Bridging Gaps in STEM Education through 'Think Like a Scientist' Community Outreach Program

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BACKGROUND

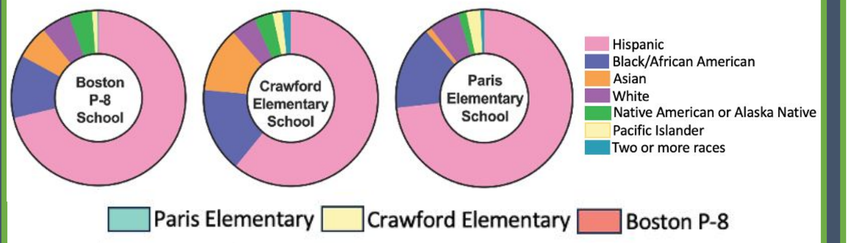
- **Fewer students interested** in science, technology, engineering and mathematics (STEM)
- STEM **important** for **global economy**
- Challenges in STEM include:
  - **Not everyone is equally represented in science**
  - **Retention issues**
  - **Lack of early exposure**, hindering interest later
  - **Removal of science curriculum** in CO schools

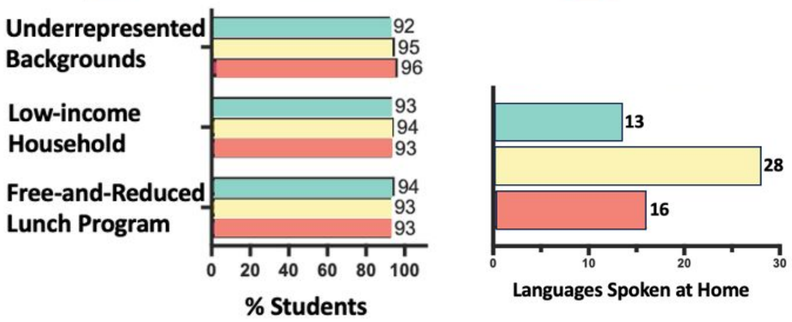
PURPOSE

- Fill **missing STEM gap**
- **Inspire** elementary students into career in STEM
- Foster **active learning** and **critical thinking**
- Provides **diverse examples** of scientists
- Make science **accessible** and **achievable** for all

Learn to 'think like a scientist'

SCHOOL STATISTICS





2022 CMAS Scores	Math Rating	Math Growth	Literacy Rating	Literacy Growth
Crawford	Does not Meet Expectations	Approaching Expectations	Does not meet expectations	Approaching Expectations
Paris	Does not Meet Expectations	Approaching Expectations	Does not Meet Expectations	Does not Meet Expectations
Boston*	Does not Meet Expectations	Insufficient Data	Does not Meet Expectations	Approaching Expectations
2023 CMAS Scores	**Math Rating**	**Math Growth**	**Literacy Rating**	**Literacy Growth**
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WHO WE ARE

CURRICULUM

Week 1: What is science?
Exp. Jelly Bean Taste Test

Week 2: The Scientific Method
Exp. Lemon Volcano

Week 3: Experimental Design
Exp. Crazy Sandwich Recipe

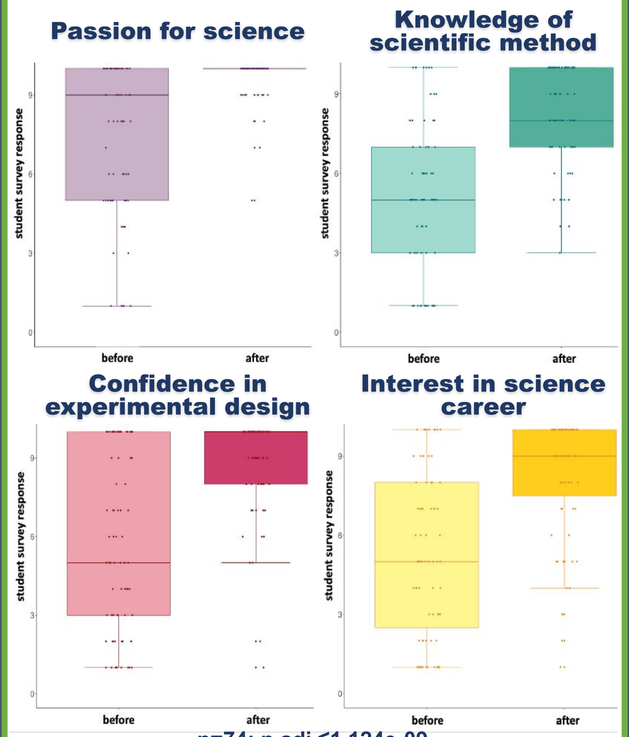
Week 4: Spotting Fake News
Exp. Exploding 'Ninja Star' Sticks

Week 5: Creativity, Collaboration & Communication
Exp. Design a Poster

Week 6: Science Poster Presentations & Celebration

RESULTS

"On a scale of 1-10, how would you rate your confidence and beliefs before and after the program in…"



n=74; p.adj ≤1.124e-09

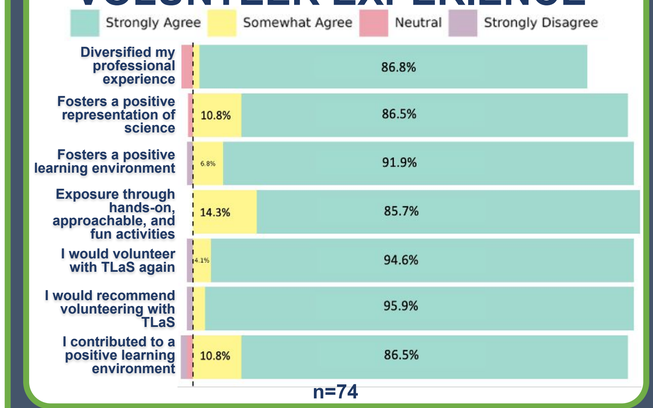
Increased confidence and belief in STEM

"I love that I can take science ideas home with me and share with my family what I learned."

LEARN MORE!

YouTube | Curriculum | Website

VOLUNTEER EXPERIENCE



CONCLUSIONS

- Is a **model** for STEM educational outreach
- **Beneficial experience for all involved**: student participants, teachers, schools, and volunteers
- Increases **equal representation** in STEM
- Sparks **science interest** in elementary students
- Focuses on the **basics of the scientific method –** ask a question, do an experiment and discover the answer

ACKNOWLEDGEMENTS

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