

SUMMARY of Earth Science Education’s Podcast for Places... Audios for SLCC (cancelled) field experience March 2020.

Exhortations: DRIVERS DRIVE!! These audios are for passengers.

INTEREST IN GEOLOGY CAN LEAD TO DISTRACTED DRIVING.

If you intend to listen to these, recruit a driver!

NOTE:

This field experience has 13 audio segments narrating segments of the route. They and other Podcasts for Places can be found at <https://earthscienceeducation.org> ... resources” ... resources by county ... Salt Lake County. The direct link is not provided here as links break.

The driving time for this field experience is about an hour: a half hour from Salt Lake Community College Redwood campus to Faultline Park (near the University of Utah) and about a half hour back to SLCC Redwood campus. Two audios are cut for Faultline Park and a mapping exercise around Faultline Park’s city block.

Audio #	Location – driving directions	Themes
0001 1 min.	Introduction Please listen before leaving SLCC Redwood Campus	DRIVERS DRIVE – audios are for passengers. Watch for patterns!
0002 1 min	SLCC -Almost ready to leave SLCC It’s a system... tectonics rules!	Goal: West side / East side Recognize evidence of faults.
002 9 min	From SLCC (approx. 4600 South on Redwood Road Travel north to 2100 South Don’t get on UT-201... go just north to 2100 So	Location: answers “Where is?” Landmark: features as signposts Scarps: such as stream banks, shorelines, faults... PATTERNS of materials – Bedrock vs Sediments.
003 11 min	From 2100 South and Redwood Road – Travel east to 700 East.	Patterns: river terraces (Jordan River and bypass canal) vs shorelines vs fault scarps.
004 6 min	From 2100 South and 700 East – Travel north to 400 South	Erosion-Deposition by water: Think: patterns associated with lake beds, sheet flow, alluvial fans, shorelines.
005 5 min	From 400 South and 700 East Travel east to 1300 East AND then North just one block to 400 South (!) Turn left! Travel west on 400 South to Faultline Park. STOP.	Wow! Cheer as cross the base of this scarp of the Wasatch fault zone (WFZ). TRAX.. Enjoy topog to Faultline park.
006 10 min	FAULTLINE PARK At the park’s swings. Lecture plus imagination!	Extensional tectonics. Fault blocks. Personalize the scene. Where does “break” happen... Would your legs buckle, or would you fly? What else can you notice today... and come back and check after eq?

007 7 min	FAULTLINE PARK BLOCK... Walk around the block clockwise. MAP for this exercise will be posted with these audios (www.earthscienceeducation.org ... “resources” ... SLCounty...). As you walk down the hill, decide where you would mark the fault (UP block vs DOWN block. It is not obvious because covered by some post-faulting sediments. Continue north mentally mapping the scarp through gaps of houses. At the pink house okay to go east a ways. Stop at private property sign. Mentally, or on your map, mark UP side vs DOWN side DOWN on your map. Return to 1000 East continue north to 300 South, then east. Worry for the parking at corner apts. Consider how fences can give evidence of the fault displacement. Where will you draw the on your map (UP vs DOWN). Continue south on 1100 East admiring the view (and scarp). Return to Faultline Park and your vehicle.	
008 5 min	After Faultline Park. On 1000 East travel one block North to 300 So Turn right at 300 South. Travel to 1100 East Turn left at 1100 East and travel to South Temple. Turn right (east) on South Temple to 1300 East	Watch where fault scarp goes. Splays of normal faults. Shorelines and alluvial fans of “Avenues,” fault zone to east and drainages. Reservoir Park (sag pond)
009 10 min	Cross WFZ at 125 South 1300 East Dictation begins at top of scarp. From 200 South and 1300 East south to Highland Dr	125 South – University Apts on major scarp of WFZ. Rise onto flat by 200 South.. Proceed south cross fault scarps, alluvial fans, drainages, drive on shorelines. Patterns of roads, cemeteries, schools, colleges. So much at 2100 So!
010 5 min	At Highland Drive and 3900 South, turn left (SE) onto Highland Drive Travel SE on Highland Drive to 3900 South.	The WFZ modifies landforms (geosphere) and also weather, hydrology, biology and urban development.
011 13 min	From 3900 South and Highland Drive Travel west, cross Jordan River becomes 4100 South Continue west ALMOST to Redwood Road DON'T TURN LEFT at REDWOOD ROAD CONTINUE TO 2200 West!!!	Think processes... and how processes cause differences in landforms and materials. Why and how landforms associated with faults, shorelines, and stream banks differ.
012 4 min	On 4100 South cross Redwood Road Continue West CHEER when you see scarp at CLUB RENDEZVOUS Continue west to 2200 West and 4100 South Proceed south to SLCC entry off 2200 West	The (now closed) break in slope at Club Rendezvous was initially mapped as a shoreline. Now it's mapped as a fault. How do we know?

BIG CONCEPTS while finding faults of SLCounty.

Tectonics rules!

Salt Lake County looks the way it does due to the interplay of tectonics and erosion/deposition. Extensional tectonics of the past 22 million years has created the basins and ranges of the Basin and Range Physiographic Province including Salt Lake Valley. The Oquirrh Mountains are a range of the Basin and Range. The Wasatch Mountains lie along the western margin of the Rocky Mountain Physiographic Province. The Wasatch fault zone (WFZ), a world-class fault, is the boundary between the two provinces recognized by most Earth scientist because it is so impressive (big, bold contrasts and the Greatest Snow On Earth). Less impressive but of academic as well as social interest are the faults of the west side of the valley. All Utahns have faults and residents of Salt Lake County have many faults!

After this field experience, listeners should experience JOY when they notice subtle changes in patterns of landforms, specifically, breaks in slope.

Patterns of landforms (natural shapes on Earth's surface) and Earth's materials (specifically bedrock versus sediments) result from Earth processes.

Earth is a system and, as with all systems, has subsystems that interact. Earth's subsystems are:

- Geosphere: solid Earth – Salt Lake County's faults affect the geosphere, specifically, contrasts in high and low topography.
- Hydrosphere: water Earth – Salt Lake County's faults affect the geosphere, for example why the Jordan River is where it is, and why it flows north to Great Salt Lake.
- Atmosphere: gaseous Earth – Salt Lake County's Wasatch fault zone creates the orographic effect that results in tens of feet of winter snow on the Wasatch Mountains.
- Biosphere: living Earth, including the Anthrosphere – humans and human footprint. For example: Why did Salt Lake City's pioneer planners lay out major thoroughfares 7 blocks apart? And if so, why is 13th East the major thoroughfare not "14th" East? (Tectonics rules!). Why does Highland Drive cut across the orthogonal pattern of SLCounty streets? (Tectonics rules!)

Please take pride when "seeing" scarps (drops of topography) and other changes in slope. It's all about patterns... and patterns lead to understanding processes.

ESE mantra: if you can see patterns... you can be a scientist.

Enjoy.