WESTMORELAND PARK WETLANDS CONSERVATION

YOUTH EDUCATION CURRICULUM

For all students interested in protecting nature and understanding the importance of the outdoors.

BEYOND TOXICS

Leadership for a thriving and just Oregon

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KALAPUYA HISTORY

The Willamette Valley region is the traditional homelands of the Kalapuya. Today, Kalapuya descendants are members of the Confederated Tribes of Grand Ronde and Siletz. The Kalapuyan people maintained the wetlands using controlled burns to create and promote the growth of camas fields and other native plants.

"Willamette Wetlands of the Kalapuya" is a mural created by a collaboration of Beyond Toxics, Friendly Area Neighbors Equity Action Team, Confederated Tribes of the Grand Ronde, Kalapuya descendants, City of Eugene's Human Rights and Neighborhood Involvement, and City of Eugene Parks and Open Space. The mural illustrates a Kalapuya storyteller speaking of her people and their uses of native plants for food, medicine and spiritual observances through the annual seasonal round in the traditional manner still practiced today.

LOOKING AT THE MURAL

Spend a few minutes looking at the mural and becoming familiar with the different images on the painting. Sketch one plant, animal and item of your choice and correctly write word in Kalapuyan if it's on the mural.

PLANTS

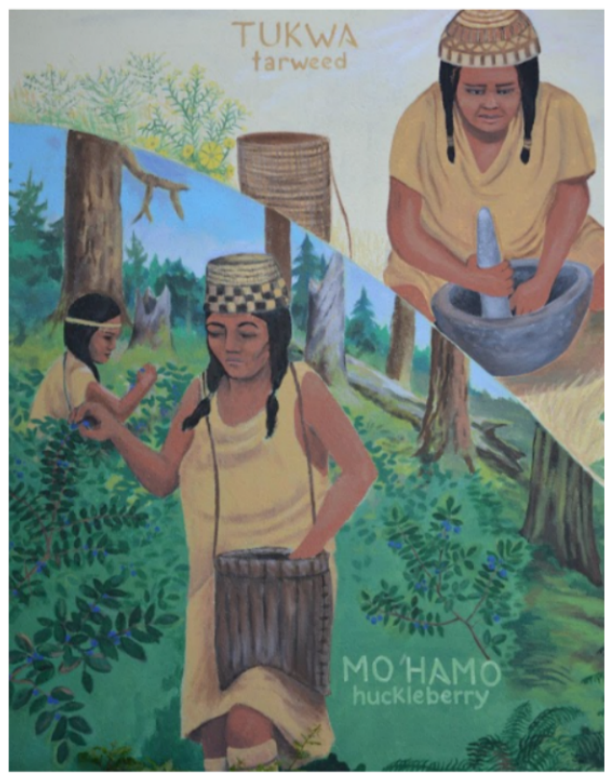
ANIMALS

ITEMS

Discussion

Work in small groups to compare your answers with your classmates. Discuss what you think each plant was used for and how different animals may have helped. Write your answers below.

KALAPUYA USES OF WETLAND RESOURCES



Read Pgs 1-4 of the mural guide, which describes several plants and harvesting methods of the Kalapuya people. The following paragraph describes one use of the seeds and berries, and other harvests throughout through a seasonal round in the Willamette Valley.

"Once collected the seeds were poured into conical baskets which were carried on the backs of the women to their camps by leather tump lines. Once at the camp, they often continued to roast the seeds on boards made from the ash tree, placing them on hot rocks or over coals from the fire. Once roasted, the seeds were pounded in a mortar, or stone bowl with a pestle to create a rather sweet, finely granular flour which was often combined with other ground seeds to produce a flour from which cakes were made. This flour was then mixed with cooked mashed camas, hazelnuts, dried service berries, dried huckleberries and sometimes dried animal meat to make a type of pemmican. This was very useful food when traveling and for eating during lean winter months."

Disclaimer Do not forage in the Westmoreland Wetlands.

MAKE YOUR OWN ENERGY BAR FROM NATURAL INGREDIENTS FROM THIS RECIPE

1/2 cup creamy peanut butter (or other nut butter)
1 cup dry oatmeal
2/3 cup dried fruit chopped (dates, cranberries, figs, blueberries, raisins, cherries, goji berries)
1/3 cup honey
1/2 cup semi-sweet chocolate chips (optional)
1/3 cup ground almonds or other nut (optional)

Instructions:

1. Mix all ingredients in a large bowl.
2. Mix well until all ingredients are well incorporated.
3. Cover with plastic wrap and chill for one hour in refrigerator.
4. Using a cookie scoop, take tablespoon size amount and roll into a tight ball. Place balls on a waxed paper lined cookie sheet.
5. Place cookie sheet into freezer and freeze for 3 hours. Transfer to a plastic bag and store in fridge for one week or freezer for up to 3 months.

https://redefinedmom.com/kid-approved-no-bake-energy-bites-recipe-great-alternative-granola-bars/

INTRODUCTION TO WETLANDS

Wetlands are one of the most biologically productive ecosystems on Earth, comparable to tropical rain forests and coral reefs. Wetlands provide food sources that support a variety of species.

Wetlands are areas that have, at least periodically, waterlogged soils or standing water. While wetlands are often wet, a wetland might not be wet year-round. Some of the most important wetlands are only seasonally wet. Wetlands are the link between the land and the water. They are transition zones where the flow of water, the cycling of nutrients, and the energy of the sun combine to produce a unique ecosystem. Wetlands may stay wet for several reasons: they are in low areas that receive constant rain, water from below the ground that is at or near the surface, they are near rivers or other bodies of water that occasionally flood, or they are in tidal areas along the coast.

Wetland areas can be created by beavers damming a stream. Humans can create wetlands by blocking normal water flow with construction, or by flooding areas for different uses.

COMMON TYPES OF WETLANDS

Marshes are periodically saturated, flooded, or ponded to form small lakes. They are and characterized by herbaceous (non-woody) vegetation adapted to wet soil conditions. Marshes frequently occur in poorly drained depressions, floodplains, and shallow water areas along the edges of lakes and rivers.

Swamps are fed primarily by surface water flowing in and are dominated by trees and woody shrubs. Swamps occur in either freshwater or saltwater floodplains. They are characterized by very wet soils during the growing season and standing water during certain times of the year.

Bogs are freshwater wetlands, often formed in old glacial lakes, characterized by spongy peat deposits, evergreen trees and shrubs, and a floor covered by a thick carpet of sphagnum moss. Cranberries, blueberries, and carnivorous plants like the pitcher plant also grow in bogs. The only water source for bogs is rainwater, and they are usually found in glaciated areas of the northern United States.

Wet Prairies are seasonally flooded ecosystems dominated by herbaceous plants occurring on poorly drained lowland soils. Poorly drained soils, combined with the relatively flat topography of a valley bottom, cause seasonal precipitation to collect, saturating the soil and often producing standing water, typically from November through April or May. Vascular plant communities are comprised of a diversity of forbs, sedges, rushes, and grasses.

Fens are freshwater peat-forming wetlands covered mostly by grasses, sedges, reeds, willow and wildflowers. Fens, like bogs, tend to occur in glaciated areas of the northern United States.

DISCUSSION

What type of wetland is at Westmoreland Park?

What other wetlands have you visited and where were they?

What are the differences and similarities between a marsh and a swamp?

How are wetlands different from lakes, rivers, ponds and streams?

ACTIVITY

Walk around the wetlands

As you stroll through the park, take note of what you see, smell and hear.

What do you see? (Plants, animals, insects, colors)

What do you smell? (Does it smell good, bad or no scent)

What do you hear?

POLLINATORS AND WILDFLOWERS

Pollination: The transfer of the male flower's pollen to a female flowers stigma to begin fertilization. Pollination produces fruits and seeds to continue the future generation of plants. Plants are pollinated in different ways. For example, some are able to self-pollinate, and some rely on the weather such as rain and wind. However, most require an organism such as bees or butterflies to move the pollen from flower to flower.

What is a pollinator? An animal that moves pollen from one flower to another. Here in Oregon, some pollinators include butterflies, bees, beetles, moths, hummingbirds, wasps and flies.

Why are pollinators important? Ecosystems require pollinators to continue the future generations of plants. Some studies have shown that 85-95% of plants require pollinators to fertilize other plants. Additionally, fruits and seeds that come from pollination are a key dietary staple for many birds and mammals, including humans. Lastly, pollinators are a food source for other animals such as bats, birds and small mammals.

KALAPUYA CULTURE AND WETLAND PLANTS

Wetlands are important to the Kalapuya People who have always lived on these lands and use many wetlands plants for food, medicine, basketry, ceremony and relationships. In the sections below, Kalapuyan names in the Santiam dialect are noted in **bold font** and scientific names are *italicized*.

Barestem Biscuitroot | **Alu't**
Lomatium nudicaule

Plant Profile: The tiny yellow flowers of Barestem Biscuitroot are clustered together into showy heads. This perennial plant relies on energy stored in a tap root to survive difficult conditions, such as drought.

Ethnobotany: All parts of Biscuitroot have important uses. When burned, the seeds have a strong aromatic fragrance that is a central part of sacred ceremonies for some tribes. In early spring, the soft, new leaves and stalks can be eaten raw or cooked in earth ovens. The roots have medicinal properties and are used to treat colds and sore throats. Careful harvesting is practiced to prevent overharvest of this useful plant.

Common Camas | **Andip**
Camassia quamash

Plant Profile: In early spring, the six-petaled blue-purple flowers of Common Camas can be found in moist meadows across western Oregon. An underground bulb provides the plant with the nutrients and energy it needs to flourish.

Ethnobotany: Many Native American tribes across the Pacific Northwest traditionally harvest the Camas bulb when the flowers have died back in the summer. Waiting gives the Camas flowers the time they need to pollinate and spread seeds across the prairie. This patience allows the harvesters to support future Camas populations and maintain the prairie's health. The bulbs are cooked in earth ovens. When they are soft, they can be mashed and eaten right away, or flattened into cakes to be kept over winter. The uncooked bulbs can be stored for many months.

Common Rush | **Amúštal**

Juncus effusus ssp. pacificus

Plant Profile: Rushes resemble grasses and grow in clumps or colonies in wetlands. They have small brown flowers that grow near the top of the stems..

Ethnobotany: Many Native American tribes across the Pacific Northwest traditionally harvest rushes as a weaving material. Rushes are used to make woven straps for cradle boards and pack baskets, and rope for berry baskets. They are one of the materials used to weave identifying tribal design patterns in hats and baskets, sometimes in combination with cattail leaves and beargrass.

Narrowleaf Mule's Ears | **Uamelk Tepok**

Wyethia angustifolia

Plant Profile: Sunflower-like in appearance, Narrowleaf Mule's Ears can be seen blooming in uplands and shallow wetlands through spring and summer. Its large, yellow flowers grow up to 3 inches in diameter, attracting many important pollinators.

Ethnobotany: Indigenous Tribes across western Oregon harvest Mule's Ears for its nutritious seeds. The seeds can be roasted and baked into bread or boiled for mush or soup. They provide nutrition through the winter if they are pounded into flour or meal with other herbs and grasses.

Tarweed | **Tukwa**

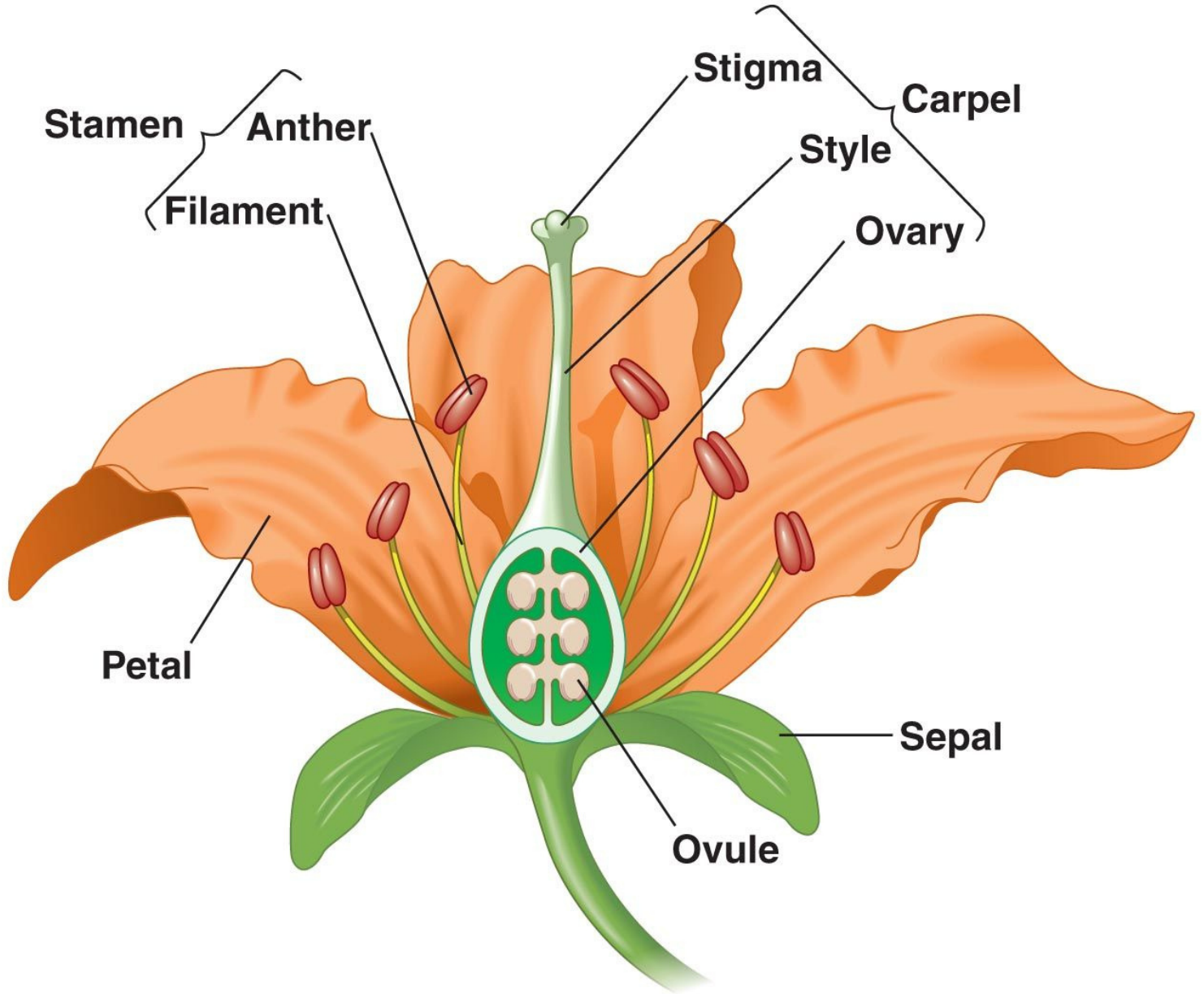
Madia sp.

Plant Profile: The annual Tarweeds have large buds that open to small, light yellow flowers, and leaves covered with fine hairs. As they begin to flower, the aromatic, oily, sticky coating on their leaves, stems and buds make them easy to identify.

Ethnobotany: Following a prairie burn, women traditionally harvested the seeds by knocking them off the plants into a gathering basket. The seeds can be stored year-round and are used to make meal or flour with other nuts and seeds such as hazelnuts or sunflower seeds. Oils from Tarweed are spread on the skin during ceremonies. The oil is also used for cooking, and for making a bar-like food without the intense sugar that Europeans introduced.

Scan the QR code to learn more about these plants

IDENTIFYING PARTS OF THE FLOWER



ACTIVITY

Grab a flower and carefully pull it up from the stem without ripping the plant out of the ground. Work with a partner to identify the parts of a flower and quiz each other by pointing to different parts .

ACTIVITY

Building a Bug House

Step 1: Collect recyclables

Empty egg cartons, cardboard tubes (paper towel rolls), and other cardboard packaging work great

Step 2: Collect natural materials

Collect dried leaves, pieces of bark, wood shavings and other natural materials found in the park

Step 3: Build

Determine which cardboard will be the frame of the "house." Use small items like part of the egg carton and cardboard tube to create compartments in the frame. Then fill each compartment with natural resources. Think of the compartments like rooms in a house and the natural resources as furniture in the room.

Step 4: Place your bug house outside

Find a place you think will attract the most bugs

Step 5: Observe

Revisit your Bug House to see what's moved in!

Building A 'Bug' House | ZFK Blog (zoologyforkids.com)

Pollinators In the Wetlands

V C H U M M I N G B I R D B T
C Y Y R O D I M E O S V K U Y
K I G G Y R R K I N I Z A T T
B W N K G D B A D F G A T T T
U R O N X R N W G Q V I Y E I
M L S L A R A Z E O U I D R G
B A C D F B F S H A N D I F E
L D R A Y S A T S V V F D L R
E Y I M G A P R Z H X E L Y M
B B C S K W G I M V O T R Y O
E U K E V A E D D O H P Y S T
E G E L F P V P T E T S P Z H
Y Q T F H T Q K O G R H V E E
S W A L L O W T A I L S O S R
W Z R Y W B X D C T O H V Z Y

CINNABARMOTH
SWALLOWTAIL
TIGERMOTH
CRICKET
LADYBUG
GRASSHOPPER
ORBWEAVERS
BUTTERFLY
HUMMINGBIRD
KATYDID
WOLFSPIDERS
BUMBLEBEE
DRAGONFLY
DAMSELFLY

Words can go in any direction.
Words can share letters as they cross over each other.

CLIMATE CHANGE AND DEFORESTATION

Wetlands provide an important sink for greenhouse gases by keeping carbon dioxide out of the atmosphere. When wetlands are harmed or deforested, they release high amounts of carbon and other dangerous gases into the atmosphere. This leads to the increase in temperature, warming our planet causing sea levels to rise, more frequent storms, diseases and many other severe outcomes.

The greenhouse effect is caused when the sun's rays are reflected off the earth and trapped in our atmosphere by gases, causing temperatures to rise and heat to fill the atmosphere. Greenhouse gases include carbon dioxide, methane, nitrous oxides, and water vapor.

Where do they come from?

Carbon dioxide: Cars and power plants burning coal and other fossil fuels, Transportation, Electric power, industry

Methane: Livestock farming, landfills and waste

Nitrous Oxides: fertilizers for agricultural use

Deforestation is the action of removing a wide area of trees. This practice is greatly impacting Oregon's forests and specifically the wetlands. Urban development and agricultural uses are among the leading drivers of deforestation. Here in the Willamette Valley about 57% of wetlands have been lost and that amount is increasing.

WHAT IS CLIMATE CHANGE?

To understand climate change, it is important to first understand what climate is and how it is different than weather. **Climate** is the usual weather found in a place over a long period of time. **Weather** is the conditions outside at a particular time.

Climate change is a change in the usual weather in a particular place. Scientists have shown that the Earth's temperature has increased about 1 degree over the last 100 years. Although this may not seem like a lot, it has serious effects on our planet. Increase in temperature leads to irregular weather patterns, glaciers melting and sea levels rising. Scientists have also shown that human activity contributes to **global warming**. Humans drive vehicles, heat and cool our homes, use gas stoves to cook food, all of which require energy. The most common ways to get energy is to burn coal, gas, and oil. All of these methods of getting energy release gases into the air which cause the atmosphere to warm up.

Vocabulary Words

Climate: The typical weather conditions in an area over a long period of time. Example: Tropical, Dry, Temperate, Continental and Polar.

Weather: Describes the conditions outside at a particular time.
Example: Rain, snow, windy.

Global warming: The long-term increase in Earth's average temperature.

Carbon dioxide: A gas that traps heat and warms the Earth that is created by the burning of fossil fuels such as coal, natural gas, oil and wood.

Carbon footprint: The amount of carbon dioxide one human releases into the environment in a year.

Blue Carbon: Refers to organic carbon that is captured and stored by the world's oceanic and coastal ecosystems.

Fossil fuels: Coal, oil, and natural gas, which come from the breakdown of ancient plants and animals over millions of years.

WETLANDS ROLE IN CLIMATE CHANGE

Wetlands are vulnerable to climate change

As sea levels rise, coastal wetlands are heavily impacted by climate change. Coastal wetlands are found all along the pacific northwest. They are important because of their role in managing water quality and flooding, and providing habitats to many species.

Wetlands mitigate climate change

Wetlands are important greenhouse gas sinks, meaning they store carbon and prevent its release into the air. When wetlands are disturbed, they release greenhouse gases into the atmosphere and contribute to global warming.

Ecosystem Services

- Cleaning up polluted water.
- Slowing and storing floodwaters and snow melt.
- Recharging groundwater.
- Supporting habitat for many different native plant and animal species.

Effects of climate change on wetlands

- Loss of carbon stored in soil
- Changes in soil structure
- More frequent drying or flooding
- Changes in plant or animal communities
- Saltwater intrusion to freshwater coastal wetlands
- Changes in timing and amount of water available to wetlands fed by snow melt.

DEPARTMENT OF ECOLOGY, STATE OF WASHINGTON

WHAT CAN YOU DO?

- **Used goods are good:** Reduce and reuse because factories emit carbon dioxide.
- **Unplug your cords:** When not using your charging cords, unplug them; unplug unnecessary appliances and gaming consoles (saves money).

- **Help out at the hotel:** Hang up and reuse your towel.
- **Spread the word:** Write an article in your school or local news.
- **Close the door:** In air-conditioned rooms, keep the door closed because an open door to an air-conditioned building can let 2.2 tons of carbon dioxide (CO2) escape over one summer.
- **Hot and cold:** Wear a warm sweater instead of cranking the heat and open a window instead of blasting the AC

- **Eat your veggies:** Livestock, especially cows, account for earth's heat trapping (the cow's toots).
- **Walk it out:** Walk or bike as much as you can.
- **Season your fruit:** Try and eat mostly in-season fruits and veggies Eat local from the farmers' market.

- **Air dried:** Hang up freshly washed clothes in the warmer months
- **Send a postcard:** Reach out to local politicians asking them to do something about climate change.
- **Calculate your impact:** Use an online carbon calculator to see how much your actions release a year.
- **Be a science champion:** Not everyone understands climate change. Learn the facts and talk to your friends and family. (NATgeo kids, April 2018).

GET INVOLVED!

YOUTH V. GOV

Youth v. Gov is young people around the world who are suing their governments for actions causing and worsening the climate crisis. Youth v. Gov is what [they] do at Our Children's Trust: representing and supporting youth securing their legal right to a safe climate. Youth v. Gov is a legal campaign, a hashtag, and even a film --- made by independent, acclaimed filmmakers --- that tells our story.

OUR GUIDING PRINCIPLES

1. Our Children's Trust advocates on behalf of youth and future generations.
2. Our Children's Trust advocates for legally-binding, science-based climate recovery policies.

Scan here to watch the film.

DISCUSSION

Work with a partner to write out what you know about climate change.

Compare with the group what you and your partner wrote.

What did you learn from your partner or group that you did not know before?

Climate Change

Z W L J Y L O X J G S Y H F L G O U K R
F K N C M V P A T M X W J U I F N E T I
I Y Y N T Z D A S Y M G R B I K K F G E
I W T K D L T X W C T I T D P P S X M N
C E C O A K S B H T Y F U G G Q Y K E I
O A D Z B C A R B O N D I O X I D E T T
T T I U G S N H V F H B C M D L V P H R
U H C O S K M O H I J G V P E E U I A O
A E G A J F P C A T M R D L N C N D N U
J R V O D V Q Z O A X M C G W A F Z E S
W U L K S C T D Y J Q H I B P Z P Q J O
Q J K Z H L H M P M G U C L I M A T E X
G L O B A L W A R M I N G Y U G Z R F I
A G L A C I E R I Q K B R Z H Y X G K D
A Z U X N M F O S S I L F U E L S T N E
S L N K W O M Z N N P Y U Y A Y Y N H U
G F V C L I M A T E C H A N G E D U E G
B Q G R E E N H O U S E G A S E S O N K
X O J W L Y V Y N Y J A H X C B H Z W H

Carbon Footprint
Greenhouse Gases
Carbon Dioxide
Climate Change
Global Warming
Fossil Fuels
Climate
Glacier
Nitrous Oxide
Methane
Weather

BLOWING UP A BALLOON WITH CO2

Materials: Vinegar, Baking Soda, Plastic Bottle, Candle

Step 1: Pour the vinegar into a bottle with a small neck.
Step 2: Measure out 1 teaspoon of baking soda and drop into a balloon.
Step 3: Stretch the neck of the balloon around the bottle (Already filled with vinegar) and BE SURE to hold the top of the balloon.
Step 4: Stand the balloon upright making sure to hold it around the neck of the bottom and allow baking soda to drop into the bottle. (The reaction will take place quickly).

Using the same bottle of vinegar, we are going to create more CO2 and blow out a candle.
Step 1: Light a candle.
Step 2: Pour 1 teaspoon of baking soda into the bottle of vinegar -- you can use the same bottle from the previous experiment as long as it's used within a few minutes.
Step 3: While the reaction is taking place, carefully tip the bottle over the flame as if you were pouring liquid on the candle.

GLOBAL HEALTH

Since the Covid-19 pandemic, global and public health have become household terms. However, many individuals are unaware of the difference between global and public health. Global health looks at the overall health of populations everywhere in world. It is referred to as global health rather than international health because disease is not constrained by artificial borders. It has the goal of achieving equity in health for everyone worldwide. On the other hand, public health works at the local level, like focusing on the health of the community in your town. These two concepts work together to create new laws and government regulations. They are important sectors of development and have increased priority because of the impact of climate change.

Global health deals with health issues and determinants that are transnational, meaning they affect multiple countries. Examples of health issues that transcend borders include infectious diseases that travel between countries, as well as noncommunicable diseases and conditions that affect many populations around the world".

Public health promotes and protects the health of people and the communities where they live, learn, work, and play.

Adapted from: Healthy People 2020

WHAT DOES THIS MEAN?

As defined by the World Health Organization (WHO), Social Determinants of Health are “the conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels.”

HOW DOES THIS AFFECT ONE`S HEALTH?

NEIGHBORHOOD AND BUILT ENVIRONMENT:

HEALTH AND HEALTH CARE:

SOCIAL AND COMMUNITY CONTEXT:

EDUCATION:

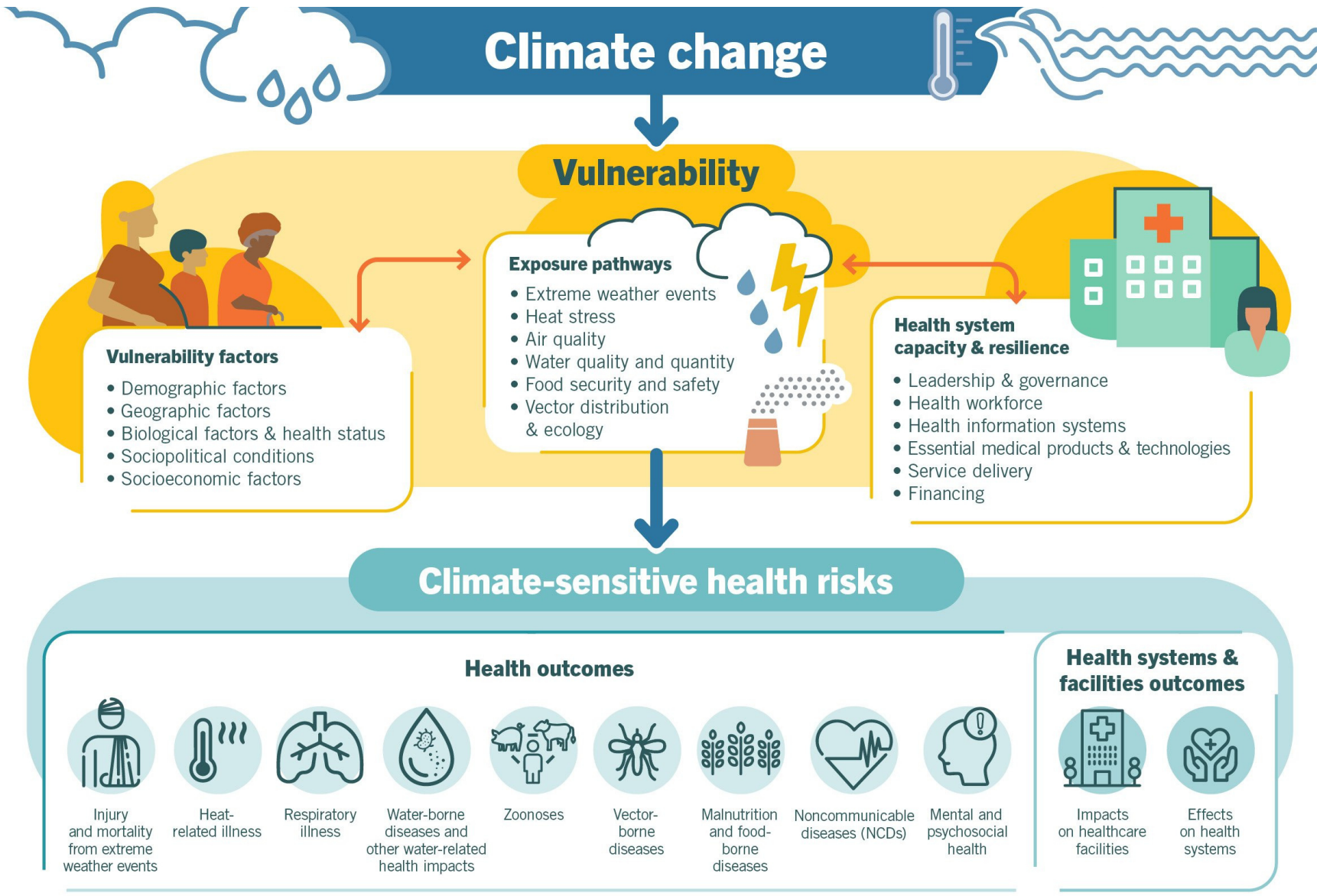
ECONOMIC STABILITY:

HOW ARE CLIMATE CHANGE AND HEALTH CONNECTED?

What examples from your friends and family show this connection?
(Ex. Asthma from forest fires)

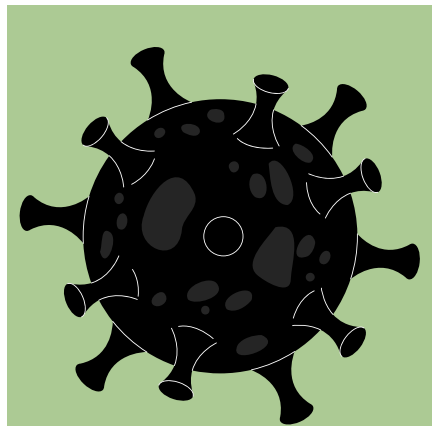
As climate change continues to worsen, we will see more extreme weather events and warmer temperatures. Rising temperatures lead to frequent heat waves, extreme weather, rising sea levels, and increases in CO2 levels. All of these affect the overall health of the population by worsening the conditions around us. Reducing emissions of greenhouse gases through better transportation, food and energy-use choices can result in improved health, particularly through reduced air pollution. Increased air temperatures cause heart and lung problems. Additionally, as wetlands become smaller and habitat for animals shrinks, disease becomes more prevalent in our communities. Overall, climate change affects the social and environmental determinants of health --- clean air, safe drinking water, sufficient food and secure shelter.

The World Health Organization defines health as a state of complete physical, mental and social well-being



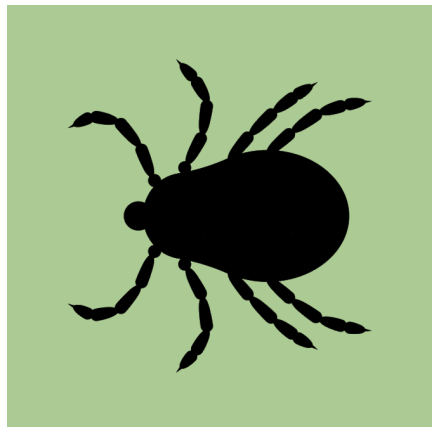
Pick one vulnerability factor, exposure pathway and health system capacity and resilience. Explain which climate change health risk is associated with each one and explain why

INFECTIOUS DISEASES

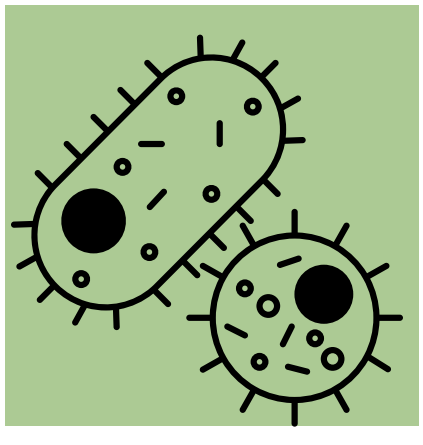


Virus: Viruses are a type of germ that are very tiny and when they get inside your body, they can cause disease. They can cause the common cold, flu, chicken pox and many other diseases. To prevent the spread of viruses, wash your hands frequently and often.

Mosquitoes are insects that are found all over the world. A female mosquito requires blood from vertebrates (animals with a spine) to lay eggs and reproduce. This leads to the transfer of diseases such as yellow fever, West Nile virus, and malaria through mosquito bites.



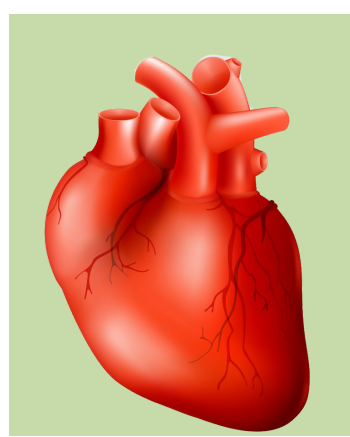
Ticks are commonly found outdoors in shrubs, tall grass and trees. They can infect humans if they are carrying the blood from a virus-bearing animal. If found on the body, they can be carefully removed and cause no harm. However, if left untreated they can cause Lyme disease and other harmful dangers to humans.



Bacteria are small organisms that are made of a single cell. Some bacteria can cause disease and enter the body through the mouth, nose and cuts on your skin. Once inside your body, the bacteria themselves or the toxins they produce can cause infections.

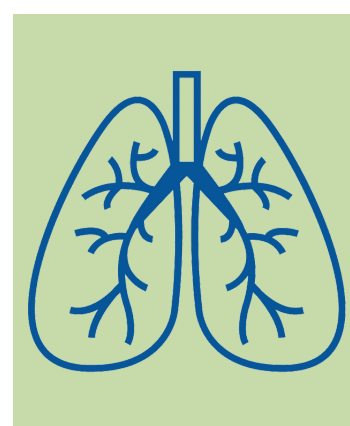
NON-COMMUNICABLE DISEASES

Cancers



Cardiovascular Diseases

Diabetes



Chronic Lung Diseases

Non-communicable disease, also known as chronic diseases, are not transmitted person to person. Instead, they are caused by a combination of genetic, environmental and behavioral factors. Some examples of NCDs are obesity, heart disease, stroke, diabetes and many others. Many of these can be prevented by improving social determinants of health.

HOW TO IMPROVE YOUR HEALTH

Wash your hands frequently.

Stay up to date on vaccines.

Wear a mask when you are sick .

Stay home when you don't feel well.

Be active for at least 60 minutes a day.

Drink lots of water.

Connect with nature and go outside.

WHAT ARE SOME OTHER WAYS TO IMPROVE YOUR HEALTH?

QUIZ

1). Today the Kalapuya descendants are a part of the confederated tribes of the:
A) Grand Ronde and Siletz
B) Warm Springs
C) Umatilla
D) Willamette Valley

2). All are common types of wetlands other than:
A) Swamps
B) Fens
C) Tundra
D) Bogs

3). A pollinator is:
A) An organism that migrates south during the winter
B) An animal that moves pollen from one flower to another
C) Typically, a large organism that does not fly
D) An animal that consumes the leaves of plants

4). Why are pollinators important:
A) Plants require nutrients provided by pollinators
B) They are beautiful organism's humans like to photograph
C) Ecosystems require them to continue future generations of plants
D) None of the above

5). Common plants found in the wetlands include all but:
A) Common Camas
B) Tarweed
C) Silver puffs
D) Zebra cactus

6). The most outer part of a flower is the:
A) Carpel
B) Stamen
C) Sepal
D) Petal

7). Scientists have shown that the Earth's temperature has increased by__ degrees over the last 100 years:
A) 1 degrees
B) 5 degrees
C) 10 degrees
D) 20 degrees

8). Greenhouse gases include:
A) Carbon Dioxide
B) Methane
C) Nitrous oxides
D) All of the above

9). What is a leading driver in deforestation?
A) Urban development
B) Agricultural uses
C) A and B
D) None of the above

10). All are ecosystem services but:
A) Cleaning up polluted water
B) Releasing greenhouse gases
C) Slowing and storing floodwaters
D) Supporting plant and animal habitat

11). What should you not do for combat climate change:
A) Unplug your cords
B) Reduce and reuse
C) Keep the door open when using Air conditioning
D) Air Dry your clothes during warm summer months

12). What is the WHO definition of health?
A) Not being sick
B) The absence of disease or infirmity
C) A state of complete physical, mental, and social well-being
D) None of the above

13). Which of the following types of disease are not transmitted person to person:
A) Infectious diseases
B) Communicable diseases
C) Non-communicable diseases
D) Airborne diseases

14). Social determinants of health include all but:
A) Economic stability
B) Education
C) Social and community context
D) Protected nature

A,C,B,C,D,C,A,D,C,B,C,A,C,D

KALAPUYA DICTIONARY

TUKWA - TARWEED

MO`H`AMO`OLALLA - HUCKLEBERRY

UAMELK TEPOK - MULE EAR DAISIES

KTSITAN - CAREX TUMILICOLA

ANDIP- CAMAS

ALU`T- BISCUIT ROOT

AMAFA - OAK

ULIK - ACORN