Week 4 Community

Day 2

NAME:_____

Day 2 Agenda

Торіс	Activity			
Warm-Up!				
English Language Arts	 Read a poem by Rudyard Kipling titled "We and They". Analyze the poem for perspective and complete a graphic organizer. Annotate and respond to questions about the poem. 			
Science	 Read about Community Structures Answer questions about what you read Draw an image/picture 			
Mindfulness Moment!				
Math	 Real World Math: Defining Community: The math of gerrymandering Practice Problems 			
Mindfulness Moment!				
Civics/Social Studies	 A New Community: Learn about Mongolia and its culture 			
PE	Bingo!			

Warm-up Activity: Write a journal entry around the daily quote on identity.

COMMUNITY

OVER

COMPETITION

Day 2: Who Is Part of Our Community? English Language Arts

What is this lesson about?: Today you will continue to explore the theme of community. You will read a poem about how we create community through our own perspective of who is like us and who is not. (*Perspective* is point of view.)

Step 1: Read the Poem

Some vocabulary to review before reading:

grub: the larva of an insect	utterly: completely	thatch: a roof covering of straw, leaves or branches
impudent: disrespectful	heathen: a person who does not belong to a religion (often considered uncivilized)	gobble: to eat noisily and quickly, to eat greedily

We and They

By Rudyard Kipling

Father and Mother, and Me, Sister and Auntie say All the people like us are We, And every one else is They. And They live over the sea, While We live over the way, But-would you believe it? – They look upon We As only a sort of They!

We eat pork and beef With cow-horn-handled knives. They who gobble Their rice off a leaf, Are horrified out of Their lives; While they who live up a tree, And feast on grubs and clay, (Isn't it scandalous?) look upon We As a simply disgusting They!

We shoot birds with a gun. They stick lions with spears. Their full-dress is un-. We dress up to Our ears. They like Their friends for tea. We like Our friends to stay; And, after all that, They look upon We As an utterly ignorant They!

We eat kitcheny food. We have doors that latch. They drink milk or blood, Under an open thatch. We have Doctors to fee. They have Wizards to pay. And (impudent heathen!) They look upon We As a quite impossible They!

All good people agree, And all good people say, All nice people, like Us, are We And every one else is They: But if you cross over the sea, Instead of over the way, You may end by (think of it!) looking on We As only a sort of They!

Step 2: Complete Graphic Organizer

Communities are made up of people who feel a sense of fellowship (or belonging) with others because they share common characteristics, attitudes, beliefs, interests or goals. This poem emphasizes the different perspectives or ways that we see ourselves and how that affects how we see others.

You are going to analyze the different perspectives in the poem by looking at how the speaker describes "we" differently from "they". You will focus on two different kinds of words: **Nouns:** *persons, places, things, feelings or ideas* **Verbs:** *actions or states of being (run, is/be)*

Go through the poem and <u>underline</u> lines that describe "we" or "us" Go through and star * the lines that describe "them" or "They" Use this information to complete the graphic organizer below—focusing on the types of words that are being used to describe the two different groups. An example has been provided. (Provide a minimum of 5 for each.)

We	They
Nouns: pork and beef	Nouns: knives, rice
Verbs: eat	Verbs: gobble

Step 3: Share

Share out your words to the rest of the group. As you listen to others, add in any words that you had not included. Make sure you have words from each stanza.

Step 4: Answer the following questions

Connotation is the implied meaning of a word—it is what can make a word be negative or positive. For example: If you like someone, you might not say they are "fat" because that has a negative connotation, you might describe them as "curvy" or "chubby" because these tend to have more positive connotations or feelings.

1. What kind of connotations do you see with the words used in the "we" column? Give at least one example of a word and its connotation. Is it positive or negative? How?

2. What kind of connotation do you see with the words in the "they" column? Give at least one example of a word and its connotation. Is it positive or negative? How?

2. How does the author want you to feel about "they"?

3. The speaker ends each stanza in a similar way by saying that "they" look at "we" as "they". Explain what he is saying.

4. The theme is the "message" or "lesson" that an author is trying to communicate. (Hint: Look at the last stanza.) What is the theme of this poem?

Step 4: Write a short reflection.

Perspective, or your point of view influences how you see people of other groups but these perspectives can sometimes be incorrect because they are missing information or have bias.

Think of a group or community that you belong to that has been judged incorrectly. What is the misperception? What do you wish other people would take the time to know?

Student Feedback:



Day 2: Community Structures Science

What is this lesson about?: Today you will read through the Community Structures passage. You will answer a few questions about what you read. You will complete a community structure-activity.

Step 1: Read through the Community Structures passage

Community Structures

Khan Academy

Different ecological communities can be pretty different in terms of the types and numbers of species they contain. For instance, some Arctic communities include just a few species, while some tropical rainforest communities have huge numbers of species packed into each cubic meter.

One way to describe this difference is to say that the communities have different structures. Community structure is essentially the composition of a community, including the number of species in that community and their relative numbers. It can also be interpreted more broadly, to include all of the patterns of interaction between these different species.

In this article, we'll look at some of the ways that community structure can be quantified (measured numerically). Then, we'll examine factors that shape community structure, focusing especially on foundation and keystone species.

How do we measure community structure?

Two important measures ecologists use to describe the composition of a community are species richness and species diversity.

Species richness

Species richness is the number of different species in a particular community. If we found species in one community, and species in another, the second community would have much higher species richness than the first.

Communities with the highest species richness tend to be found in areas near the equator, which have lots of solar energy (supporting high primary productivity), warm temperatures, large amounts of rainfall, and little seasonal change. Communities with the lowest species richness lie near the poles, which get less solar energy and are colder, drier, and less amenable to life. This pattern is illustrated below for mammalian species richness (species richness calculated only for mammal species, not for all species). Many other factors in addition to latitude can also affect a community's species-richness.



Map shows the spatial distribution of mammal species richness in North and South America. The

highest number of mammal species, 179-228 per square kilometer, occurs in the Amazon region of South America. Species richness is generally highest in tropical latitudes, and then decreases to the north and south, with zero species in the Arctic regions.

Species diversity

Species diversity is a measure of community complexity. It is a function of both the number of different species in the community (species richness) and their relative abundances (species evenness). Larger numbers of species and more even abundances of species lead to higher species diversity. For example: A forest community with 20 different kinds of trees would have greater species diversity than a forest community with only 5 kinds of trees (assuming that the tree species were even in abundance in both cases). A forest community with 20 different kinds of trees in even abundances would have greater species diversity than a forest community with a forest community with 20 different kinds of trees in even abundances would have greater species diversity than a forest community with 20 different kinds of trees in even abundances would have greater species diversity than a forest community with 20 different kinds of trees in even abundances would have greater species diversity than a forest community with 0 a single species in very uneven abundances (for instance, with 90 percent of the trees belonging to a single species).

In general, ecologists think that more diverse ecological communities are more stable (that is, more able to recover after a disturbance) than less diverse communities. However, the diversity-stability relationship isn't a universal rule, and there are some cases where other factors (besides species diversity) are more important in determining community and ecosystem stability.

What factors shape community structure?

The structure of a community is the result of many interacting factors, both abiotic (non-living) and biotic (living organism-related). Here are some important factors that influence community structure:

- The climate patterns of the community's location.
- The geography of the community's location.
- The heterogeneity (patchiness) of the environment.
- The frequency of disturbances, or disruptive events.
- Interactions between organisms.

A community's structure can also be shaped by the chance events that happened during its history. For instance, suppose that a single seed blows into the dirt of a particular area. If it happens to take root, the species may establish itself and, after some period of time, become dominant (excluding similar species). If the seed fails to sprout, another similar species may instead be the lucky one to establish itself and become dominant.



Foundation and keystone species

Some species have unusually strong impacts on community structure, preserving the balance of the community or even making its existence possible. These "special" species include foundation and keystone species.

Foundation species

A foundation species plays a unique, essential role in creating and defining a community. Often, foundation species act by modifying the environment so that it can support the other organisms that form the community.

Kelp (brown algae) is a foundation species that forms the basis of the kelp forests off the coast of California. Kelps create environments that allow the survival of other organisms that make up the kelp forest community. The corals of a coral reef are another foundation species. The exoskeletons of living and dead coral make up most of the reef structure, which protects other species from waves and ocean currents. Beavers, which modify their environment by building dams, can also be seen as a foundation species.



Keystone species

A keystone species is a species that has a disproportionately large effect on community structure relative to its biomass or abundance. Keystone species differ from foundation species in two main ways: they are more likely to belong to higher trophic levels (to be top predators), and they act in more diverse ways than foundation species, which tend to modify their environment.

The intertidal sea star *Pisaster ochraceus*, which is found in the northwestern United States, is perhaps the most famous example of a keystone species. In a classic experiment of community ecology, the sea stars were experimentally removed from the intertidal zone where they lived. As a result, populations of their prey (mussels) increased, altering the species composition of the community and sharply reducing species diversity. When the sea stars were present, about species of barnacles and algae were found in the lower part of the intertidal zone, but when they were missing, the mussel population expanded downward and almost entirely replaced these other species.

This type of sharp reduction in diversity or collapse of community structure commonly occurs when a keystone species is removed. In this case, the loss of diversity happened because the mussels crowded out other species, which could normally persist because the sea stars kept the mussels in check.

Step 2: Answer the questions using the text

- 1. What is a community structure?
- 2. What are two important measures ecologists use to describe the composition of a community?

- 3. Why do communities with the highest species richness tend to be found near the equator?
- 4. What two functions make up a species diversity?
- 5. What are two factors that influence community structure?
- 6. What are two types of species that have unusually strong impacts on community structure?
- 7. Ecological communities are exactly the same.
 - a. TRUE
 - b. FALSE

Step 3: Draw a picture and describe

Draw a picture of your community. Is your community diverse? What words would you use to describe your community?

Student Feedback:



Mindfulness Moment!

Emotional Graph: Everyone processes emotions differently. Using the graph below chart your own response to these five emotions: Sad, happy, surprise, angry, and afraid. Consider how long your emotions last...the length of time will compare to the length of the line.



Day 2: The Census: Population and Prisons Math

What is this lesson about?: This lesson focuses on how people who are incarcerated 'count' in the Census, and raises questions about whether the current system is fair or not, and what could be done to make the Census work better for certain communities.

But first: Today's Warm-Up

Do you think that everyone should pay the same amount for WiFi at their homes or is this something that should depend on how much money a family makes?

Assume that a city government passed a law saying that it would automatically provide 'free' internet to all households in the city. How would the City 'pay' for that?

How would you respond to this if you were a big cable/wifi provider like Comcast or Cox or Verizon?

Step 1/Activity 1: Residents held in prisons across the country are counted in the Census.

If you were living in Atlanta, Georgia, were arrested and then sentenced to prison in rural Georgia, where do you think you would be 'counted' for purposes of the US Census?

Almost always, the answer is in the location where you are imprisoned. This process of counting residents held in prisons in the location of their prison, not their last known address. creates some outcomes that many think are not that fair. This is how most states account for their prison population, although a few states have changed their state laws to count prisoners at their 'last known address."

Today we are going to take a look at a few scenarios to see how this impacts funding and voting.

Example #1. A city called **Everything's Perfect** has 48,000 residents.

- The City is broken up into 4 Wards or Districts.
- Each District gets 1 representative on the City Council...

Everything's Perfect collects \$240,000 in taxes on gasoline sales. These taxes are used to fix up the roads.

- Assuming that each Ward gets the same amount of money to fix up its roads, how much money will each Ward get for Road Repair?
- Hint: if there are 4 Wards and each has the same # of people, divide \$240,000 by 4.

- Assume that Ward 3 and Ward 4 have a lot more roads than Wards 1 and 2. What will happen over time to the roads in Wards 3 and Ward 4 if each Ward gets the same amount of Road Repair money year after year?
- Do you think that using the Census results is the best way to allocate the amount of money used forRoad Repair? Yes/No. If no, what would be an alternative way to figure out how to use the Road Repair money.
 - Now, assume that you live in Ward 1 (very few roads). Each year you pay your gasoline taxes that go to repair the roads.
 - If you work from home and mostly drive around your neighborhood, how might you feel about your gasoline taxes being divided up this way?
 - If you have a long drive from your apartment and drive though the other Wards to and from work each day, how might you feel about your gasoline taxes being divided up this way?
- Ok, each year the city of "Everything's Perfect" receives a 'grant' from the Federal government to help build solar panels on homes--to increase its use of solar energy. In it's first year, the City Council takes in the \$120,000 it gets from the federal government and says every resident can get a \$500 credit to use to help them install solar panels.
 - At the end of the first year, the City learns that:
 - $\frac{1}{2}$ of the houses in Ward 1 used the money and purchased solar panels.
 - But in Ward 2, only a ¹/₈ of the people used the money to purchase solar panels.
- The City did some research and learned that in Ward 1 most people own their own home, but that in Ward 2 most people live in apartments. For some reason the landlords didn't bother to install the panels.
 - What is a reason why landlords might not install panels when homeowners would?

Step 2/Activity 2: Now let's consider what happens when the City decides to build a prison that will house <u>4,000 people in Ward 4</u>. The prisoners all come from out of town.

- Assume that the rest of the population stays the same. How many people, including the prisoners now live in **Everything's Perfect**.
- If the City wants each Ward to have approximately the same number of people living there, how many people should each Ward now have?
 - Hint: take the total population before the new prison (48,000) and add in the new 4,000 people. What is the new population of the City?
 - Now, if each Ward is supposed to have the same number of people, divide that number by how many Wards there are.
 - So: How many people should each Ward have now?

- Use the Grid to the right to mark off the 4 Wards of the City-
- Add the prison to Ward 4 and write in the # of people in the prison.
- Add in the # of nonincarcerated people in each Ward.
 - How many nonincarcerated people live in Wards 1, 2 and 3.
 - How many nonincarcerated people live in Ward 4?

Remember, the people living in the prison cannot vote, but they do count as a part of the Ward's population.

- Everything's Perfect Ward 1 Ward 2 Ward 3 Ward 4
- Now, assume that the City Council has 4 representatives, one for each Ward. Who has more voting power, a nonincarcerated person living in Ward 1 or Ward 4?
- If each Ward gets the same amount of money to put in new water pipes to replace the lead pipes, who will get more money to pu in new water pipes--a non incarcerated person ilving in Ward 2 or Ward 4?

Step 3/Activity 3: Looking at a real map, and real data. Below is a map of a rural county from the last census.



Review the map above and answer the questions below.

Each Ward has approximately how many residents?

(Round off to the nearest 10)

What Ward has a prison (penitentiary)?

What is its population?

How many nonincarcerated people live in Ward 2?

Approximately how many nonincarcerated people live in each of the other Wards?

Assume each Ward has 1 person on the City Council.

Ok, now what happens if the City Council has a vote on whether or not to raise taxes or where to build a new park or playground or how to distribute federal grant funds.

Who has more voting power, a person who lives in Ward 2 or a person who lives in Ward 3 or 4?

- Remember, individuals locked up at the prison don't get to vote, but they do count when dividing the city up into equally sized Wards...

Assume that the City of Anamosa gets a federal grant to put a new park in each Ward of the City. Which park will be the least crowded?

Is this fair to the residents of Wards 1, 3 and 4? Yes/No?

Is it fair that the prisoners 'count' but don't get to use the local park?

Closing note: In recent years, some states (Delaware, Marylyand and more recently, California) have started to move away from this system, and are going to 'count' individuals held in prisons as a part of their home neighborhood.

Step 4/Activity 4: How does this impact the communities where individuals are taken from?

In some neighborhoods, a large % of the adults may end up incarcerated. When these adults are held far away from their communities, they don't 'count' in the local census. This can have negative impacts on their own community. Let's look at the chart below to examine this...

Assume that over 3 years, the population of Neighborhood A falls from 100,000 people to 75,000 people, while the population of the other three Neighborhoods stays the same.

	Year 2020	% of Population	Year 2023	% of Population
Neighborhood A	100,000	25%	75,000	
Neighborhood B	100,000	25%	100,000	
Neighborhood C	100,000	25%	100,000	
Neighborhood D	100,000	25%	100,000	
Total	400,000		375,000	

Based on the chart above, what % of the total population is in Neighborhood A in 2023? What % of the total population is in each Neighborhood B, C and D in 2023?

(Hint: divide 75,000/375,000) and divided 100,000/375,000).

In 2020, if the City had \$1,000,000 to use to support affordable housing, how much of that money would go to Neighborhood A if they based it on % of the total population?

In 2023, if the City has another \$1,000,000 to support affordable housing, how much of that will go to Neighborhood A if they base it on % of the total population?

- **Discuss**: Is this fair? Would your answer be different if you know that 25,000 people moved away for good or if 25,000 were moved out because they were sent to prison but their families were left behind?

Skill Builders and Review Problems

- See separate document

Student Feedback:



Mindfulness Moment!

Read The Guest House and respond to it below.

	What do you think this poem is trying to say?
The Guest House	
This being human is a guest house.	
Every morning a new arrival.	
A joy, a depression, a meanness,	
some momentary awareness comes	
As an unexpected visitor.	
Welcome and entertain them all!	
Even if they're a crowd of sorrows,	
who violently sweep your house	What do you think the guest house is a metaphor
empty of its furniture,	for? (metaphor: something that is symbolic for
still treat each guest honorably.	something else)
He may be clearing you out	
for some new delight.	
The dark thought, the shame, the malice	
meet them at the door laughing,	
and invite them in.	
Be grateful for whoever comes,	
because each has been sent	

Day 2: Communities of the World: Mongolia Social Studies

What is this lesson about?: In today's lesson you will learn about a community that differs from your own. Today we will focus on Mongolia.

Step 1: Read the article on Mongolia

Countries Of The World: Mongolia

Image to right: Horses are an important part of Mongolian culture. They are a very respected animal and are used for traveling, farming and hunting. In fact, there are more horses in Mongolia than there are people. Photo by: Pixabay/Kanenori.

Mongolia is located in Asia between Russia to the north and China to the south. Situated on mountains and plateaus, it is one of the world's highest countries with elevation averaging 5,180 feet. Mongolia is 435 miles from the Yellow Sea.



Mongolia's temperature can fluctuate as much as 35 degrees in one day. The country is very dry and receives only about 4 inches of rainfall per year. Southern Mongolia is dominated by the Gobi, which is one of the Earth's coldest deserts and covers about 500,000 square miles.

People And Culture

For most of its history, Mongolia was closed off to the world and little was known about the country or its people.

Many Mongolians continue to live in yurts, or gers, which are dome-shaped, round, tent-like structures. They are furnished with a stove for heat and cooking meals, rugs to cover the wooden floors, beds and storage. Today's gers often have electricity, satellite dishes and solar panels.

Mongolia's largest festival, Naadam, is celebrated in summer and focuses on sports, games and food. Children also participate in some of the sports, including horse races. Many people still raise animals in Mongolia and eat a lot of meat and milk products.



Nature

Bactrian camels are native to Mongolia. They have two humps and are smaller than the Arabian camel. The Mongolian horse is small but tough and can withstand the harsh temperatures of the Mongolian climate.

The Gobi is expanding. Every year, about 1,400 square miles of new desert are added because of changes in land use, including farming, grazing animals and destruction of the forests. Global climate change may also be a factor.

Wildlife is threatened in Mongolia. The rare snow leopard is endangered, but has a refuge in the country's nature reserves. As less land is available for wild animals, species such as the musk deer have nowhere to hide from illegal hunters who are killing off most of the remaining population.



The first dinosaur egg ever discovered was found in the Gobi. Many dinosaur remains and fossils from 100 million years ago, during the late Cretaceous period, have been found there.

Government

Mongolia is led by a president who is elected by the people, but the president doesn't have much power. Most of the control is in the parliament, which has 76 members and chooses the prime minister and the cabinet officers.

History

The Mongol Empire gained power as Genghis Khan and his sons conquered much of Asia and Europe during the 13th century.

Marco Polo, his father and an uncle were the first Europeans to cross the Gobi in about A.D. 1275. The southern portion of Mongolia, known as Inner Mongolia, is part of China. The northern region became independent from China in 1921 with Russia's help. Mongolia became a communist country in 1924, but in 1990 multiparty elections were held by the people.

Step 2: Answer Questions

What is the giant desert in Mongolia called? List three things you learned about that desert.

Step 3: Check out the typical food of Mongolia.



The most common rural dish is cooked mutton (sheep), usually without any other ingredients. In the city, every other local displays a sign saying "buuz". Those are steamed dumplings filled with meat. Other types of dumplings are boiled in water (bansh [ko], manti), or deep fried in mutton fat (khuushuur). Other dishes combine the meat with rice or fresh noodles made into various stews (*tsuivan* [ru], *budaatai huurga*) or noodle soups (*guriltai shol*).

The most surprising cooking method is only used on special occasions. In this case, the meat (often together with vegetables) gets cooked with the help of stones, which have been preheated in a fire. This either happens with chunks of mutton in a sealed milk can (khorkhog), or within the abdominal cavity of a deboned goat or marmot (*boodog*).

Milk is boiled to separate the cream (*öröm*, clotted cream). The remaining skimmed milk is processed into cheese (*byaslag*), dried cheese curds (aaruul), yogurt, kefir, and a light milk liquor (*shimiin arkhi*). The most prominent national beverage is airag, which is fermented mare's (horse) milk. A popular cereal is barley, which is fried and malted. The resulting flour (arvain guril) is eaten as a porridge in milk fat and sugar or drunk mixed in milky tea. The everyday beverage is salted milk tea (süütei tsai), which may turn into a robust soup by adding rice, meat, or bansh.

Step 4: Answer the question

Are you brave enough to try some Mongolian food? Which one(s)?

Step 5: What does the inside of a typical family home look like in Mongolia?



The Regzen family outside their ger with all of their possessions, Ulaanbaatar, Mongolia. Published in Material World pages 40-41. The Regzen Batsuuri family lives in a 200 square foot ger (round tent built from canvas, strong poles, and wool felt) on a hillside lot overlooking one of the sprawling valleys that make up Ulaanbaatar, Mongolia.

Step 6: Explore the culture of Mongolia.

One of the most colorful and original items of Mongolian national dress is the traditional headwear. The Mongolian headdresses differed in shape and purpose; there were hats for the young and old, summer and winter & men & women, holidays and ceremonies & fashionable and everyday hats. Their fashion and trimmings & colors were amazing varied depending on the sex of the person wearing it his or her social position or to who's tribe or nationality they belonged. There are 400 different styles. For example, the cone-shaped top of the hat (blue or red) had 32 stitching symbolizing the unification of 32 Mongolian tribes.



The middle ages women & men wore summer hats made of plush wet velvet upturned brim & brocaded pointed tops. In ancient times it symbolized power capable of frightening enemies. In summer Mongols wore either the hat or flat-topped "Toortsog" hat consisting of six gores. The toortsog had an upper and a lower part. The upper part was not one piece but was sewn from six

separate pieces.

Married women were not permitted to wear this hat, only girls & men. Women's holiday headwear was noted for it is original and richness of adornment. It consisted of holiday silk and velvet hat and a complete decorative set for the hair the lower part of the hat was made from velvet and the upper part from red silk. The hair holder was covered with coral, pearl, and mother pearl. The Shanaavch the temporal adornment with little silver bells was fixed to the hair holder. The "Tolgoin boolt" was a headdress



usually made of silver and studded with a precious stone and semiprecious stones. Women's hats were more fashionable than men's, and the ribbons on them were decorated with turquoise.

Step 7: Answer the questions below.

1. List two interesting things that you learned about Mongolia?

2. Can you list three interesting things in the photo of the Mongolian family's house?

3. How were Mongolian hats different based on who is going to wear hats? Wht types of things do the hats symbolize?

4. Are there any hats or headresses that symbolize different things in American culture? (hint: what do students wear on their graduation day? Are there any special hats worn for holidays or religious ceremonies that you can think of?)

5. What else do you want to know about Mongolia?

Student Feedback:



What is this lesson about?: In today's lesson, you will work on your PE BINGO card.

Step 1: Try to complete the PE BINGO card.

PE BINGO

Try to complete all the squares Tuesday and Thursday.

60 Second Wall Sit	20 Burpees	20 Jumping Jacks	10 Jumps
10 Hops On One Foot	60 Second Stand on One Foot	60 Second Plank	15 Walking Lunges
10 Arm Circles	Run Fast in Place 30 Seconds	15 Sprinter Situp	30 Bicycle Crunches
30 Bicycle Crunches	60 Second Superman	Wheelbarrow Walk	20 Calf Raises
15 Pushups	10 Jumps	60 Second Stand on One Foot	1 Handstand