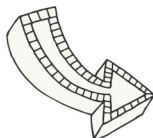


6-12

Differentiated Instruction



"Writing on the Window"
DISCIB12-L2

by Michael Troop Ed.D

This Packet Contains:

Certificate of Completion

Your Lesson Report

Lesson Document

Author Bio





Certificate of Completion

This certificate is presented to

Joe Smith

for successfully completing all coursework and training for

DISCI612-L2

Differentiated Instruction-Science (6-12)

Lesson 2

COURSE AUTHORIZED BY

Nicole A. Dizon

NICOLE A. DIZON
KTA EXECUTIVE DIRECTOR

COURSE APPROVED BY

Ignacio Lopez III

IGNACIO LOPEZ III, ED.D.
CHIEF ACADEMIC OFFICER

THE 3RD DAY OF FEBRUARY 2012

All content is the property of the K-12 Teachers Alliance
and is protected by copyright and other intellectual property laws.

DSCI612-L2

Writing on the Window: Lesson Report

Name: Joe Smith

Scene A

Reflection #1: How does Ms. S set her students up for note taking?

Ms. S is not paying attention to the fact that all students need differentiated learning instruction. She leads them into a note taking pattern that does not reach many learners. Ms. S does not stay engaged with her students because she is going back and forth from the board and her students.

Reflection #2: Does her format and strategy help all learner types, why or why not?

No, her format does not help all learners. She keeps her strategies different enough in order to reach every learner, but the material is not consistent. Her content is what changes and not the format.

Reflection #3: How does Ms. S's system for note taking help or hinder students' understanding of a topic?

Her system hinders the students because it is only one way to take notes. She needs to provide a variety of ways to take notes within this scene. She is not reaching all learners and some of them get clearly left behind.

Scene B

Reflection #1: What did you notice about the structure the teacher outlined for taking notes?

The teacher took notes with them so he didn't move too fast or too slow. He also had to take breaks between notes which probably meant his students needed those breaks as well. This structure will allow the students the time to listen, write, and hopefully retain it.

Reflection #2: How does this process engage all the students in the process of learning while taking notes?

As the teacher is walking through the process of taking notes, he is assigning them tasks to do like putting a date on the paper or numbering items in a certain way. He continues to ask the students to stay engaged through their notes.

Reflection #3: How does this strategy break information up into meaningful sets of information?

It is not one block of information for the students to retain and then regurgitate in the next class. The breaking down of the information helps students create stepping stones to hold on to. The next time a student wants to access the information, he or she will then use the stepping stones to find the information, rather than have to remember all of it as one big chunk.

Key Take Aways

The Three High-Leverage Practices you've reflected on:

1. Set up and model how you want students to take notes.
2. Present the material in a way that students can think about it from multiple perspectives (i.e. window notes strategy).
3. Help students break information down into meaningful sets of data.

Quiz

Question 1: What is the one major benefit to using this note taking strategy in your classroom?

Your Answer: This strategy helps students process information into meaningful bits of information.

Correct Answer: This strategy helps students process information into meaningful bits of information.

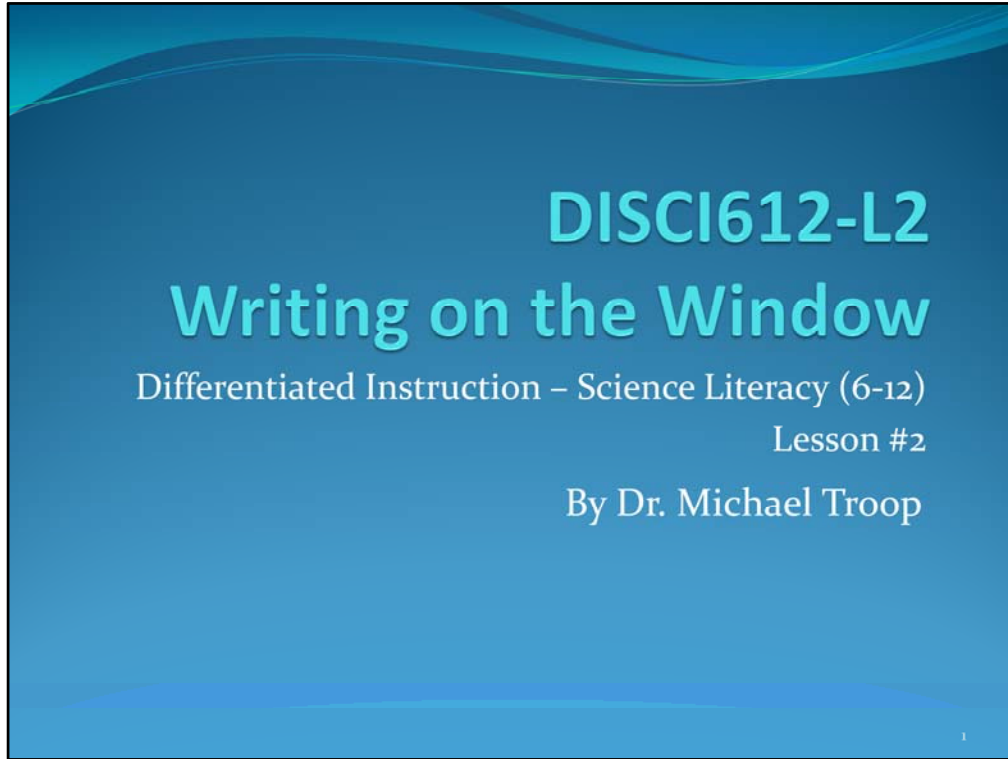
Question 2: What were the four main categories the teacher used for window notes?

Your Answer: Describe, react, analyze, solve

Correct Answer: Describe, react, analyze, solve

Question 3: Based on the information presented, how would you integrate this high leverage practice into your class?

Your Answer: I would make sure my lesson plans are prepared enough so I don't have to depend on them when I'm actually teaching. I would also consider each learner and how they might need differentiated instruction. When teaching, I would make sure I am observant of my students and their reactions to the information I am giving them.



Welcome to 6-12 grade differentiated science reading online professional development. We're glad you joined us. All of our lessons have been designed with YOU (the working teacher) in mind. The videos, modeled practices, and reflection questions throughout the lesson will provide you with strategies and techniques that can be immediately implemented into your daily teaching practice. We know you'll enjoy everything this lesson has to offer. So let's get started!

Lesson Sequence (or Agenda)

1. Review Lesson Objectives
2. Review Guiding Questions
3. Watch Video – Scenario A
4. Reflection of Guiding Questions
5. Watch Video – Scenario B
6. Reflection of Guiding Questions
7. Review Key Take-Aways
8. Quiz

2

This 6-12 Grade lesson has been designed with two videos and several guiding questions to help you reflect on your current framework used to differentiate in a science lab.

The sequence of this lesson is laid out as follows:

1. First we'll review the lesson objectives.
2. Then we'll review the guiding questions that will be used throughout the lesson.
3. You'll then be prompted to watch a scenario where Ms. Simons take notes from a short lecture on global warming.
4. Using the guiding questions, you'll then reflect on what went wrong.
5. You'll then be prompted to watch a second scenario in which Ms. Simons demonstrates the use of a special note taking strategy that differentiates based on students' learning styles.
6. Using the guiding questions you'll then reflect on the strategy Ms. Simons used to help students comprehend what they have learned.
7. You'll then review the key take-aways.
8. You'll finish the lesson with a very short three question quiz.

Learning Objectives

1. Understand that taking notes on complex material is not easy.
2. Understand that there are strategies that engage all learners in the process of thinking while taking notes.
3. Understand that there are strategies that support the needs of multiple learning types.

3

The learning objectives for this course include:

1. Understand that taking notes on complex material is not easy.
2. Understand that there are strategies that engage all learners in the process of thinking while taking notes.
3. Understand that there are strategies that support the needs of multiple learning types.

Video Guiding Questions

1. How does Ms. S set her students up for note taking?
2. Does her format and strategy help all learner types?
3. How does Ms. S's system for note taking help or hinder students' understanding of a topic?

4

Before we get started with the videos there are some key guiding questions we'd like for you to think about. Part of the student-teacher interaction in the classroom consists of the teacher speaking and the student taking notes on the information the instructor presents to them.

Often, teachers do not set students up for taking notes. If they do, it is a standard format that is not always conducive to all learner types. As you watch this scene think about the following questions:

1. How does Ms. S set her students up for note taking?
2. Does her format and strategy help all learner types?
3. How does Ms. S's system for note taking help or hinder students' understanding of a topic?

In this scene, Ms. Simons asks students to take notes on her lecture on global warming.

At the bottom of your screen we've included a reflection box so you can input your thoughts as they come to you. Once you've finished watching the video, take a moment to reflect on what you saw. You don't need to answer any of the guiding questions here. Just reflect on what you've seen in the video. You'll have an opportunity to take a closer look at the guiding questions in the next part of the lesson. When you've finished reflecting on the video, click next to continue.

Scene A

- Video SCENE A

Video Guiding Questions Here

1. How does Ms. S set her students up for note taking?
2. Does her format and strategy help all learner types, why or why not?
3. How does Ms. S's system for note taking help or hinder students understanding of a topic?

SCENE A Reflection #1

- Photo of Ms. S writing notes on the board

Processing the Guiding Questions
Question 1:
How does Ms. S set her students up for note taking?

6

How many times have you seen a teacher lecture to students this way? Take a moment to look back at the original guiding questions. Let's process these questions together as we revisit the scene using several images.

The first guiding question was:

How does Ms. S set her students up for note taking?

Take a moment to look at the photo of Ms. S in the scene. How could Ms. S provide a little more structure so that all of her students have an opportunity to think about the material in a more interactive way?

Complete the reflection question at the bottom of your screen, when you're finished click next to go on to the next guiding question.

SCENE A Reflection #2

- Photo of some of Ms. S's students writing in their notebooks

Processing the Guiding Questions
Question 2:
Does her format and strategy help all learner types, why or why not?

7

The second guiding question was:

Does her format and strategy help all learner types, why or why not?

There are many types of learners with multiple learning styles present. As an educator, it is the teachers responsibility to present material in such a way that all learners can be reached. This is at the core of differentiated instruction. Does Ms. S do this in her class? How would you structure your class differently and why?

Spend a moment typing in the Reflection box your thoughts, when finished click next.

SCENE A Reflection #3

- Photo of Ms. S walking around her room (looking at students notes while she is talking)

Processing the Guiding Questions

Question 3:

3. How does Ms. S's system for note taking help or hinder students understanding of a topic?

8

The third guiding question was:

How does Ms. S's system for note taking help or hinder students' understanding of a topic?

Howard Gardner developed his multiple intelligence theory which is based on the premise that students have a distinctive assortment of intelligences ranging from linguistic, logical-mathematical to interpersonal and intrapersonal intelligence. It is up to the teacher to plan around these strengths, or preferred modes of learning for any activity, whether it be for note taking, group activities, or even labs. How does Ms. S meet the needs of all of her students preferred modes of learning?

Spend a moment writing your answer in the reflection box, when finished click next.

Scene B Video Guiding Questions

Scene A Guiding Questions	Scene B Guiding Questions
<ol style="list-style-type: none"> 1. How does Ms. S set her students up for note taking? 2. Does her format and strategy help all learner types, why or why not? 3. How does Ms. S's system for note taking help or hinder students' understanding of a topic? 	<ol style="list-style-type: none"> 1. What did you notice about the structure the teacher outlined for taking notes? 2. How does this process engage all students in the process of learning while taking notes? 3. How does this strategy break information up into meaningful sets of data?

9

In the first scene we saw Ms. S give a lecture to students on global warming and require them to haphazardly take notes. In our next scene you will see Mr. Jake, a teacher in the next room, use a specific note taking strategy with his students that attempts to meet the needs of his students multimodal way of learning.

Before the video, let's remember all of our guiding questions:

1. How does Ms. S set her students up for note taking?
2. Does her format and strategy help all learner types, why or why not?
3. How does Ms. S's system for note taking help or hinder students understanding of a topic?

In this next scene, let's rephrase the guiding questions to:

1. What did you notice about the structure the teacher outlined for taking notes?
2. How does this process engage all students in the process of learning while taking notes?
3. How does this strategy break information up into meaningful sets of data?

In this second scene, Mr. Jake tries a new approach to taking notes that meets the needs of all of his students. In this scene, he sets up how he wants students to take notes. Notice the task he has students engage in during the lecture. As you are watching the video keep in mind the new guiding questions proposed.

At the bottom of your screen we've included a reflection box so you can input your thoughts as they come to you. You do not have to answer all of the guiding questions here. We will take a closer look at each guiding question in the next part of the lesson. Once you finished watching the video, take a moment to reflect on what you saw, click next when finished.

Scene B

- Video SCENE B

Video Guiding Questions Here

1. What did you notice about the structure the teacher outlined for taking notes?
2. How does this process engage all students in the process of learning while taking notes?
3. How does this strategy break meaning up into meaningful sets of information?

10

SCENE B Reflection #1

- Photo of Mr. Jake setting up notes at the board

Processing the Guiding Questions

Question 1:

How does Mr. Jake set his students up for note taking?

11

The skill of note taking is extremely important for students to master. Research indicates that students who have developed this skill have outperformed their peers who do not take effective notes. Therefore, it is important for educators to teach their students how to do this effectively. When you think back to the video with Ms. S, what do you notice about the difference between these two teachers approaches?

The first guiding question to this second scene was:

How does Mr. J set his students up for note taking?

Spend a moment answering the reflection question, when finished click next.

SCENE B Reflection #2

- Photo of teacher filling in one of the boxes on board

Processing the Guiding Questions
Question 2:
How does this process engage all students in the process of learning while taking notes?

12

The teacher uses a very deliberate strategy to engage all of his students in thinking about the material he presented in his lecture. He specifically asked students to take notes using the template that is labeled in quadrants, each with a specific purpose. Students needed to Describe the topic, React to it, Analyze it, and quadrant 4 – Solve it. You did not see this part, but at the end of the class period, Mr. J assigned homework for the students to investigate how to solve this dilemma.

The second guiding question used for this scene was:

How does this process engage all students in the process of learning while taking notes?

Spend a moment answering the reflection question, when finished click next.

SCENE B Reflection #3

- Photo of students engaged in notes

Processing the Guiding Questions
Question 3:
How does this strategy break information up into meaningful sets of data?

13

Process is just as important as product. You can introduce material, even review material with students. However, if your students cannot make meaning out of what you are presenting, it does not do the student any good.

The third guiding question for this second scene was:

How does this strategy break information up into meaningful sets of data?

Key Take-Aways

The Three High-Leverage Practices you've reflected on:

1. Set up and model how you want students to take notes.
2. Present the material in a way that students can think about it from multiple perspectives (i.e. window note strategy).
3. Help students break information down into meaningful sets of data.

14

Teaching is a very dynamic process. Students in science classes need to take notes on a variety of topics during many types of activities. The typical layout for notes is to have students write what the teacher writes on the board, or what is presented to them via PowerPoint. Although there are many different strategies students can use for note taking. We focused on one type, window notes, that supports multiple modes of learning. From this, three high leverage practices emerged that you can use in your classroom:

1. Set up and model how you want students to take notes.
2. Present the material in a way that students can think about it from multiple perspectives (i.e. window note strategy).
3. Help students break information down into meaningful sets of data.

In an effort to further reflect on the material covered in this lesson we have designed this short quiz. Read each question carefully. When you are done with a question, click next to move on. When you're done, be sure to submit the quiz to see how well you did. You'll also be able to print out a copy of your certificate, quiz score, and reflection responses.

Quiz – Question 1

1. What is one major benefit to using this note taking strategy in your classroom?
 - a) This strategy helps students process information into meaningful bits of information
 - b) This strategy helps students organize a somewhat disorganized activity.
 - c) Teachers organize their thought process for students.

15

The answer to question one is A. This strategy helps students process information into meaningful bits of information. What is key here is the word meaningful as the strategy asks students to identify questions, feelings, and ideas based on the facts presented.

Quiz – Question 2

2. What were the 4 main categories the teacher used for window notes?

- a. Information, ideas, questions, emotions
- b. Facts, questions, ideas, feelings
- c. Describe, react, analyze, solve
- d. Facts, steps, questions, diagram

16

Although any of the above may be used as possible categories, the correct answer is C. Describe, react, analyze, solve. Notice how each of the answer sets above tap into various levels of Bloom's Taxonomy.

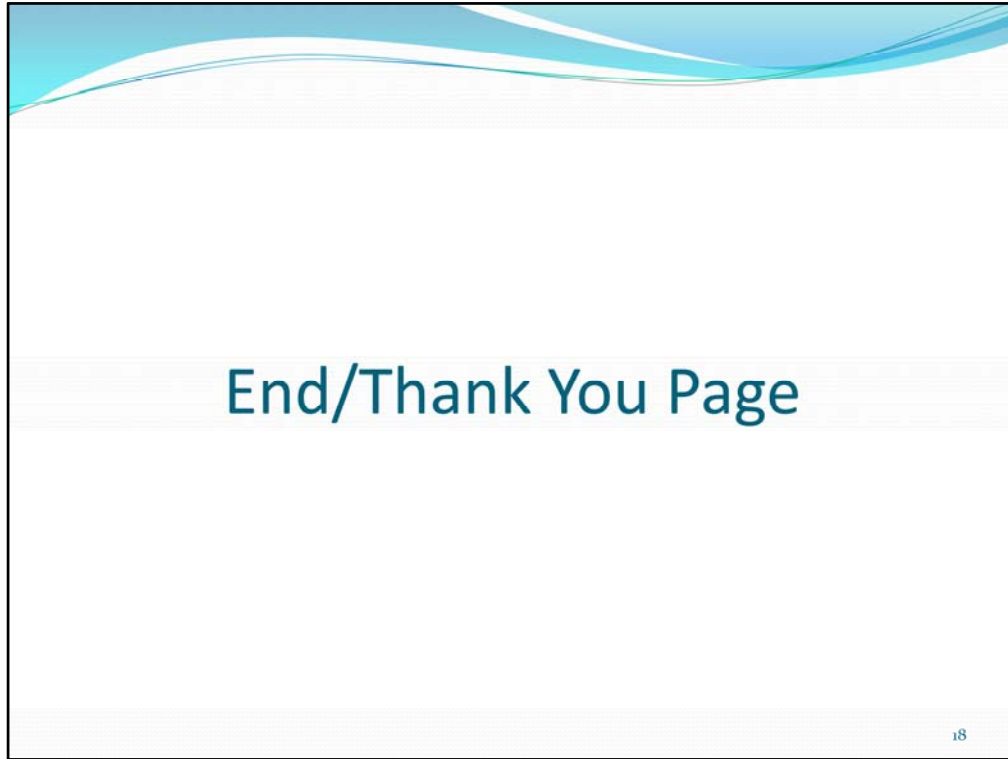
Quiz – Question 3

3. Based on the information presented, how would you integrate this high leverage practice into your class?

Enter Your Free Form Answer

17

**Teachers need to provide structure for students to take notes and not only model how to take notes, but give students an opportunity to process the information in different ways.

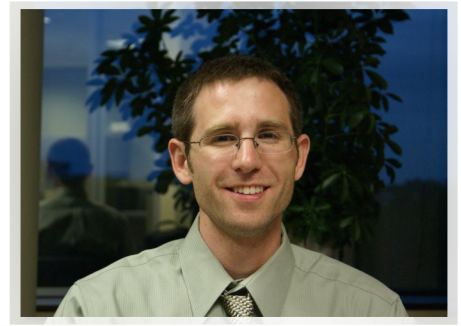


You have now completed the quiz. On this page you can view your score and all of your reflection comments. You can also print your certificate of completion. Thank you for your participation here today. For additional help with other practices be sure to check out the other nine lessons offered in this course.



K-12 Teachers Alliance Featured Presenter

Dr. Michael J. Troop



**DIFFERENTIATED INSTRUCTION
CLASSROOM MANAGEMENT
BRAIN BASED LEARNING
SCIENCE INSTRUCTIONAL STRATEGIES
STRATEGIES FOR INCREASING RIGOR**

Doctorate in Educational Psychology National-Louis University
Human Learning & Development, Educational Leadership

B.A. General Psychology University of Illinois at Chicago
General Biological Science (30sh)

Science Coordinator, Academy for Urban School Leadership

Provide curriculum and instructional support to novice and seasoned teachers in urban elementary and high schools

Instructional Coach, Academy for Urban School Leadership

Provide support to novice and seasoned teachers in a high school turnaround environment

Instructor, Department of Secondary Education/Educational Psychology, National-Louis University

Provide pre-service teachers, Teach for America and Academy for Urban School Leadership residents with the coursework for certification

PROFESSIONAL MEMBERSHIPS

American Education Research Association

Association for Supervision and Curriculum Development

Council for Exceptional Children

Dr. Michael Troop has been an educator for 15 years and received his Doctorate in 2011 for Human Learning and Development in Instructional Contexts at National-Louis University. He has received a variety of certifications: High School (Type 09) Teaching Certificate; Environmental Science and Psychology; Crisis Prevention and Intervention; Therapeutic Crisis Intervention; EMT-Basic; and a National Certification in Gymnastics. His professional memberships include: American Education Research Association; Illinois High School Gymnastics Coaches Association; Association for Supervision and Curriculum Development; and Council for Exceptional Children.

Currently, Dr. Troop works at National Louis University as an Instructor in the Secondary Education Department and Educational Psychology Departments. He also works as the Science Coordinator for K-12 Curriculum and Instruction with The Academy for Urban School Leadership. He has served on the Advisory Board for the Museum of Science and Industry's Center for Advancement in Science Education. Some projects he has partnered with include Advanced Human Development (Teaching Blog Integration) and Response to Intervention (Alliance for School-based Problem-solving & Intervention Resources in Education, Northern Illinois University).

Professional development programs provided by the K-12 Teachers Alliance guarantee superior quality, value and integrity
K-12 Teachers Alliance • 20624 Abbey Woods Court North • Frankfort, IL 60423 • 800.948.9806 • www.k12teachertraining.com