

@ BROWN 9AM - 4PM

"W" IS FOR "WASTE OF SPACE"

JOAN → ♀ I HAVE COOTIES

○ WHAT TO BRING: BIKE, SNEAKERS, RAINGEAR, \$ CURE FOR LEPROCY, \$

HELMET, WATER, DAYPACK LUNCH ESTON

MIKE "YOU GOT CHOCOLATE IN MY PEANUT BUTTER" McCELLAN

○ 017-244-0998
JEFF "YOU GOT LEPEROUS FINGER IN MY RASPBERRY JAM" HUENIGER

○ SINCE THE NAME OF THIS TRIP IS THE WESTON OBSERVATORY YOU'D THINK WE'D BE GOING TO SOME PLACE THAT OBSERVES SOMETHING IN WESTON AND YOU'D BE DEAD WRONG AND BY "WRONG" I MEAN "RIGHT" MEANING "LEFT" MEANING "CORRECT" MEANING "KNOW YOUR HAND SIGNALS" BECAUSE THIS IS A FAR BIKE TRIP TO AN EARTHQUAKE "OBSERVATION CENTER IN WESTON

Weston Observatory

Mike McLellan
 (17-244-0998)
 Jeff Huenemaerde
 617-332-9506

(for those who can't read cursive, it's Weston Observatory)



MIKE ♥ BIKE TRIPS

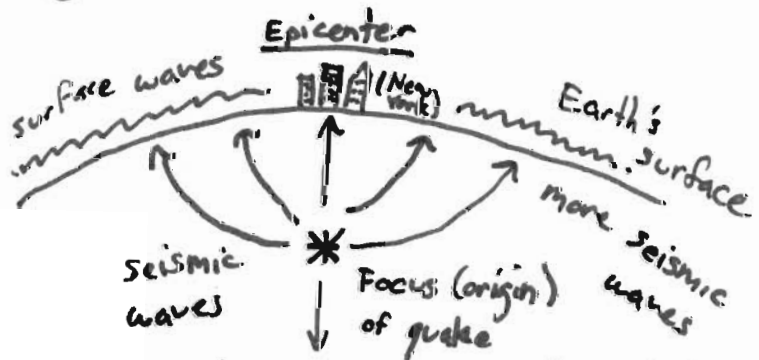


what to bring: BIKE, HELMET, backpack, lunch, plenty o' water, raingear, sneakers (do not wear hiking boots)

where to meet: Brown Middle School Times: 9am - 4pm E.S.T.

Today we are going to Weston observatory ... BY BIKE!! I must say. I love this more than I love taffy, and I'm a man who loves his taffy. But taffy aside, today we are going to learn about the earth and her quakes, otherwise known as earthquakes. Now you may think that an observatory is used for observing the stars or the behavior of small children but this observatory is for observing the aforementioned earthquakes, some more than one hundred miles away. Some more than one mile away but less than one hundred miles away. So today we will learn all there is to know about earthquakes and then some. We will also practice our bike safety. Mmm... taffy!

Example of Earthquake



Bike Safety 101: Hand signals



LEFT turn



RIGHT turn



STOP/SLOW

in case of emergency, the nearest hospital

This program must comply with the regulations of the MA Dept. of Health and be licensed by the city of Newton Health Department

Weston Observatory

Jeff Huenemeyer and Mike Mclellan
(617-332-9506) (617-244-0998)

7/14/04
time: 9-4
location: Brown

Bring: bike, helmet, sneakers, lunch, water, daypack, sunscreen

Today we will be going to the Weston Observatory, which is a station used to study earthquakes. They use seismographs to study the different movement patterns of the plates around the earth. Earthquakes occur when two or more tectonic plates collide with each other.

The three different kinds of collisions are:

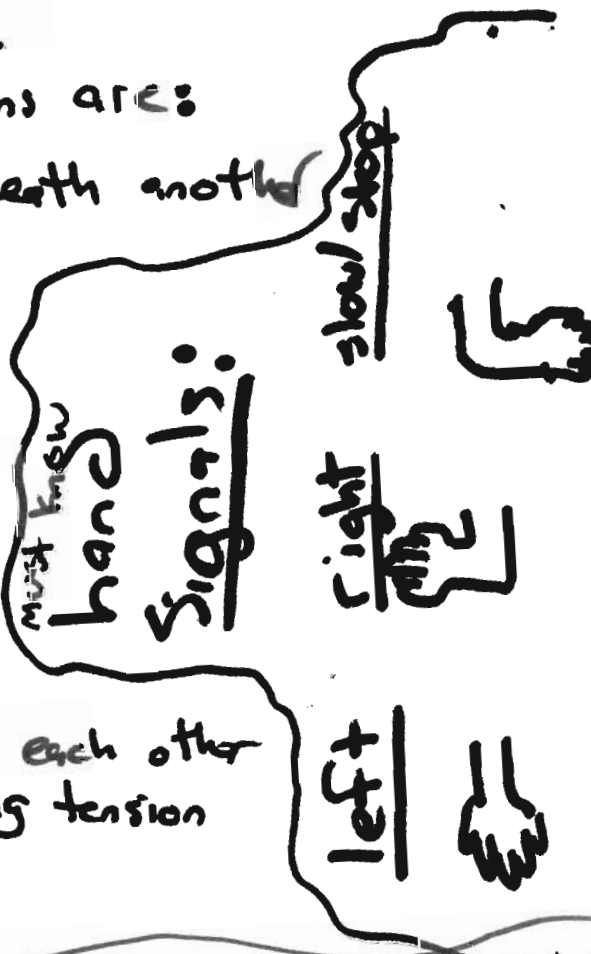
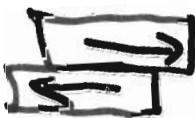
Submergent - when one plate goes beneath another



Divergent - when two plates move apart

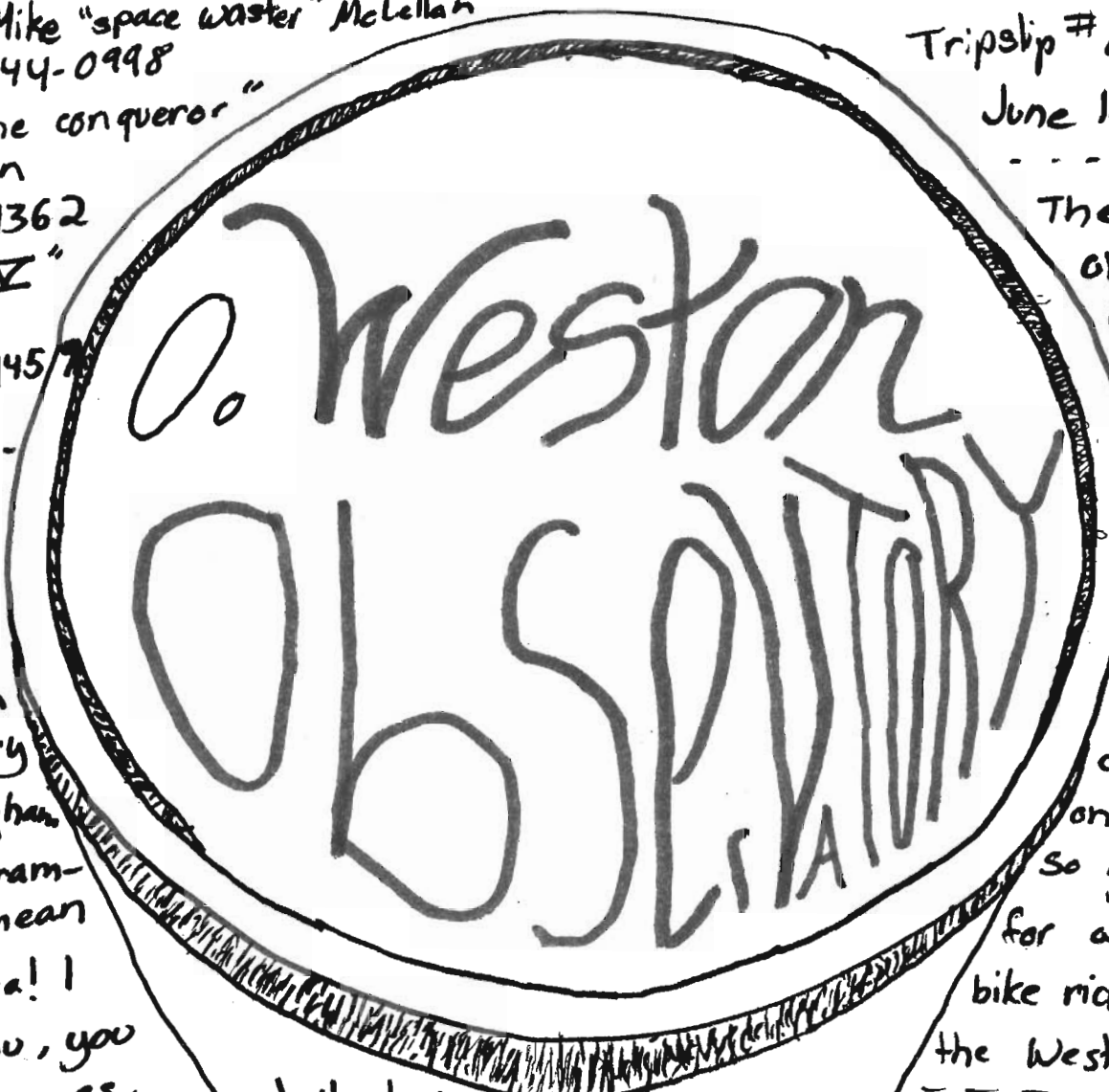


Transform - when two plates slide against each other causing tension



Leaders: Mike "space waster" McLellan
 617-244-0998
 Garhett "the conqueror"
 Sobman
 617-332-1362
 David "IV"
 Krinsky
 617-332-4457

Trip slip #8
 June 13th 2005



The Weston Observatory is used to study earthquakes. Now is your chance to use all that geology learning you done lorned on Monday.

Today we will be biking to the Weston Observatory in Framingham and by Framingham I mean Weston. Ha! I fooled you, you gullible gooses. Teeheehee. Many of you may know what an Observatory is. It is a place with a huge telescope used to gaze at the stars, so, in theory, the same is true for the Weston Observatory. Well that theory is 100% wrong!

So get ready for a nice little bike ride out to the Weston Observatory.

What to bring: Bike, HELMET, BACKPACK, lunch, H₂O, sneakers

TIME
 9am-4pm
 @
 Brown

Hawaii has only one school district.



In case of Emergency, your child will be brought to: Newton Wellesley Hospital: 617-243-6000. This program must comply with the regulations of the Massachusetts Dept. of Public Health and must be licensed by the city of Newton Health Department.

YAN!

Weston



Beratory

snake as Pacman "R"



Leaders

"Shake, shake, shake it like an..."

Earthquake!" Okay... get ready

to bike, hike, and... Mike? Yep. Today

we are going to learn about energy

and conservation! Yeah, I know, I'm pretty

excited to! Ohhh man, my knees are

shaking. We are going to learn what

makes our earth "quake".

Garrett "don't forget to bring your bike"

Solomon
617-332-1362

David "I like you" Krinsky
617-332-4459

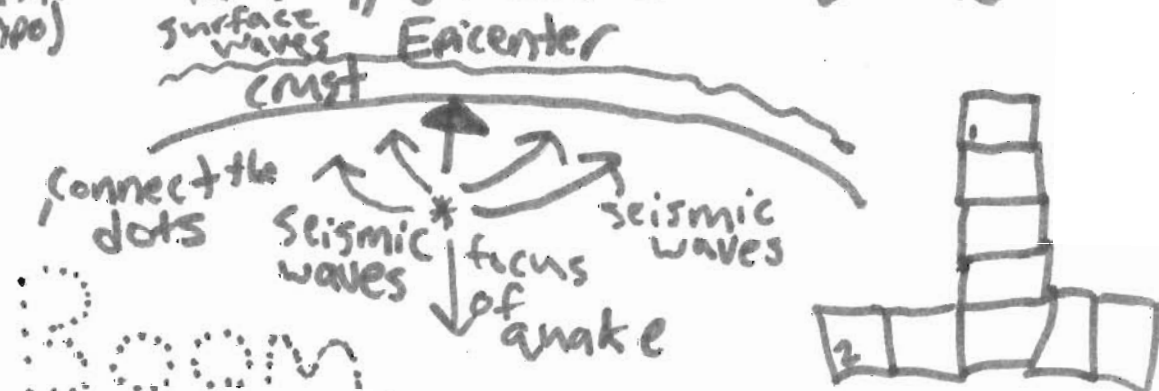
Mike McLellan (find the type)
"Game time"
617-244-0998

Equipment

SHOES

- boots (horrays!)
- water
- field kit
- lunch
- rain gear
- bike helmet

Anatomy of an earthquake



Boom

1.ing aspen
2. our planet

In case of emergency, your child will be brought to:
 Newton Wellesley Hospital: 617-243-6000.
 This program must comply with the regulations of the Massachusetts Dept. of
 Public Health and must be licensed by the city of Newton Health Department.

WESTON

TRIP # 8 Observatory

LEADERS:

DAVID KRINSKY
617 332 4459

Garrett Solomon
617 332-1362
Mike McLellan
617-244-0998

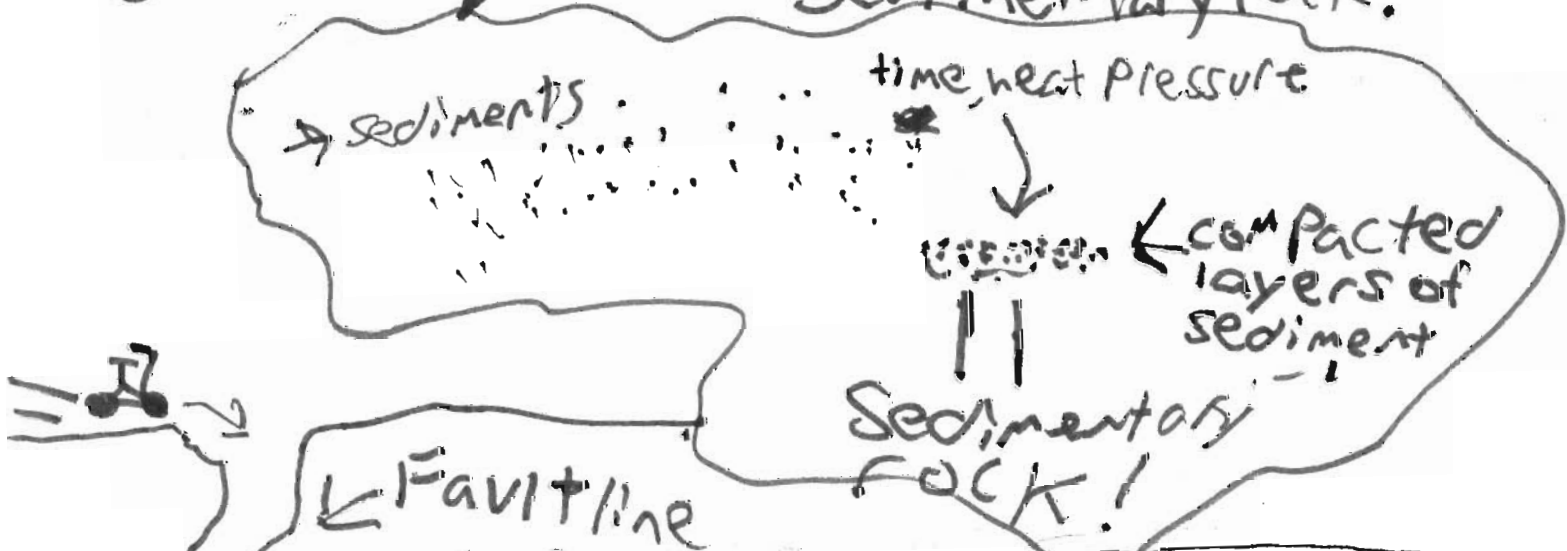


you need:
Bike, helmet,
sneakers Field kit
water, lunch and
a newt

Sneakers

← bring one

Whats up homeslice. We will
be bike to the happiest place on earth...
Weston observatory! Weston observatory
is an earth quake observatory for the Boston
area, so maybe if you give me some chips
we may go on a tour! here is a
quick diagram of Sedimentary rock:



In case of Emergency, your child will be brought to:
Newton Wellesley Hospital: 617-243-6000.
This program must comply with the regulations of the Massachusetts Dept. of
Public Health and must be licensed by the city of Newton Health Department.

Trip slip #10

7-14-98

Times: ~~9-7~~ 8:30 - 3:00

Place: Brown

Leaders: Gabe "I was born in a chicken-coop" Yospin
969-3966

Mike "I have Crisco in my socks" Dyen (No, he really does! Ask him about it!)
244-0285

Stuff: BIKE! HELMET!!
lots of water, field kit, sneakers
super lunch (I recommend
fluff), 3,250 lb. block of granite



WESTON OBSERVATORY

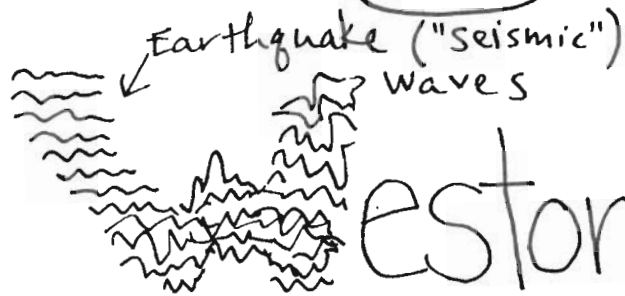
That's right! Weston observatory doesn't stare up at the sky, it stares down at the ground! In case you hadn't guessed it yet, this is a geology trip! You'll get to learn all about seismology, and the "richter scale", and we'll also see some crazy fossils, from around here. Some of the fossils are fossil raindrops. How could that happen? Plus I'll show you all of the computer and instruments that we use to measure earthquakes and other big things that make the ground shake. What else could shake the ground enough for us to notice it? Find out the answers to these and other questions tomorrow, as I lead you around Weston Observatory.

Nice scientist who shows us around



Times: 9-4
Meet@: BMS

Leaders: Savina "Quake Meister"
Yospin (969-3966)
Jon "Richter Man" Rivnay
(527-1849)



Weston Observatory



Hey! The Earth likes to move it move it, and when we bike to the Weston Obs, we're going to learn all about it. Cool! Geology and seismology are incredibly

Equipment:
BIKE (in full working order), helmet, Sneakers, field kit, much water, lunch, a newt

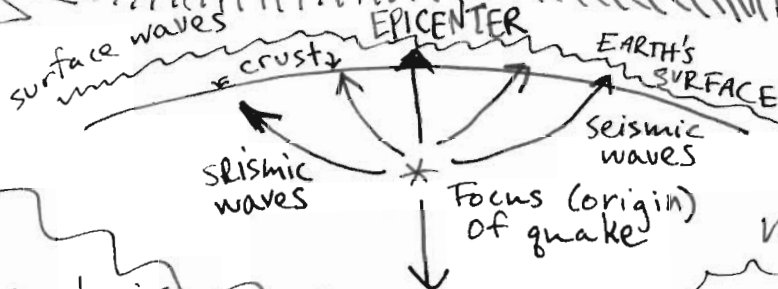
interesting, especially if you're a big nerd. Maybe you're reading this and thinking, "Man, my life will never be affected by Earthquakes. What gives?" Well, I'll tell you what gives. Rock gives! Yes, all that solid stuff you stand on

gives, as in moves, which is why we get Earthquake action. And that action even gets at us here, in New England, so it's good for all of you to be wise.



Earthquakes happen because plates (either continental or oceanic) slide over, past, and/or under each other. Let's check out the...

ANATOMY OF AN EARTHQUAKE



We'll learn about what all these words mean tomorrow!

stuff to think about!
What different types of plate boundaries are there?
or many different "layers"

SEE YOU TOMORROW!

WESTON OBSERVATORY

Times: 9am - 4pm
 Meet at: Brown Middle School
 What to bring: your BIKE, helmet, sneakers (not boots), LOTSA WATER, big lunch, backpack, field kit, the North wind

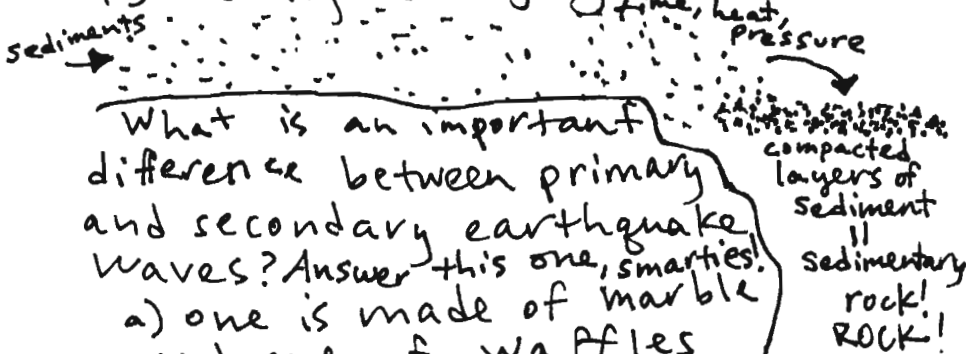
← Fault line

2003: July the 15
 Trip slip # 10

Leaders: Sarina "I'll gnake your Earth" Yospin
 969-3966

Jeff "I'll slay your giant"
 Huena moerder
 332-9506

Whoa! What! WHOA! Time for one of my all-time favorite Envi Sci trips, you lucky dogs! Geology holds a very special place in the cockles of my heart, as does the term "in the cockles of my heart," but geology plays a bigger role than that term on this particular trip. Weston Observatory is an earthquake observatory for the Boston area, so after we enjoy a bike ride there, we'll get a tour of the place -- and this place is really bringing back the funk. Ooooooh yeah.



What is an important difference between primary and secondary earthquake waves? Answer: this one, smarties!
 a) one is made of marble and one of waffles
 b) one can move through the liquid parts of the Earth

© It has to do with the airspeed velocity of an unladen...

DRAW A PICTURE of the coolest thing you see at Weston Obs.



Weston Observatory

Tripslip # 9

July 15, 2003

Leaders:

Jeff Huenemoerder
(617-332-9506)
Sarina Yospin
(617-969-3966)

Today we are going to the Weston Observatory. Make sure you bring lots of water and food, since you will be wanting it along the way. This is a station that studies earthquakes. They use seismographs to study different movement patterns in the earth. Earthquakes happen when two or more tectonic plates hit each other. The different kinds of collisions they can make are:

What to bring:

Bike,
helmet, sneakers,
lunch, water, field kit,
sunscreen

Submergent: when one plate goes beneath another.



Divergent: when the two plates move apart.



Transform: When the two plates slide past each other

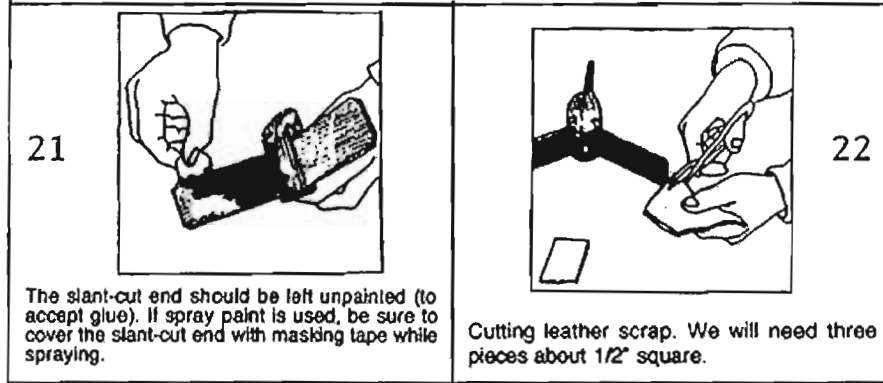


Quote of the day:

“If you think a weakness can be turned into a strength, I hate to tell you this, but that's another weakness.”

THE ENVIRONMENTAL SCIENCE PROGRAM 2002 | ts# 10.

Only when you go bald and blind do you realize that you need glasses to see that you're bald.



If it's left unpainted, it'll accept glue.

This trip slip conveniently printed on white, just white, only white paper, is that so wrong?!
{look for other colors to appear on future trip slips, courtesy of Kinko's}

Today and/or tomorrows trip (depending on when you read this):

WESTON OBSERVATORY.

CITIZENS ON PATROL.

Pertinent Information:

Ts# (trip slip number): 10

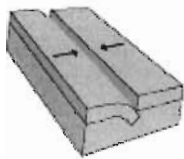
D|t (date and times): July 16, 2002 | 9am-4pm

Ml (meeting location): Brown middle school

L's (leaders): Jonathan Rivnay {617.527.1849} y Sarina Yospin {617.969.3966}

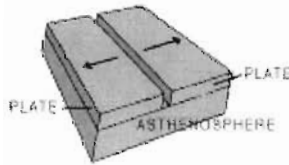
vEq (various equipment): Bicycle (🚲), Helmet, Biking Shoes or Sneakers (not hiking boots), Water, Lunch, Field Kit (Raingear, First Aid, etc.), Sunscreen, Lucky Charms.

Types of Plate Boundaries.



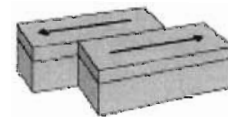
Convergent

Convergent bound'ries
Mountains, Volcanoes, Trenches.
Depends on the plates



Divergent

The plates move away,
Liquid hot magma rises,
The ocean floor grows.



Transform

Tension is building,
Two plates slide past each other,
This is an earthquake.

Other Informational Haikus {oi5|7|5}:

Measure the earthquakes.
Even the ones in turkey.
Seismograph station.

Log'rithmic: Richter!
Six: ten times stronger than five.
Seven: hundred times.

**You have abused your weather privileges, now you will have to find out the forecast ALL ON YOUR OWN!

WED JUL

trip slip # 10

7117195

OBSERVATORY

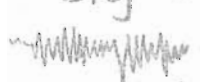
Leaders - Gordon Robb - 244-9304
Alton Tebbia - 961-4057

Location - Brown St. High
Times - 8:30 - 2:00

Equipment - Bibs, Helmet, lake and tools (if you have them), H₂O, lunch, field kit



Hey, Today we're heading out to Weston observatory. Now this place is quite special due to the fact that it is one of the foremost seismographic stations in the U.S. Run by B.C. Collyer, this station measures and records earthquakes from all over the world. In fact last time I was there 2 years ago, the station had just picked up the vibrations from a massive earthquake in Japan. (And you remember the one that did all that damage in Kyoto) While we're out there we are going to learn about such things as primary and secondary waves and how they pertain to the damage an earthquake does. The scientists out there are also going to talk about the Richter scale. (The scale on which they measure an earthquake. It has no top measurement, so there is no earthquake too big to measure.)

 - This is the way an earthquake looks on a seismograph machine.

A bit of faulty logic

There are three types of faults found in this world - The point where two massive land plates connect - the study of the movements of these is called plate tectonics.

Submergent (subduction zone)

Divergent fault

transform fault



one shelf goes under another



two shelves move in opposite directions



This is like the San Andreas fault where the two plates scrape along each other

Leaders: Amelia "Gruffman" Runyan 617.244.8836
 Sarina "Sarina" Yospin 617.969.3966

Times: 8:30 - 4:00
 Meet @ BMS



Equipment: BIKE, HELMET, SNEAKERS (not boots!) water, H₂O, tell) more water, Big yummy lunch, field kit, Bike lock, 4 baby artichokes w/ dipping sauce, mmm... also a lot of HEAVY useless rocks.

Ha! I bet you thought this observatory had telescopes and such to look at the sky. If you did, you were wrong. Sorry. This observatory, run by B.C. measures seismographic activity in the ground. Seismographs are the machines that measure earthquakes and their severity on the RICHTER scale.

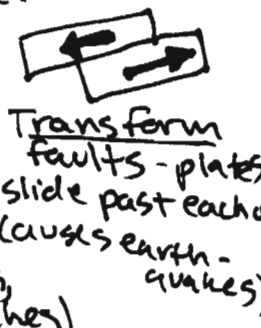
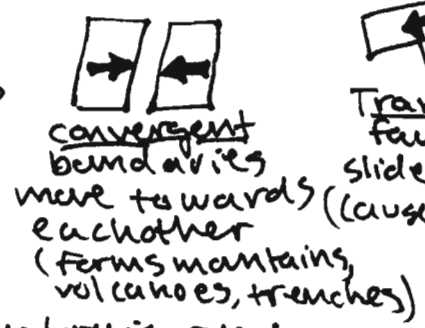
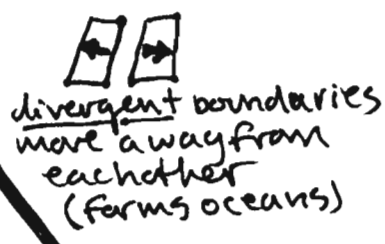
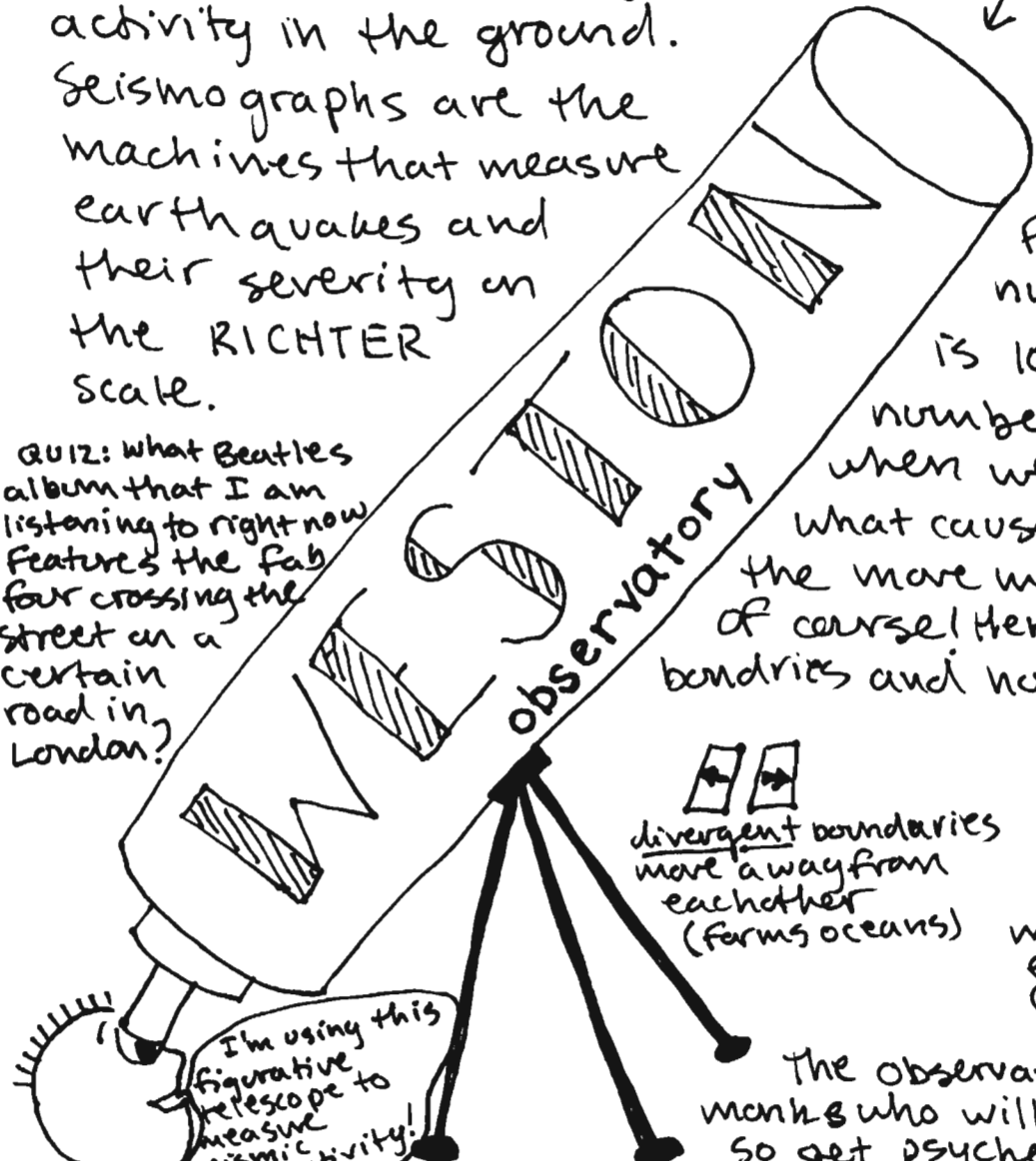


Figurative House during an "telescope earthquake into the world of seismographic readings"

The richter scale goes from 1 to 10 and each number that it goes up is 10 times worse than the number before it. I'll explain when we get there.

What causes earthquakes? why the movement of tectonic plates, of course! there are some types of plate boundaries and how they move:

QUIZ: What Beatles album that I am listening to right now features the Fab Four crossing the street on a certain road in London?



The observatory is run by some cool monks who will teach us about geology so get psyched!

Trip slip # 9

* Bike Trip *

Place: Brown

7/17/01 Sarina 969-3966

Time: 8:30-4:00

Leaders: ~~Julie out~~

Equipment: Bike, Helmet,
field kit, lots of H₂O,
sneakers, lunch, bike
lock,

Amelia 244-8836

Weston Observatory

Today we will be biking to Weston Observatory. There we will find one of the countries best seismographic stations. A seismo-whata you say. A seismograph is a machine that measures and records earthquakes. So we will be learning about the famous richter scale. Each rating on the scale is 10x stronger than the one before it. For example: a rating of a 3 on the scale is 100x stronger than a 1. These seismographs pick up earthquakes all over the world. We will have our own guided tour of this place so it should be pretty cool. Here is an interesting earthquake fact: An earthquake will usually fall on a fault line. A fault line is where two tectonic plates meet up. After a large earth quake you may be able to measure how far the plates have moved. "In Alaska in the early 1900's an earth quake made the ground shift over 30 ft." - Allant.

So make sure you have all your equipment. And study up on your hand signals, because they will come in handy. Get it! Julie made a joke. HA, HA, HA.

Meet @: BMS

Date: Tuesday, July 17

Time: 8:30-4

Equipment: BIKE,
helmet, any bike tools
you have, lots of water,
big lunch, field kit,
sneakers, a burning desire
to listen to somewhat
monotonous monks

Leaders: Sarina "Argentina" Yospin

(617) 969-3966

Amelia "Bunion" Runyan

(617) 244-8836

Trip slip #9

Sarina's favorite primate: the
slow loris - they're so cute!

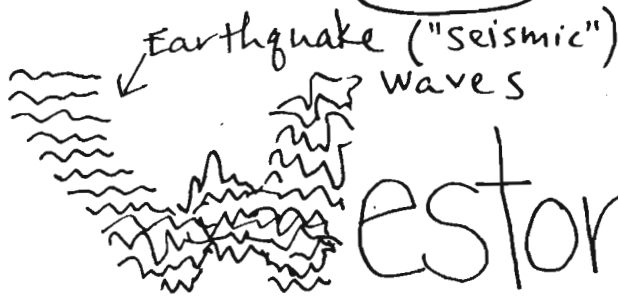


Hey howdy hey, partners in nerdiness! Prepare your
hinies (←spelling?) for a day spent (somewhat) in transit
to and from the Weston Obs! (see above) The Weston Obs.
is a seismographic station, meaning it monitors and
studies the unstable world of earthquakes. And it's
run by monks from B.C. who give us a "wicked
Pissah" tour of the place. We'll see their whack
seismographic technology, an excellent collection of
cool rocks (Sarina's favorite part), and a bunch of
fossil-printed rocks. Kickin' chicken! I love this trip.
So get ready for fun, fabulousness, and faultline
fractures, 'cause here comes Weston Observatory!

Times: 9-4
Meet@: BMS



Leaders: Sarina "Quake Meister"
Yospin (969-3966)
Jon "Richter Man" Rivnay
(527-1849)



Weston Observatory



Hey! The Earth likes to move it move it, and when we bike to the Weston Obs, we're going to learn all about it. Cool! Geology and seismology are incredibly

Equipment:
BIKE (in full working order), helmet, sneakers, field kit, much water, lunch, a newt

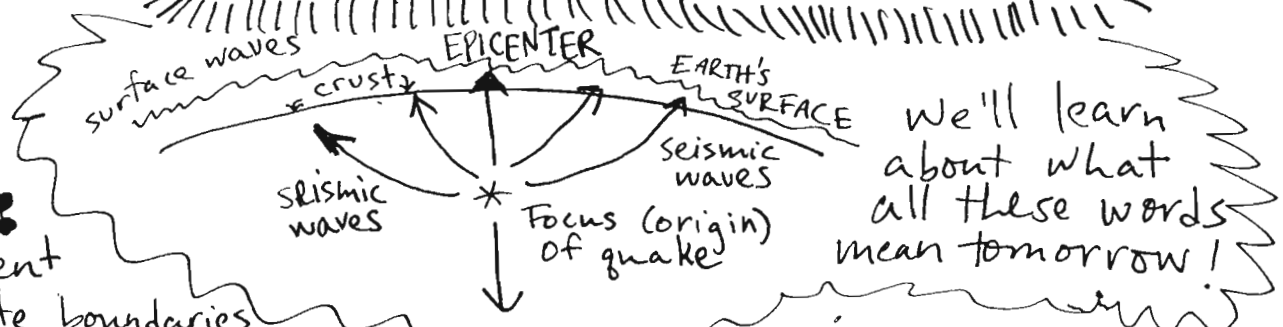
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ANATOMY OF AN EARTHQUAKE



stuff to think about:
- What different types of plate boundaries are there?
- How many different "layers" make up the Earth?

SEE YOU TOMORROW!