
DP LESSON EXPANSION IDEAS: GUIDING QUESTIONS, LEAD-INS, AND ACTIVITIES

DP Lesson: “Young People Learn Old Ways”

Introduction

► The questions and activities in this guide directly relate to the IB Mapping Companion. The Companion classifies the lessons by Achieve3000 Article Summary, Subject Group and TOK Links, helping students to move beyond in-depth reading to conceptual and reflective inquiry.

Step 1: Engaging with Knowledge Questions

Text Summary

To help Native American students maintain ties to their culture, a New Mexico school district is offering Navajo language classes during the summer.

TOK Theme

Knowledge and the Knower

Area of Knowledge

Language Acquisition

Central Idea

Language is not only used for communication; it is intertwined with identity, memory, and Ways of Knowing. In this lesson, students discover how Navajo families, schools, and communities are collaborating to protect their language and culture. They learn about how language can be a carrier of knowledge, how it can connect families across generations, what is at stake when language starts to decline, and how these combined factors impact knowing and being in the world.

TOK Links

The TOK Links for this lesson have been designed in a way that they can be introduced at various stages of inquiry. They can be used as a springboard for further Knowledge Questions, to inform work on Exploration and Perspectives or to assist in Reflection and Action. Links offer different dimensions of TOK thinking, allowing students to recognize and understand how knowledge is formed, valued, and retained.

- What impact does language have on our comprehension and admiration of cultural customs?
- How much responsibility should schools have for protecting endangered languages?
- How, particularly in oral traditions and ceremonies, does language convey meaning beyond words?

Step 2: Exploring and Investigating

▶▶ These approaches provide students with opportunities to consider the connections between the article and related ideas. Through discussion and analysis, students are encouraged to consider alternative views and evidence, as well as connections between real-world examples and larger questions about the creation, value and sharing of knowledge.

▶▶ *Before reading*

Activate students' thinking:

- Start with a class discussion: "How does learning a language connect to understanding a culture?"
- Play a short video clip of Navajo students learning traditional crafts or language phrases.
- Ask: "What kinds of knowledge are passed on through language that can't easily be translated?"

▶▶ *During reading*

Encourage students to use inquiry and evidence:

- Ask: "How does learning a language relate to learning about a culture?"
- Show a short video clip of Navajo students learning a craft or language phrases.
- Ask: "What types of knowledge are transmitted through language that can't be easily translated?"

Step 3: Analyzing and Evaluating

▶▶ *After reading*

Facilitate discussion and analysis:

- Is language preservation a cultural, ethical, or political issue?
- How does this effort compare to other programs designed to preserve cultural knowledge (Māori, Hawaiian, or Irish languages, for example)?
- Can translation ever do justice to the knowledge embedded in a native language?

Step 4: Synthesizing and Applying

▶▶ **Knowledge Questions (1)**

Students begin the lesson by reading an article about Navajo language programs in New Mexico and the effects of language loss. TOK can deepen the exploration further: language is not only a tool to express knowledge, but also a vehicle for the transmission of culture, history and identity.

- If a language is lost, what is lost along with it?
- To what extent does language shape our cultural memory and identity?
- Can cultural knowledge survive without its original language?
- How does language preservation impact what future generations can know?

In the article, schools, families, and communities are described doing various activities to maintain Navajo for the younger generations. It therefore raises the question of who is responsible for the preservation of knowledge. Should it be the primary responsibility of the families? Or is it the schools' central role? Or should language and culture protection be shared?

► Knowledge Questions (2)

- To what extent should schools and governments be responsible for the protection of endangered languages' protection?
- In what ways is knowledge more or less valuable when families, communities, or organizations maintain it?
- How can education systems reconcile global access (by means of a dominant language) and protection of local identity?

Step 5: Communicating and Presenting

1. Language and Knowledge Research

Objective: Understand how language can be a form of knowing and preserving knowledge.

Task: Select an endangered or revitalized language (Hawaiian, Māori, Basque, Welsh, Inuktitut, etc.)

Research and present:

- A short history of the language and the story behind how it died out, or how it survived.
- How preservation relates to cultural identity or national policy.
- A TOK reflection: What kind(s) of knowledge (ethical, cultural, linguistic, spiritual, etc.) is it possible to lose or gain when a language is lost?

TOK Connection: Knowledge and the Knower; knowledge and language

2. Comparative Study: Translation and Meaning

Objective: Examine the link between language and meaning.

Task: Select two different translations of a poem, proverb, or religious text (e.g., a Navajo proverb and its English translation). Compare the tone/emotion and meaning in each version, then write a short reflection responding to the following question: 'Is it ever possible to preserve original knowledge and emotion through translation?'

TOK Connection: Language and Knowledge; Human Sciences

3. Field Connection: Interviews or Family Oral Histories

Objective: Connect the personal experience of a family or community member to a global TOK inquiry.

Task: Interview a family or community member who speaks a heritage or second language. Ask them how language has impacted their sense of belonging, identity, or memory.

Summarize the main points and reflect on:

- How is language used to transmit values or shared understanding?
- What is gained or lost when these stories are repeated in another language?

TOK Connection: Personal knowledge vs. shared knowledge; ethics of representation

Step 6: Reflection and TOK Connections

Ask students to reflect on how their understanding of language as a form of knowledge has evolved. Students share one insight connecting the lesson to the TOK theme Knowledge and the Knower.

DP Lesson: “A Brain for Math”

Introduction

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Step 1: Engaging with Knowledge Questions

Text Summary

John Urschel is a talented football player and a brilliant mathematician. In 2017, he announced his retirement from the NFL after only three seasons.

TOK Theme

Knowledge and the Knower

Area of Knowledge

Mathematics and Human Sciences

Central Idea

Knowledge comes in many forms: physical, intellectual, and emotional. Each form of knowledge has power and impacts the way we define success and purpose. In this lesson, students discover how John Urschel’s story sheds light on personal choice, risk, and identity in the search for knowledge. Students also consider how various forms of knowledge inform, contradict, and require choice between one another.

TOK Links

The TOK Links for this lesson have been designed in a way that they can be introduced at various stages of inquiry. They can be used as a springboard for further Knowledge Questions, to inform work on Exploration and Perspectives, or to assist in Reflection and Action. Links offer different dimensions of TOK thinking, allowing students to recognize and understand how knowledge is formed, valued, and retained.

- Can someone be equally successful in two very different areas of knowledge, like sport and mathematics?
- To what extent is mathematical ability a product of nature, nurture, or personal choice?
- How do we decide which types of knowledge are more valuable: physical, intellectual, or emotional?

Step 2: Exploring & Investigating

►► These approaches provide students with opportunities to consider the connections between the article and related ideas. Through discussion and analysis, students are encouraged to think about other views and evidence, as well as connections between real-world examples and larger questions about the creation, value, and sharing of knowledge.

►► *Before reading*

Warm-up activity:

- Write on the board: “Can one person truly excel in two completely different fields?”
- Ask students to list examples of people who have done so (e.g., Leonardo da Vinci, Serena Williams studying business or Einstein the violinist).
- Discuss what success looks like in each field, e.g., achievement, passion, recognition, or contribution to knowledge.

►► *During reading*

- As students read, highlight the contrasts between intellectual and physical knowledge.
- Ask: “What motivated Urschel’s choice to pursue math over football?” and “How do we measure the worth of knowledge when one pursuit risks another?” Encourage students to annotate for evidence of identity, risk, and reasoning.

Step 3: Analyzing and Evaluating

►► *After reading*

Facilitate discussion and analysis:

- Facilitate a group discussion around the tension between personal fulfillment and external measures of success.
- Debate: “Which kind of knowledge—intellectual, physical, or emotional—most defines success in life?” or “Should society reward intellectual knowledge more than physical achievement?”
- Students connect their arguments to TOK themes of ethics, knowledge, and personal identity.

Students read the core article, in which NFL player John Urschel left a promising football career to focus on his first love, mathematics. Students read that Urschel has been successful in both mathematics and football. Still, the TOK question behind this activity is more philosophical: How do we define success when different Areas of Knowledge pull us in multiple directions? Which types of knowledge/skills should we privilege? What are the risks/responsibilities when we walk away from one Area of Knowledge to focus on another?

Step 4: Synthesizing and Applying

▶▶ Knowledge Questions (1)

- Can an individual be equally successful in two very different areas of knowledge, such as sport and mathematics?
- How do we decide which types of knowledge are more valuable: physical, intellectual, or emotional?
- To what extent does personal choice override the pull of nature or nurture in ability and achievement?

The article also notes the risks of Chronic Traumatic Encephalopathy (CTE) and the role of potential brain injury in Urschel's decision to retire. The tension between his knowledge, passion, and health invites a TOK discussion: What value do we put on physical achievement if it has the potential to destroy intellectual or emotional well-being? How do we choose between our love of a discipline and the risks it might pose to ourselves and to knowledge creation more generally?

▶▶ Knowledge Questions (2)

- How does risk affect our ability and desire to pursue knowledge in different areas (e.g., sport, science, art)?
- To what extent should knowledge be pursued if it endangers the person doing the knowing?
- How do passion and emotion affect the kinds of knowledge we choose to value or to protect?

Step 5: Communicating and Presenting

1. Mathematical Knowledge

Objective: To explore the nature of mathematics as a way of knowing.

Task: Choose one instance in which math is used to explain or model a facet of human experience (probability in psychology, symmetry in art, patterns in music, etc.). Write a short reflection on how mathematical thought can help us to see and understand truths about the world that might be inaccessible to other ways of knowing.

TOK Connection: Mathematics as a way of knowing; abstract reasoning and the real world.

2. Risk and Knowledge

Objective: To consider how the concept of risk is related to the creation of knowledge in other fields.

Task: Choose one example in which the pursuit of knowledge in a field such as science, exploration, or sport involved risk to the knowledge-seeker (Marie Curie, astronauts, mountain climbers, athletes, etc.). Explain what was gained by the risk and whether there might be ethical limits on the pursuit of knowledge.

TOK Connection: Ethics and knowledge; human motives and limitations.

3. Emotion, Passion, and Choice

Objective: To understand how emotion affects our valuation of different kinds of knowledge.

Task: Interview someone who has made a significant life or career choice in which they made trade-offs between different valued goals (following one's passion vs. security, art vs. science, etc.). Write a summary of how emotion and reason were factors in this decision and whether there are parallels with Urschel's decision.

TOK Connection: Emotion and reason as ways of knowing; decision-making in knowledge pursuit.

Step 6: Reflection & TOK Connections

▶▶ Ask students to think about what Urschel’s story reveals about the balance between passion, risk, and knowledge. Students should connect their reflections to the TOK theme Knowledge and the Knower.