

## **Handout 4**

### **Vignette 1: 5<sup>th</sup> Grade Art Lesson**

In a fifth-grade art class students were looking at boldly colored images of Friedrich Hundertwasser's work as part of their unit on 'landscape' with the goal of expanding their understanding of how artists use a variety of art elements and their imagination to create landscape images.

The students had a lot of background in art elements, and to help them use their prior knowledge in deeper ways to analyze Hundertwasser's images, the teacher successfully provoked discussion about the use of fluid lines, vibrant color and overlapping shapes that characterized the images shared. After the discussion, the students were invited to draw and paint an interpretation of a chosen photograph of landscape in the style of the artist, taken from a discarded calendar. Before they began, the teacher shared the performance criterion: use the art elements in your own work that we discussed in the Hundertwasser images, particularly, fluid lines, vibrant color and overlapping shapes.

In a previous lesson, students had made observational drawings in their sketchbooks of the landscape surrounding their school. Some of the students asked if rather than using the photographs, they could develop their drawings so that they could make 'Hundertwasser drawings' from their observations. As another learning goal in the unit was for students to develop their understanding of how to incorporate the various art elements in their own work that they saw in the art they analyzed, the teacher felt that adding this flexibility in the task would support their achievement of this goal. Also, the teacher realized that this would be a valuable opportunity for the students to connect their perception of their landscape view to their perception of the artists' work, the teacher agreed. This prompted other students to want to do the same. A few students had the idea that they would directly capture the view from the classroom window in the artist's style. Despite the teacher's plans to use the photographs to stimulate the students' drawing and painting, he changed his plans in order to permit students to pursue their own creative ideas.

The students had access to a variety of paper sizes, a range of drawing tools and paint in the three primary colors and black and white which they had experience of mixing to create the range colors they wanted to paint with. The students went to work creating their Hundertwasser landscape interpretations. As they worked the teacher circulated, responding to specific student's questions and comments, and asking probing questions about students' thinking and process.

As the work developed, the teacher noticed that one student's work stood out. It resembled few of the features captured in the student's prior observational drawing, but used flowing lines and imaginative representations of buildings filled with intricate patterns. About two thirds of the way through the lesson, the teacher drew the other students' attention to this particularly interesting piece of work. He talked about the work and the student's use of line and pattern. When all the students returned to their own

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work, he could see that many of them had been pushed to think about line and images in more adventurous ways and all had begun to experiment with using the newly discussed art elements to various degrees.

Towards the end of the lesson the class came together and each student was given the opportunity to compare his or her work with the images by Hundertwasser that had inspired the lesson. Some students indicated they were not ready to discuss their work and wanted to wait until they had more time to develop it further. Others took the opportunity to say something about their pieces, how Hundertwasser's images had inspired them, and to solicit feedback from the teacher and their peers.

At the end of this session, the teacher asked the students if they had a plan for how to develop their work further during the next lesson. Showing thumbs up most students indicated that they did. For the students that showed thumbs down, the teacher said he would meet with them individually to go review their pieces and to think about further developments so deepen the quality of their paintings.

## **Vignette 2: ELA Writing Unit: Middle School**

### **I. Unit Overview**

Ms. Grey teaches sixth and seventh grade language arts to students with a broad range of socioeconomic, ethnic, and language backgrounds. She is currently teaching a unit on the genre, response to literature. Her students are focusing on understanding the concept of the “hero” in the novel, *The Giver* by Lois Lowry and the epic poem, *Beowulf*. The learning goals for her unit are:

- To understand the function of various grammatical features in texts.
- To understand how to revise writing with a focus on specific grammatical features to create cohesion and lexically dense descriptions.
- To understand how to read one’s own work critically through increased grammatical sensitivity.
- To understand how to detect areas of weakness in one’s writing, find solutions, and incorporate revisions indicated in previous drafts.

Over the course of the unit, to support students’ reading and writing development, Ms. Grey focuses on academic language. For example, she addresses pronouns and noun phrases, prepositional phrases, subordinate and embedded clauses, verb variety, compound and complex sentences, and transition words. The various grammatical features introduced over the course of the unit will be incorporated into the writing process at all stages, including as a strategic resource for revision.

### **II. Standard Lesson Format**

**Scaffolded Instruction.** Each (multi-day) lesson throughout this unit follows a similar structure. At the beginning of a lesson, Ms. Grey introduces a grammatical concept to her students within a whole group setting and then asks them to identify it in a sample paragraph. She explains its grammatical function in the text, ideal patterns for usage, and common problems she has seen in previous students’ writing. After working with the teacher’s text, students and teacher collectively generate a word and phrase list to use as a revision tool for their independent writing. They apply the list to the teacher-generated text before moving on to pair and individual

practice (e.g., noun phrases that can be used instead of pronouns to refer to characters they are writing about from their novels). Finally, students are ready to create their own paragraphs, using the target grammatical feature. For each new academic language concept, this step-by-step process is repeated with some variation, depending upon the grammatical feature being introduced. At regular intervals, students are also asked to complete essay-writing assignments in order to utilize their skills in more authentic writing activities, and to provide additional assessment opportunities for the teacher.

**Formative Assessment and Feedback.** The teacher monitors students understanding and progress by observing students and checking student work. If she finds a common problem in student work or conceptual understanding, she addresses the whole class for a few minutes to clear up the problem. Ms. Grey also gives feedback to individual students, sometimes pointing out to the whole class a particularly well-done assignment. In these instances she asks the student to read his or her work out loud to the class and then asks for feedback from peers about what makes it a strong piece writing.

**Repeated Exposure.** To assist students to appropriate new information into their own writing, at each stage of a multi-day lesson, students share out their examples with classmates, and discuss ways in which they targeted the grammatical feature. Culminating each lesson on an academic language concept is always a day of review, where students are given more opportunities to practice and refine their new skills and knowledge. As each new grammatical feature is subsequently introduced, students incorporate the previous one into their new practice.

### **III. Artifacts from Example Lesson on Compound Sentences**

The following classroom artifacts (including teacher-generated resources and student work) illustrate the scaffolded writing process students went through to complete the tasks related to a multi-day lesson on compound sentences.

**Task 1.** Students practice using transition words to combine sentences for added fluency and clarity in their writing, and practice writing with an impersonal context. Example sentences are from the literary work, *Beowulf*. Teacher-generated resources for this task include lists of transitional expressions as a resource for combining sentences.

A paragraph has coherence when a reader can easily tell how and why ideas are related. Transitional words and phrases are used to connect ideas in a paragraph. Here are some common transitions.

Transitions Showing Time/Narration			
after	finally	immediately	then
before	first, second, etc.	next	until
during	following	often	when
Transitions Showing Place/Description			
above	beside	in	there
along	down	into	to
around	from	next	under
before	here	over	where
Transitions for Comparing and Contrasting Ideas			
also	another	similarly	
although	but	too	
and	however	yet	
Transitions Showing Cause and Effect/Narration			
as a result	for	so that	
because	since	therefore	
Transitions for Showing Importance/Evaluation			
first	mainly	then	
last	more important	to begin with	

Directions for the Task:

**Use your list of transition words to:**

- a. pair up events from the following list and show how they are related – you may also improve the original sentences, but be sure to keep the original meaning**
- b. add descriptive phrases to expand meaning – use the phrases to explain why, where, how, when, etc.**
- c. improve each sentence twice – put the number(s) in the margin**

Sentences students need to combine in task:

1. Beowulf learns about Grendel.
2. Beowulf decides to sail to Denmark.
3. He takes fourteen men with him.
4. Beowulf explains their arrival to the cliff guardian.
5. Beowulf and his men march to Heorot.
6. Beowulf tells King Hrothgar why they have come.
7. The men feast in the great hall.
8. Beowulf waits for Grendel to arrive.
9. Beowulf fights fiercely with the monster.
10. He pulls Grendel's arm from his body.
11. King Hrothgar praises Beowulf.
12. Beowulf receives gifts.
13. After celebrating everyone goes to rest.

If you and your partner have time, write two or more opinion/analysis statements related to Jonas and his actions *without using the words I or my*.

Example It is clear that Jonas..... instead of  
In my opinion Jonas..... or  
I think that Jonas.....

**Tasks 2 and 3.** First supported by a partially completed model paragraph and then independently, students write a paragraph about a heroic literary character. This is an important example of scaffolding removal, which tends to be most easily done when the task remains constant.

<p>Pick one character &amp; use that person to complete these statements</p> <p>1. <u>Jonas</u> is a hero because he <u>presents Gabriel from releasing</u> <u>escapes to the normal world</u> and gives the community back. <u>its memories and choices.</u></p>	<p><b><u>IV.</u></b> <b><u>Arti</u></b> <b><u>fact</u></b> <b><u>s</u></b></p>
<p>2. <u>Beowulf.</u></p> <p>3. Beowulf is a warrior in the epic poem "Beowulf". He is considered a great hero because he defeats Grendel and frees the city of King Hrothgar. Beowulf's heroic actions include fighting Grendel, Grendel's mother and coming to rescue the city when he heard they were in trouble. He comes with fourteen of his best men to Hrothgar's town where he defeats Grendel, this is a noble deed because Beowulf did this out of the goodness of his heart. Beowulf is more than just a warrior, he's a HERO.</p>	

## Illustrating Final Stages of the Writing Process

### Remember These Ways to Improve Your Writing

1. Descriptive phrases - who, what, when, where, why, how phrases can add important details
2. Transition words - show relationships by using these words to link information
3. Use renaming to avoid repetition - identify characters in a variety of ways
4. Nominalization - add interest by starting your sentence with an "ing" word (gerund)
5. Prepositional phrases - another easy way to include helpful details
6. Use precise vocabulary
7. Include details
8. Clearly state your opinion/analysis - try to use impersonal/scholarly statements

The following classroom artifacts (including teacher-generated resources and student work) illustrate the later stages of the writing process. Included are two teacher-generated resources (tips and examples for improving writing) as well as student work samples illustrating a first draft, revisions, and a final draft.

### Writing Improvements - Examples

1. Descriptive phrases
  - Byron's insecure younger brother, Kenny Watson was worried about being bullied. who
  - How to survive a blizzard, a mean game Byron played with Kenny, was one of the ways Byron tormented Kenny. what
  - On the long journey to Birmingham, Dad kept himself awake all night long. when
2. Transition words
  - Byron refused to follow his parents rules, as a result they decided he would go live with his Grandma Sands.
  - First Kenny heard a loud boom, soon after that word spread that there had been an explosion.
3. Renaming
  - Byron Watson   Kenny's older brother   this juvenile delinquent   Daddy Cool
4. Nominalization
  - Peeking through the bathroom keyhole, Kenny hoped to find out what his father was doing.
5. Prepositional phrases
  - In the backseat, next to the window Kenny felt Joey's drool run down his leg.
6. Precise vocabulary
  - Momma ordered Byron to come inside the kitchen.
7. Details
  - Each year Kenny would get two new pairs of real leather gloves with rabbit's fur.
8. State your opinion
  - It is clear...
  - This proves that...
  - You can see from this...

**First Draft and Revisions.** Referencing the teacher's grammatical resources the student crossed out a repetitive proper noun, "Jonas" and replaced it with an expanded noun phrase which creates lexical density and embeds character description information. It also creates fluidity in the writing by linking two clauses together with information referenced from the predicate of the previous clause, "is a true hero" in the subject of the following clause, "This young boy, only 12 years of age."

What is a hero? Jonas, of ~~The Giver~~, by Lois Lowry is a true hero. ~~Jonas~~ This young boy, only 12 years of age, ~~is a true hero~~ ~~in the community~~ ~~where~~ ~~everything seems perfect on the surface.~~ ~~I personally~~ ~~think that Jonas is a hero because of his extreme bravery~~ ~~in the face of great danger. Jonas sacrificed himself in order to~~ ~~save many people from what could have happened.~~

*Annotations:*  
- "to be" above "is a true hero"  
- "by is actually more like an abandoned island" above "in the community where"  
- "In my opinion," above "I personally"

The addition of an independent clause at the end of the sentence to describe the story's setting provides the reader with added descriptive information as well as the author's implicit opinion of the setting with use of the evaluative adjective, "abandoned."

While the phrase, "In my opinion," still contains a personal reference to the author, it appears to be an attempt to create an impersonal tone while presenting an opinion. This is partially successful in that, on a text structure level, the student is able to change the subject of the sentence from "I", meaning the author, to "Jonas," referring to the main character of the story and the principal subject of the essay.

In this revision, the student decided to separate one sentence into two in order to provide added information to the text. The student created cohesion between the two separated clauses with the addition of the prepositional phrase, "in the community."

**Final Draft.** The student copied the first draft to make a clean final copy. The revisions on the first draft are incorporated here.

*What is a hero? Jonas, of the Jews, by  
Lois Lowry is a true hero. This young boy, only  
twelve years of age, arose as a hero in a place  
called the Community. In the Community, everything  
seems to be perfect on the surface, but it's actually  
more similar to an abandoned island. Jonas  
is a hero because of his extreme bravery in the  
face of great danger.*

#### V. Reflections

This writing unit demonstrates the successful transfer of skills and knowledge from teacher to student in academic language, furthering the student on his or her path towards self-regulated learning. Ms. Grey followed a procedural scaffolding model in her instruction, i.e., a step-by-step, explicit process within the context of integrated, authentic writing experiences. Through the use of the process writing approach, integrated with modeling and the provision of supportive materials, Ms. Grey was able to move her students closer to independent writing practice.

*Adapted from Barbara Jones's, "Academic Language and Procedural Scaffolding in Writing Instruction." Paper presented at AERA, 2006.*

### **Vignette 3: Math Problem Solving Lesson: High School**

This lesson focuses on one task: *Boomerangs*. The goal of the lesson is to enable students to develop strategies for solving problems in which limited resources must be used to greatest effect. In solving *Boomerangs*, students are called upon to help Phil and Cath maximize profits by optimizing the use of both time and materials. The mathematics of this lesson is connected to the Common Core State Standards that call upon students to represent constraints by equations and inequalities, and by systems of equations and/or inequalities, and to interpret solutions as viable or non-viable options in a modeling context. The standards also call upon students to graph solutions to linear inequalities in two variables as a half-plane, and to graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Toward the end of the previous day's lesson, the teacher invites students to work on the problem *Boomerangs* individually for fifteen minutes. He thinks it is important to allow students to grapple with the problems posed without assistance, as far as possible. He wants to gain some insights into their understanding and strategy use. He makes clear to the students how this problem solving is connected to the longer-term goal of meeting the mathematics standards.

#### *Boomerangs Problem*

*Phil and Cath make and sell boomerangs for a school event. The money they raise will go to charity. They plan to make them in two sizes: small and large. Phil will carve them from wood. The small boomerang takes 2 hours to carve and the large one takes 3 hours to carve. Phil has a total of 24 hours available for carving. Cath will decorate them. She only has time to decorate 10 boomerangs of either size. The small boomerang will make \$8 for charity. The large boomerang will make \$10 for charity. They want to make as much money for charity as they can. How many small and large boomerangs should they make? How much money will they then make?*

The teacher collects and analyzes his students' responses to *Boomerangs*. His goal is to identify salient issues and difficulties before the next day's lesson. The teacher does

not grade the students' work, because providing grades can distract students' attention away from the mathematics that they are intended to learn in the following lesson. Instead, the teacher summarizes his students' response to *Boomerangs* as a series of questions and comments. These often reflect common issues.

As the teacher reads his students' initial responses to *Boomerangs*, he makes notes on what the responses reveal about the students' levels of understanding and their different problem-solving approaches. To help students make further progress when they return to *Boomerangs*, the teacher writes a series of comments and questions addressing important common issues that have arisen in the students' work. The table below illustrates some such issues for *Boomerangs* and the kind of feedback that he can generate for student use. The goal is for this feedback to be an aid to learning.

Common issues	Questions and prompts
Difficulty getting started	<ul style="list-style-type: none"> <li>• What do you know?</li> <li>• What do you need to find out?</li> </ul>
Incorrect interpretation of the constraints and variables For example: the student has found the profit for making just one type of boomerang.	<ul style="list-style-type: none"> <li>• What figures in the task are fixed?</li> <li>• What can you vary?</li> <li>• What is the greatest number of small/large boomerangs they can make?</li> </ul>
Unsystematic work For example: The student finds out three or four seemingly unconnected combinations, such as 5 small and 5 large boomerangs, then 10 large, etc.	<ul style="list-style-type: none"> <li>• Can you organize the numbers of large and small boomerangs made in a systematic way?</li> <li>• What would be sensible values to try? Why?</li> <li>• How can you check that you remember all the constraints?</li> </ul>
Poor presentation of work For example: The student presents the work as a series of unexplained numbers and/or calculations, or as a table without headings.	<ul style="list-style-type: none"> <li>• Would someone unfamiliar with your type of solution be able to understand your work?</li> <li>• Have you explained how you arrived at your answer?</li> </ul>
Difficulties in using a graphical approach. Difficulties in using an algebraic approach.	<ul style="list-style-type: none"> <li>• Would someone unfamiliar with your type of solution be able to understand your work?</li> <li>• How can you check your answer?</li> <li>• How do your answers help you solve the problem?</li> </ul>
Correct solution Student needs an extension task.	<ul style="list-style-type: none"> <li>• Can you now use a different method? For example, a table or graph, or algebra?</li> </ul>

The next day, the teacher gives back the student work and the related comments and questions. Students re-engage with their solutions individually for ten minutes; the teacher's goal is for students to address the issues raised by their teacher's feedback. He sets up what they are to do:

- I have read your solutions to the problem I gave you yesterday at the end of the lesson and I have some questions about your work.
- I would like you to work on your own for about ten minutes to answer my questions.

After 10 minutes of working on their own problems, the teacher then organizes the class into groups of two or three students and gives out a fresh piece of paper to each group. The teacher invites his students to try the task again, this time combining their ideas.

- Put your own work aside until later in the lesson. I want you to work in groups now.
- Your task is to produce a solution together that is better than your individual

Students work collaboratively to analyze sample student responses to *Boomerangs* for 20 minutes. After each group has had sufficient time to attempt *Boomerangs* again collaboratively, the teacher gives out a copy of the sample responses of Alex, Danny, Jeremiah, and Tanya. The teacher then asks students to analyze the sample work and write comments on it. He wants to provide the opportunity to evaluate a variety of possible approaches to *Boomerangs*, but without providing a complete solution strategy.

- Imagine you are the teacher and have to assess this work.
- Correct the work and write comments about the accuracy and organization of each response.

Sample responses to discuss

ALEX

Phil can only make 12 small or 8 large boomerangs in 24 hours

12 small makes \$96  
 8 large makes \$80

She only has time to make 10, so \$96 is impossible.  
 She could make 10 small boomerangs which will make \$80.  
 Or she either makes 8 large or 10 small boomerangs and makes \$80

JEREMIAH

Small boomerangs =  $x$   
 Large boomerangs =  $y$

Time to carve  $2x + 3y = 24$  ①

Only 10 can be decorated  $x + y = 10$  ②

$2x + 2y = 20$  ③

①-③  $y = 4$   $x = 6$

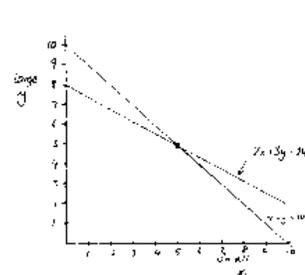
So make 4 large boomerangs  
 6 small boomerangs

DANNY

No of Small	$5 \times 8$	No of large	$2 \times 10$	Profit
0	0	8	80	80
1	8	7	70	78
2	16	6	60	76
3	24	5	50	74
4	32	4	40	82
5	40	3	30	80
6	48	2	20	78

The most Profit is \$82

TANYA



if  $x=0$   
 $2x + 3y = 24$   
 $5 \text{ Small} + 5 \text{ Large} = 40 + 50 = 90$

if  $y=0$   
 $2x + 3y = 24$   
 $2x = 24$   
 $x = 12$

Sample responses to discuss

ALEX

Phil can only make 12 small or 8 large boomerangs in 24 hours  
 12 small makes \$96  
 8 large makes \$80  
 Cath only has time to make 10, so \$96 is impossible.  
 She could make 10 small boomerangs which will make \$80.  
 So she either makes 8 large or 10 small boomerangs and makes \$80

JEREMIAH

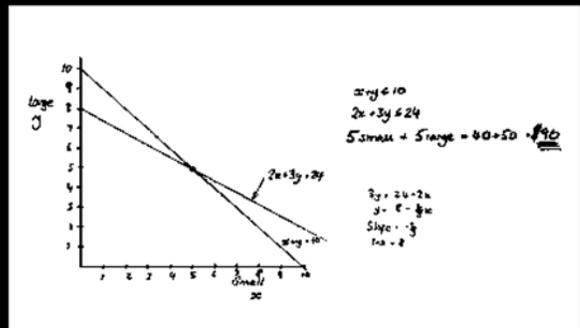
Small boomerangs =  $x$   
 Large boomerangs =  $y$   
 Time to carve  $2x + 3y = 24$  ①  
 Only 10 can be decorated  $x + y = 10$  ②  
 $2x + 2y = 20$  ③  
 $① - ③ \quad y = 4 \quad x = 6$   
 So make 4 large boomerangs  
 6 small boomerangs

DANNY

No of small $s$	$s \times 8$	No of large $l$	$l \times 10$	Profit
0	0	8	80	80
1	8	7	70	78
2	16	6	60	76
3	24	5	50	74
4	32	5	50	82
5	40	4	40	80
6	48	3	30	78

The most Profit is \$82

TANYA



After the students have spent 10 minutes on this task, the teacher facilitates a whole-class discussion to consider the different approaches used by Alex, Danny, Jeremiah, and Tanya when they solved *Boomerangs*. Here teachers focus the discussion on those parts of the collaborative activities that students found difficult. Teachers ask students to compare the different solution methods.

- Which approach did you like best? Why?
- Which approach did you find most difficult to understand?

Students share the strengths and weaknesses of the sample responses. They realize that Alex has considered both constraints, but has not examined different combinations; they appreciate both the effectiveness and limitations of Danny's table; they understand that Jeremiah's equations really ought to be inequalities; and they realize the potential of Tanya's graphical approach.

After the discussion the students are invited to revise their own work using a different color pen than that

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of their first solution. This is an opportunity to use all they have learned from the collaborative work and the class discussion. As the students finish and are satisfied with their work, the teacher asks them to try a different approach to *Boomerangs*. He encourages students to compare their new approach with the first one they tried.

*Adapted from Boomerangs, The Shell Center*