings, graphics, and boxes. Ask questions such as the following:

- Which text features are used in this article?
- Which of these features are unique to a nonfiction text?
- Why do you think the text has been laid out in sections with boxes and graphics instead of as a single block of text?
- Would you have done anything differently if you had been designing this article? What? Why?

During Reading

Read Aloud/Think Aloud

Read Aloud the introductory passage and the following paragraph on page 2, allowing the students to listen to the information as you model fluent reading to support their comprehension.

Then read aloud the rest of page 2 and the top of page 3, modeling by Thinking Aloud. During the modeling process, make sure you tell the students exactly what has triggered your thinking.

Have the students skim the rest of the article and identify any vocabulary that needs explaining. Have each student select a portion to use for practising Think Aloud. Then have them try Thinking Aloud in pairs.



Assessment Tip

Look for the student who provides evidence and examples, either from this magazine or from sources beyond the magazine, to support an opinion.

Scales

A Likert scale asks students to rate their level of agreement with a statement on a range from “strongly disagree” to “strongly agree.”

For those who are having difficulty, you could either set for them points in the text where they should stop and think aloud (the words in bold may be appropriate) or work with a small group while the more confident students work in pairs on the rest of the article.

After Reading

K-W-L Chart

The students can complete the “Learn” column of their K-W-L charts. They can consolidate their learning or thinking by generating more questions about the definition of genius.

Scales

Have the students attempt to define genius by developing a scale and then creating a set of statements about talent/genius. They can ask their classmates to rate each statement from strongly agree to strongly disagree.

Lesson Focus

Making judgments

About This Selection

This selection profiles the childhoods, achievements, and jobs of four influential people. Readers are asked to credit their achievements to genius or talent.

Word Talk

Glossary words:

innovative, tuberculosis

Other vocabulary: *passion, transformed, professional, averaged, special ability, achievements, Grammy*



Assessment Tip

Look for the student who provides evidence and examples, either from this magazine or from sources beyond the magazine, to support an opinion.

Genius or Talent?

page 8

Before Reading

Making Connections

Ask the students questions such as the following:

- Do you know any people with a special talent? Would you call them geniuses? Why/why not?

During Reading

★Making Judgments

You may find it useful to refer to the Strategy Focus page (page 10) for this activity.

Ask the students to read the profiles at a more in-depth level. At the end of each profile, ask the students to consider questions such as these:

- Is this person a genius, or does this person have an extraordinary talent?
- How did you decide?
- Why did you use these criteria to decide?

When the students have finished this exercise, organize them into small groups to discuss their responses to the genius/talent question. Ask them to share, compare, and justify their answers.

After Reading

Graphic Organizer

Have the students use the information in the text to construct a graphic organizer, such as a concept web or a T-chart, to express their knowledge.

Creative/Aesthetic Response

Allow the students to respond personally to the topic by listing some geniuses or talented people (modern or historic) to write profiles on. Have them use the same formula as presented in the magazine. Ask them to decide on the genius/talent issue and give their reasons.

Key Reading Strategy: Making Judgments

Making judgments is something we do all the time to form opinions. It is an important part of reading as it forces us to think about and process the content instead of merely taking in the information. It also makes us consider a piece of writing as one side of an argument. We can take into account what we already know, as well as what we have read, to decide whether we can make an informed decision or opinion about it or if we need to read more.

Reading and Discussing the Page

Discuss the concept of making judgments. Invite the students to volunteer ideas about how they make judgments. What do they know about the process involved in making a judgment or forming an opinion?

Read aloud the introductory paragraphs on page 10. Revisit the question about making judgments, and ask the students whether their answers are the same.

Choose a student or ask for a volunteer to read aloud the information in the red box. Ask questions such as the following:

- Why is it important to make judgments when reading?
- When you are reading and making judgments, do you always take into account your own background knowledge, or do you read the text in isolation? Why is it important to make connections with your background knowledge?

Read through the “Try It Out” section, ensuring that all the students know what to do. Leave them plenty of time to work their way through each step. Have them complete **BLM 1**, Making Judgments. If some of the students are having trouble with the exercise, you may need to withdraw a group for further practice.

Have the students read the “For Real” portion of the text. This may help them to understand the importance of making judgments.

Lesson Focus

Making judgments
Visualizing

About This Selection

Josh, the main character in this story, thinks he doesn't have any special abilities. While helping at a competition, he finds out that he has perfect pitch, a unique kind of musical genius.

Word Talk

Glossary word: *roadie*

Other vocabulary:

disbelief, competition, gigs, tense, major, hammering, flat, minor, pitch, anxiously

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

To assist in the visualization process, have the students use comic books, clip art, a picture dictionary, or video games to provide illustrations or images of words.

Perfect Pitch

page 12

Before Reading

Making Connections

Ask the students questions such as the following:

- Have any of you ever performed in front of an audience? How did you feel?
- For those who haven't performed, what has stopped you?

Anticipation Guide

Make copies of the Anticipation Guide **BLM 2**. Students can agree or disagree with each statement before they read *Perfect Pitch*.

During Reading

Shared Reading

Using a Shared Reading approach, read the first page of the story, encouraging the students to record any thoughts or questions on sticky notes and mark them in the text. Discuss these before moving to the Visualizing activity.

Visualizing

Visualizing is an important tool because if students can form a picture related to the text, it will often aid their comprehension. Use the following process:

- Read the text aloud, and share some of your own mind pictures.
- Invite the students to share their own mind pictures.
- Discuss the importance of visualizing text – to grasp the concept behind the words.
- Ask the students to create mind pictures individually; then ask them to share these in a small group.
- Encourage the students to vocalize the things that trigger their mental images, such as a specific word, a personal experience, or a book or movie they have read or seen.
- Finally, remind the students that text features (diagrams, pictures, or a glossary) may help to create more accurate mind pictures.

Some of the students may find this a difficult strategy, so before embarking on the text, you may need to practice with them.

You can have the students do a Double-Entry Journal with quotes from the text and their mental image, or they could draw what they visualize as you read to them. As this is a relatively long selection, you could choose to divide the text into two, starting off by Reading Aloud, while the students draw their visual images, and then completing the journal exercise as the students read the text independently.



Assessment Tip

Look for the student who provides evidence and examples, either from this magazine or from sources beyond the magazine, to support an opinion.

Somebody Wanted But So

Students choose a character from the text and create a sentence saying what the character wanted, what stands in the character's way, and how the conflict is resolved.

Text Reformulation

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

★Making Judgments

Refer the students to page 12. Ask questions such as the following:

- What opinion have you developed about Josh (the narrator)?
- When someone you know “puts his foot in his mouth,” how do you react? Do you react differently depending on who else you are with?

Have the students skim through the text, reminding themselves of the events of the story. Ask them to choose an excerpt from each page and make a Triple-Entry Journal, using the headings “Situation,” “Details,” and “Response.”

Situation	Details	Response
Page 14, Josh at back of hall, listening to band	Thinks “Jasmeet had written a fantastic opening piece.”	Josh is a really generous person who takes pleasure in others’ success.

When the students have finished this activity, ask them questions such as these:

- ★Did your opinion of Josh and the other characters change as the story progressed? How? Why?

After Reading

Somebody Wanted But So

The students could carry out a Somebody Wanted But So activity, deciding who the somebody is, what the person wanted, the “but” that stopped it from happening, and the so, which shows the final outcome.

Text Reformulation

Encourage the students to Reformulate the Text by writing it as a newspaper report about the Battle of the Bands.

Lesson Focus

Monitoring for meaning

About This Selection

This article examines the amazing senses and intelligence of different animals and how they use these to navigate, communicate, and organize themselves.

Word Talk

Glossary words: *navigate, sonar, murky, distractions*
Other vocabulary: *complex, echolocation, obstacles, clicks, generation, chemical signal*

Word Splash

Key words from the text are “splashed” or written onto an overhead transparency or chart paper. Students use the words to predict the content of the text.

Say Something

Students work in pairs, taking turns to read sections of text aloud. The reader pauses occasionally to say something about the text, for example, a prediction, question, comment, or connection.

Silent Exchange

Students write an open-ended question. The questions are passed around the group, with each student writing a response to each question. At the end, they discuss the responses.

Animal Intelligence

page 18

Before Reading

Word Splash

Write some of the words from “Word Talk” on a transparency or the board, and ask the students to use them to predict the content of the text.

Making Connections

Ask the students questions such as the following:

- What is intelligence?
- Have you ever seen an animal do something intelligent?
- What are some examples of animal intelligence?

During Reading

Marking the Text

A number of words in this selection may be unfamiliar to the students. Encourage them to Mark the Text by bookmarking or using sticky notes to record questions or thoughts.

Say Something

Use Say Something: organize the students into pairs. (The selection is organized for easy division.) Each student reads a section aloud, pausing occasionally to say something about what she or he has read (for example, a prediction, question, comment, or connection).

Once the students have finished reading the text, clarify any confusion or questions they may have.

After Reading

Graphic Organizer

Have the students create a chart with three columns:

1. The name of the animal mentioned in the text
2. What that animal does
3. What purpose this serves

Dolphin	Uses echolocation – echoes from clicks and squeaks they make that bounce off animals and objects	Helps dolphins find their way around
---------	--	--------------------------------------

Silent Exchange

To encourage questioning and sharing points of view, have the students carry out a Silent Exchange. When they have done this, have them discuss the questions and answers.

Lesson Focus

Making connections

About This Selection

This selection follows an email to an online IQ expert about memory. The expert responds and details an ancient process for memorization.

Word Talk

Glossary word: *suit*
Other vocabulary: *landmarks*



Reflection and Metacognition

Have the students discuss how the illustrations supported their understanding of Andi Bell's system.

Ask an Expert: Amazing Memory

page 22

Before Reading

Making Connections

Ask the students to use a scale of 1 to 10 to rate their ability to remember things (for example, words to a song, a math formula, appointments, people's names). This will help them see that memory is different for different things. Then ask them to justify their rating.

Ask the students questions such as these:

- Have you ever done any memory training? What sort?
- Do you know any other forms of memory training?
- What are the advantages of having a great memory?

During Reading

Read Aloud/Think Aloud

Read Aloud the text on page 22, allowing the students to listen and follow along as you model fluent reading.

Reread the same portion of text to model Think Aloud. Pause as you read to share your thinking, noting the words or ideas that triggered your thinking. Then organize the students into pairs, and have them reread a portion of the text and think aloud to each other. If some students find this difficult, you could provide them with cues where they could stop and think.

After Reading

Exercising Memory

Use a deck of cards or create flash cards of things to memorize, and have the students try out Bell's system. Use "landmarks" in or outside the classroom to remember the cards, and have the students test each other. Discuss whether they found Bell's system easy to use.

Lesson Focus

Making judgments
Predicting

About This Selection

The relationship between the size, shape, and functions of the brain are discussed in this article. It also includes a personal quiz to find out how readers learn best.

Word Talk

Glossary words: *epileptic seizure*

Other vocabulary:

scientists, wired, brain damage, savant, symbols, visualize, connections, theories, experiments

Probable Passage

The teacher lists key words from the selection and the students discuss them. They may be asked to arrange the words into categories. The students then use the words to fill in the blanks of a Probable Passage (one that might occur in the text) or to write their own Probable Passage.

Extra Help

Remind the students to clarify the meaning of the words in bold, using the glossary.



Assessment Tip

Look for the student who provides evidence and examples, either from this magazine or from sources beyond the magazine, to support an opinion.

Brains Matter

page 24

Before Reading

Questioning

Ask the students questions such as the following:

- What do you think the story is about?
- In what way do you think brains matter (with regard to the title of the selection)?
- What questions do you have about brains and the way they work?

Probable Passage

Give the students copies of the Probable Passage **BLM 3**. Ask the students to discuss the words and use them to write a Probable Passage as a way of predicting what the passage is about.

During Reading

Guided Reading

Using a Guided Reading approach, tell the students that you want them to focus on the questions below as they read through this selection. Record the questions on chart paper beforehand so that they are clearly visible.

Focus questions for page 24:

- What did scientists think they would find out about the shape of the human head in the nineteenth century?
- ★What's your opinion of these scientists?
- What do you think scientists would do now to find out about a person's brain?

Focus questions for page 25:

- Why did Einstein leave his brain to science?
- Why do you think a child's brain is wired to learn language more quickly than an adult's?

Focus question for the box about Daniel Tammet:

- ★What is your initial reaction to the fact that Daniel's brain is damaged, yet he can multiply massive numbers and speak seven languages?

Focus question for the end of the article:

- Is your opinion of Daniel the same at the end of the article as it was at the beginning? If it has changed, how has it changed?

Have the students read on and complete the quiz. Discuss their results.

After Reading

Predicting

As a class, look back at the predictions the students made before reading. Discuss why they were correct or incorrect.

Text Reformulation

The students could reformulate the text about Daniel Tammet into one of the following forms:

- newspaper report
- journal entry (from Daniel's perspective)
- poem.

Creative/Aesthetic Response

Encourage the students to write a journal entry about their own learning style, as discussed in this article.

Featured Graphic Organizer: Concept Web

A concept web is a simple way of organizing a lot of information. It centers on a topic and branches out to include increasingly specific pieces of information. The ideas can then be used in various types of writing, such as a book report or an essay. It is especially useful for studying or reviewing because it helps a student to remember key points. Using different colors for different levels of information is great for visual learners.

Reading and Discussing the Page

Read aloud the introductory passage. Ask the students to skim the web to get the general idea, then take them through it step by step. As you look through the web, draw the students' attention to the various components:

- The topic (different kinds of intelligence) is in the middle of the web in a bold, white font with a distinctive red background.
- The red branches lead to the subtitles (four different types of intelligence) in bold black on a yellow background.
- Each subtitle has two branches. One branch applies to the sorts of things people with each kind of intelligence like to do, and the second branch applies to the skills they have. Each branch has a title of its own (in bold type), and the information following in normal type is differentiated by bullet points.

Have the students go back to Animal Intelligence and make a concept web about the animals discussed in the text using **BLM 4**, Concept Web.

Lesson Focus

Skimming
Paraphrasing
Text features
Asking questions

About This Selection

This graphic text shows the location of the six main areas of the brain and describes how they help the body perform different functions.

Word Talk

Vocabulary: *organ, center, electrical signals, lobe, emotions, essential, patterns, stem, spinal cord, controls*



Teaching Tip

Make sure students are aware that graphic texts include print features, organizational features, design features, and organizational patterns and that they understand the functions of a graphic text.

Control Center

page 30

Before Reading

Questioning

Review the importance of Questioning while reading. Have the students recall what they have learned about intelligence, and have them list more questions they may have.

Text Features

Ask the students questions such as these:

- What is a graphic text?
- How is it different from an informational or literary text?
- What is the purpose of a graphic text?

If they are unsure about the purpose of a graphic text, ask them again at the end of the text and check that they understand.

Skimming the Text

Have the students skim the text to identify any unfamiliar words. Tell them that reading the text thoroughly will usually clarify these words, but make time at the end of reading to ascertain whether anyone needs further help.

During Reading

Paraphrasing

Demonstrate paraphrasing. Encourage the students to use sentence stems such as “This means ...” Have them paraphrase the information from a few of the boxes and share their results in pairs.

Focus Questions

Provide the students with questions such as the following:

- What information is provided?
- Is all the information provided? What is missing?
- How is the information organized? Why is it organized in this way?
- What are the advantages and disadvantages of a graphic text?

After Reading

Creative/Aesthetic Response

Have the students create their own graphic texts about another subject.

Featured Project: How Good Is Your Memory?

Materials required: paper and a pen (for students who are visual learners)

Tell the students that they are going to be challenging their memories. Read aloud the text at the top of the page, and encourage the students to talk about their own strategies for remembering names, numbers, and faces.

Read the instructions for the memory test, and set the students to work. It should take them only a few minutes to complete. You could use a stopwatch to make sure all students take the same amount of time to look at each number.

Once they have finished, encourage them to try the tips in the orange boxes.

The students may wish to try some other ideas, such as the following:

- Write down the number.
- Divide the groups of numbers into smaller groups.
- Sing the numbers to a well-known tune, such as a nursery rhyme.

Further Activity Ideas:

Do the same test using:

- words, names, or random groups of letters
- shapes
- colors.

Making Judgments

Name: _____ Date: _____

What to do:

- Read “Genius or Talent” (*Good Thinking*, pages 8–9). Try to make an informed judgment about whether each person is a genius or a talented person, and write it in the final column of the table below. In the “Evidence from the text” column, write the evidence from the text that caused you to make your judgment.

Genius or Talent?

Genius or talent?	My background knowledge	Evidence from the text	My judgment
Bill Gates			
Wayne Gretsky			
Georgia O’Keefe			
Ray Charles			

Anticipation Guide

Name: _____ Date: _____

What to do:

- Before reading “Perfect Pitch” (*Good Thinking!*, pages 12–17), read the statements in the table below. In the first column, write your response: strongly agree, agree, disagree, or strongly disagree.
- Read the article, then look back at the statements. Have you changed your ideas? Write your new response in the final column.

Response before reading	Statement	Response after reading
	Having a sense of humor is important.	
	Performing in front of a crowd is terrifying.	
	Being a roadie is an important job.	
	Having perfect pitch is a talent you are born with.	

Probable Passage

Name: _____ **Date:** _____

What to do:

- ➔ Read and discuss the following words from “Brains Matter” (*Good Thinking!*, pages 24 to 27.) What do you think the article will be about?
- ➔ Use the words from the list to write a short passage that could be in the story.

epileptic seizure

scientists

wired

brain damage

savant

symbols

visualize

connections

theories

experiments

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Concept Web

Name: _____ Date: _____

What to do:

- Reread “Animal Intelligence” (*Good Thinking!*, pages 18–21).
- Fill in the supporting details about these key ideas in the chart below. The first one has been done for you.

