



## See It Again for the First Time

Curriculum Unit 09.01.02  
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### General Introduction

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"What can I do to help my students develop better visualization skills?" I have asked myself that question innumerable times. When I first conceived of the present three--week unit for my seventh--grade Language Arts students, I wanted to help them develop a better ability to comprehend and retain the information in texts. I wondered whether and how the ability to picture in one's mind's eye or create internal visualizations based on external images or texts actually contributes to better comprehension when reading and more specific, descriptive language when writing. I found that studies support the use of guided discussion of images as a way to help students of varying ages and levels develop an ability to look critically at images, which involves thinking critically about images, and -- very important -- thinking critically in other settings as well. <sup>1</sup>

Critical thinking involves the ability to integrate the information within an image or text, draw inferences using relevant background knowledge, and use specific observations to support claims or conclusions. The development of these skills is itself an aid to better comprehension and retention of text, and it increases the ability to write clearly, descriptively, and persuasively. Thus, I have developed the present unit as a way to help students explore visual images and texts using guided discussions and writing assignments. The present unit is intended to help students develop greater ability to (1) notice and remember details and (2) use their observations to help them think critically. Both of these skills improve students' comprehension of texts, their ability to retain and recall the meaning of texts they have read, and their ability to write clearly, descriptively, and persuasively.

### Objectives

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I believe that by completing this unit, students will learn to notice more details in visual images by writing descriptions of them and/or using them as writing prompts. By introducing the students to effective ways to approach and analyze visual materials and by giving them opportunities to practice (in class and possibly

during a field trip to an art museum), I hope to give my students a new perspective on the process of writing and reading in relation to seeing. I believe that progressing multiple times through the cycle of writing, knowing, seeing, with feedback from their classmates and from me, will help my students develop a stronger two-way link between their visualization and verbalization skills.

If this unit is successful in addressing the issues summarized above, the following objectives will be met:

Students will notice and identify details in visual images and in texts, orally and in writing.

Students will consider and analyze details in images in order to make inferences about the images and/or the creators of the images.

Students will consider and analyze details in texts in order to generate and support claims about the images/texts and/or the artists/authors of the images/texts.

Students will evaluate the relevancy of details as support for a specific claim about visual images and texts.

## Strategies

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In this unit, the students will go through a process of observing changes in their own "vision" as a result of writing. They will complete experiential writing pieces before and after viewing visual images. I hope to build on the students' seeing-writing skills to help them develop writing-seeing skills. In addition, because I would like these skills to transfer to the students' reading, in terms of helping them to notice, visualize, remember and state textual details, the unit will also include lessons in which students read, analyze, and respond to texts for this purpose. I have designed the lessons so that they alternate, with a writing/visual image-focused lesson followed by a reading/text-focused lesson, and vice versa.

This curriculum unit includes a set of visual images and texts, each accompanied by questions and/or prompts intended to help students notice details about images or texts, so that they are better able to form mental images (visualizations) and recall the images, texts and details later. Several activities using different strategies are included, with a focus on having the students notice details as a way of coming up with useable evidence to support a claim. Several examples (with varying levels of detail) are offered below. An essential element of this unit is the return to the original text or image after an activity that is meant to help students notice more details or have greater insight during the second viewing or reading. The general structure of the lesson sequences is as follows:

(1a) Careful study of a visual image, with students looking at the image and doing a brief writing activity.

(1b) Further viewing of the image while discussing it with classmates.

(1c) Additional writing to record and/or elaborate on new insights gained upon returning to the image after the initial writing activity.

(This sequence of viewing, writing, viewing while discussing, and writing could be repeated multiple times.)

(2a) Reading of a text somehow related to the visual image, accompanied by a brief writing assignment.

(2b) Further study of the text while discussing it with classmates.

(2c) Additional writing to record and/or elaborate on new insights gained upon returning to the text after the initial writing activity.

(This sequence of reading, writing, reading/viewing of the text while discussing, and writing could be repeated multiple times.)

## Rationale

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When we look at a picture, even if we study it well, we cannot perfectly recreate it in our mind's eye later on. Similarly, when we are exposed to language, we generally do not remember the content word for word or line for line. <sup>2</sup> Nevertheless, we may say that we do remember a picture or a text that we have viewed or read. When we remember images and texts, what is that we remember? Cognitive scientists study this topic, and they say that when we view images or read texts, we construct mental representations of them. <sup>3</sup> The representations themselves are abstract recordings of the characteristics of the image or the meaning of the text. The images we view can be real, dynamic ones of world around us or static ones such as paintings; for either type, we construct representations that we organize into models or frameworks.

As we acquire mental representations of various aspects of the world through our interaction with the people

and things around us, we organize these mental representations into various kinds of mental models relevant to the recurring experiences we have. <sup>4</sup> For example, children who experience the same series of dynamic images (and sounds) every night when being put to bed develop a mental model that could be called a bedtime model. This bedtime model might consist of a parent pulling a book from the shelf, turning the pages as he or she talks, putting the book down, turning on a mobile, and turning out the light. When the child has internalized this series of events or formed a mental model for the bedtime routine, then he or she will be surprised if the bedtime routine is not followed one night. A mental model can be thought of as a set of expectations in a given circumstance.

Similarly, as children gain experience with narrative text (stories), they develop models based on their generalized understanding of the typical structure of stories. <sup>5</sup> With exposure to stories, children develop mental models for narrative texts. <sup>6</sup> They build a mental model that contains the expected elements of a story. The kind of mental model that we form while reading a given text is called by a specific name: the situation model. <sup>7</sup> The situation model includes not representations of the exact content of what was read (i.e., it is not a word--for--word or pixel--by--pixel recorder), but representations of the meaning we gleaned from the text, and it incorporates connections that we make to prior knowledge and our pre--conceived understandings of the world. <sup>8</sup> The situation model can be thought of as a mental model that has been filled in with the details of a particular story.

Children progress through several stages of development regarding the complexity of the mental models they build for the structure of narrative texts. <sup>9</sup> Although the general components of stories remain consistent across different examples and over time, children's awareness of that structure becomes increasingly organized and detailed over time. Children (and adults) use the experiences they have had building situation models to create increasingly elaborate mental models, into which they can fit more details and more information about the story, a process that allows for improved comprehension and retention of the stories.

Mary Ellen Moreau has developed a series of tools to help teach children the structure of stories. She follows a progression that most children go through naturally as their mental models for stories become more elaborate. Early in narrative development, children's mental models for narrative text are quite simple, consisting of a character in a setting; this is the "Descriptive" stage. <sup>10</sup> When children are in this Descriptive stage, they will tend to mention and possibly describe the main character(s) and the setting when retelling a story. In the next stage, Action Sequence, children tend to include in their retellings the character(s) and setting and a list of actions that occurred in the story. At this stage, the actions are not necessarily in chronological order, and the story as retold by the child may not be comprehensible to a listener. Later in development within this stage, retellings include actions in the order in which they happened in the story.

When children begin including in their retellings the idea that the characters faced a "kick--off" <sup>11</sup> (often a problem) that led to the actions in the story, then they have reached the next stage of narrative development, the Reactive Sequence. At this stage, the actions of a story are not simply events but are characters' reactions to a problem or unusual situation. In the following stage, Abbreviated Episode, children express the characters' reactions as consequences of their feelings about the kick--off. Children who are in the Abbreviated Episode stage have built a mental model consistent with their (subconscious) expectation that narrative texts include explicit or implicit information about character(s) and setting early on in the story, then about a kick--off that causes an emotional response in the main character, whose subsequent actions are a result of those feelings. A story told by a child in the Abbreviated Episode stage could be something as simple as, "I was in the sandbox and I got mad at Caitlin because she took my shovel. I hit her." In this example, the

main character is the child telling the story, the setting is the sandbox, the kick-off is Caitlin taking the shovel, the character's feeling in response to the kick-off is "mad," and the character's subsequent reaction is hitting Caitlin.

Mary Ellen Moreau's stages of narrative development continue with the Complete Episode, the Complex Episode, and the Interactive Episode. <sup>12</sup> They do not need to be described here in more detail; at the basic level these stages are consistent with the idea that we form situations models as we listen to or read stories and continue to use them to build an increasingly complex mental model for stories. When readers (or listeners) come to new content, they integrate that new information into their current situation model. Readers who have more prior knowledge are able to integrate new information more completely and to retain it for longer periods of time compared to readers with less prior knowledge. <sup>13</sup> Readers' comprehension may therefore be inhibited if they do not have adequate models prior to reading, or if they do not fill in their situation model appropriately as they read. The meaning-based representations with which we fill in the situation models are what we remember later -- even though we do not retain the precise text, we retain the representations of the text's meaning. <sup>14</sup> Furthermore, our situation model for a particular text can contribute to the expansion or refining of our mental model for narrative texts so that we are better equipped to face new narrative texts in the future.

Thus far, the examples discussed have included mental models for a bedtime routine and for the structure of narrative texts. Mental models, however, can be formed for many encounters we have with the world. Abigail Housen does not use the term mental model in the reports of her research findings that I have read; nevertheless, it seems that her method of teaching students to observe and think about visual images could be described as a method of helping students develop increasingly sophisticated mental models for observing visual images. Housen and others have developed a method, called Visual Thinking Strategies (VTS), designed to help children (and adults) observe visual images in an increasingly detailed and informed manner such that they also develop increasingly sharp critical thinking skills, which have been shown to transfer to settings other than those in which they were taught. <sup>15</sup>

Housen found that when children are given practice interacting with each other while viewing artwork, they develop improved critical thinking skills more quickly than children who are not given these guided opportunities to explore visually presented works of art. <sup>16</sup> The visual modality is used as a starting point for group discussion, allowing students to develop skills that transfer from the group setting to a one-on-one setting and that eventually transfer to other contexts, such as those involving non-art objects. For instance, Doley, Friedlaender, and Braverman <sup>17</sup> found that first-year medical students who participated in training involving discussions of paintings (using an approach similar to VTS) developed better visual observation skills than their classmates who did not participate. The observational skills -- developed using paintings -- could be transferred to other types of images, so that the participating students were able to make more precise observations and inferences regarding pictures of skin lesions and other medical visual images.

Further transfer to literacy skills also appears to result from students' long-term participation in VTS, as evidenced by the results of the Minnesota State Reading Test taken by eighth-graders each year from 1996 through 2000. Housen and her colleagues worked with teachers in a Minnesota school, Byron, to help them implement VTS beginning in 1993. The first group of Byron students who began participating in VTS in 1993 became eighth-graders in 1998, the second group in 1999, and the third group in 2000. Before 1998, Byron eighth-graders had not received VTS training. The results of the Minnesota State Reading Test were the following: from 1996 through 2000, the average percent of eighth-graders in schools other than Byron who

passed the test increased steadily from approximately 60% to 80%. A control school tracked by Housen and her colleagues followed this pattern. In contrast, the average percent of passing Byron eighth--graders increased from approximately 50% and 54% in 1996 and 1997 (before VTS training) to approximately 77%, 80%, and 87% in 1998--2000 (after VTS training). Housen states that, "The Byron school principal, teachers and school board members believed that the school district's participation in the five--year pilot program of VTS, contributed significantly to Byron's placement in the top 8 percent of Minnesota schools." <sup>18</sup>

The results of a study by psychologist Joseph Anderson, as reported in his 1974 article, are consistent with the idea that we are able to construct representations for visual stimuli more efficiently than we are able to construct representations for verbal (text) stimuli. <sup>19</sup> He explained that as a group, children displayed varying levels of ability to reproduce given stimuli depending on the modalities of input and output: they performed best in the visual input--visual output condition, then the visual input--verbal output and verbal input--visual output conditions, and finally the verbal input--verbal output condition. The author of this study hypothesized that children performed most poorly in the verbal--verbal condition because it required internal translation of the verbal input into a visual representation and then back to the verbal modality for output. Thus, in my unit, I plan to focus on visual stimuli (images) as a means of helping my students form mental models, even though I am ultimately interested in the students' having improved text comprehension and retention.

Because we are able to form more detailed mental representations if we have already developed a mental framework, or mental model, of the characteristics of the image, it seems that the key to helping my students use visualization skills to build better memory and comprehension is to help them develop mental models. Mental models, even when developed using images, can also be used to retain information and details gleaned from a text.

## Assessment

Following Wiggins and McTighe, <sup>20</sup> I begin my unit with the assessment I am planning to use, in order to ensure that the lessons contribute directly to the development of the skills to be fostered. In the present unit, the assessment would consist of a pre--test and a post--test to be administered before starting the unit and after the lessons have been completed. The assessment allows the teacher to determine the extent to which the lessons have helped meet the unit objectives; at least for the pre--test, I would choose not to assign grades based on quality as measured by the rubric.

The assessment includes two parts each of which includes a brief discussion prior to having the students write a response. The first part is a response to a visual image, and the second part is a response to a poem. During the pre--test, I would use chart paper to keep notes about the pre--writing discussion; then during the post--test, the same notes could be used as a brief review of the original discussion before the students begin to write. The specific format of the assessment could be adapted or adjusted to match various student levels and teacher goals, but the basic idea could be the following:

To assess the extent to which students make observations of an image and use those observations to support a claim:

- (1) Prior to starting the unit, students bring in images of homes: indoor or outdoor images of any part of homes from any time period or location, real or imaginary, in photos or drawings or other media. I would ask the students to try especially to bring in images of living rooms, kitchens and

bedrooms. Have a discussion about the difference between a "home" and a "house," about what makes a home a home rather than a house, or about the meaning of "Home is Where the Heart Is."

(2) Pre--test: Give the students ten to fifteen minutes to write their answer to a question such as:

--Which image is a good illustration of the saying, "Home is Where the Heart Is"?

--Which image would you be most likely to call home?

--Which image is a superb example of a "home" rather than a "house"?

--Which image would [a character from a class reading] most likely call home?

--After students have answered one of the questions above, have them answer the following:

Why? Provide evidence based on your observations of the image. At least three specific observations of the image should be included in your response.

(3) Using a rubric similar to the one shown as Table 1, the teacher scores each response. The rubric includes categories directly relevant to the present unit; additional categories covering organization or usage could be added.

(4) Post--test: The post--test could be a revision of the student's own original response, a second response to the original pre--test question (without looking back at the first response, but using the same images), or the students could choose a new question and write from scratch; regardless of the assignment, the amount and quality of evidence provided could still be compared to the pre--test response if the same rubric is used to score both the pre--test and the post--test.

<b>Category</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>
<b>Response includes a claim.</b>	Claim is relevant to the assigned topic and is presented clearly and explicitly.	Claim is relevant to the assigned topic, but is presented unclearly or only implicitly.	Claim is not relevant to the assigned topic.	Response does not include a claim.
<b>Response includes observations about the image.</b>	Response includes clear description of 3 or more insightful, relevant observations.	Response includes clear description of 2 insightful, relevant observations.	Response includes clear description of 1 insightful, relevant observation.	Response does not include observations about the image, or includes only irrelevant observations.
<b>Response includes reasoning regarding how the observations support the claim.</b>	Response includes clear reasoning regarding how three or more observations support the claim.	Response includes clear reasoning regarding how two observations support the claim.	Response includes clear reasoning regarding how one observation supports the claim, or does not include explicit reasoning regarding how the observations support the claim.	Any observations made do not appear to support the claim.

Table 1. Sample rubric to be used in scoring the visual image pre-- and post--assessments.

A claim in a response would simply be a statement such as, "I believe that the image of the girls' blue bedroom is a superb example of the saying, 'Home is Where the Heart Is.'" Observations made in support of this claim could include statements such as, "The girls whose bedroom this is appears to have made it their home using images of things they love, such as the photo of themselves playing with a golden retriever in a colorful heart--shaped frame, placed centrally on the night--table between their beds." An explicit statement describing how the framed photo supports the claim could express the idea that the placement of a photo of a beloved pet in a vibrant frame and in a prominent position where they would see it at the beginning and end of the day is a way of making their bedroom a home because it is an image of a loving relationship in their lives, and it represents a personal attachment they have made in the world. Students might express this idea with a sentence such as, "The girls made their room feel like their own place by putting a picture of their dog by their beds."

To assess the extent to which students make observations of a text and use those observations to support a claim:

- (1) Read as a class the poem "Where I'm From" by George Ella Lyon. In a brief discussion, lead the students to see that each line (or pair of lines) of the poem tells a story and reveals something about the poet. An example to give to the class could be the lines, "I am from the dirt



under the back porch. (Black, glistening, it tasted like beets.)" These lines tell us not only about the poet's house, but also that at some point in her youth she ate the dirt under the back porch; this story gives us the idea that she spent time playing outside, exploring. We can probably also assume that if she thought dirt tasted like beets, then she may have also thought that beets taste like dirt.

(2) Give the students eight to ten minutes to write answers to the following question: In the poem "Where I'm From," the poet George Ella Lyon reveals herself and stories about her life to the reader. Support this claim by explaining what you learned about George Ella Lyon through at least three examples from the poem.

(3) Using a rubric similar to the one shown as Table 2, the teacher would score each response. The rubric includes scoring categories directly relevant to the present unit; additional categories covering organization or usage could be added.

(4) For the post--test, the teacher could choose whether to have students revise their original responses or write new responses, either requiring them to use different examples or allowing them to re--use the same examples; again, the teacher will be able to use the rubric--based scores to gauge the extent to which the students' observational skills have improved regardless of which post--assessment is used.

<b>Category</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>
<b>Response includes examples (observations) from the poem.</b>	Response includes 3 or more explicitly-stated, relevant observations of the text.	Response includes 2 explicitly-stated, relevant observations of the text.	Response includes 1 explicitly-stated, relevant observation of the text.	Response does not include explicitly-stated, relevant observations of the text.
<b>Response supports the assigned claim by including inferences based on observations of the text.</b>	Response supports the assigned claim by including insightful, reasonable inferences made about the poet or her life based on three or more observations.	Response supports the assigned claim by including insightful, reasonable inferences made about the poet or her life based on two or more observations.	Response supports the assigned claim by including insightful, reasonable inferences made about the poet or her life based on one observation; or response includes only unreasonable or irrelevant inferences.	Any observations made do not appear to support the claim.

Table 2. Sample rubric to be used in scoring the text pre-- and post--assessments.

## Classroom Activities

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Day 1: This lesson would focus on a visual image. It introduces "I see--notice--think-- wonder" (SNTW, for See--Notice--Think--Wonder) sheets <sup>21</sup> (see Appendix A). This lesson would involve color copies of Self--Portrait by Chuck Close <sup>22</sup> covered with numbered sticky--notes. Students would choose one sticky note from the top or bottom row and fill out one SNTW sheet about the area under the sticky note. Then students would remove an adjacent sticky note and fill out one SNTW sheet about the area under that sticky note, through five or six sticky--notes or until the students begin losing interest. Then they would write a prediction about the overall image and remove the remaining sticky notes. We would discuss the image, nouns, adjectives and sentences, with the idea that the descriptions differed depending on how much of the image had been revealed, i.e., how far zoomed in or zoomed out from it one was. Then students would be asked to write how their ideas of the image changed as more of it was revealed.

Day 2: We would begin by reviewing the previous lesson, and then I would ask the students to think of (and write down) one situation in their own lives in which their understanding or opinion changed as a result of getting to know something or someone better (learned about its context or saw it from a new perspective) -- similarly to the way our understanding of the Chuck Close painting changed as our perspective grew. We would then discuss their examples. One example I could give would be the way we understand individual people better when we have met members of their family -- then we understand what aspects of them are like those of their family, and what aspects reflect their own personalities. We learn about individuals when we get to know the context from which they come. After discussion, students would be asked to write about their change in perspective as a result of getting to know the context of someone or something better.

Day 3: When students first arrive in class, they would be given opportunities to share their writing from yesterday as a way to begin discussing examples of a change in perspective. They would be asked to think of as many stories as they could in which a character's perspective changed because he or she changed size. Students might think of familiar stories they have read in books or seen in movies, such as *The Indian in the Cupboard*, *Ralph S. Mouse*, *Alice in Wonderland*, *Stuart Little*, *King Kong*, or *Honey, I Shrunk the Kids*. As they give examples and tell a little about each character's situation, I would write words on the board that they said that had to do with size, changing size, quantity, or amount of space taken up by something. After a few examples, students would be asked to write down their own examples of words that could be used to tell about something's size, its changing size, or the amount of space covered by it; I would ask them to label each word with its part(s) of speech. After a short time (probably about two minutes), a few students could share their answers if they wanted, and then I would give students a copy of an excerpt from K.C. Cole's essay "A Matter of Scale." <sup>23</sup> Students would be asked to read the excerpt quietly to themselves; then they would be paired up or asked to find a partner. Each pair of students would be asked to find as many nouns, verbs and adjectives on the page that had to do with size, changing size, quantity, or amount of space. The words that I was able to find in each category are shown in Table 3. In a discussion after the students have found the words dealing with size, the goal would be for the students to notice the large number of words related to the topic that the author used on just one page. The purpose of this assignment is to have the students see the language--rich ways in which even something as simple as size can be described, by noticing the detail and

explicitness of Cole's explanations and the many examples she gives to support her points.

<b>Nouns</b>	<b>Verbs</b>	<b>Adjectives</b>
expanse	measures	bigger
realm	grow	smaller
landscapes	puffed up	vast
giant	bursting out	big
size	shrank	small
scale	<i>Shrunk</i>	more
size	adds up	Shrinking
(invisibility)	(appear)	Little
giant	(dissolve)	more
size	increases	less
Size	doubled	quantitative
giant	quadruple	huge
geometry	(two) times (two)	Big
Height	increase	sixty-foot
dimension	increase	one
area		two
volume		three
height		ten
(cross) section		taller
thickness		thousand
two (times) two		greater
volume		stout
weight		thick
factor		puny
eight		
times		
weight		
times		
(cross) section		
factor		
(one) hundred		
weight		

Table 3. The nouns, verbs, and adjectives related to size, change in size, quantity or amount of space taken up, all found on the first page of K.C. Cole's essay "A Matter of Scale" <sup>24</sup>.

Day 4: We will notice details in the 1931 painting *The Midnight Ride of Paul Revere* by Grant Wood. <sup>25</sup> Tell students, "You are going to be asked to notice details about this painting and to write them down. Let's do a couple together. I notice that the light from these windows shines almost half-way across the path here. [Write this up on poster paper.] Raise your hand if you notice a different detail." Add three to four more examples together, then ask students to write down ten details, things they think others wouldn't notice on their own. Have five or so students share one of their examples; write each one up on the poster paper. [Optional: Have all students write down five more details. Have approximately five more students share their examples until there is a list of about fifteen to twenty details.] Select one as the most interesting detail in the list, while each student selects the most interesting detail in his or her list. Then model adding a claim by stating, for instance, "The fact that the lights are on in these houses but not these houses is important because it shows that the horseman is a messenger," and have students write down their own claims derived from their own list of details. Then cross out all details that do not support that claim, first together and then all students on their own. Other details that might support the sample claim above are that the horse and

rider appear to be racing through town, there are no telephone poles so messages probably could not be passed on by phone yet, and people are getting up and coming outside their houses as if they are talking or shouting to other people, even though it is the middle of the night -- all of these could be details that show that the horseman is a messenger.

Day 5: We will notice details in the poem "The Midnight Ride of Paul Revere" by H.W. Longfellow (written April 19, 1860). Students would have already been introduced to prepositions of location, so I would begin by having them find as many prepositions of location (and their objects) as possible. Then students will be asked to picture the scene in their minds as we read it out loud. After reading, students would fill out a SNTW sheet for texts (see the bottom half of Appendix A). A discussion leading to the formation of a claim would follow, similar to that planned for the lesson of Day 4. The purpose of this lesson is to extend the strategy used for visual images on Day 4 to use with a written text.

### **Other lessons could be developed based on the following ideas:**

We could focus on the idea that buildings are sometimes designed to fit in their particular settings. Using multiple images of wheat stalks, wheat stacks, and wheat fields (with clear horizon lines), draw students' attention to the similarities between these natural shapes and the architecture Frank Lloyd Wright's houses designed for Midwest environments, such as his Robie House (whose interior and exterior reflect wheat stalks, stacks and fields). The purpose of this lesson would be for students to understand the importance of context: the Robie House without a Midwestern context of wheat fields is not meaningful in the way that it is when it is in its intended context. Extensions to similar examples could be made. One possibility would be to use images of Frank Lloyd Wright's houses Fallingwater, set in a forest near waterfalls, or Taliesin West, designed for the desert/mesa environment of Arizona.

Students could be asked to write about connections between houses and their environments; or images of the houses without their contexts could be shown to the students, who would then be asked to write a response to the following questions, "What information does a person need to know in order to really understand the design of this house? Why? What details give you clues about the land around this house?" In other words, the students would be asked to fill in the setting of the house.

Using scenes from Where's Waldo books,<sup>26</sup> students could be asked to choose to be one of the people in a scene (who are all only slightly different from each other) and to write a description of themselves that would allow another person to identify them. Then students would trade descriptions and try to identify their partners' chosen characters, as a means of determining whether the students' descriptions were written with sufficient detail for their partners to identify the chosen characters. This exercise would serve the purpose of helping students attend to details and include descriptions of those details in their writing, with the motivation of having another student use the details to find a particular character in the visual image.

Students could be asked to compare multiple images of a particular theme, such as images of parents caring for offspring, e.g., the paintings *The Sick Monkey* by William Henry Simmons, the painting *Freedom from Fear* by Norman Rockwell, and the photograph *Migrant Mother* by Dorothea Lange.<sup>27</sup> These images, along with others such as *Prisoners Exercising* (Van Gogh), could be used to discuss and write about what is involved in freedom.

A warm--up activity one day could be to use a 'Hidden Pictures' scene in which the students have to find small images hidden within a larger image, such as one showing Casey at the Bat.<sup>28</sup>

## Annotated Bibliography for Teachers

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Anderson, Joseph. "Visualization and Verbalization as Mediators of Thought." *Speech Monographs* 41.4 (1974): 408--412. Although the language in this article seems dated, it provides a good brief summary of previous findings and some original cognitive psychology research on differences in people's responses to stimuli depending on whether the input and output are verbal or visual.

Cain, Kate. "Making Sense of Text: Skills that Support Text Comprehension and its Development." *Perspectives on Language and Literacy* 35.2 (Spring 2009): 11--14. This is a short, easy-to-comprehend article that introduces the topics studied by researchers of text comprehension.

Dolev, Jacqueline, Linda Krohner Friedlaender, and Irwin M. Braverman, "Use of Fine Art to Enhance Visual Diagnostic Skills." *Journal of the American Medical Association* 286.9 (2001): 1020--1021. This article is a clear 1--page summary of a study completed by educators in the Yale Medical School and the Yale Center for British Art. They showed that medical students' visual observation skills can be enhanced through experiences viewing and discussing paintings, which can help in their ability to make observations and inferences regarding pictures of medical conditions in need of diagnosis.

Housen, Abigail. "Aesthetic Thought, Critical Thinking and Transfer." *Arts and Learning Research Journal* 18.1 (2001--2002): 99--131. This engaging article is an informative summary of the author's findings throughout her career regarding the Visual Thinking Strategies curriculum, which she and others designed as a means of helping children learn to observe and discuss works of art.

Kitsch, Walter. *Comprehension: A Paradigm for Cognition*. Cambridge: Cambridge University Press, 1998. This book seems to be a cognitive science textbook. It is dense in that it provides a solid and interesting, though jargon-filled, summary of the development of the field of how humans learn about and represent the world in their minds.

McQuade, Donald, and Christine McQuade. *Seeing & Writing 3*. Boston: Bedford/St. Martin's, 2006. This book was the textbook used for this seminar. It is a fascinating collection of images and texts (essays, poems, excerpts) that can easily be used to elicit thoughts, discussion and writing about such topics as identity and place, scale, and the use of icons in various cultures.

Moreau, Maryellen Rooney, and Brian Scott Welch. *Talk to Write, Write to Learn: A Teachers' Manual for Differentiated Instruction and Tiered Intervention*. Springfield, MA: MindWing Concepts, 2008. This manual provides useful overviews of narrative development, classroom materials suitable for students of many ages and levels to guide them through to the next stage of development, as well as useful assessments.

Rapp, David N. "Mental Models: Theoretical Issues for Visualizations in Science Education." *Visualization in Science Education*. Ed. John K. Gilbert. Netherlands: Springer Press, 2005. 43--60. I could barely contain myself while I read this exciting, superb article that includes a summary of the various definitions of visualization and mental models and clear descriptions of the development of mental models.

Tapiero, Isabelle. *Situation Models and Levels of Coherence: Toward a Definition of Comprehension*. Mahwah, NJ: Lawrence Erlbaum Associates, 2007. This book provides a summary of research in the field of cognitive psychology on how humans represent the world with a focus on text and discourse comprehension. It includes in--depth examples that help to clarify its well--written yet dense contents.

Wiggins, Grant, and Jay McTighe. *Understanding by Design*. Alexandria, VA: Association for Supervision and Curriculum Development, 2006. This workbook is a clear and useful text designed to help teachers learn to plan lessons, units and curricula by starting with their final goals and working backwards.

## Annotated Reading List for Students

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Cole, K.C. "A Matter of Scale." *Seeing and Writing 3*. Eds. Donald McQuade and Christine McQuade. New York: Bedford/St. Martin's, 2006. 128--131. This essay presents many surprising facts and insightful observations related to scales in the natural world and the would--be effects of altering natural scale. Its language is poetic and appealing as well.

Longfellow, Henry Wadsworth. "The Midnight Ride of Paul Revere." The National Center for Public Policy Research. April 19, 1860. <http://www.nationalcenter.org/PaulRevere'sRide.html>.

Lyon, George Ella. "Where I'm From." George Ella Lyon. 1993. <http://www.georgeellalyon.com/where.html>.

## Annotated List of Materials for Classroom Use

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Close, Chuck. "Self--Portrait 2000--2001." *Seeing and Writing 3*. Edited by Donald McQuade and Christine McQuade. New York: Bedford/St. Martin's, 2006. 132 and 136. This is a fascinating painting in the "photorealist" or "superrealist" style, which my seventh--grade students mistook for a photograph despite its mosaic appearance.

Davis, Timothy. "Casey at the Bat." *Highlightsteachers.com*. Highlights for Children n.d. Web. 5 Apr. 2009. This is a sketched scene of the character Casey while he is getting ready for the big pitch.

Handford, Martin. *Where's Waldo*. Cambridge, MA: Candlewick Press, 1987. This book has a series of two--page--sized color prints of scenes (various seasons and locations) in which there are many people but only one Waldo.

Merrill, Linda, Lisa Rogers, and Linda Simmons, eds. *Picturing America: Teacher's Resource Book*. Chicago: National Endowment for the Humanities, 2008. A useful collection of classic images accompanied by varyingly useful lesson suggestions and poster--size reprints.

Steichen, Edward. *The Family of Man*. New York: The Museum of Modern Art, 1955. A time--tested, ever--relevant collection of photographs documenting the human journey through life throughout the world, interspersed with fitting quotations.

Van Gogh, Vincent. *Prisoners Exercising*. Visual Resources Collection. Yale University Library, n.d. Web. 6 Apr. 2009. A copy of Van Gogh's painting showing a group of male prisoners walking in circles in high--brick--walled prison cell.

## Appendix A: "I see -- I notice -- I think -- I wonder" Sheets for Images and Texts <sup>1</sup>

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Name \_\_\_\_\_ Period \_\_\_ Date \_\_\_\_\_

When I look closely at this image,

I see \_\_\_\_\_

(something that jumps out at you in the image)

I notice \_\_\_\_\_

(something you don't think other people will see)

I think \_\_\_\_\_

(an interesting thought you had about this image)

I wonder \_\_\_\_\_

(something you want to know about this image)

\_\_\_\_\_

Name \_\_\_\_\_ Period \_\_\_ Date \_\_\_\_\_

When I look closely at this text,

I see \_\_\_\_\_

(something that jumps out at you in the text)

I notice \_\_\_\_\_

(something you don't think other people will pay attention to)

I think \_\_\_\_\_

(an interesting thought you had about this text)

I wonder \_\_\_\_\_

(something you want to know about this text)

Remember what you know about literary devices such as alliteration, repetition, rhythm, and rhyme..

## **Appendix B: Implementing Connecticut State Standards**

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In this unit, students are asked to make observations, make inferences and draw conclusions based on those observations, and then support their conclusions with additional evidence from the text. The text is sometimes a visual text (e.g., *The Midnight Ride of Paul Revere*) and sometimes a written text (e.g., "A Matter of Scale"). These activities contribute to teaching Connecticut Standards 1.1.d., 1.1.e, and 1.1.f, in which students are supposed to:

d. identify, use and analyze text structures.

e. draw conclusions and use evidence to substantiate them by using texts heard, read

and viewed.

f. make and justify inferences from explicit and or implicit information.

In addition, students are asked to discuss visual texts with each other, with very little input from the teacher. Differing viewpoints naturally arise in such open-ended discussions, so students participate in discussions that fulfill Standards 1.4.a and 1.4.b because they:

a. respond to the ideas of others and recognize the validity of differing views.

b. persuade listeners about judgments and opinions of works read, written and

viewed.

During discussion, when students are asked to provide supporting evidence for their claims based on their observations of a visual or written text, they are being asked to participate in tasks aligned with Standard 3.1.a:

a. use oral language with clarity, voice and fluency to communicate a message.

If the post-test option chosen by the teacher is to revise the pre-test, then students would also participate in a task aligned with Standard 3.2.c:

c. revise texts for organization, elaboration, fluency and clarity.

## Notes

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1. Abigail Housen, "Aesthetic Thought, Critical Thinking and Transfer," *Arts and Learning Research Journal* 18, no. 1 (2001--2002): 99--100.
2. Walter Kitsch, *Comprehension: A Paradigm for Cognition* (Cambridge: Cambridge University Press, 1998), 34.
3. David N. Rapp, "Mental Models: Theoretical Issues for Visualizations in Science Education," in *Visualization in Science Education*, ed. John K. Gilbert (Netherlands: Springer Press, 2005), 44.
4. Kitsch, *Comprehension*, 29.
5. Kate Cain, "Making Sense of Text: Skills that Support Text Comprehension and its Development," *Perspectives on Language and Literacy*, Spring 2009 (2009): 12.
6. Kitsch, *Comprehension*, 18.
7. Cain, "Making Sense of Text," 11.
8. Rapp, "Mental Models," 45.
9. Maryellen Rooney Moreau and Brian Scott Welch, *Talk to Write, Write to Learn: A Teachers' Manual for Differentiated Instruction and Tiered Intervention* (Springfield, MA: MindWing Concepts, 2008), 66--67.
10. *Ibid.*, 15.
11. *Ibid.*, 21--22.
12. *Ibid.*, 23--28.



- <sup>13</sup> Isabelle Tapiero, *Situation Models and Levels of Coherence: Toward a Definition of Comprehension* (Mahwah, NJ: Lawrence Erlbaum Associates, 2007), 75.
- <sup>14</sup> . Cain, "Making Sense of Text," 14.
- <sup>15</sup> . Housen, "Aesthetic Thought, Critical Thinking and Transfer," 99--100.  
Ibid., 115.
- <sup>16</sup> . Jacqueline C. Dolev, Linda Krohner Friedlaender, and Irwin M. Braverman, "Use of Fine Art to Enhance Visual Diagnostic Skills," *Journal of the American Medical Association* 286, no. 9 (2001): 1020--1021.
- <sup>17</sup> . Ibid.
- <sup>18</sup> . Joseph Anderson, "Visualization and Verbalization as Mediators of Thought," *Speech Monographs* 41, no. 4 (1974): 408--412.
- <sup>19</sup> . Grant Wiggins and Jay McTighe, *Understanding by Design* (Alexandria, VA: Association for Supervision and Curriculum Development, 2006).
- <sup>20</sup> . On May 19, 2009, Barbara Rothenbach gave a presentation at the Bass Library in which she asked members of our seminar to fill out a sheet that was similar to my "I see -- I notice -- I think -- I wonder" sheet. Her sheet included three questions: "What do you see?" and "What do you notice?" and "What do you think is going on?" Her third question is also the first question used in the method of teaching described in the literature about Visual Teaching Strategies, originally conceived by Abigail Housen (see Annotated Bibliography for Teachers).
- <sup>21</sup> . Chuck Close, *Self--Portrait 2001--2002*, in *Seeing and Writing 3*, ed. Donald McQuade and Christine McQuade (New York: Bedford/St. Martin's, 2006), 132.
- <sup>22</sup> . K.C. Cole, "A Matter of Scale," in *Seeing and Writing 3*, ed. Donald McQuade and Christine McQuade (New York: Bedford/St. Martin's, 2006), 128.
- <sup>23</sup> . K.C. Cole, "A Matter of Scale," 128--131.
- <sup>24</sup> . Linda Merrill, Lisa Rogers, and Linda Simmons, eds., *Picturing America: Teacher's Resource Book* (Chicago: National Endowment for the Humanities, 2008), xv.
- <sup>25</sup> . Martin Handford, *Where's Waldo* (Cambridge, MA: Candlewick Press, 1987).  
Steichen, *The Family of Man*, 151.
- <sup>26</sup> . Timothy Davis, "Casey at the Bat," *Highlights for Children*,  
[http://www.highlightsteachers.com/archives/hidden\\_pictures/casey\\_at\\_the\\_bat\\_by\\_timothy\\_davis.html](http://www.highlightsteachers.com/archives/hidden_pictures/casey_at_the_bat_by_timothy_davis.html).

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