# **Inspiring Young Minds : Fresno State Transportation Institute K-12 Hands-on Activities**

### Presenter

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# **INTRODUCTION & PURPOSE**

- Transportation is all about being Fast and Convenient
- We are currently witnessing a major Transportation Revolution
- Smart Systems, Electrification, & Autonomous Driving are leading the pack
- Long-run significant impact to other major industries
- The human race needs to adapt to this change
- FSTI wishes to educate and inspire the youth about different upcoming challenges and opportunities that the industry has to offer
- Focused on modern-day Transportation Challenges and possible Technological Solutions
- Lesson Plans are also designed to assist in performing the activities and maximize outreach
- In accordance with California Common Core & **Content Standards of Learning**

## **LITERATURE REVIEW**

- students
- Activities designed to address modern-day challenges locally and globally
- Activities are engaging, interactive, interesting, involves critical thinking, and fun to do
- Initial research was conducted from resources like DiscoverE, ITE, Dream Big, IEEE, ASCE, Measure C, Caltrans, etc.
- requirements
- School, Science Fair/Public Forums
- students & teachers



Dedicated hands-on activities designed for K-12

• More than 100 activities were shortlisted and 8 were finalized, designed, and developed as per

• Various grade levels are: Kindergarten, Lower Elementary, Upper Elementary, Middle School, High • Data Analysis based on the feedback of over 130





# Transportation Institute



Activity Survey for Students (High School)

> was overall satisfied witl this session

The session was helpful fo my self-development

think I was inspired to think o a better future through this

session to my friends in future

I would recommend this

Please choose 3 ke takeaways from this session.

Please provide us overall eedback from this session.

Vhich activity was the mos interesting to you





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Strongly Disagree	Disagree	Agree	Strongly Agree	
DIY Gas Engine	DIY Solar Engine	All of It	None of It	
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# **METHODOLOGY**

- Assessment of activities based on Age, Standards of Learning, Relevance to Local Community, and Cost
- Feedback forms were designed for Pre & Post-Activity
- Continuous development in consultation with educators
- Procurement of various supplies required for performing the activities for all grade levels
- Formatting of Lesson Plans and To-Do Steps for every activity
- Announcement of the activity across the county

# **CONCLUSION**

- Continual developmental based program
- Evaluate each session
- Improvements based on Feedback & Data **Analysis from Students & Teachers**
- Motivate the youth towards Transportation & a Sustainable Future
- Significant improvement & acknowledgment in student thought process from pre to post activity
- Looking forward to a positive change in **Future Transportation**
- Expansion using best practices







