

MATH

Tribal Taxes

ESSENTIAL UNDERSTANDINGS

- Tribal Government
- Sovereignty

LEARNING OUTCOMES

By the end of this lesson, students will be able to:

- Construct and chart piecewise functions to analyze income tax rates.
- Explain how taxes impact enrolled members of federally recognized Native American tribes.
- Explain how federal, state, and tribal tax systems interrelate.

ESSENTIAL QUESTION

How can I use functions to understand and analyze practical matters such as taxes?

LOGISTICS

- Where does the activity take place?
Presentation: Classroom; Activity: Classroom or homework
- How are the students organized?
 Whole class Teams: 3 – 5
 Pairs Individually

TIME REQUIRED

Up to two hours

Overview

In this lesson, students will learn essential information about taxes and how they impact enrolled members of federally recognized Native American Tribes. Many people believe that Native Americans do not pay taxes and therefore should not benefit from federal and state tax-supported programs. This lesson debunks that myth and helps students understand the complex interrelation between state, federal, and Tribal governments and tax systems. Students will also complete a math exercise using piecewise functions to analyze and calculate federal and Oregon state income taxes. The lesson can stand on its own or serve as a complement to or extension of other math lessons.

Background for teachers

Native American Tribes are sovereign powers. Like other sovereign powers within the boundaries of the United States—states and the U.S. government—Tribes need resources to govern and support their members. The U.S. government provides some resources to Tribes through payments and services as required by treaties. The federal and state governments also make funds available through grants and appropriations earmarked for Tribes. Tribes generate additional revenue by establishing profit-making businesses, selling goods and services, and issuing permits and licenses.



Like the other sovereign powers, Tribes can also levy taxes on resources and transactions that fall under their jurisdiction, although their options are comparatively limited. For example, Tribes cannot collect property taxes on reservation land and land held in trust for the Tribes by the U.S. government. Due to the complicated history between the U.S. and state governments and Tribes, Tribal tax policy is driven by court decisions and agreements negotiated between Tribes and the federal government and individual states.

Tribes may or may not choose to levy taxes and set their own criteria for who pays them and when. Tribes in Oregon and across North America have established a variety of tax structures to support their communities. Tribal taxes used in Oregon include lodging taxes; taxes on utility infrastructure and services (water, power, transportation, telecommunications, and waste disposal); and corporate/business taxes.

There is a common misunderstanding that Native Americans do not pay taxes. Individual Native Americans enrolled in federally recognized Tribes are citizens of the United States, the states they live in, and their Tribes. Like all other U.S. citizens, individual Native Americans must pay federal taxes on their personal incomes. Native American *Tribes*, however, are tax-exempt entities, and with some exceptions, state and local governments cannot assess taxes on the Tribes, their lands, or transactions that fall under the Tribes' jurisdiction. Depending on where a Tribal citizen lives (on or off a reservation or other Tribal land), works (for a Tribal or a nontribal employer),

STANDARDS

Oregon math standards

High School – Functions

HSF.IF.C.7 – Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.

HSF.IF.C.7b – Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.

MATERIALS

What materials are needed for students to engage in this activity?

Unless otherwise indicated, the following materials are provided as appendices or attachments to this lesson.

- **PowerPoint presentation** – Load the slides prior to the lesson to ensure they are displaying properly
- **Classroom writing surface** (i.e., blackboard, whiteboard, chalkboard, chart paper and markers)
- **Classroom audiovisual technology** to display PowerPoint slides and videos (see next items)
- **“Man on the Street: Do Native Americans Pay Taxes”** video from Indian Country Today on YouTube (available at <https://www.youtube.com/watch?app=desktop&v=rZnTOrvPFz8&autoplay=1&rel=0&showinfo=0>)
- **“The Rez We Live On: Taxes”** video from the Confederated Salish and Kootenai Tribes (available at <https://vimeo.com/49059078>)

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and shops (on or off Tribal lands), he or she may or may not also pay county property taxes and state or local income and sales taxes.

Native Americans who live in states (like Oregon) that levy an income tax may be able to exclude some or all of their personal income from state income taxes, but they typically must document that they meet certain requirements to be eligible. In Oregon, for example, Native Americans are required to file an Oregon personal income tax return each year, but may be able to subtract all or part of their income from the calculation of state income taxes owed if they meet all of the following conditions specified by the Oregon Department of Revenue:

- They are enrolled members of a federally recognized Tribe
- They earned their income in Indian country (i.e., on Tribally controlled lands such as reservations)
- They live in federally recognized Indian country

In this lesson, students will learn to use piecewise functions to analyze and represent federal and Oregon income tax rates. They will also calculate Oregon income taxes owed by a fictional Oregon taxpayer who may qualify to exclude some of his income because of the exemption available for Oregon members of federally recognized Tribes.

MATERIALS (Continued)

What materials are needed for students to engage in this activity?

Unless otherwise indicated, the following materials are provided as appendices or attachments to this lesson.

- **“Introduction to Piecewise Functions”** video (3:48) from Khan Academy on YouTube (available at <https://youtu.be/tedzsRH0Jas>)
- **“Introduction to Piecewise Functions”** lesson from Desmos (available at <https://teacher.desmos.com/activitybuilder/custom/5b0232029e40e60ac0c15806>)
- **“Evaluate and Sketch a Piecewise Function Pertaining to Tax (Part 3)”** video (4:55) from Study Force on YouTube (available at <https://www.youtube.com/watch?v=gsvjNtGICrs>)
- **Tribal Taxes Math Worksheet** (one copy per student)
- **Tribal Taxes Math Worksheet Answer Key**
- **Oregon Department of Revenue, Exempt Income Schedule for Enrolled Members of a Federally Recognized American Indian Tribe** (available for reference or extension activities)



To prepare for this lesson teachers should:

1. Review all materials for this lesson.
2. (Optional) Update the federal and Oregon tax rates on the last two slides of the PowerPoint presentation and in the tables in the worksheet answer key, if you'd like the numbers to match any changes in federal and state income tax rates that may have happened since this lesson was written.
3. Refresh your knowledge of piecewise functions if it is an unfamiliar application or one that has not been taught for a while. A link to a Khan Academy video (just under four minutes long) and a Desmos lesson that provide instruction on the topic are provided in the "Materials" section above. A second video from Study Force on YouTube (just under five minutes long) provides an example of using piecewise functions to calculate taxes.
4. Ensure students will have access to all materials (printed and/or electronic) needed to participate in this lesson (see "Materials" section above).
5. Decide how students will work on the application activity worksheet (with you in the classroom, on their own individually or in pairs or groups, or outside of class) and adjust the lesson plan and timing as needed.
6. Prepare classroom audiovisual technology to display the PowerPoint slides and videos listed in the "Materials" section.

¹ Definition retrieved from the Bureau of Indian Affairs website:
<https://www.bia.gov/frequently-asked-questions>

VOCABULARY

Sovereignty – The inherent right of Native American Nations to exercise self-governance. Tribal sovereignty predates the existence of the U.S. government and the state of Oregon. Tribal governments are separate and unique sovereign nations with powers to protect the health, safety, and welfare of their citizens and to govern their lands, air, and waters.

Indian country – Any land within a current federal Indian reservation boundary and other lands held in trust by the U.S. government for a Tribe.

Federally recognized Tribe – An American Indian or Alaska Native Tribal entity that is recognized as having a government-to-government relationship with the United States, with the responsibilities, powers, limitations, and obligations attached to that designation.¹

Subtraction – An amount of money that taxpayers can subtract from income taxes they owe to their government.

Progressive taxation – A tax that imposes a lower tax rate on lower-income taxpayers compared to those with higher incomes. The U.S. federal and Oregon state income taxes are progressive.

Marginal tax rate – The rate at which tax is incurred on an additional dollar of income.

Tax bracket/income bracket – Divisions of income at which tax rates change in a progressive income tax system.

Exempt (as in taxation) – Right to exclude income from taxation.

Piecewise function – A function built from pieces of different functions over different intervals, with more than one formula used to define the output.



Resources

Hopkins, R. (April 17, 2018). Why tax day for Native Americans can be such an infuriating time. [Online]. Retrieved March 24, 2020, from <https://www.bustle.com/p/why-tax-day-for-native-americans-can-be-such-infuriating-time-8730102>

Internal Revenue Service. (n.d.). Tax information for Indian Tribal governments. [Online]. Retrieved March 24, 2020, from <https://www.irs.gov/government-entities/indian-tribal-governments>

Jensen, E. M. (2008). Taxation and doing business in Indian Country. [Online]. Retrieved May 4, 2020, from https://scholarlycommons.law.case.edu/cgi/viewcontent.cgi?article=1133&context=faculty_publications

Montana Budget and Policy Center. (November 2017). Policy basics: Taxes in Indian Country part 2: Tribal governments. [Online]. Retrieved March 24, 2020, from <https://www.montanabudget.org/post/policy-basics-taxes-in-indian-country-part-2-tribal-governments>

Oregon Department of Revenue. (n.d.). American Indian filing information. [Online]. Retrieved March 24, 2020, from <https://www.oregon.gov/dor/programs/individuals/Pages/american-indian.aspx>

Oregon Department of Revenue. (December 13, 2019). Government-to-government annual report. [Online]. Retrieved March 24, 2020, from [https://www.oregonlegislature.gov/cis/GovToGovReports/2019%20\(Revenue\).pdf](https://www.oregonlegislature.gov/cis/GovToGovReports/2019%20(Revenue).pdf)

U.S. Department of the Interior, Bureau of Indian Affairs. (n.d.). Frequently asked questions. [Online]. Retrieved March 24, 2020, from <https://www.bia.gov/frequently-asked-questions>

References

National Congress of American Indians. (n.d.). Taxation. [Online]. Retrieved March 24, 2020, from <http://www.ncai.org/policy-issues/tribal-governance/taxation>

Native American Rights Fund. (n.d.). Frequently asked questions. [Online]. Retrieved March 24, 2020, from <https://www.narf.org/frequently-asked-questions/>



Considerations for teachers

Assessment

Formative assessment can be achieved through monitoring student contributions to group and whole-class discussions. Summative assessment can be achieved by reviewing and grading group or individual work on the application activity worksheet using the "Tribal Taxes Math Worksheet Answer Key" provided.

Practices

- *Small group* – Small-group activities allow students to share and analyze ideas with one, two, or three other people. This practice can be good for students who do not want to share their ideas with the whole class and/or who may be afraid of others' reactions. The teacher should monitor group discussions to determine the degree to which students are understanding the concepts.
- *Classroom discussion* – Large-group, whole-class discussion allows students to express their thoughts and hear the thoughts of others. For the instructor, this practice is a good way to take the pulse of the group and see what general themes are emerging. For students, large-group discussion can be a way to express themselves or to hear differing perspectives from others. Attention should be paid to students who feel more at ease speaking out in class and others that may need additional coaching, support, or other options for expression.
- *Clear/unclear window* – This technique can be used at the beginning or end of an assignment (or a significant segment of learning) to help students identify what they understand and what remains unclear or poorly understood. It can be used as both a brainstorming and an assessment technique and can be done as an individual, group, or whole-class exercise. Students (or the teacher) draw a vertical line on a piece of paper or a classroom writing surface and label the left side "Clear" and the right side "Unclear." On the clear side, students list the things they understand (or the teacher writes them down if doing the activity as a whole class), and on the unclear side students (or the teacher) write down things that students do not understand.



Learning target

- I can construct and chart piecewise functions to understand a real-world context (taxation).

Options/extensions

• Students can review the websites of the nine federally recognized Tribes in Oregon and locate information regarding taxes, tax commissions, and tax policy and write a short report on what they find. Such information may be found in Tribal constitutions, Tribal bylaws, and Tribal ordinances. If students are having difficulty finding information, or as an alternative, you can get them started with the following leads:

- The Confederated Tribes of Warm Springs assesses a business privilege tax.
- The Confederated Tribes of the Umatilla Indian Reservation has a Tribal Taxation Code, adopted in 1996, and levies a utility tax on railroads, electrical transmission lines, pipelines, telephone lines, cable lines, and other utilities that cross the Tribe's reservation.
- The Coquille Indian Tribe; the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians; and the Confederated Tribes of Siletz Indians of Oregon assess some variation of lodging/hotel taxes.
- Students can review and summarize the "Exempt Income Schedule for Enrolled Members of a Federally Recognized American Indian Tribe" from the Oregon Department of Revenue (see "Materials"), in particular the information on the third page. Questions you might have them answer include:
 - What types of income can be exempted from Oregon income taxes?
 - How is "Indian country" defined?
 - How does a taxpayer prove they qualifies?

Appendix

Materials included in the electronic folder that support this lesson are:

- Slides.ppt
- Materials_Tribal Taxes Math Worksheet.doc
- Materials_Tribal Taxes Math Worksheet Answer Key.doc
- Materials_Materials_Oregon_DOR_Schedule_OR-EIS.pdf

Activity 1

Warm-Up

Time: 15 minutes

Step 1

Review the learning target and key vocabulary with students.

Step 2

Ask students about the last time they visited a national or state park or enjoyed fireworks in their city or town. Have them share with an elbow partner their memories of the experience and what they enjoyed.

Step 3

Ask students if they know how much it costs to maintain parks and public buildings such as schools and libraries and where the money comes from. Ask a few volunteers to share what they know.

Step 4

Write or type the word “Taxes” on a classroom writing surface and work together as a class to define the term. Help students arrive at a definition that highlights two main ideas: *collective good* and *collective responsibility*. Collective good is the idea that there are some things, such as public services and infrastructure, that are necessary for the good of all and that very few individuals or even small groups of people could supply or maintain on their own. (Examples include city streets, water lines, sewage systems, fire and police departments, public schools, and public libraries.) Collective responsibility is the idea that all adult members of a society who share in the collective good should also share the cost of providing for it, unless physically or mentally unable to do so.



Activity 1 *(Continued)*

Step 5

Ask students what they know about how taxes work. You might start by having them list different types of taxes they are aware of and then lead them through a “clear/unclear window” exercise (see description above) to help them identify what they know and what they don’t know about the details for each type of tax (e.g., how each tax works, who pays it, and what the proceeds are used for).

Step 6

Provide a brief description of income taxes, including progressive income taxation: the more money you earn, the more you pay in income taxes, and the less money you earn, the less you pay in income taxes; Oregon’s tax structure compared to that of nearby states (i.e., income tax but no sales tax); and the requirement of U.S. citizens to file annual tax returns with federal and state governments. Note that in this lesson students will be learning about and working with federal and Oregon income tax information.

Activity 2

Tribal Taxes

Time: 15 minutes

Step 1

Play the “Man on the Street: Do Native Americans Pay Taxes” video from Indian Country Today on YouTube (available at <https://youtu.be/rZnTOrvPFz8>).

Step 2

Play the “The Rez We Live On: Taxes” video from the Confederated Salish and Kootenai Tribes of the Flathead Reservation on Vimeo (available at <https://vimeo.com/49059078>).

Step 3

Click through and discuss slides 1–6 with the class. These slides contain information about the sovereignty of Native American tribes and how it impacts taxation.

- The *Three Sovereign Powers Within the Boundaries of the United States* slide (slide 1) highlights how federally recognized tribes are considered sovereign powers within the borders of the United States.
- The *Individual Native Americans Must Pay Federal Income Taxes* slide (slide 2) provides language from an Internal Revenue Service (IRS) ruling codifying that Native Americans, as U.S. citizens, must pay federal income taxes.
- The *But Native American TRIBES Are Exempt from Federal Income Taxes* slide (slide 3) provides additional language from the same IRS ruling, which clarifies that as sovereign entities, federally recognized tribes *as organizations* are exempt from federal taxes.
- The *And State Income Taxes* slide (slide 4) highlights how Native American tribes are generally exempt from state taxes. In this case, the Oregon Department of Revenue is describing how a Native American who has certain membership, residency, and economic relationships with a federally recognized tribe may subtract some or all of their income reported file their state income tax return (i.e., exclude it from state taxation).



Activity 2 (Continued)

- The *Indian Country in the Pacific Northwest* slide (slide 5) can be used (along with the definition provided in the “Key vocabulary” section above) to define “Indian country” as the term was used in the previous slide.
- The *Tribes Can Levy Taxes in Indian Country* slide (slide 6) provides language from a U.S. Supreme Court ruling upholding the taxing authority of Native American tribes as inherent to their sovereignty.

Step 4

Provide a summary of this segment.

Say:

Many Americans misunderstand or hold on to stereotypes or misconceptions about Native American tribes. The tribes have been here in the land we now call Oregon for millennia, are still with us today, and have the right to manage their own affairs. Their relationships with the federal and state governments are complicated by a history of oppression and broken promises. Native Americans pay federal income taxes and may or may not pay additional taxes depending on whether their tribe taxes them (as they have the right to do on lands and transactions they oversee) and whether they are exempted from other state and local taxes because of where they live, who they work for, and where they buy goods and services and conduct other business.

Step 5

Pause for questions before proceeding.



Activity 3

Piecewise Functions and Taxes

Time: 20 minutes

Step 1

Depending on students' prior experience with piecewise functions, provide a short lesson or refresher on how to construct and chart them. You can use either the "Introduction to piecewise functions" video from Khan Academy or the Desmos lesson, or both, if helpful. (Links for both are provided in the "Materials" section above.)

Step 2

Display the slide with federal and Oregon income tax rates (slide 7). Make the following key points:

- The federal and Oregon income tax systems are examples of *progressive taxation*: The higher your income is, the more income tax you pay; the lower your income is, the less income tax you pay.
- Oregon and the federal government apply *marginal tax rates* to different levels of income, as shown on the slide. That is, you pay an entry-level rate on a first portion of your income and then higher rates on subsequent remaining portions of your income (the margin). The ranges of income that determine the marginal tax rates are known as *tax brackets* or *income brackets*.
- It is possible to write and chart a piecewise function that represents these marginal rates for both federal and Oregon income taxes. In a few minutes, students will have the opportunity to do just that.
- Federal and Oregon income taxes have different rate structures for different types of tax filers, such as those who are single, those who are married and filing taxes together, and those who are considered the head of a household. For the purposes of this lesson, we are keeping things simple and focusing on single filers.

Activity 3 *(Continued)*

Step 3

Play the “Evaluate and Sketch a Piecewise Function Pertaining to Tax (Part 3)” video from Study Force on YouTube (see link in “Materials” section).

Step 4

Pause for questions before proceeding.

Activity 4

Application Activity

Time: 45 – 60 minutes

Step 1

Provide a brief overview of the activity.

Say:

We will now have an opportunity to practice using piecewise functions to analyze and chart income tax rates. On the slide are the current federal and Oregon income tax rates and ranges. We will use these to calculate the amount of income taxes a hypothetical Oregon taxpayer might owe to the federal and state governments.

[Provide additional instructions as needed depending on how you have decided to have students work on the activity (e.g., individually, in small groups, or together as a whole class).]

Step 2

If you are having students work in groups on the activity in or out of class, sort them into small groups of three to five students using your preferred method.

Step 3

Distribute to each student one copy of the “Tribal Taxes Math Worksheet” handout. Walk students through it to help them understand the different parts and what they are expected to do.

Step 4

Direct students to apply the federal and Oregon tax rate information on slide 7 to the respective tables in the handout.

Step 5

If having students work in groups, have each group select a reporter who will take notes, record calculations, and summarize the group’s work if later called upon to debrief their answers and/or process for the rest of the class. Other



Activity 4 *(Continued)*

students in the groups should take notes and copy calculation steps in their own copies of the handout as their groups work through it.

Step 6

(Optional) Depending on your sense of students' familiarity with piecewise functions (and ability to understand and apply them to the scenario and information provided to them in the application activity), consider getting students started on a portion of it as a whole class and/or complete the entire activity together.

Step 7

Allow time for students to work together on the handout (or work silently if done as an individual exercise). Walk around the classroom and monitor student work. Provide feedback and suggestions as appropriate to assist students.

Step 8

When it looks like most groups (or individual students) have finished, check their work and debrief the process using the "Tribal Taxes Math Worksheet Answer Key" and one of the following methods depending on your preferences and available time:

- Work through the activity steps on a classroom writing surface and have students/groups correct their work as they follow along
- Make a copy of the answer key for each group, have them correct their own work using it, and then ask group reporters to share how they did
- Collect completed handouts from groups/students, grade and write feedback on them outside of class, and then return and discuss them at the next class session

Activity 4 *(Continued)*

Step 9

Invite group reporters or other volunteers to share what it felt like to work on the problems and what they learned from it.

Step 10

(Optional) Collect completed worksheets from group reporters or individual students (if you have not already done so) if you will grade them for a summative assessment.

Activity 5

Closure/Reflection

Time: 10 minutes

Step 1

Take any final questions from students.

Step 2

Revisit the learning target and ask students to review with a partner what they learned about taxes and piecewise functions. Ask a few volunteers to share what they discussed with their partners.