

10.3.2

Lesson 11

Introduction

In this lesson, students organize, analyze, and synthesize their claims using their Forming Evidence-Based Claims Tools from the previous lesson to develop comprehensive claims about each inquiry path in the Research Frame.

Students begin the lesson by organizing the claims they created in the previous lesson by physically arranging the Forming Evidence-Based Claims Tools according to the inquiry paths they address. Students analyze and make connections between these specific claims and the supporting evidence to develop comprehensive claims about each inquiry path. Students use Organizing Evidence-Based Claims Tools to write the comprehensive claims about each inquiry path. Students then work in small groups to peer review one Organizing Evidence-Based Claims Tool using an Evidence-Based Claims Criteria Checklist. For the lesson assessment, students synthesize the information from an Organizing Evidence-Based Claims Tool into a paragraph explaining the claim, the evidence that supports it, and how the claim supports a side of an issue from the problem-based question.

This work directly prepares students to develop and write an Evidence-Based Perspective for the End-of-Unit Assessment. Students build on the claims created in the previous lesson to develop comprehensive claims that reflect a deeper understanding of the inquiry paths and the problem-based question itself, and begin to develop a perspective on their issue. For homework, students review all of their Organizing Evidence-Based Claims Tools using the Evidence-Based Claims Criteria Checklist and, if necessary, revise their claims.

Standards

Assessed Standard(s)	
W.9-10.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.
W.9-10.7	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Addressed Standard(s)	
W.9-10.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
SL.9-10.1	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grades 9–10 topics, texts, and issues</i> , building on others' ideas and expressing their own clearly and persuasively.

Assessment

Assessment(s)
<p>Student learning in this lesson is assessed via a Quick Write at the end of the lesson. Students respond to the following prompt, using an Organizing Evidence-Based Claims Tool from the lesson.</p> <ul style="list-style-type: none"> Develop a claim about an inquiry path or your problem-based question and support it using specific evidence and details from your research. <p> The Quick Write will be assessed using the Evidence-Based Claims Criteria Checklist.</p>
High Performance Response(s)
<p>Individual student claims will vary by the individual's problem-based question. A High Performance Response should:</p> <ul style="list-style-type: none"> Develop and explain a claim about an inquiry path or the problem-based question (e.g., the legal issues that deal with patients' rights to tissue removed during surgery need to be clearly defined because doctors and researchers can profit from tissue taken during surgery. This claim was developed using multiple pieces of evidence and demonstrates a perspective that is prevalent in the sources around the issue of tissue ownership: "tissue banks appear to have de facto ownership over sample inventories" ("Tissue Banks Trigger Worry About Ownership Issues")). Provide relevant and sufficient evidence from research to support the claim (e.g., "If you've ever had a blood test or biopsy at a hospital, that tissue was in a pipeline to research and commercialization. The result was a genetic gold rush" ("My Body, My Property"); "courts found that state law provided little basis for granting patients a property interest in their voluntarily donated, excised tissue" ("Body of Research—Ownership and Use of Human Tissue")).

Vocabulary

Vocabulary to provide directly (will not include extended instruction)
<ul style="list-style-type: none"> • None.*
Vocabulary to teach (may include direct word work and/or questions)
<ul style="list-style-type: none"> • None.*

*In their research and reading, students will encounter domain-specific vocabulary related to their individual research questions/problems. Students will track some of this vocabulary in their vocabulary journals when conducting independent searches during class and for homework.

Lesson Agenda/Overview

Student-Facing Agenda	% of Lesson
<p>Standards:</p> <ul style="list-style-type: none"> • Standards: W.9-10.9, W.9-10.7, W.9-10.4, SL.9-10.1 <p>Learning Sequence:</p> <ol style="list-style-type: none"> 1. Introduction of Lesson Agenda 2. Homework Accountability and Research Process Check-In 3. Organizing and Developing Comprehensive Claims 4. Peer Review: Assessing Claims 5. Quick Write 6. Closing 	<ol style="list-style-type: none"> 1. 5% 2. 10% 3. 40% 4. 25% 5. 15% 6. 5%

Materials

- Copies of the Organizing Evidence-Based Claims Tools for each student (one point, two point and three point)
- Model Research Frame (refer to 10.3.2 Lesson 6)
- Copies of Evidence-Based Claims Criteria Checklist for each student
- Research Portfolios (refer to 10.3.2 Lesson 1)
- Student copies of Forming Evidence-Based Claims Tools (refer to 10.3.2 Lesson 10)

Learning Sequence

How to Use the Learning Sequence	
Symbol	Type of Text & Interpretation of the Symbol
10%	Percentage indicates the percentage of lesson time each activity should take.
no symbol	Plain text indicates teacher action.
	Bold text indicates questions for the teacher to ask students.
	<i>Italicized text indicates a vocabulary word.</i>
▶	Indicates student action(s).
☞	Indicates possible student response(s) to teacher questions.
ⓘ	Indicates instructional notes for the teacher.

Activity 1: Introduction of Lesson Agenda

5%

Begin by reviewing the agenda and the assessed standards for this lesson: W.9-10.9 and W.9-10.7. Explain that in this lesson, students use the Organizing Evidence-Based Claims Tool to make comprehensive claims by identifying connections between the specific claims and evidence from the previous lesson (Forming Evidence-Based Claims Tools). Students then peer review one Organizing Evidence-Based Claims Tool using the Evidence-Based Claims Criteria Checklist. Finally, students synthesize the information from an Organizing Evidence-Based Claims Tool into a written paragraph. This work directly prepares students to develop and write an Evidence-Based Perspective for the End-of-Unit Assessment.

- ▶ Students look at the agenda.

Activity 2: Homework Accountability and Research Process Check-In

10%

Return to each student the previous lesson's assessment (two completed Forming Evidence-Based Claims Tools) to make claims about one inquiry question and ask students to take out their homework from the previous lesson (use at least two Forming Evidence-Based Claims Tools to make claims about each inquiry path).

- ▶ Students examine the previous lesson's assessment and take out their homework.

Instruct students to take out the Student Research Plan and journal about their research progress and next steps in the research journal, based on the work completed in the previous lesson (Lesson 10). Instruct students to look specifically at Part 3: Organizing and Synthesizing Research, and reflect on the research activity they did in the last lesson: forming evidence-based claims about inquiry paths. Instruct students to use the language of W.9-10.7 that aligns with Part 3 of the Student Research Plan when writing their journal responses.

- ▶ Students journal about their research progress and next steps.
 - 🗨 Student responses will vary by individual problem-based question. Look for students to use the language of the Student Research Plan and W.9-10.7, as well as evidence from their research process for research journal responses.
 - ① The lesson assessment from the previous lesson required students to use two Forming Evidence-Based Claims Tools. Hand these tools back to each student with feedback. This assessment was evaluated using the Evidence-Based Claims Criteria Checklist.
 - ① The W.9-10.7 language that applies to Part 3: Organizing and Synthesizing Research includes: “synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.”
 - ① While students are journaling about their research progress and next steps, circulate around the room to monitor students’ homework completion.
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Instruct students to arrange all of their Forming Evidence-Based Claims Tools by inquiry path on their desks.

- ① Students should have at least six Forming Evidence-Based Claims Tools, two for each inquiry path.
- ① Students do not engage in pair discussion for homework accountability because they will work together on their Forming Evidence-Based Claims Tools later in the lesson.

Activity 3: Organizing and Developing Comprehensive Claims

40%

Explain that in this activity, students build on the claims-making process they started in the previous lesson by analyzing and synthesizing comprehensive claims about each inquiry path in the Research Frame. Students use the claims made in the previous lesson as a foundation to analyze and develop comprehensive claims for an entire inquiry path.

- ▶ Students listen.

Provide students with the following definition: *comprehensive* means “of large scope, covering or involving much, inclusive.” Explain that in this lesson students combine the claims made in the previous lesson to create claims with a larger scope for each inquiry path. Explain that these new claims will be more global and will include multiple pieces of evidence.

- ① Explain to students that synthesizing multiple pieces of evidence to develop *comprehensive* claims will allow students to create stronger claims because they are demonstrating that the claim is supported by sufficient evidence. These *comprehensive* claims will provide a foundation for

student's Evidence-Based Perspective in the End-of-Unit Assessment. In addition, developing *comprehensive* claims across multiple sources is necessary for writing the central and supporting claims of the Research-Based Argument Paper in Unit 3 of this module.

① At this point, students are making claims about their research. They will not begin to develop central claims until Unit 3, Lesson 1. For the End-of-Unit Assessment of this unit (10.3.2 Lesson 13), there are no central claims. Students just explain their developing perspective about the problem-based question.

- ▶ Students listen.

Distribute a blank Organizing Evidence-Based Claims Two Point Tool to each student. Display the Model Research Frame for students to see. Instruct students to examine the Research Frame and read Inquiry Path 2: "Who owns tissue, cells and organs and DNA?"

- ▶ Students examine the Organizing Evidence-Based Claims Two Point Tool and read Inquiry Path 2 on the Model Research Frame.

① The Model Research Frame was created in 10.3.2 Lesson 6.

Explain to students that in the previous lesson, the class developed these two model claims about this inquiry path:

- Tissue banks, not individuals, have control over tissue samples.
- Once tissue is removed from the body, it is sent to tissue banks or biotechnology companies.

- ▶ Students listen.

① The Model Forming Evidence-Based Claims Tools used in this part of the lesson are located in the previous lesson, (Lesson 10).

① The first claim was formally modeled in the previous lesson. The second claim was not formally modeled during the previous lesson, but was included as an additional example.

Explain that in this activity, students analyze and make connections between the claims they made about their inquiry questions (the work from the previous lesson). Students will organize, analyze, and make connections between the Forming Evidence-Based Claims Tools completed for each inquiry path to create a comprehensive claim on an Organizing Evidence-Based Claims Tool.

- ▶ Students listen.

Model how to complete an Organizing Evidence-Based Claims Two Point Tool based on the model inquiry path discussed above (Who owns tissue, cells and organs and DNA?). Display the tool, and explain to students that the Two Point Tool is the most appropriate one to use because, in this case, they are working with two points (claims).

Explain to students that they can make a larger claim by connecting these two claims.

Continue modeling by writing one of the claims in the Point One section and the other in the Point Two section, and writing the supporting evidence for each point (claim).

① See the [Model Organizing Evidence-Based Claims Two Point Tool](#) at the end of the lesson.

Explain that students can connect these two claims to create a new claim, and model it. Write the new claim at the top of the tool: “The legal issues that deal with patients’ rights to tissue removed during surgery need to be clearly defined because doctors and researchers can profit from tissue taken during surgery.”

- ▶ Students follow along with the modeling.

Distribute blank Organizing Evidence-Based Claims Tools to each student, giving students the appropriate tool for the number of claims they have. Students should have one Organizing Evidence-Based Claims Tool for each inquiry path.

① Some students might use a Two or Three Point tool depending on how many claims they made about each inquiry path in the previous lesson. For example, if students completed three Forming Evidence-Based Claims Tools for one inquiry path, they should use a Three Point tool to connect the three claims into one comprehensive claim about the inquiry path. Remind students they may need to return to their sources if additional evidence is necessary to support their *comprehensive* claim.

Instruct students to use an Organizing Evidence-Based Claims Tool to develop a comprehensive claim about each inquiry path on their Research Frame. They should use the six Forming Evidence-Based Claims Tools they completed in the previous lesson. Remind students they have completed at least two of these tools for each inquiry path.

- ▶ Students use their Organizing Evidence-Based Claims Tools to form comprehensive claims about each inquiry path.
- ① Circulate around the room to monitor student progress.
- ① **Differentiation Consideration:** Some students may be able to use an Organizing Evidence-Based Claims Tool to complete a comprehensive claim about the problem-based question, in addition to the inquiry paths.

Activity 4: Peer Review: Assessing Claims

25%

Explain that in this activity, students assess one of their claims using the Evidence-Based Claims Criteria Checklist. Students will work in small groups to assess whether one of the claims they developed on the Organizing Evidence-Based Claims Tool is appropriately supported.

Display and distribute the Evidence-Based Claims Criteria Checklist to all students.

- ▶ Students examine the Evidence-Based Claims Criteria Checklist.

Model how to use the Evidence-Based Claims Criteria Checklist by using it to assess the Model Organizing Evidence-Based Claims Tool created in the previous activity. Remind students of the model claim from the previous activity: “The legal issues that deal with patients’ rights to tissue removed during surgery need to be clearly defined because doctors and researchers can profit from tissue taken during surgery.” Read through each criterion in the “Content and Analysis” section, check the boxes that apply, and write model comments. Explain and model the following:

- I can check the first box for the “Content and Analysis” section, Clarity of the Claim, because the claim is clearly stated and understandable. *Clarity* means “the state of being clear or transparent.”
- I can check the second box for the “Content and Analysis” section, Conformity to the Text, because I created the claim directly from the textual evidence and ideas I read. For example, the quote “If you’ve ever had a blood test or biopsy at a hospital, that tissue was in a pipeline to research and commercialization. The result was a genetic gold rush” directly supports my claim because it states what doctors do with tissue samples and the potential for large profits to be made in the biotechnology industry.
- I can check the third box for the “Content and Analysis” section, Understanding of the Topic, because my claim demonstrates sound thinking about the issue of tissue ownership and the problem-based question. The idea is not abstract and there is evidence to support it.

- ▶ Students listen and follow along with the modeling.

① Display the Evidence-Based Claims Criteria Checklist for all students to see.

① **Differentiation Consideration:** Consider pointing out to students that the word *conformity* means that the claim is based upon the text, as indicated by the phrase “directly based upon” in the checklist.

Ask students to give their assessment of the Model Organizing Evidence-Based Claims Tool for the next three sections of the Checklist: Command of Evidence, Coherence and Organization, and Thoroughness and Objectivity. Remind students to explain their thinking. Write students’ thoughts on the Evidence-Based Claims Criteria Checklist that is displayed.

- ▶ Students assess the Model Organizing Evidence-Based Claims Tool as a whole class, using the next three sections of the Evidence-Based Claims Criteria Checklist as a guide.

🗨️ Student responses may include:

- Command of Evidence: The claim has specific evidence supporting it, as demonstrated by the text quotes on the tool itself. Each piece of evidence can be used to directly support the claim. For example, the quote “As it stands now, tissue banks appear to have de facto

ownership over sample inventories and the right to use them as they wish” shows that researchers have control over tissue samples and can do whatever they want with the samples.

- **Coherence and Organization:** The specific points on the tool group the evidence; the evidence is easy to understand and follows a logical pattern, directly supporting each point and laying a clear foundation for the claim itself.
- **Thoroughness and Objectivity:** There are eight quotes, and each quote aims to support the overall claim and presents my perspective of the problem-based question. For example, the following quote from “My body, my property” demonstrates exactly what is possible for doctors to do with tissue samples they obtain from patients: “But before Moore's doctor undertook the surgery, he realized Moore's tissue had unique properties and began negotiating with a biotechnology company to market Moore's cells without his knowledge or consent” (Andrews, par. 4).

- ① **Differentiation Consideration:** If students struggle with responses for Thoroughness and Objectivity, consider providing the following definitions: *thoroughness* means “complete; attentive to detail and accuracy” and *objectivity* means “the state or quality of not being influenced by personal feelings or prejudice.” Students will encounter the term *objective tone* in the next unit, Unit 3, when learning how to write objectively about research.
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Instruct students to transition into small groups.

- ▶ Students form small groups.

- ① Place students in heterogeneous groups of four to five that will remain consistent throughout the module. Consider forming groups ahead of time to maximize the range of different research topics and questions within each group. The goal of these groups is to create small communities of inquiry/research teams that provide support and accountability to each other. Students should know about their teammates’ topics, research questions, central claims, etc. Students should share claims and evidence that arise from their individual inquiry and learn from each other’s research processes, which they may use to potentially refine their own inquiry topics and questions.

Explain to students that their discussions should continue the work of collaborative discussion outlined in SL.9-10.1, to which students were previously introduced. Remind students these discussion strategies have been taught in previous modules.

- ① Encourage students to keep in mind the Module Performance Assessment as they practice the skills inherent in the Speaking and Listening Standards during this discussion activity. Remind students

that they will present their research orally at the end of the module and that this activity provides an opportunity to begin preparing for the assessment presentation.

Explain to students that for this activity, each student gives one Organizing Evidence-Based Claims Tool to a peer in the small group to review using the Criteria Checklist. Each student should have one tool to review.

- ▶ Students exchange Organizing Evidence-Based Claims Tools with a peer within their group, and review them using the Evidence-Based Claims Criteria Checklist.

Direct students to return the tool they reviewed to their peer once the review is complete.

Activity 5: Quick Write

15%

Instruct students to respond briefly in writing to the following prompt:

Develop a claim about an inquiry path or your problem-based question and support it using specific evidence and details from your research.

Instruct students to develop their written response from the Organizing Evidence-Based Claims Tools. Remind students to use the Evidence-Based Claims Criteria Checklist to guide their response. Remind students to practice the skills outlined in W.9-10.4, to which they were introduced in Module 10.1.3 Lesson 8.

- ① If necessary, consider reviewing the components of W.9-10.4, which include producing clear, coherent writing that employs organization and style appropriate to the task, purpose, and audience.
 - ▶ Students listen and read the Quick Write prompt.
- ① Display the prompt for students to see, or provide the prompt in hard copy.

Transition to the independent Quick Write.

- ▶ Students independently answer the prompt, using the Organizing Evidence-Based Claims Tools and the Evidence-Based Claims Criteria Checklist to guide their responses.
- 🗨 See the High Performance Response at the beginning of this lesson.

Activity 6: Closing

5%

Display and distribute the homework assignment. For homework, instruct students to review all of their Organizing Evidence-Based Claims Tools using the Evidence-Based Claims Criteria Checklist and, if necessary, revise their claims.

- ① Remind students that revising the Organizing Evidence-Based Claims Tool might lead to a final round of research and analysis of annotated sources and Taking Notes Tools to find the most relevant and useful evidence possible.
 - ▶ Students follow along.

Homework

Review all of the Organizing Evidence-Based Claims Tools using the Evidence-Based Claims Criteria Checklist and, if necessary, revise your claims.

Name Inquiry Path



CLAIM:		
A Supporting Evidence (Reference:)	B Supporting Evidence (Reference:)	C Supporting Evidence (Reference:)
D Supporting Evidence (Reference:)	E Supporting Evidence (Reference:)	F Supporting Evidence (Reference:)

Name Model Response

Inquiry Path Who owns tissue, cells, organs, and DNA?



CLAIM: The legal issues that deal with patients' rights to tissue removed during surgery need to be clearly defined because doctors and researchers can profit from tissue taken during surgery.			
Point 1 Tissue banks, not individuals, have control over tissue samples.		Point 2 Once tissue is removed from the body it is sent to tissue banks or biotechnology companies.	
A Supporting Evidence "courts found that state law provided little basis for granting patients a property interest in their voluntarily donated, excised tissue." (Reference: 7)	B Supporting Evidence " If left unregulated and to the whims of [donors], these highly prized biological materials would become nothing more than chattel going to the highest bidder" (Reference: 4)	A Supporting Evidence "Patients undergoing surgery at these medical centers will be asked to sign permission forms that enable the medical center to send left-over pathology specimens to biotechnology companies." (Reference: 5)	B Supporting Evidence "Whereas vital organs have a finite life span and must be transplanted within hours, tissues such skin, corneas, tendon, bone, and heart valves can be harvested later and cryopreserved. Thus, more tissues than organs are donated. A good proportion of these body parts are processed and sold for profit and become such items as bone putty and collagen." (Reference: 5)
C Supporting Evidence "As it stands now, tissue banks appear to have de facto ownership over sample inventories and the right to use them as they wish." (Reference: 4)	D Supporting Evidence "Catalona asked his patient-donors to write to Washington University requesting that their tissue samples be sent to his new place of employment. Washington University refused to send them, and a dispute arose about the patients' right to control the tissue." (Reference: 7)	C Supporting Evidence "If you've ever had a blood test or biopsy at a hospital, that tissue was in a pipeline to research and commercialization. The result was a genetic gold rush. " (Reference: 6)	D Supporting Evidence "But before Moore's doctor undertook the surgery, he realized Moore's tissue had unique properties and began negotiating with a biotechnology company to market Moore's cells without his knowledge or consent." (Reference: 6)

EVIDENCE-BASED CLAIMS CRITERIA CHECKLIST		✓	COMMENTS
I. CONTENT AND ANALYSIS <i>An EBC is a clearly stated inference that arises from reading texts closely.</i>	Clarity of the Claim: States a conclusion that you have come to after reading and that you want others to think about.	<input type="checkbox"/>	
	Conformity to the Text: Is based upon and linked to the ideas and details you have read.	<input type="checkbox"/>	
	Understanding of the Topic: Demonstrates knowledge of and sound thinking about a text or topic that matters to you and others.	<input type="checkbox"/>	
II. COMMAND OF EVIDENCE <i>An EBC is supported by specific textual evidence and developed through valid reasoning.</i>	Reasoning : All parts of the claim are supported by specific evidence you can point to in the text(s).	<input type="checkbox"/>	
	Use and Integration of Evidence: Uses direct quotations and examples from the text(s) to explain and prove its conclusion.	<input type="checkbox"/>	
	Thoroughness and Objectivity: Is explained thoroughly and distinguishes your claim from other possible positions.	<input type="checkbox"/>	
III. COHERENCE AND ORGANIZATION <i>An EBC and its support are coherently organized into a unified explanation.</i>	Relationship to Context: States where your claim is coming from and why you think it is important.	<input type="checkbox"/>	
	Relationships among Parts: Groups and presents supporting evidence in a clear way that helps others understand your claim.	<input type="checkbox"/>	
	Relationship to Other Claims: Can be linked with other claims to make an argument.	<input type="checkbox"/>	
IV. CONTROL OF LANGUAGE AND CONVENTIONS <i>An EBC is communicated clearly and precisely, with responsible use/ citation of supporting evidence.</i>	Clarity of Communication: Is clearly and precisely stated, so that others understand your thinking.	<input type="checkbox"/>	
	Responsible Use of Evidence: Quotes from the text accurately.	<input type="checkbox"/>	