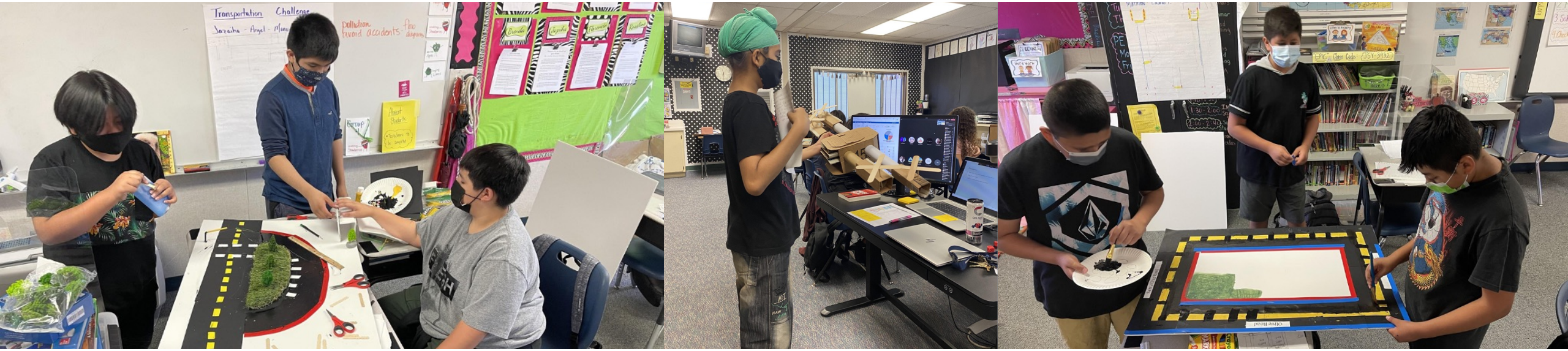


MTI Research Snaps Presents “Advancing Transportation Equity”



The Central Valley Transportation Challenge

Dr. Christian Wandeler

CSU Fresno Associate Professor

February 14, 2023 | 1:30-2:00p.m. (PT)



@MinetaTrans



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#MTIResearchSnaps



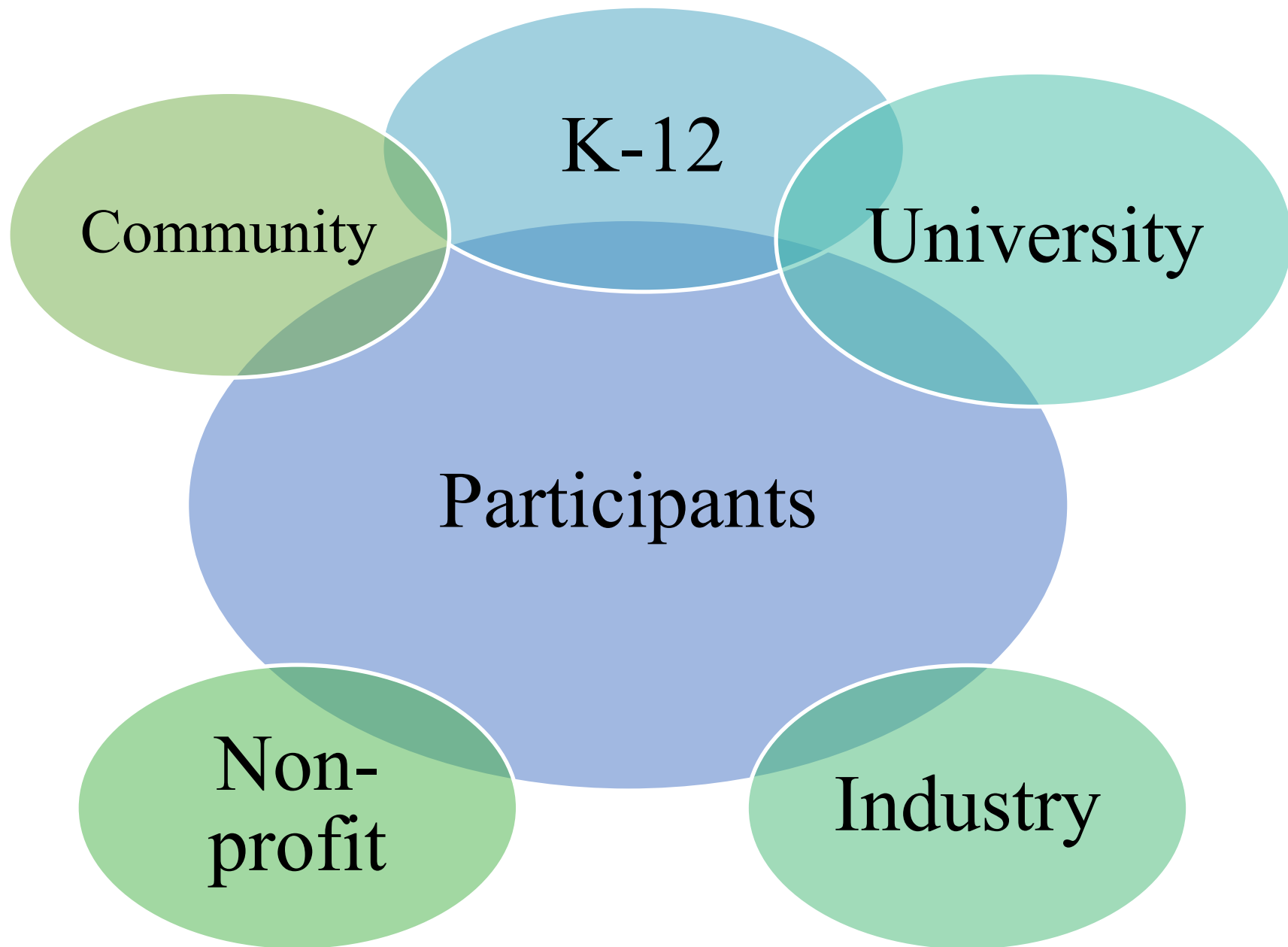
CENTRAL VALLEY Youth Transportation Challenge

The Central Valley Transportation Challenge (CVTC) aimed to provide underserved minority students

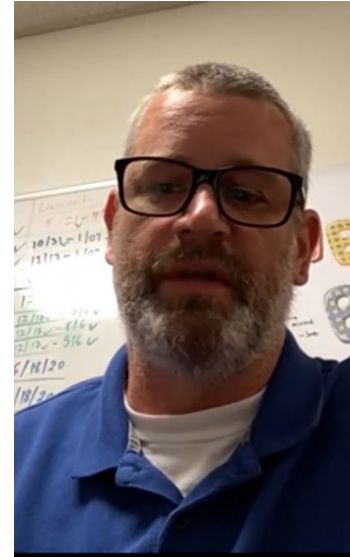
primarily from rural areas

with high quality transportation related educational experiences,

so that they learned about transportation related topics and become more aware of transportation related careers opportunities.



Engineering Students



- Arun Selvamani
- Subhadip Sarkar
- Utsav Shah
- David Ryman

CENTRAL VALLEY Youth Transportation Challenge

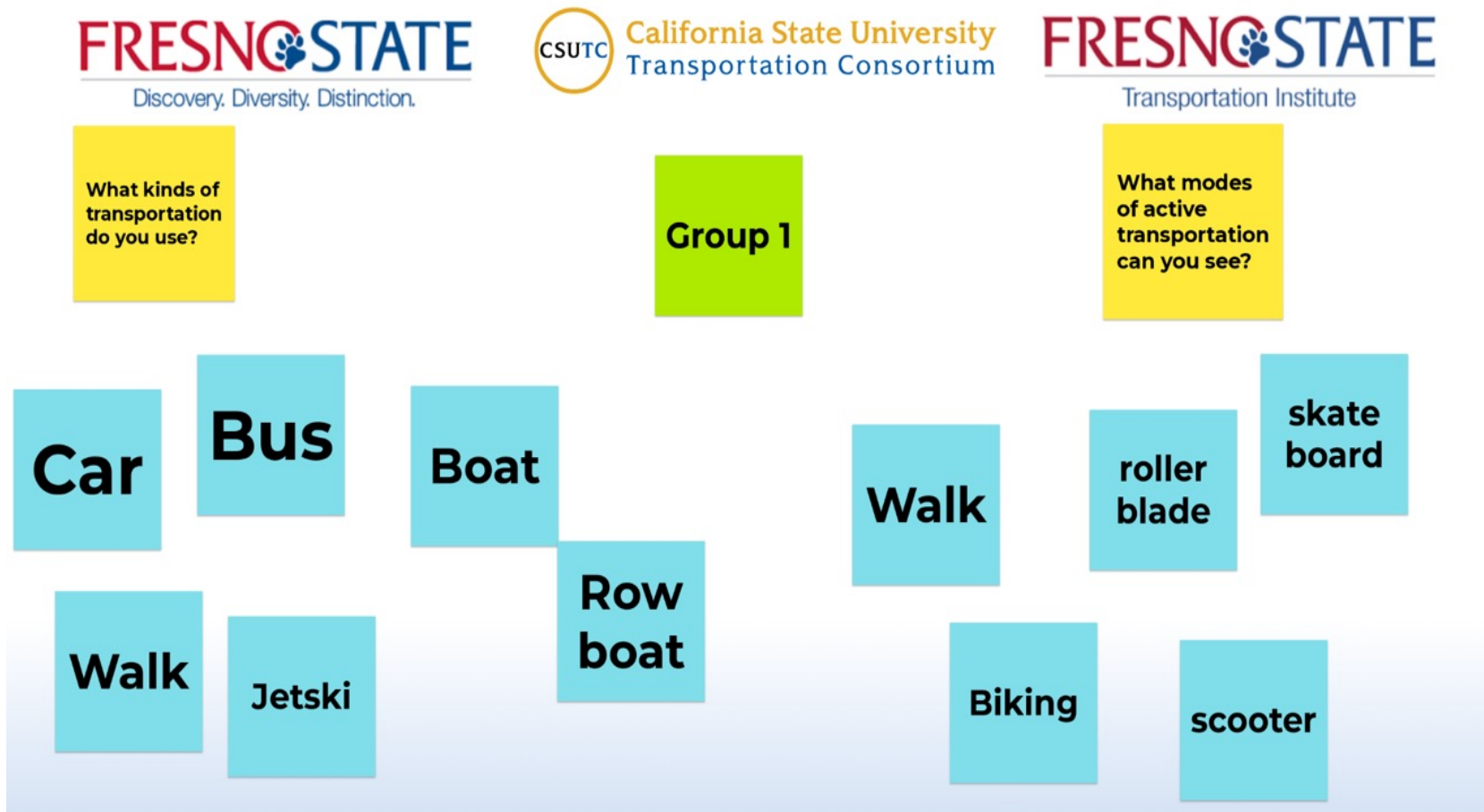
Challenge: How can we make biking to school safer?

Sample Schedule for the Challenge

Session	Activity	
Session 1	Engineers present overview of various modes of transportation	
Session 2	Students identify their school on google maps and their house, identify different modes of transportation for getting to school	
Session 3	Students focus on their on ways of getting to school	
Session 4	Engineers explore with students what safe and unsafe bike lanes look like	
Session 5	Students do a bike safety audit of their way to school	
Session 6	Students do a bike safety audit of the surroundings of their school	
Session 7	Students design a model to improve the surroundings of their school in regards to bike safety	
Session 8	Students prepare showcase of their school and present record video	

Table 6. Gloria sample schedule

Session 1



A collage of various transportation modes. It includes images of a donkey, a camel, a horse, a pigeon, a bicycle, a boat, a bus, a classic car, a motorcycle, a go-kart, a golf cart, a car, a jet, a rocket, a person hiking, a person running, a person jumping, and a person on a pogo stick. There are also logos for 'NO STATE' and 'Group 3'. The text 'What modes of transportation do you use?' is written on a yellow background. The text 'Can we categorize the modes of transportation?' is written on a black background. The text 'er' is written on a white background. The text '4' is written on a white background. The text 'messenger pigeon' is written on a yellow background.

Can we categorize the modes of transportation?

Session 3 Biking from Home to School

The image shows a Google Maps interface on a web browser. The browser's address bar displays the URL: `google.com/maps/dir/Blue+Oak+Academy,+Road+148,+Visalia,+CA/1252+E+Chestnut+Ct,+Visalia,+CA+93292/@36.3027536,-119.278575...`. The map shows a route from 1252 E Chestnut Ct, Visalia, CA 93292 to Blue Oak Academy, 28050 Rd 148, Visalia, CA. The route is marked with a blue line and includes a segment labeled "via Ave 280/E Caldwell Ave" with a 4 min, 2.4 miles estimate. Another segment is labeled "via Ave 280/E Caldwell Ave and E K Ave" with a 5 min, 2.9 miles estimate. The total route is 12 min, 12 miles. The sidebar on the left shows the starting point, the destination, and the route options. The right side of the image shows a video call interface with four participants: Christian @Wandeler, Aven West :, Mrs. Cazarez, and iker.

Google Maps interface showing a route from 1252 E Chestnut Ct, Visalia, CA 93292 to Blue Oak Academy, 28050 Rd 148, Visalia, CA. The route is marked with a blue line and includes a segment labeled "via Ave 280/E Caldwell Ave" with a 4 min, 2.4 miles estimate. Another segment is labeled "via Ave 280/E Caldwell Ave and E K Ave" with a 5 min, 2.9 miles estimate. The total route is 12 min, 12 miles.

Participants in the video call:

- Christian @Wandeler
- Aven West :)
- Mrs. Cazarez
- iker

Session 4: Advantages and disadvantages of biking to school



What are some of the good things about riding a bike to school?

What are some challenges about riding a bike to school?

You get exercise

you have know the way to school to ride a bike

you can ride a bike to get fresh air

bikes have dont have gas

you could fall off your bike

You got to work hard so to work the bike

you d not need a lis ins to drive

getting lots of exercise and it's good for your body

you can ride to get fast food



i don't know the way or get lost



bikes are better for the environment because they are good for your body and they don't leave any chemicals that could hurt the air and auction that people breathe

A skateboard

bikes dose not need gas



you could also break your bone

Session 5: Learning to see safe or unsafe biking environments.



BIKE SAFETY

What does **safe** look like?

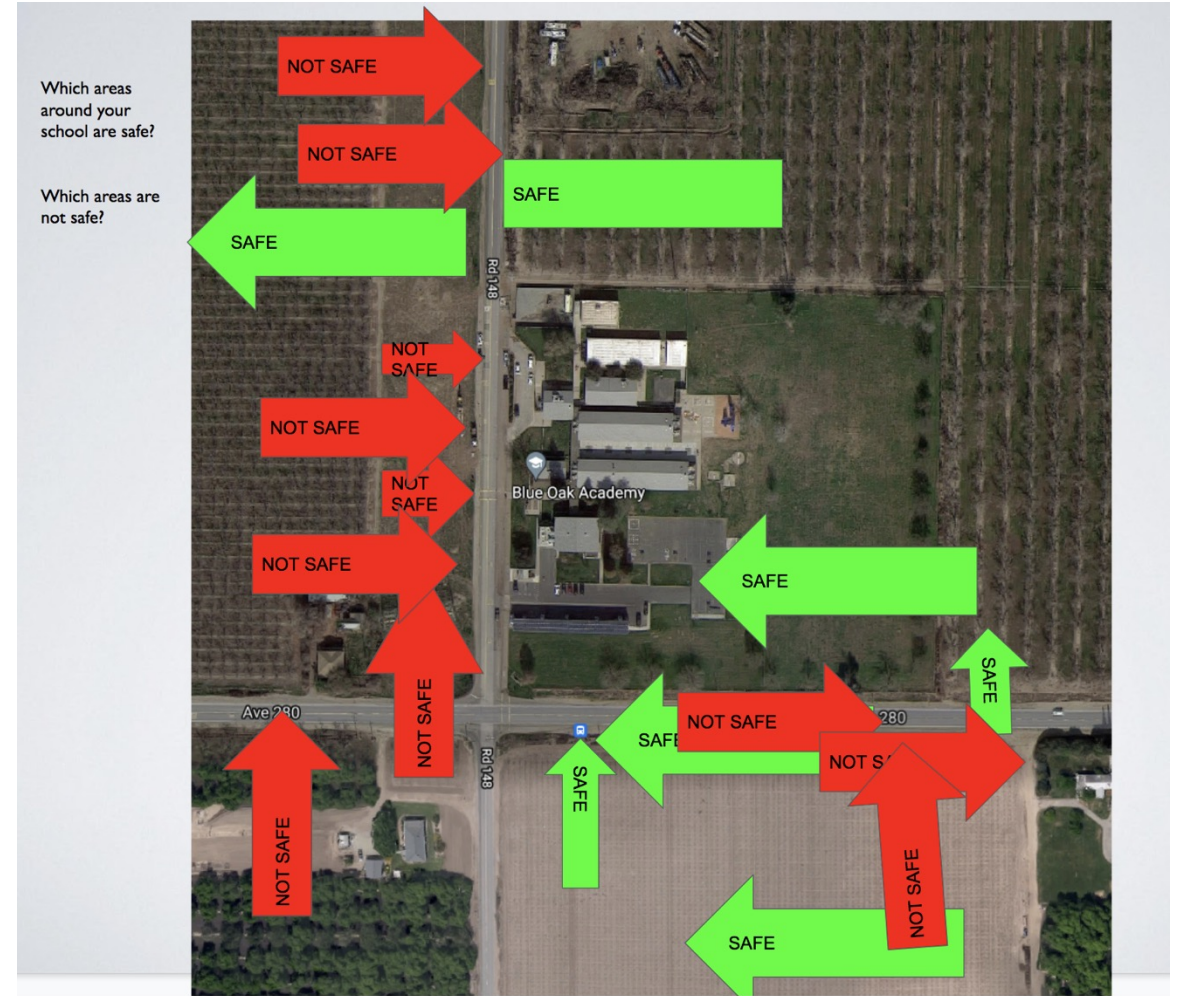


Session 6: Conducting a virtual bike to school safety audit.

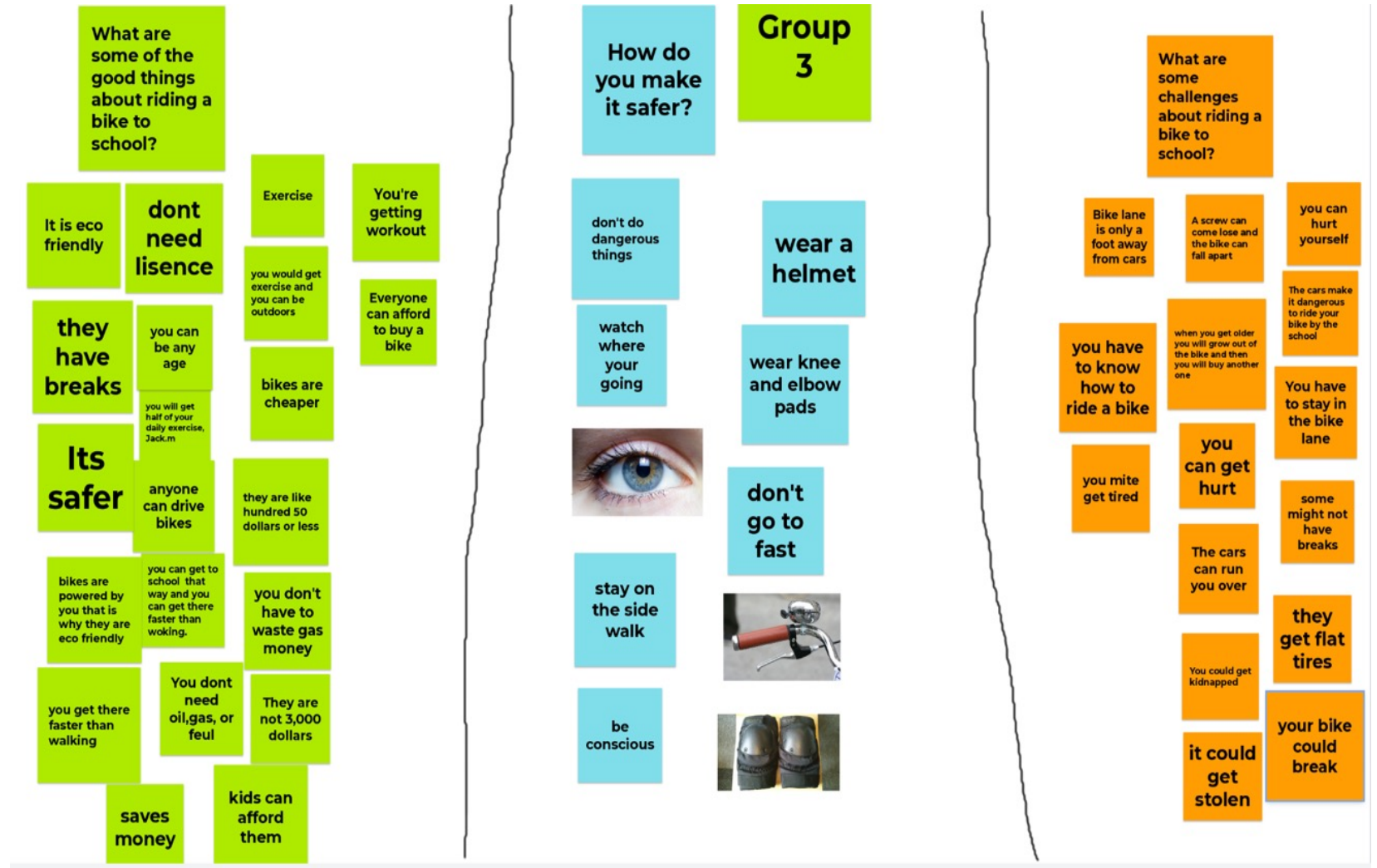
Bike Audit Investigation!

<p>Step 1</p> <p>Find BOA on Google Maps Address: 28050 Road 148, Visalia, CA</p>	<p>Step 2</p> <p>Try your own home address on Google Maps</p>
<p>Step 3</p> <p></p> <p>Drop the little yellow guy at a starting point!</p>	<p>Step 4</p> <p>Use this tool to VIRTUALLY travel from your home to our school!</p>
<p>Step 5</p> <p>Take a screenshot if you can! What looks safe or not so safe on your bike ride to school?</p>	<p>capture your entire screen on Chromebook</p>  <p>650 x 365</p>

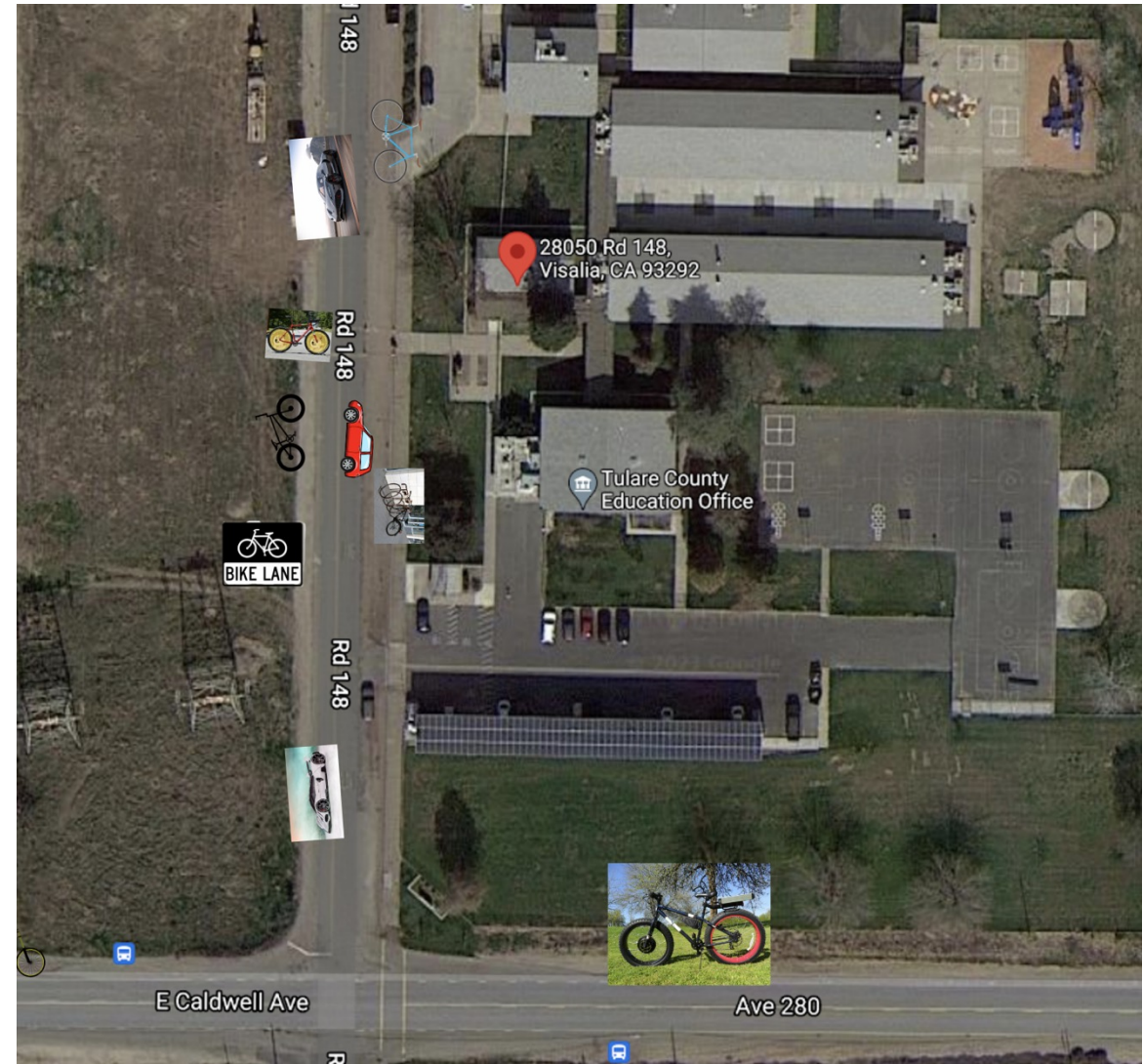
Session 7: Learning to see safe or unsafe biking environments around the school.



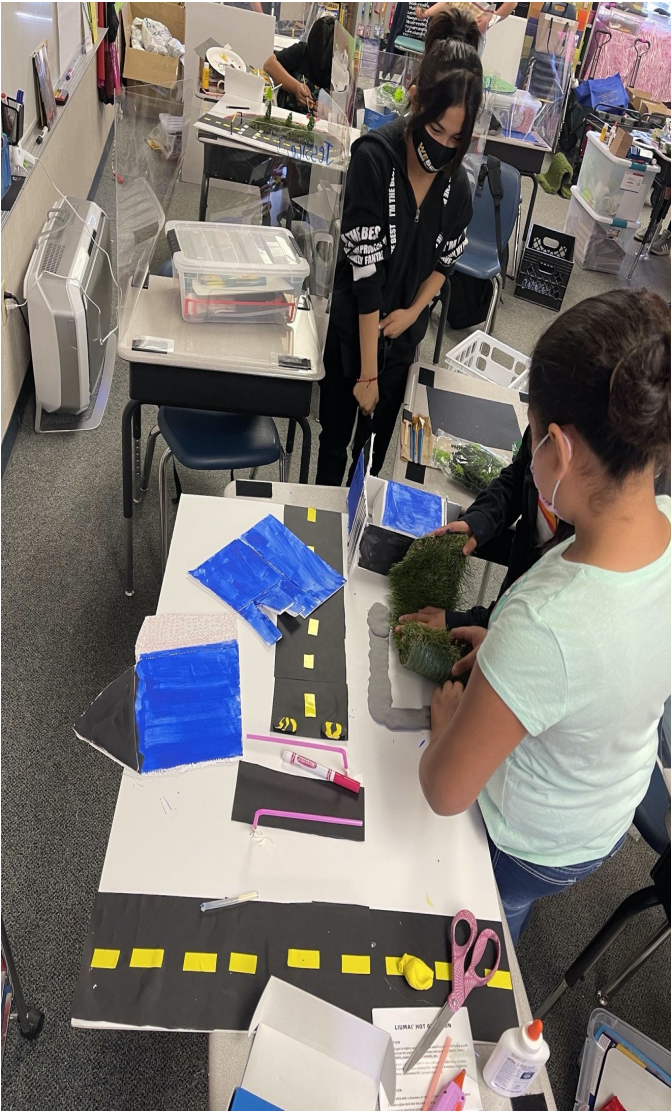
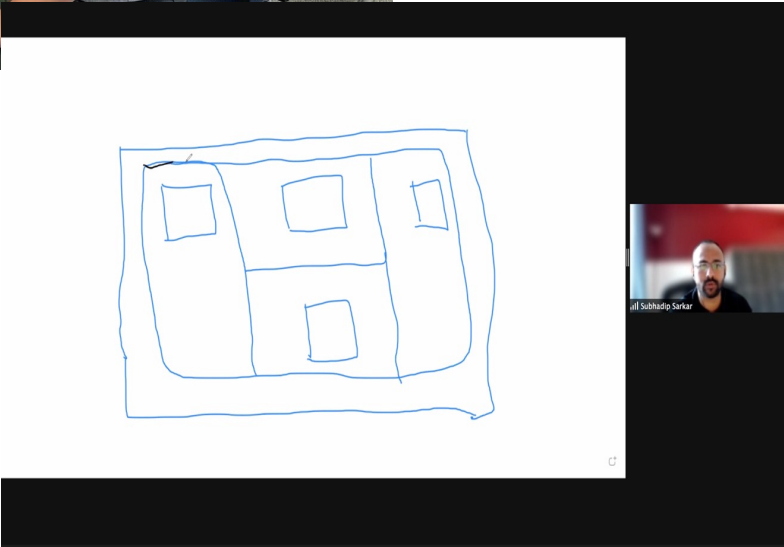
Session 8: Ideation



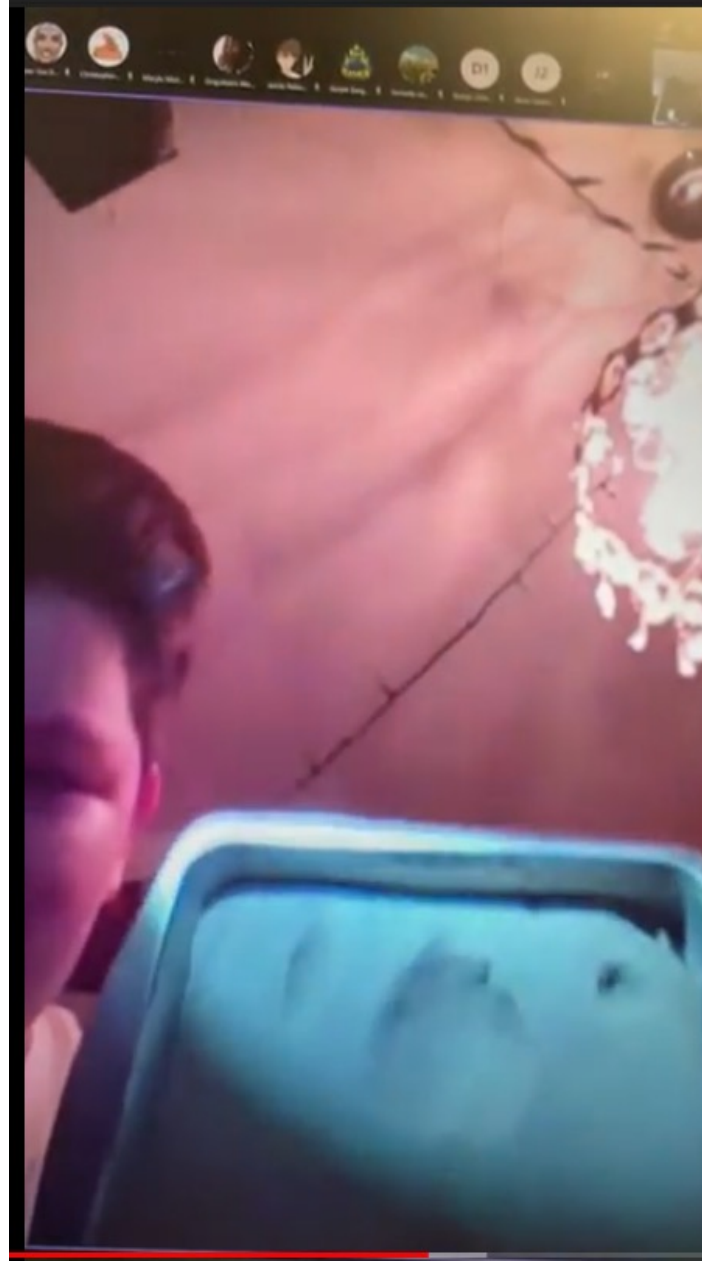
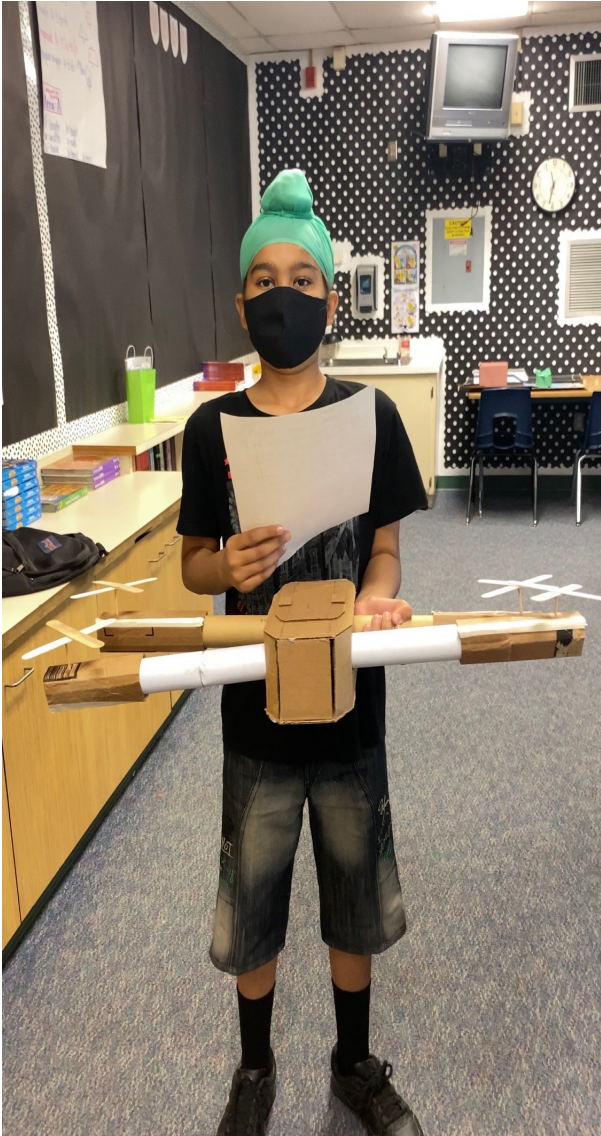
Session 9: Proposed Changes for the School



Students designing safety improvements (e.g., a green island as a buffer to protect the student pick-up zone).



Students in school and from home demonstrating their prototypes.



CSU Transportation education Hub



CSU Transportation Education

The online transportation resource repository is a collection of lesson plans for single lessons or lesson sequences guiding students through the Transportation Challenge. This project was supported by the California State University Transportation Consortium.



Careers
(1)



Challenges
(1)



CTE Challenge



Future
(3)



Introduction
(3)



K-2
Challenges
(10)



Literacy
Challenge
(7)



Maker Space
(7)



Sustainability
(2)



Transportation
(1)

CHALLENGES

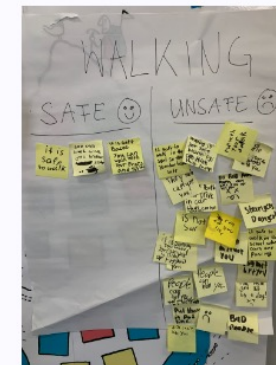
Walking to School Challenge

Category: Challenges ♥ 0 Lesson Set

Duration: 45 Minute(s)
Grade(s): K - 12th
Number of Students: 20
Enrichment Components: STEAM, Transportation

Description

The walking to school safely challenge is asking: How might we make walking to school safer? This challenge takes 4-6 lessons and guides students through a problem-based learning experience.



Objective

The objectives are - students become more aware of walking safety - students become more aware of different modes of transportation - students become more aware of transportation-related careers - students develop a sense of agency - students develop a sense of civic engagement

Quality Standard

LESSON PLAN CREATED BY:



Christian Wandeler

FSTI Transportation Institute

Christian Wandeler

[VIEW ALL LESSON PLANS](#)

Related Activities

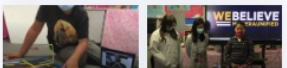


Transportation
Challenge-
Lesson 1
6th

Students will focus on the transportation challenges in the Central Valley and will be asked to brainstorm, collaborate, and share the various ways we can address these problems in our local area.

Transportation
Challenge
Lesson 2
6th

Students will focus on the transportation challenges in the Central Valley and will be asked to brainstorm, collaborate, and share the various ways we can address these problems in our local area.



Transportation
Challenge
Lesson 4 BONUS
Extension
6th

Students will focus on the transportation challenges in the Central Valley and will be asked to brainstorm, collaborate, and

Transportation
Challenge
Lesson 7
6th

Students will focus on the transportation challenges in the Central Valley and will be asked to brainstorm, collaborate, and

Conclusion

There were 8 key research findings that can be summarized with the following three professional practice recommendations.

- 1. create an agile program that has a solid structural foundation with enough flexibility to be responsive to the needs of the students.
- 2. provide flexible asset-based support, that allows for the experience and expertise of the participating teachers to come through and leverages the existing technology resources.
- 3. Align the transportation outreach with academic standards that the teachers and educational leaders are focused on, so that they value the transportation related content as high-quality educational experiences that support and align with their other efforts.
- Teacher A: “I feel much better about the project. I handle the steps and the university brings the process and content expertise. I learn together with my elementary students.”

Thank you for joining us for:
Advancing Transportation Equity Series

The Central Valley Transportation Challenge

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Learn more about the online Graduate Program in Transportation Management that MTI supports at one of our upcoming information sessions:
<https://transweb.sjsu.edu/education/graduate-events>

Have a suggestion for a webinar topic you'd like to see featured? Email alverina.weinardy@sjsu.edu

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