Bio Oct 10

Exam on the 31st

Field trip take homes(lost lake) things you should know

1. saw firsthand a cople of the biotic communities of your assignment

 -can not use any photos from lost lake. You will lose point if you do

2. valley grassland before and after

 -why the changes

 -3 inventions that alter settlement and biotic communitites

 3. California indioans: primative?

 Tues the 29th is the photo essay due date

Current news: salmonella, and food born illnesses!

 With an added “finger” to you the american voting citizen

 Brought to u by the people in Washington

 Fresno made the news!

 Foster Farm chicken could have sicken 10,000 people with salmonella.

 Disease control is shut down

Salmonella is a bacteria that can make you sick. Not all salmonella are the same. Some make you really sick some make you a little sick. Find out what strain it comes from.

About 42 percent of those sickened had to be hospitalized. That’s when were concerned. This is a scary form. 1 of this 7 strains is resistant to antibiotic. So it can kill you.

This brings us to bacteria

 You grandma is trying to kill you

Bacteria- the dominant life form on the planet

What makes bacteria, bacteria.

What separates bacteria form all the other kingdoms?

Its Prokaryotic! Doesn’t have a nuclease

How different are there DNA

How come is there so much differences is there DNA code? First billion years on earth had no sign of life. Amino acid are developing. They build protein, structure. Theres bacteria on eath for billions of years. DNA mutans

A billion years ago plants start showing. Humans been on earth for a few time.

They are everywhere

-10 billion in your mouth-right now

-25% of your body weight

Why are they so successful

-time, evolution produces diversity

-abilitiy to mutiply

-conjegation

Conjegation in bacteria swapping DNA.

-by bumping to other bacteria they can swap plasma can make them resistant to antibiotic.

Many are beneficial

- we can identify who you are by the bacteria covering you skin

- if you have good bacteria bad bacteria cant invade your body

- they help you digest food

- when you go on antibiotic you always going to the bathroom because it removed the bacteria in your stomach

oil eaters

* some bacteria eat oils.
* They brake them down
* We use them to help us when theres an oil spill

Biological pest control

* bacillus thuringensis or BT
* produces like a cystal when it gets in the gut in insects and it kills them
* good if you grow tomatoes so insects wont eat up your plant

Fermentation

* some by yeast- different
* Bacteria causes sour
* Produces vinegar, beer

Tiny Factories

* medicines
* enzymes
* bioengineering

Bad bacteria

 Pathogens- agents which casue disease

* to cause a diseas a bacterium must do 2 things
* 1 invade, attach, and mutiply in a host tissues or ells
* 2 produce a toxin- chemical whch intergers or destroys a host

Killer bacteria

- tuberculosis

- cholera

- mentingitis

- gonorrhea/syphilis

Food borne illnesses

* food poisoning
* solmonella, botulism, Escherichia
* imoroper food handling and preparation

3 things

1. contamination-modern food processing

2 rapid replication- improper refrigeration, handling

3 no preventative actions- no sterilization

bacteria cant divide under 40 degress. And is killed over 130 degrees.

Food Poisoning In USA

* 76 millionn cases per year about 1 in 4 US citizens
* 325,000 hospitalizations 1 in 840
* 5,000 deaths 1 in 55,000
* data from CDC

Curious distribution

* one quarter of hospital admittance for food poisoning
* happen on 1 day of the year. The day after thanksgiving
* nana’s trying to kill you