

Crime Scene Investigation
Forensic Detective: Who Did It?

Ericka Mayo

4th-6th Grade

July 2018

Introduction

Rationale

Why are the skills, content, and concepts presented in this unit important for students to learn?

Forensic Science is the application of the scientific method to solving mysteries and crimes. This unit is designed around real world

applicable situations and it blends forensic science with core subject areas. Students will be asked to read, research, hypothesize, and use reasoning skills to find evidence in order to solve crimes. While incorporating technology, students will record data, draw conclusions, and develop the best method of communicating results. This unit also emphasizes hands-on learning which includes fingerprinting and investigating a crime scene for evidence in order to solve a crime. The course is important because it teaches students how to draw on skills from different disciplines in order to gather evidence and draw conclusions about an event. The ultimate goal is for the students to know how does investigation generates evidence.

Differentiation

What elements of this unit make it particularly beneficial or appropriate for gifted learners? (Be sure to discuss the dimensions of differentiation: Content, Process, Product, and Learning Environment AND the features of differentiation: Complexity, Challenge, Depth, Creativity, and Acceleration)

The study of Forensics is beneficial and appropriate for gifted learners because it requires students to think critically. In this unit, the content is differentiated for gifted students because they are required to use overarching concepts, interdisciplinary connections, and the study of differing perspectives. Differentiating the content by incorporating ethics also makes the unit appropriate for gifted students. More complex text is used in this unit which gives the content more depth. The process is accelerated by utilizing higher level thinking lesson plans such as the Socratic Seminar and Kohlberg's Stages of Moral Development. Through the use of the Socratic Seminar, students deepen their understanding of the essential question through collaboration. Authentic inquiry occurs as students create their own higher-level questions for the seminar. Through collaboration, students develop their speaking and listening skills. Students monitor both themselves and their peers, setting goals and planning throughout the unit. The learning environment is highly mobile, allowing students to move around the classroom and collaborate with their peers. The unit is designed to give gifted students the creative freedom to create their own crime scene, activities to increase the complexity about the topic such as, fingerprinting and

DNA analysis, the challenge of understanding people's different morals when faced with a dilemma, and diving deeper into investigating evidence, and accelerating their understanding by being exposed to complex text.

Goals and Outcomes

Content Goal

Goal 1: Apply the scientific method to perform investigation

Outcomes

Students will be able to:

- A. Acknowledge and understand the skills involved in scientific analysis (observation, interpretation, data keeping, writing of reports).
- B. Gather and analyze all crime related physical evidence in order to come to a conclusion about a suspect.
- C. Form a hypothesis as to what could have happened based on investigation of evidence found at the scene.

Process Goal

Goal 2: Develop a hypothesis based on evidence

Process Outcomes

Students will be able to:

- A. Draw inferences from available details.
- B. Apply the scientific method to perform an investigation.
- C. Collect and organize data necessary to discover evidence.
- D. Listen to different point of view and articulate their reasoning for their response.
- E. Create questions and maintain dialogue which examines ideas and concepts.

Concept Goal

Goal 3 To understand how investigation generates evidence

Concept Outcomes

Students will be able to....

- A. Use investigation to generate evidence.
- B. Analyze evidence found during an investigation
- C. Make an informed decision using evidence indicating whether a belief or proposition is true or valid.

Assessment Plan

What evidence will show that students understand? Describe formative assessments and summative assessment (performance task) that will be used to monitor student progress in meeting established goals throughout unit. Include student work samples (copies and/or photos) that demonstrate student content knowledge, skill development, and understanding of the unit's concept.

Students will demonstrate knowledge and understanding of the unit by completing formative assessments and a summative assessment

(Performance Task). Formative Assessments will include "ticket out the door" questions which quickly collects the students' response

to a question at the end of each class. Based on the students' responses, I can modify the next lesson to address concepts that the

students may have struggled with or failed to understand. I will also use "Admit questions" at the beginning of class to determine what

the students retained from the previous lesson or after a break is over. Another formative assessment that will be used is Peer

assessments which allows students to use one another as a learning resource. Students will be given the opportunity to create their own

crime scene. Once they've create their crime scene, they will exchange with a partner and solve each other's crime by investigating the

evidence given in the scenario. This unit also contains self-assessments which requires students to think about their own learning

process, reflect on what they did well and what they struggled with, and to articulate what they learned or

what they still need

assistance with. I will circulate the classroom listening to students and asking questions. This also serves as a formative assessment

because their conversations within their small group and their response to my questions tell me if they understand what has been

taught.

Performance Task

The Performance Task is the summative assessment. Students will have to investigate a crime scene for evidence to solve a crime. The

scenario is as follows; You are a crime scene investigator who has been hired by the FBI to investigate a crime scene for evidence.

Your task is to investigate the crime scene, gather, analyze, and interpret important evidence. You will then have to explain how the

investigation generated evidence. The head of the FBI will rate your investigative skills by critiquing the evidence you found to

determine if you are savvy enough to be formally added to the FBI team.

[Rubric for Performance Task](#)

[Sample 1 Performance Task](#)

[Sample 2 Performance Task](#)

[Sample 3 Performance Task](#)

[Formative Assessment- Student Work](#)

[Formative Assessment- Student Sample 2](#)

[Formative Assessment-Student Sample 3](#)

[Crime Scene Performance Task Video](#)

TEACHER NAME

Ericka Mayo

GRADE LEVEL

4th Grade

NC CURRICULUM STANDARDS

EKS: Science 3.2 -5.2

- (A) plan and implement descriptive investigations, including asking and answering questions, making inferences, and selecting and using equipment or technology needed, to solve a specific problem in the natural world;
- (B) collect data by observing and measuring using the metric system and recognize differences between observed and measured data;
- (C) construct maps, graphic organizers, simple tables, charts, and bar graphs using tools and current technology to organize, examine, and evaluate measured data;
- (D) analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations

CONCEPT

Investigation

ESSENTIAL UNDERSTANDING

Investigation Generates Evidence

ESSENTIAL QUESTION

How does Investigation generate evidence?

CRITICAL CONTENT - Students will know that...

- Students will know that forensic investigation is the gathering and analysis of all crime-related physical evidence in order to come to a conclusion about a suspect.
- Students will know that observations are the basis for inferences.
- Students will know that Forensic Scientist collect, preserve, and analyze scientific evidence during an investigation.
- Students will know that Forensic Science is applying scientific methods and processes to solving crimes.
- Students will know that evidence is the available body of facts or information indicating whether a belief or proposition is true or valid.

PROCESS SKILLS - Students will be able to...

- Students will be able to draw inferences from available details.
- Apply the scientific method to perform an effective observation.
- Collect and organize data necessary to create inferences.
- Students will be able to evaluate evidence.

MATERIALS

Laptops, pencil and paper

GUIDING QUESTIONS

Pre-Lesson Questions	During Lesson Questions	Post Lesson Question
What is investigation? What are some of things you investigate? Why do you investigate? What are evidence? Why do you look for evidence? What are some things that represent evidence?	What do scientist do? Where are some of the different places scientist work? What are some types of scientist? What are some of the things scientist research?	What did you learn about Forensic Investigators? What strategies did you use during your observation? How did you reach conclusions about your observations? How did you make inferences about your observations? What rules did you impose in your group? How does investigation generate evidence?

PLANNED LEARNING EXPERIENCES

Engage and Connect - This phase focuses on piquing students' interest and helping them access prior knowledge. This is the introduction to the lesson that motivates or hooks the students.

As students are entering the classroom the teacher will be showing a video clip from CSI Episode 04 <https://www.youtube.com/watch?v=MS7TEFqsN08>.

After the clip, teacher will tell students that they will be investigating evidence like the what was displayed in the video everyday this week.

Icebreaker

Teacher will pose the question, "Who has the ability to fool the class?" Tell students that they will participate in an activity which requires them to examine evidence to reach conclusions. Teacher will then explain to students that they will have to look for clues to determine which statements are not true. Students should pay close attention to body movement, shift in eyes, and if a person stutters. Students will then participate in the activity, "Two Facts and A Falsehood". Have class sit in a circle if possible. Each person gets a chance to share their three sentences. Then the rest of the class takes turns guessing which statement is not true. This activity will support and encourage student's ability to analyze details and make sound conclusions.

After completing the Icebreaker, teacher will ask the Pre-lesson Questions listed in the lesson plan.

Students will be asked to create a list of what they know about scientist.

Teacher will write the students responses on the board while they brainstorm

Teacher will then show video <https://www.youtube.com/watch?v=58XsN6XJWQ>

After showing students the video, teacher will ask students to add to the list of things they know about scientist.

-What does a scientist do?

-Where might a scientist work?

-What tools does scientists use?

Where are some of the different places scientist work?

What are some types of scientist?

What are some of the things scientist research?

Explore - In this phase, the students have experiences with the concepts and ideas of the lesson. Students are encouraged to work together without direct instruction from the teacher. The teacher acts as a facilitator. Students observe, question, and investigate the concepts to develop fundamental awareness of the nature of the materials and ideas.

Tell students that they are participating in a crime scene simulation and they will have to investigate all of the evidence to solve the crime. Students will be broken down into 6 groups of 3 students and each group will view the simulation and answer the questions together.

http://documents.routledge_interactive.s3.amazonaws.com/9781455731381/student/content/Crime_Scene_Simulation/activity.html

Explain that students will learn how to investigate details like this.

Explain - Students communicate what they have learned so far and figure out what it means. This phase also provides an opportunity for teachers to directly introduce a concept, process, or skill to guide students toward a deeper understanding.

After the students complete the simulation, teacher will facilitate a discussion about the the evidence and how evidence drives investigations.

Teacher will discuss the importance of evidence in any investigation. If you do not have evidence, it is impossible to convict anyone of a crime. Teacher will also explain that not all information in a case will be directly stated. Sometimes scientist will need to make inferences by using evidence from the scene to determine what actually happened.

Remind students that when we investigate something or someone we observe or study closely by examination and systematic inquiry.

Elaborate—Allow students to use their new knowledge and continue to explore its implications. At this stage students expand on the concepts they have learned, make connections to other related concepts, and apply their understandings to the world around them in new ways

Teacher will then lead a group discussion about the simulation the students completed.

What did you talk about in your group?

How did you come to your conclusion?

What did you consider evidence ?

Name the different types of evidence.

How does investigation generate evidence?

How did you feel about being a forensic scientist?

ASSESSMENTS

Evaluate: *This phase assesses both learning and teaching and can use a wide variety of informal and formal assessment strategies.*

Now that you have walked through a crime scene, it's your turn to create one.

Students will be given 15 minutes to write their own crime scene scenario. After students have created their scenario, they will exchange with a partner and solve each other's crime by investigating the evidence given in the scenario.

DIFFERENTIATION

CONTENT

PROCESS

Students work with open-ended problem solving experience. By investigating they will use observations and inferences to gain knowledge to solve crimes.

PRODUCT

LEARNING ENVIRONMENT

Highly mobile. Students were able to move around the class room and collaborate with peers.

TEACHER NAME

Ericka Mayo

GRADE LEVEL

4th

NC CURRICULUM STANDARDS

TEKS: Science 3.2 -5.2

(A) plan and implement descriptive investigations, including asking and answering questions, making inferences, and selecting and using equipment or technology needed, to solve a specific problem in the natural world;

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(D) analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations

CONCEPT

Investigation

ESSENTIAL UNDERSTANDING

Investigation Generated Evidence

ESSENTIAL QUESTION

How does investigation generate evidence?

CRITICAL CONTENT - Students will know that...

Students will know:

- Students will know that fingerprints are an impression or a mark made on a surface by a person's fingertips, especially used for identifying individuals.
- Students will know that there are different types of fingerprints.
- Students will know that whorls, arches, and loops are the three fingerprint patterns.
- Students will know that evidence is the available body of facts or information indicating whether a belief or proposition is true or valid.
- Students will know that fingerprints are unique for each individual which makes them a very important piece of evidence in an investigation.

PROCESS SKILLS - Students will be able to...

Students will be able to:

- Students will be able to list and describe the three types of fingerprint patterns.
- Students will be able to compare and contrast.
- Students will be able to apply the scientific method to perform an effective observation.
- Students will be able to explain why fingerprinting is important and useful .
- Students will be able to collect and organize data.
- Students will be able to create inferences.
- Students will be able to investigate evidence by using fingerprints.

MATERIALS

Dixie Cups, In pads, index cards, fingerprint posters

GUIDING QUESTIONS

Pre-Lesson Questions	During Lesson Questions	Post Lesson Question
What is forensic science? How is Forensic science related to investigation? How is evidence related to forensic science? What kinds of evidence does forensic scientist examine? What do know about fingerprints? Why do you think fingerprints are important?	What are the three types of fingerprints? How does investigating fingerprints help solve crimes? How would you describe the loop pattern fingertip? How would you describe the whorls pattern fingertip? How would you describe the Arch pattern fingertip? How are fingerprint used as evidence in an investigation? Why should everyone be fingerprinted? How does investigation generate evidence?	What did you learn about fingerprints? What strategies did you use during your investigation? How did you reach conclusions about your investigation? How does investigating fingerprints help solve crimes? What causes fingerprints to be left behind? Why is evidence important in investigation? What are some different types of evidence? Has your response changed about everyone being fingerprinted? Explain your response. How does investigation generate evidence?

PLANNED LEARNING EXPERIENCES

Engage and Connect - This phase focuses on piquing students' interest and helping them access prior knowledge. This is the introduction to the lesson that motivates or hooks the students.

Teacher will show video <https://www.youtube.com/watch?v=XXjczBV2RkY>

Teacher will facilitate a discussion with the class about how investigation generates evidence.

Pre-Lesson Questions

What is forensic science?

What evidence was found during the investigation on the clip we just watched?

How is Forensic science related to investigation?

How is evidence related to forensic science?

What kinds of evidence does forensic scientist examine?

Explore - In this phase, the students have experiences with the concepts and ideas of the lesson. Students are encouraged to work together without direct instruction from the teacher. The teacher acts as a facilitator. Students observe, question, and investigate the concepts to develop fundamental awareness of the nature of the materials and ideas.

Show the following link to the students

Why are fingerprints unique?

<https://www.youtube.com/watch?v=5-OI95dpNSM>

After showing the video, teacher will ask student students some guided questions.

How does investigating fingerprints help solve crimes?

How does the evidence found guide forensic scientist investigations?

After allowing the students to discuss their responses, tell the class that today they will become forensic scientist and fingerprint each other.

Students will work in partners to fingerprint each other.

1. Have student/child place their thumb on the ink pad, pressing down slightly so that ink covers the entire thumb fingertip.
2. Immediately after lifting the thumb from the ink pad place fingertip on an index card, being careful to keep thumb in its original place.
3. Lift thumb straight off of index card to reveal the thumbprint.
4. Repeat the steps using each finger.

Explain - Students communicate what they have learned so far and figure out what it means. This phase also provides an opportunity for teachers to directly introduce a concept, process, or skill to guide students toward a deeper understanding.

Teacher will begin the lesson by telling students the importance of fingerprinting in Forensic Science (It helps with identifying criminals and proving people innocent). Fingerprints are a

unique trademark and no two people have the same fingerprints.

Teacher will discuss the definition of fingerprints.

Definition – A fingerprint is the impression left by a finger's friction ridges upon contact with a surface.

The study of fingerprints is called dactyloscopy.

Teacher will display the pictures of the three different fingerprint pattern and then discuss the different types of fingerprint patterns.

Patterns of classification – arch, loop, and whorl

- **Loops** begin on one side of the finger, curve around or upward, and exit the other side. **Whorls** form a circular or spiral pattern.
- **Arches** slope upward and then down, like very narrow mountains.

*Students will write the definitions in their science journal.

Teacher will ask the During Lesson Questions to check for understanding and facilitate discussion.

What are the three types of fingerprints?

How does investigating fingerprints help solve crimes?

How would you describe the loop pattern fingertip?

How would you describe the whorls pattern fingertip?

How would you describe the Arch pattern fingertip?

How are fingerprint used as evidence in an investigation?

Elaborate—Allow students to use their new knowledge and continue to explore its implications. At this stage students expand on the concepts they have learned, make connections to other related concepts, and apply their understandings to the world around them in new ways

Students will look at the print that was created on the index card earlier during the Engage portion of the lesson and compare it to pictures of the three main types of fingerprints: loop, whorl, and arch.

Figure out which picture best matches to conclude what kind of fingerprint was created!

Teacher will create a crime scene scenario which involves students using the knowledge and skills they just

acquired from the lesson. Each table will have a cup with a fingerprint on it and three suspects fingerprint.

SCENARIO-Max's house was burglarized. The culprit was thirsty and left a fingerprint on a glass. The students will be given three suspects and each suspect will have a different type of fingerprint. Student will have to use fingerprint analysis to solve the crime. They will have to produce a written response as to how they solved the crime.

What evidence did you find at the crime scene?

Why is investigation important?

There are many types of evidence. Which type of evidence do you think is most important during an investigation? Explain your response.

What did you learn about fingerprints being used as evidence?

What strategies did you use during your investigation?

How did you reach conclusions about your investigation?

How does investigating fingerprints help solve crimes?

How did using evidence assist with solving the investigation?

How does investigation generate evidence?

ASSESSMENTS

Teacher will display a picture of a crime scene on the brightlink board. The assessment will be as follows--

What evidence would you collect from this crime scene? Circle the evidence you would collect and explain how you would use it in an investigation. Student will produce a written response to the posed question.

DIFFERENTIATION

CONTENT

Level of materials available to the student sophistication of concepts within content.

Novelty of the content.

PROCESS

Students work with open-ended problem solving experience. By investigating they will use observations and inferences to gain knowledge to solve crimes.

PRODUCT

LEARNING ENVIRONMENT

Highly mobile. Students were able to move around the class room and collaborate with peers.

TEACHER NAME

Ericka Mayo

GRADE LEVEL

4th

NC CURRICULUM STANDARDS

TEKS: Science 3.2 -5.2

- (A) plan and implement descriptive investigations, including asking and answering questions, making inferences, and selecting and using equipment or technology needed, to solve a specific problem in the natural world;
- (B) collect data by observing and measuring using the metric system and recognize differences between observed and measured data;
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Language Arts

Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.

CONCEPT

Investigation

ESSENTIAL UNDERSTANDING

Investigation generates evidence

ESSENTIAL QUESTION

How does investigation generates evidence?

CRITICAL CONTENT - Students will know that...

- Students will know that moral development focuses on the emergence, change, and understanding of morality from infancy through adulthood. (Kohlberg)
- Students will know that a dilemma is a problem for which the solution can be complex and that the problem and solution may have moral and/or ethical implications.
- Students will know that Social Justice is the belief institutions in society should allow equal opportunities to all people without engaging in discrimination and social injustices occur when a person, people or groups of people are treated unfairly - discriminated against - strictly based upon a certain characteristic of the person or group of people.
- Students will know that reasoning is the ability to think about something in a logical way to form a judgement or a conclusion.

PROCESS SKILLS - Students will be able to...

- Students will be able to analyze the moral development of a character.
- Students will know how to use the stages of Kohlberg's reasoning to make and defend a decision.
- Compare and contrast stages in moral development.
- Analyze characters' responses to issues and actions
- Create persuasive writing piece based on observations and evidence
- Prioritize values and/or moral decisions.
- Students will be able to use their reasoning skills to think about the dilemma in a logical way and form a conclusion based on the evidence given.

MATERIALS

Kohlberg's Moral Development Stages, pencil, and paper

GUIDING QUESTIONS

Pre-Lesson Questions	During Lesson Questions	Post Lesson Question
What is a dilemma?	When is there a justifiable reason to tamper with evidence in an investigation?	How is moral dilemma related to social justice?
What is an example of a dilemma?		
What makes dilemma's difficult?	Who would be impacted by the decision Seth made at the crime scene?	When is there a justifiable reason to tamper with evidence in an investigation? Explain your answer.
What are morals?	What are your reasons for saying that?	
How do you think morals relate to a dilemma?	How would the characters in the narrative be impacted? What are your reasons for saying that?	How could you use these stages to reflect on how the characters handled a dilemma?
When should people use their morals?		
What is social justice?	How might Seth feel because of his choice? What are your reasons for saying that?	What did you learn about your reasoning?
What are some determining factors that help prioritize moral?	How might John feel because of Seth's choice? What are your reasons for saying that?	How could you use these stages to infer why other people make the decisions they make when dealing with their own dilemma?
How does investigation generate evidence?		How does investigation generate evidence?
How can moral dilemma interfere with an investigation?	How could you use these stages to reflect on how you have solved a dilemma in the past?	How can moral dilemma interfere with an investigation?
How can a moral dilemma interfere with evidence obtained at an investigation scene?	What did you learn about your reasoning?	How can a moral dilemma interfere with evidence obtained at an investigation scene?
	How could an investigator use these stages in the when they are investigating evidence?	What is the relationship between moral development and investigation of evidence?
	How could you use these stages to infer why other people make the decisions they make when dealing with their own dilemma?	What did you learn about reasoning?
	How is the dilemma related to social justice?	

PLANNED LEARNING EXPERIENCES

Engage and Connect - *This phase focuses on piquing students' interest and helping them access prior knowledge. This is the introduction to the lesson that motivates or hooks the students.*

As students enter the room, a picture will be displayed of a crime scene investigator at a crime scene.

Debrief: Teacher will ask students:

What do you see in the picture?

What else do you see in the picture?

What is going on in the picture?

What might the man be thinking?

Students will be given the opportunity to share their thoughts (answers should be something about the person having to make a complex, difficult decision about something).

The teacher then asks pre-lesson questions:

What is a dilemma?

What is an example of a dilemma?

What makes dilemma's difficult?

How would you solve a dilemma?

What are morals?

How do you think morals relate to a dilemma?

When should people use their morals?

Explore - *In this phase, the students have experiences with the concepts and ideas of the lesson. Students are encouraged to work together without direct instruction from the teacher. The teacher acts as a facilitator. Students observe, question, and investigate the concepts to develop fundamental awareness of the nature of the materials and ideas.*

The teacher defines dilemma as a situation in which a difficult choice has to be made between two or more alternatives, especially equally undesirable ones. Teacher will then tell students that dilemmas cause us to think critically and reflectively about difficult decisions that must be made.

The teacher provides the students with a dilemma as follows:

Seth is police officer that has been just been called to the scene of an accident. When he arrives he

notice the car at the scene belongs to his best friend, John. Fearing the worst, Seth rushed over to check on the condition of his friend. John sees Seth and although barely conscious, he manages to mouth the words, "I messed up, please get rid of the bottles for me."

Seth reeled back in shock, devastated by the condition his friend is in and the situation he is placing him in. John is asking Seth to tamper with evidence. As Seth stepped back, the wreck in front of him comes into focus. His best friend was drinking and driving. He sees that John is gravely ill and if he does live, he will probably be sentenced to jail time. Seth looked at the seat next to John and saw two empty wine bottles.

Should Seth get rid of the evidence or allow John, his best friend, to go to jail?

After the students read the short narrative, the teacher will ask students to choose a position they stand for and write down two reasons for their decision. Then the teacher will ask the students to group themselves by decisions (do they get rid of the bottles; do they leave the bottles in the car). Within the large group, the students will divide themselves into smaller groups of three or four. Students will record their reasons for making their choices. Finally, teacher will allow small groups to share their reason for their choices.

Explain - *Students communicate what they have learned so far and figure out what it means. This phase also provides an opportunity for teachers to directly introduce a concept, process, or skill to guide students toward a deeper understanding.*

The teacher will bring the class together for a whole class discussion. The teacher will ask the questions:

Who would be impacted by the decision Seth made at the crime scene? What are your reasons for saying that?

How would the characters in the narrative be impacted? What are your reasons for saying that?

How might Seth feel because of his choice? What are your reasons for saying that?

How might John feel because of Seth's choice? What are your reasons for saying that?

The teacher will provide the students with a handout of Kohlberg's Stages of Moral Development. The teacher tells students that these are the stages from infancy to adulthood and that the stages simply provide an idea about how humans develop their reasoning skills as they mature.

Stage One- Avoiding Punishment

Stage Two- Getting a reward or a benefit

Stage three- Winning Approval (what others think of me)

Stage four- Is it the rule or the law

Stage Five- It is in line with Social Order; This is the difference between moral and legal; Social Justice

Stage Six- (theory) Universal Principles (Ethics)

The teacher will ask:

What did you learn about your reasoning?

How would you identify the stages of development of Seth based on his reasoning?

How could you use these stages to infer why other people make the decisions they make when dealing with their own dilemma?

Elaborate—*Allow students to use their new knowledge and continue to explore its implications. At this stage students expand on the concepts they have learned, make connections to other related concepts, and apply their understandings to the world around them in new ways*

Teacher will divide the class into 3 or 4 groups. Teacher will then pass each group a scenario to read individually. Each group member will have the same scenario.

Each student will have to read the scenario and be ready to summarize with their group what the dilemma was and choose a position they would take and write down to reasons for your decision.

After small groups have shared their thoughts, they will answer the they following questions:

-Who will be impacted by the decisions you made in the dilemma? Why do you say that?

-How will the other people in the scenario be impacted? Why do you say that?

-How is the dilemma related to social justice?

The teacher circulates and monitors each group during the small group discussions. When all groups have completed discussions, the teacher will call the class back together for more whole group discussion. Each group will choose a representative to summarize the dilemma in their group.

The teacher will ask the class:

How were the dilemmas similar? How were they different?

How did you feel about the dilemma?

What reasoning will you use to solve the dilemma?

The teacher will facilitate discussion while giving students an opportunity to add thoughts and opinions.

ASSESSMENTS

Evaluate: *This phase assesses both learning and teaching and can use a wide variety of informal and formal assessment strategies.*

Teacher will ask the students to reflect on

-How does social justice impact decision-making?

- How does morals impact decision-making?

-What is the relationship between Social - justice and moral development?

Students will be asked to create a writing piece on The Moral Dilemma involved with Forensic Science..

DIFFERENTIATION

CONTENT

PROCESS

Kohlberg's Stages of Moral Development requires students to engage in high level process skills.

PRODUCT

Students will create a writing piece summarizing what they leareened.

LEARNING ENVIRONMENT

Highly mobile. Students were able to move around the class room and collaborate with peers.

TEACHER NAME

Ericka Mayo

GRADE LEVEL

4th

NC CURRICULUM STANDARDS

Science 3.2 -5.2

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Language Arts-

- Cite textual evidence to support analysis of what the text says explicitly, as well as inferences and/or generalizations drawn from the text.
- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *topics and texts*, building on others' ideas and expressing their own clearly.

CONCEPT
Investigation

ESSENTIAL UNDERSTANDING
<i>Investigation generates evidence</i>

ESSENTIAL QUESTION
<i>How does investigation generate evidence?</i>

CRITICAL CONTENT - Students will know that...

Students will know that

- Students will know that evidence is the available body of facts or information indicating whether a belief or proposition is true or valid.
- Students will know that a “close reading” strategy is an interaction that involves observation and interpretation between the reader and the text. It means rereading and reflecting to come to new conclusions and understanding about the text.
- Students will know what the theme of a story is the underlying message or the big idea.
- Students will know that Forensic Science is applying scientific methods and processes to solving crimes.

PROCESS SKILLS - Students will be able to...

Students will be able to

- Students will be able to draw inferences from available details.
- Apply the scientific method to perform an investigation.
- Collect and organize data necessary to discover evidence.
- Work collaboratively with their peers.
- Students will be able to listen to different point of views and articulate their reasoning for their responses.
- Create questions and maintain dialogue which examines ideas and concepts.

MATERIALS

Copy of the Lamb and the Slaughter by Roald Dahl, pencil, and paper

GUIDING QUESTIONS

Pre-Lesson Questions	During Lesson Questions	Post Lesson Question
What did you see in the clip? Why have all nationalities represented in the clip? If you were a character on the Orient Express, who would it be? Why? What evidence were shown in the clip? In what ways does the video help you understand that a thorough investigation must be conducted to generate evidence? How does the detective investigate? How does investigation generate evidence?	What is the cause of Mr. Maloney's death? Why is Mr. Maloney murdered? How are other character's affected by his death? How does investigation generate evidence in this story? Why was the investigation unsuccessful? What might be some other good titles? How do the officers investigate? How did evidence impact the investigation? What is the theme to this story? What are the assumptions of this text? What major decisions do the characters make, and why? What do these decisions reveal about the characters?	Why was the investigation unsuccessful? Why did Mr. Maloney's death investigation remain unsolved? What is the importance of evidence in an investigation? What was the one theme you discovered through this seminar? How did your role in the seminar (inner/outer) impact your feelings about the seminar? How did the seminar experience help you deepen your knowledge about investigation generating evidence? What generalization can you make about evidence and investigation? What challenges did you experience during the seminar? How does investigation generate evidence? What is the significance of the title, and how does it add to the understanding of the text? How did evidence impact the investigation?

PLANNED LEARNING EXPERIENCES

Engage and Connect - This phase focuses on piquing students' interest and helping them access prior knowledge. This is the introduction to the lesson that motivates or hooks the students.

Teacher will provide students with an index card with questions pertaining to the video clip from *Murder on the Orient Express*. The questions will be as follows: How did you feel while you were watching the clip? What were your thoughts about the passengers while you were watching the clip? Write about any evidence you saw in the clip and any inferences you made concerning while watching the clip.

Students will watch a short video clip from *Murder on the Orient Express*. <https://www.youtube.com/watch?v=OejS7tab2v0> and <https://www.youtube.com/watch?v=Mq4m3yAoW8E>

Once the students have viewed the clips, teacher will allow students to share their written responses orally. After students have shared, teacher will pose the following questions:

What did you see in the clip?

Why have all nationalities represented in the clip?

If you were a character on the Orient Express, who would it be? Why?

What evidence were shown in the clip?

In what ways does the video help you understand that a thorough investigation must be conducted to generate evidence?

Explore - In this phase, the students have experiences with the concepts and ideas of the lesson. Students are encouraged to work together without direct instruction from the teacher. The teacher acts as a facilitator. Students observe, question, and investigate the concepts to develop fundamental awareness of the nature of the materials and ideas.

Students will be divided into groups of three or four. Each group will be provided with a copy of *Lamb to the Slaughter* by Roald Dahl to read silently and independently. Students should utilize the "close reading" After each group member has read the short story they should discuss notes and questions written during the close reading. Each group should craft five questions as a result of their close reading. These questions will be used during the Socratic Seminar.

Explain - Students communicate what they have learned so far and figure out what it means. This phase also provides an opportunity for teachers to directly introduce a concept, process, or skill to guide students toward a deeper understanding.

When students have completed the task, the teacher will ask the following questions:

What is the cause of Mr. Maloney's death?

Why is Mr. Maloney murdered?

How are other character's affected by his death?

How does investigation generate evidence in this story?

Why was the investigation unsuccessful?

What major decisions do the characters make, and why? What do these decisions reveal about the characters?

Students will respond to the questions orally. Different perspectives are expected and allowed to be discussed.

Elaborate—Allow students to use their new knowledge and continue to explore its implications. At this stage students expand on the concepts they have learned, make connections to other related concepts, and apply their understandings to the world around them in new ways

Students are divided into two groups. One group will compose the inner circle of the Socratic Seminar; one group will form the outer circle. The inner circle members begin the dialogue while the outer circle members take notes about the dialogue, craft questions they have and observe one participant of the inner circle. The leader, a student chose by the teacher, will begin the seminar with provocative question. Inner students will respond in a dialogue fashion throughout the seminar.

Opening Question-- **How does investigation generate evidence?**

These questions could also be used if the dialogue during the seminar are shaky and/or not higher level thinking questions.

Possible Questions:

What might be some other good titles?

Is it better to be a widower or divorced?

Is it better to be a murder or divorced?

Under what circumstance is it justifiable to murder?

What is the theme to this story?

What are the assumptions of this text?

What is the significance of the title, and how does it add to the understanding of the text?

Students will dialogue for 10 minutes and then the inner circle will change places. The new outer circle will now be taking notes, crafting questions, and observing their partner in the inner circle.

When the students have completed the seminar, the teacher will pose the following questions:

Why was the investigation unsuccessful?

Why did Mr. Maloney's death investigation remain unsolved?

What is the importance of evidence in an investigation?

What was the one theme you discovered through this seminar?

How did your role in the seminar (inner/outer) impact your feelings about the seminar?

How did the seminar experience help you deepen your knowledge about investigation generating evidence?

What generalization can you make about evidence and investigation?

What challenges did you experience during the seminar?

ASSESSMENTS

Students should reflect on what they learned from discussion to answer the essential question, "How does investigation generate evidence?" and also what they learned from the seminar process. Students will then write a reflection. The reflection can be in a list, a paragraph, or a graphic organizer. In small groups, students will discuss positive findings and suggestions for improvement in their reflections and then share whole group.

DIFFERENTIATION

CONTENT

Students use overarching concepts, interdisciplinary connections, and the study of differing perspectives. Also, use of more complex text.

PROCESS

Through the use of a Socratic Seminar, students deepen their understanding of the essential question through collaboration. Authentic inquiry occurs as students create their own higher-level questions for the Seminar.

PRODUCT

Through collaboration, students develop their speaking and listening skills. Students monitor both themselves and their peers, setting goals and planning along the way.

LEARNING ENVIRONMENT

Highly mobile. Students were able to move around the class room and collaborate with peers.

Unit Resources

Provide a listing of books, Web sites, videos, and/or other instructional materials that are intended to supplement the unit. Include resources intended for both teacher and student use. Be sure to use APA style for books/articles and provide a brief (1-2 sentence) annotation for Web sites and instructional materials.

Unit Resources

(2018, February 15). Retrieved April 15, 2018, from you tube: <http://www.youtube.com/watch?v=MS7TEFqsN08>

(CSI: Episode 04, 2018)

This video clip is an excellent hook for crime scene investigation. It shows an investigator at a crime scene discovering evidence step by step with opera music playing to enhance suspense.

Branch, K. (Director). (2017). *Murder on the Orient Express* [Motion Picture].

<https://www.youtube.com/watch?v=OejS7tab2v0>

<https://www.youtube.com/watch?v=Mq4m3yAoW8E>

Thirteen strangers are stranded on a train and everyone is a suspect. Students will look for evidence to decide who committed murder.

education with vision. (2010, February 11). Retrieved April 26, 2018, from you tube:

<https://www.youtube.com/user/EducationWithVision/search?query=what+s+forensic+science>

https://www.youtube.com/watch?v=_58XsN6XJWQ

This video introduces students to Forensic Science.

Ivory, T. (n.d.). (T. Ivory, Producer, & Highdef Films) Retrieved May 3, 2018, from you tube:

<https://www.youtube.com/watch?v=XXjczBV2RkY>

The Art of Fingerprinting

This video gives an introduction to fingerprinting. It shows the different ways to fingerprint and how to lift prints off of surfaces.

live noggin. (n.d.). Retrieved June 1, 2018, from you tube: <https://www.youtube.com/watch?v=5-OI95dpNSM>

This video explains why fingerprints are unique and why fingerprints do not change.

Students Resouces

Retrieved June 12, 2018, from http://documents.routledgeinteractive.s3.amazonaws.com/9781455731381/student/content/Crime_Scene_Simulation/activity.html

This simulated crime scene is designed to test student’s observation and knowledge.

Dahl, R. (1953). *Lamb to the Slaughter*. New York: Penguin.

Short story used in Socratic Seminar to help students think critically about evidence and perceptions.

Wonderville

<https://ngss.wonderville.org/>

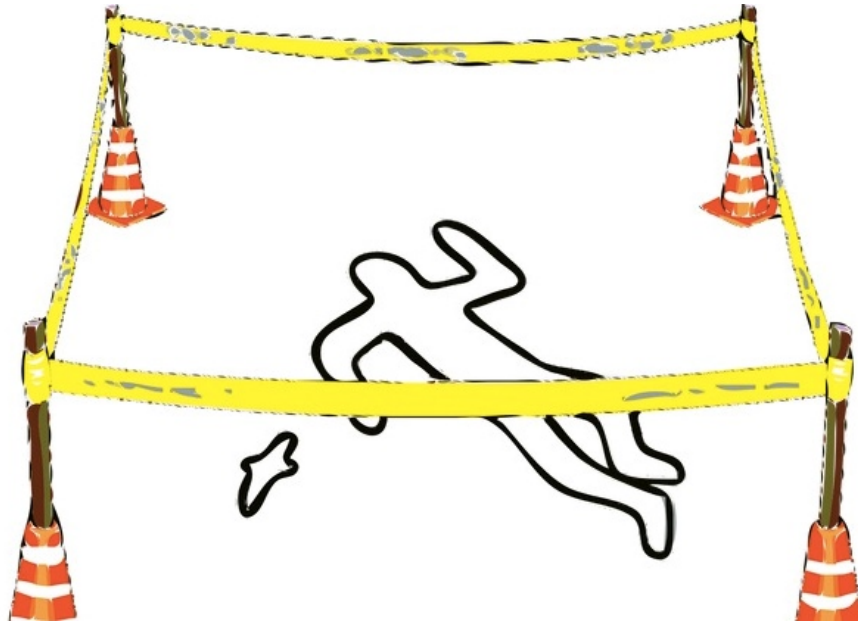
An interactive website which gives sudents more practice with studying and analyzing fingerprints.

			✓

Appendix item:

Body at crime scene.png - 792x435

[Show location](#)

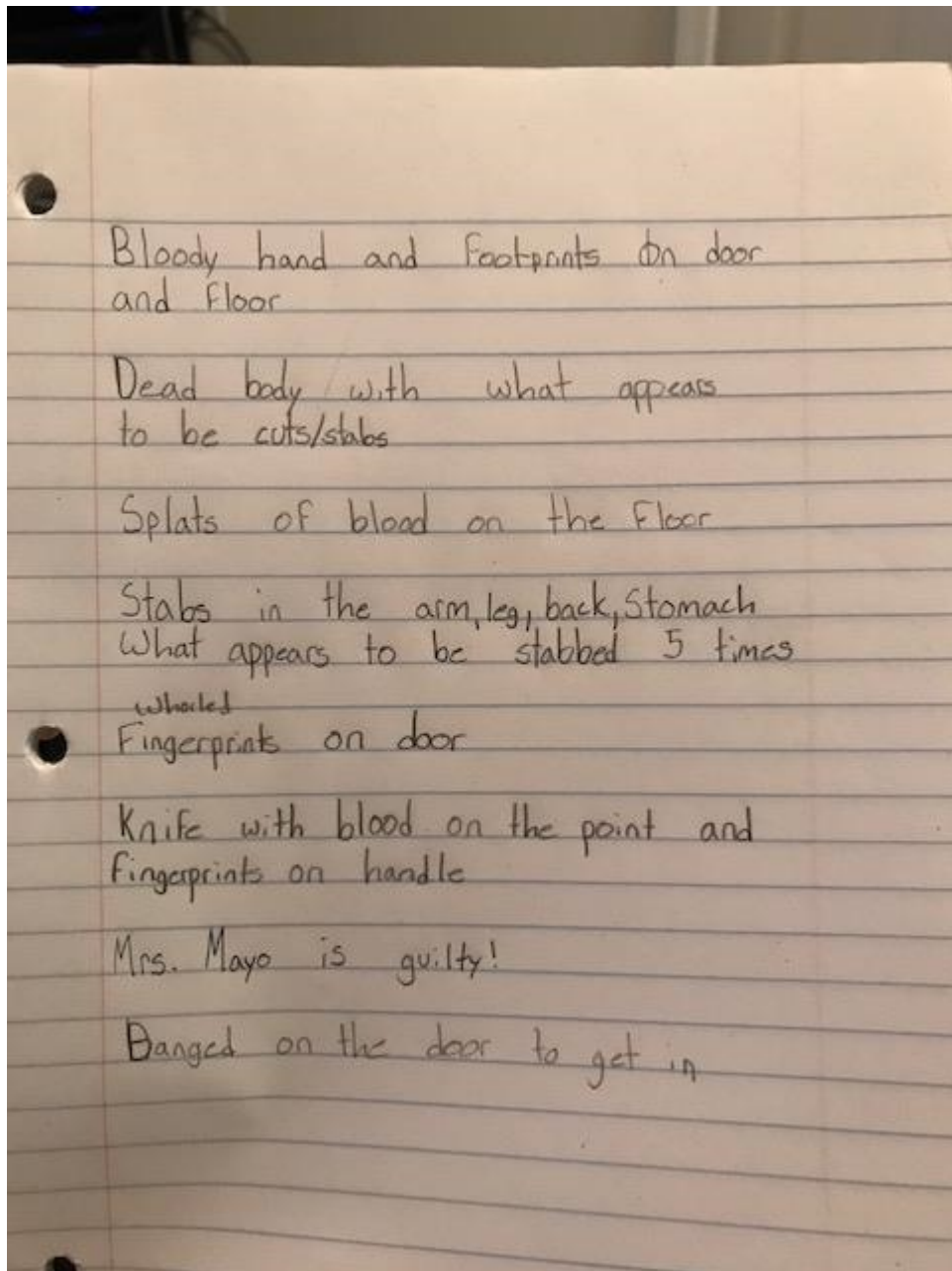


[Body at crime scene.png - 792x435](#)

png (182 KB)

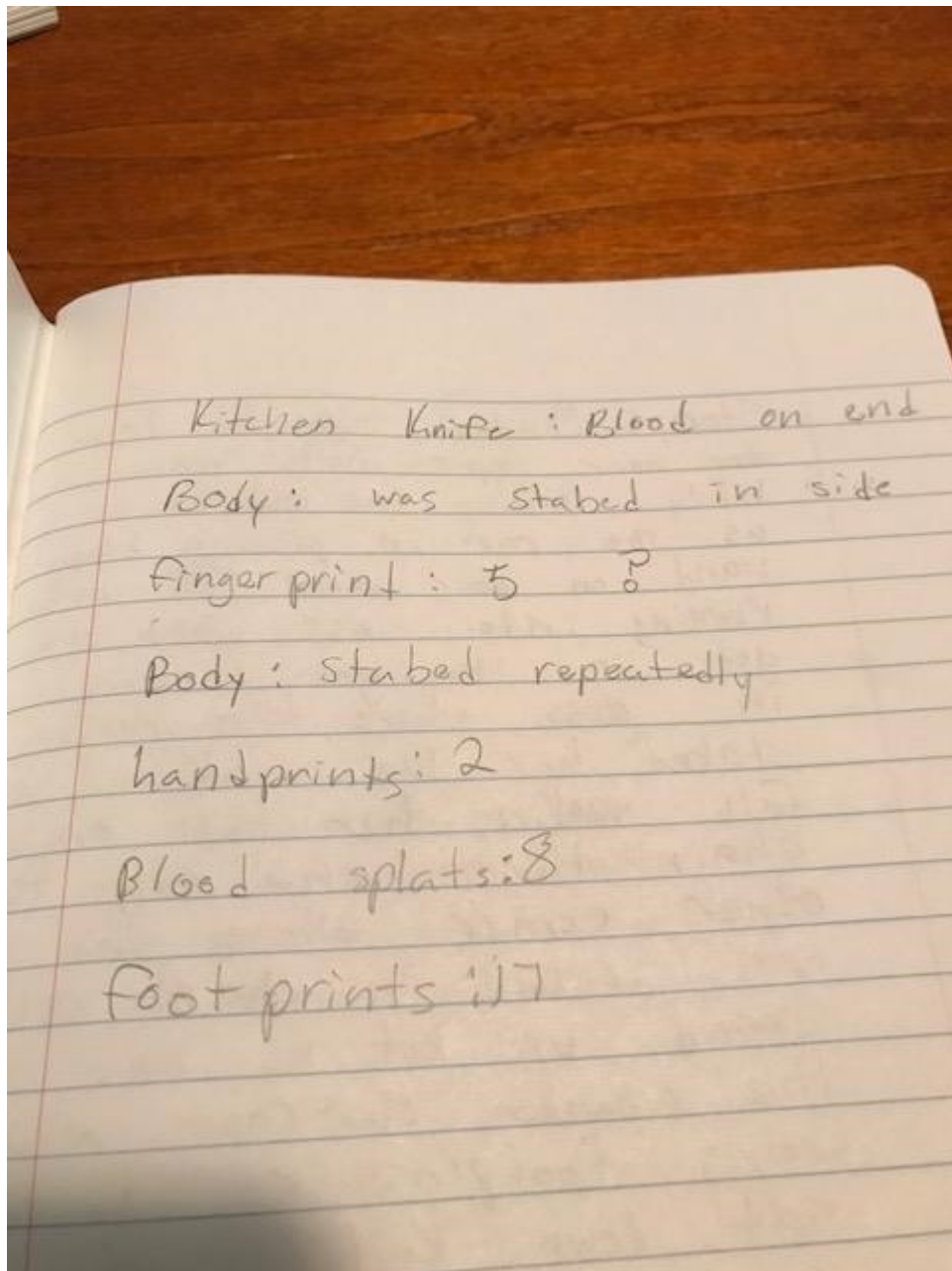
Crime Scene Investigation Rubric for Performance Task

	Poor 1	Average 2	Good 3	Excellent 4
Crime Theory	Seems to have made up a theory; it is not clear the student looked at evidence.	There is a theory but it is not tied directly to the evidence.	The theory makes some sense but details of the suspects background or critical evidence is not included.	Theory of the crime is clearly based on evidence and suspect background.
Crime Scene Notes	Minimal description of the crime scene; could not reconstruct the scene based on these notes.	Crime scene described but not in detail; it would be difficult to reconstruct .	Fairly good description; could reconstruct most of the crime scene; may be lacking some detail.	Clearly detailed description including the layout of the room; anyone could reconstruct the crime scene using these notes.
Group Work	Student did not work effectively with others.	Student cooperated with others, but needed prompting to stay on task.	Student was an engaged partner but had trouble listening to others and/or working cooperatively.	Student was an engaged partner, listening to suggestions of others and working cooperatively throughout lesson.
Writing Mechanics	Filled with spelling and grammatical errors.	Several spelling and grammatical errors but can still be followed.	Less than 2 spelling or grammatical errors	No spelling or grammatical errors.



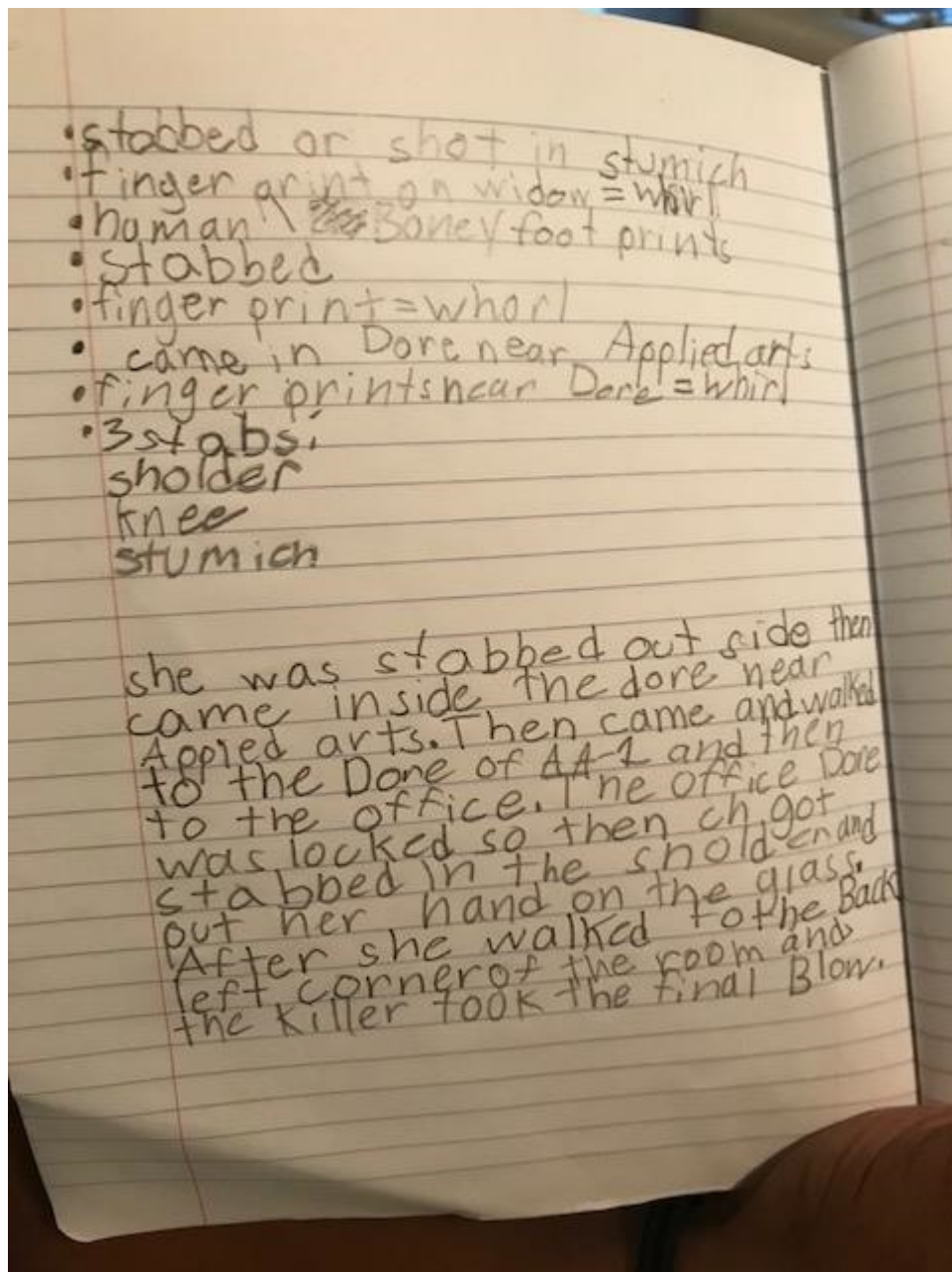
s1.jpg

jpg (69 KB)



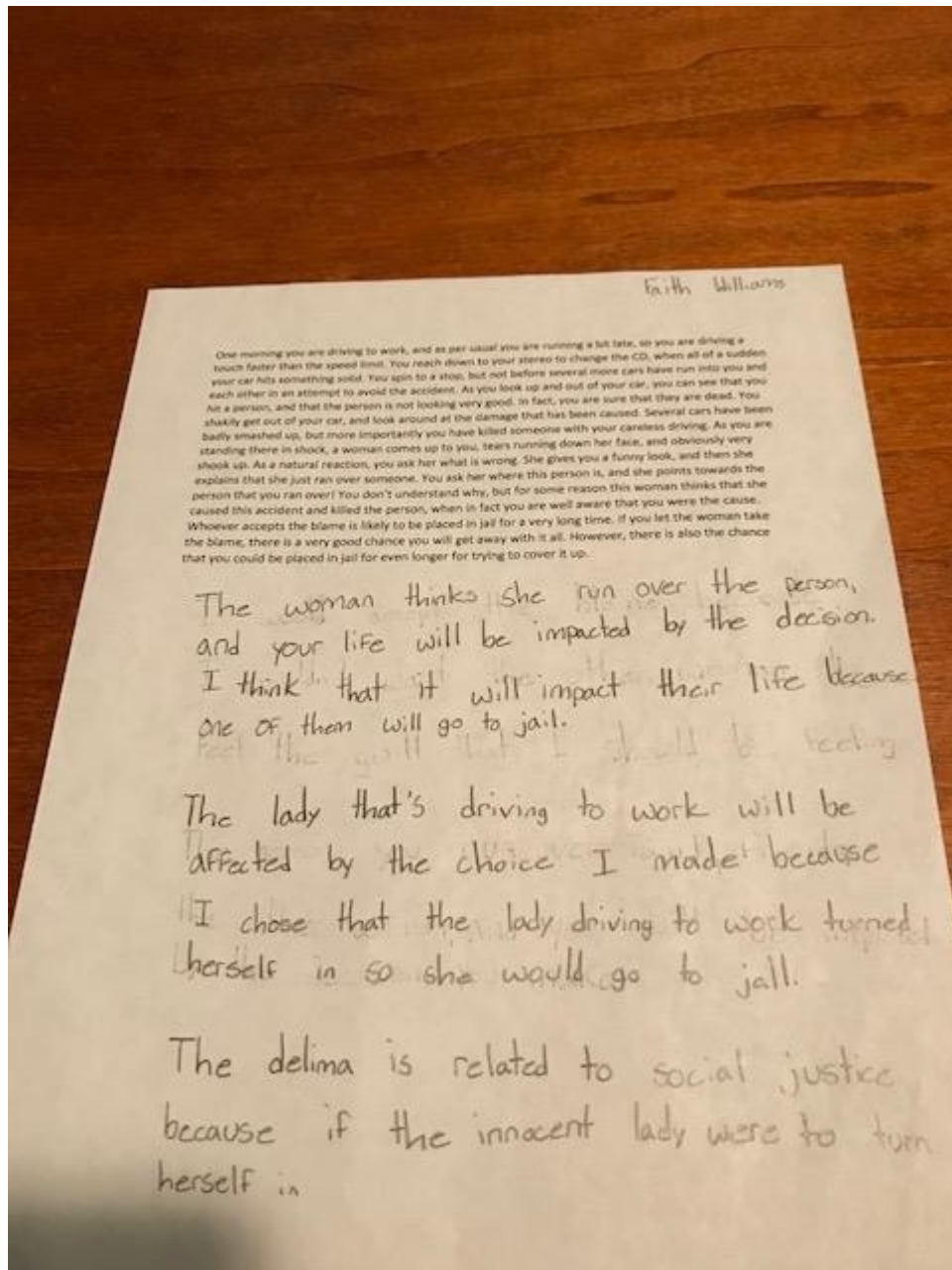
[Sample 2 Performance Task.jpg](#)

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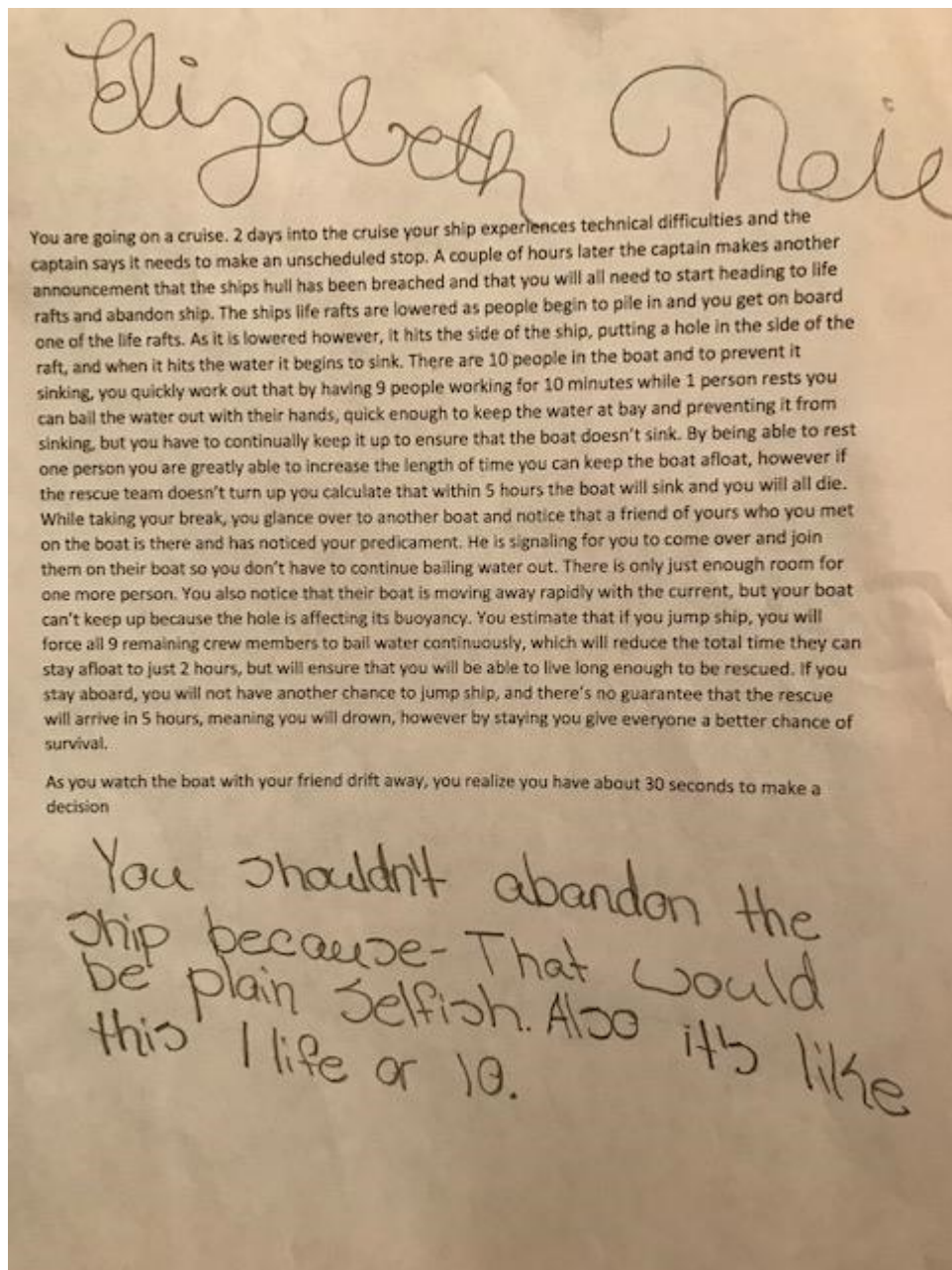
Sample 3 Performance Task.jpg

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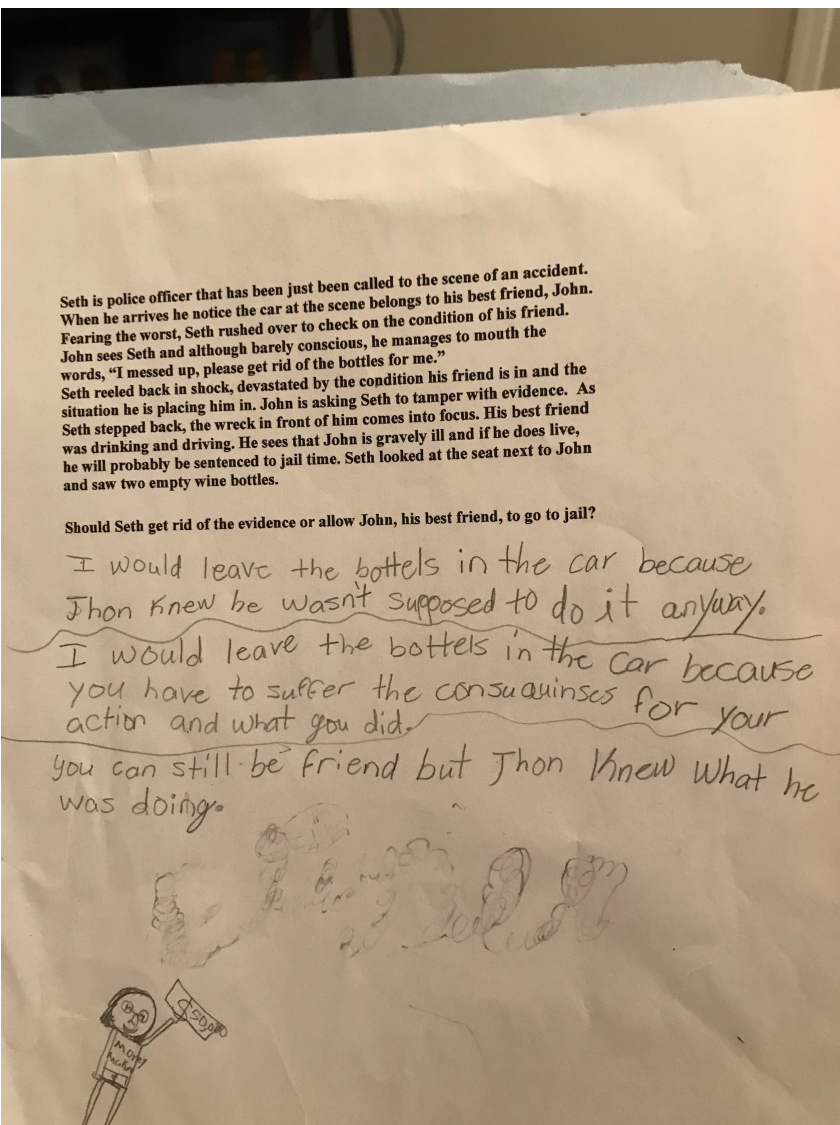
Formative Assessment- Student sample.jpg

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Formative Assessment- Student work sample
2.jpg

jpg (112 KB)



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Formative Assessment-student sample 3.jpg