



**TITLE**

# PERCEPTION OF THE SACRED: MAUNA KEA & THE TMT

GRADE LEVEL: HIGH SCHOOL, 9-10TH GRADE

**DISCIPLINE:** English

**TOPIC:** Native Hawaiian sovereignty, Mauna Kea and the Thirty Meter Telescope

**STANDARDS:** CCSS.ELA-LITERACY.RH.9-10.1, CCSS.ELA-LITERACY.RH.9-10.2, CCSS.ELA LITERACY.RH.9-10.6, CCSS.ELA-LITERACY.SL.9-10.1, CCSS.ELA-LITERACY.SL.9-10.2, CCSS.ELA LITERACY.SL.9-10.4

**OBJECTIVES:**

- Initiate and participate effectively in collaborative discussions pertaining to the construction of the Thirty Meter Telescope on Mauna Kea.
- Respond thoughtfully to diverse perspectives inside and outside of the classroom.

**ESSENTIAL QUESTIONS:**

- What does it mean for a site to be sacred?
- What is the controversy at Mauna Kea and the Thirty Meter Telescope?
- What are the arguments for and against the Thirty Meter Telescope?
- How does Mauna Kea and the Thirty Meter Telescope controversy relate to a larger history of colonialism in Hawaii?

**KIT INCLUDES:**

- [Background Reading for Educator](#)
- [Glossary of Terms](#)
- [PowerPoint Slides](#)
- Activities: Reflection questions, slideshows, group discussion, research project
- [Discussion Rubric](#)
- Video Links
  - [TMT: The World's Most Controversial Telescope](#)
  - [Why Native Hawaiians Protesting Giant Telescope on Mauna Kea Aren't Going Anywhere | NBC](#)
  - [Left Field](#)
  - [PBS Short Film Festival | Standing Above the Clouds | PBS](#)
  - [We Are Mauna Kea](#)
  - [Native Hawaiian Student Starts Petition Supporting TMT](#)
  - [Worldwide #JamMaunaKea-"Ku Ha'aheo" & "Hawai'i Loa"](#)

**CLASSROOM HOURS NEEDED:**

65-105 min

**FINAL ASSESSMENT TYPE:**

Worksheet or Research paper (multiple options)

**MATERIALS NEEDED:**

- Projector to present slides/videos
- Print outs of discussion rubrics for each student
- Student phones/computers (optional, for submitting a google form in the lesson plan)

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## INTRODUCTION

In this lesson plan, students will learn about the controversy surrounding the construction of the Thirty Meter Telescope (TMT) on the summit of Mauna Kea in Hawaii. The TMT is a large ground based infrared observatory that is proposed to stand 18 stories high and occupy & acres of undeveloped land on the northwest slope of Mauna Kea, a sacred space to many Native Hawaiians.

Through a series of reflections, discussions, lectures, and assignments, students explore the connection between colonialism and perception of the sacred using this controversy as a template.

### JOURNAL ENTRY (25 MINUTES)

- Start the lesson with a journal reflection to encourage students to start creating connections between their own lives and the controversy.
- Have students first write a definition of "sacred." Then, have them think about a space that they find very sacred in their own lives. Have them write it down. Have them describe it. Why is it important to them? What does it look like? Who else is it important to?
- Next, have students think about the ends they would go to protect that space from harm/desecration. What would they do if this place was being threatened? What if it was for the greater good? Where would they draw the line?
- After students are done writing, establish discussion norms as a class, then split off into smaller groups for 10 minutes to discuss what they wrote about and why.
- After smaller group discussion is over, have one student from each group share about the key points of their small group discussion.

### SLIDESHOW (20 MINUTES)

- Transition from the previous activity to the topic of Mauna Kea and the Thirty Meter Telescope, noting that the theme of what is "sacred" will reoccur throughout the lesson.
- Present the arguments for and against the construction of the Thirty Meter Telescope (TMT) on Mauna Kea using the slideshow in "Resources." (Slides 1 through 16)
  - Be sure to highlight throughout the slideshow that arguments for and against are related to the history of colonialism and occupation in Hawaii, especially using the timeline of usage and desecration of Mauna Kea to demonstrate this.
- Have students begin to think about the importance of learning about these global debates. How might the outcome of this debate affect people globally? How might it affect students individually?

### REFLECTION (15 MINUTES)

- Loop back to initial discussion. Have students reflect on what they would do in a situation like this using the following guiding questions.
  - How does your prior journal entry relate to this situation?
  - Have your opinions about the controversy changed? Why?
  - What new insight did this controversy bring to them?
  - Why is it important to understand both sides of the argument?
- Discussion options
  - Larger circle discussion with teacher as facilitator: You can use a talking stick or other item as a way to have students respect speakers and discourage speaking over others. Be sure to set/review discussion norms before holding discussion. Saller group discussions first, then share-outs in a bigger group.
- **Jamboard activity:** Have students write down their answers to discussion questions on jamboard slides, then share out as a class.

### TAKE HOME ASSIGNMENT:

#### Two options:

- 1) Have students watch 2 of the 6 videos provided on Edpuzzle (see "Resources") and have them answer the reflection questions provided.
- 2) Have students write research papers that reflect both sides of the controversy using a guided prompt. An optional rubric for grading is provided in "Resources."

#### Potential prompts:

- If you were the main authority of the TMT debate, how would you go about "solving" this issue? Why? What evidence do you have to back this claim?
- How does the historical context of occupation in Hawaii affect the weight of the discussion?

## DAY 2

### INTRODUCTION

In this second part of the lesson plan, students will further reflect on the controversy surrounding the construction of the Thirty Meter Telescope (TMT). Students will use their current understanding of the issue to discuss with classmates the potential ramifications along with the benefits of construction.

### DISCUSSION (20 MINUTES)

- Begin with a review and / or revision of discussion norms for the class. Have students list things they find important to engage a safe and thoughtful discussion.

#### DISCUSSION OPTIONS:

##### Large group discussion:

Have students submit discussion questions anonymously to a Google Form and have the teacher act as facilitator. To guide students in crafting their questions, ask them to consider:

- What would you like to discuss from your take-home assignments?
- What additional questions do you have about Mauna Kea? Are there concepts you still don't understand?
- What questions do you have related to the major themes of this lesson, including perceptions of the sacred, colonialism, science, etc?

##### Small to large group discussion:

Split off into smaller groups for discussion using guiding questions

- What did you learn from the take-home assignment?
  - What questions did the assignments raise?
  - What new insights did you receive?
  - How does this exposure impact your understanding of Indigenous peoples?
- Return students back into larger group discussion with the teacher as facilitator. Have students share what they discussed in their smaller groups.

### WRAP UP (5 MINUTES)

- Note the importance of knowing both sides of the argument but also understanding that not all arguments are equally weighted.
  - Explain the importance of understanding the impact of colonization on indigenous communities and the need for giving special attention to voices that are often drowned out.
- Encourage students to be mindful of intergenerational trauma. Colonialism, oppression, and history add another layer to debates regarding most Indigenous peoples.