

# The Science of *Science Is Fun*

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**ASU** LeRoy Eyring Center  
for Solid State Science  
Arizona State University

# Overview

- The goal of Science Is Fun (SIF) is to promote STEM to a diverse community - both in and outside of the classroom
- The goal of this project is to expand SIF to help schools meet Next Generation Scientific Standards (NGSS)
- SIF uses university resources as fundamental outreach tools to assist in this goal



# Problems and Solutions

Arizona is ranked 45th in education

Arizona – State Highlights 2016		RC   EDUCATION WEEK RESEARCH CENTER		
QUALITY COUNTS 2016 GRADING SUMMARY				
<b>OVERALL GRADE</b> <small>A state's overall grade is the average of the scores for the three graded categories.</small> <b>Arizona: D+</b> Rank: 45 Nation: C Online extra <small>Calculate your own Quality Counts grades at <a href="http://www.edweek.org/go/qc16calculate">http://www.edweek.org/go/qc16calculate</a></small>		Arizona		How did the average state score?
		grade	rank	
	<b>Chance for success (2016)</b>	<b>C</b>	<b>43</b>	<b>C+</b>
	<b>School finance (2016)</b>	<b>D-</b>	<b>48</b>	<b>C</b>
<b>K-12 achievement (2016)</b>	<b>C-</b>	<b>26</b>	<b>C-</b>	

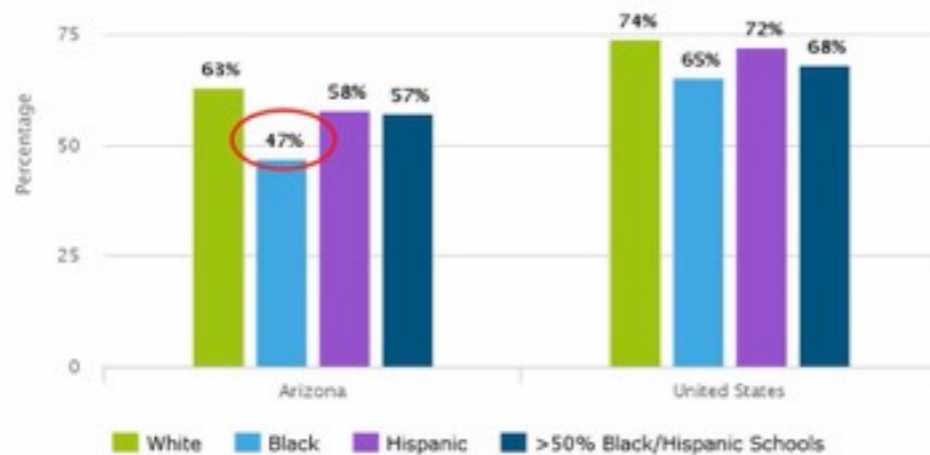
# Problems and Solutions

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Science teachers lack resources they need in the classrooms

## AZ lags in teaching resources

8th graders whose science teachers say they have all or Most of the resources they need, by race/ethnicity, 2011

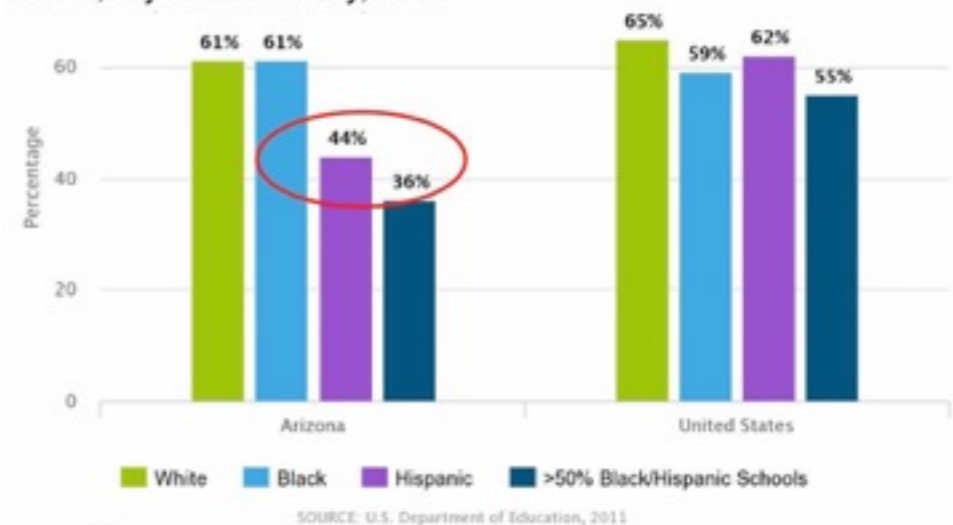


Arizona rank: 46

{CHANGE THE EQUATION}

## AZ lags in science supplies

8th graders whose schools report that supplies or equipment for science labs are available "to a large extent," by race/ethnicity, 2011



Arizona rank:  
39th

{CHANGE THE EQUATION}

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Science teachers lack resources they need in the classrooms

Arizona is a Lead State Partner with the NGSS



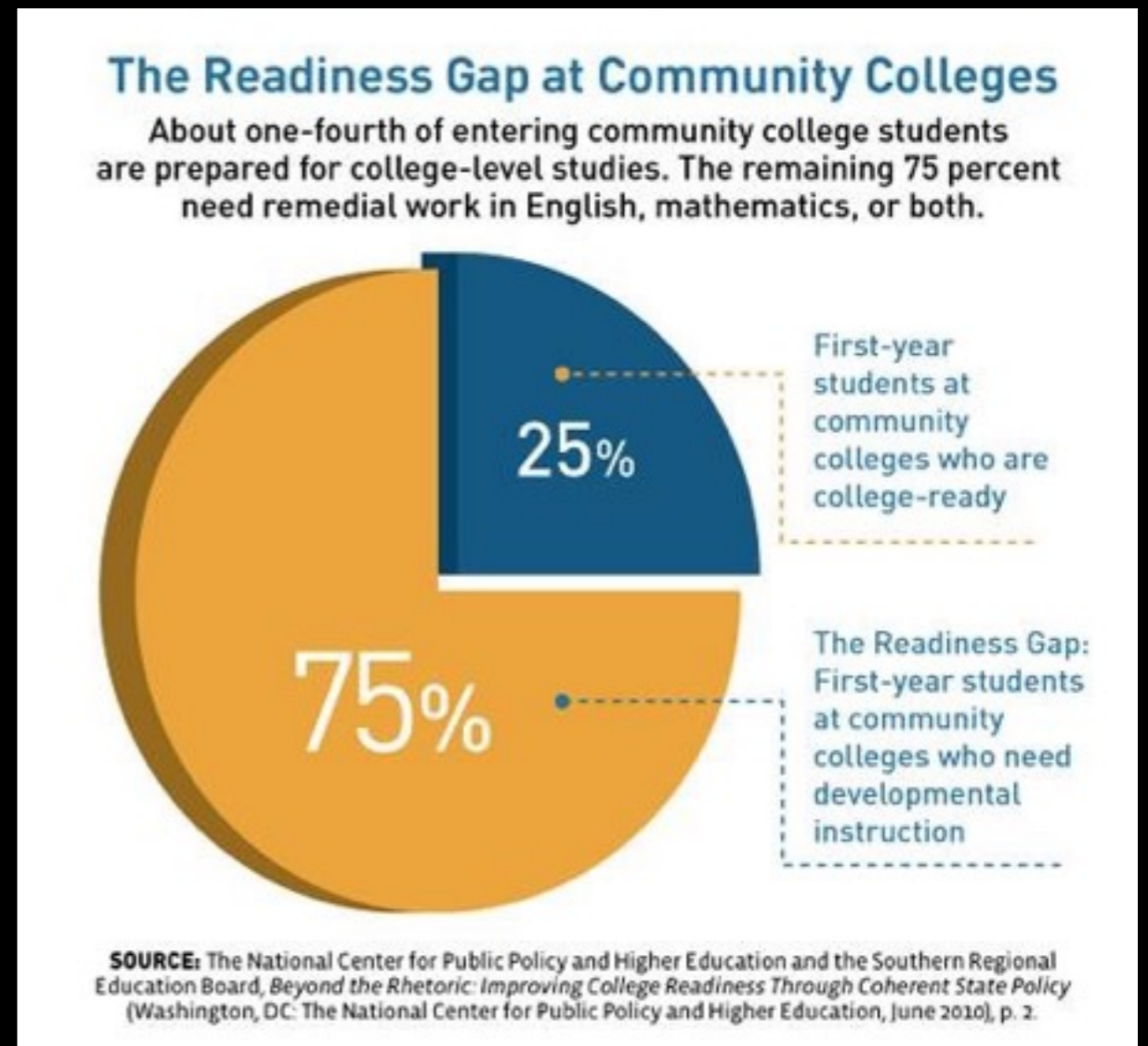
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SIF has been underutilized as a source of intervention in recent years



# Methods

- Expanding internet presence and content to make our community accessible
- Community outreach events
- Visits to middle schools around the valley
- Hosting tours of the LECSS facilities





# Methods

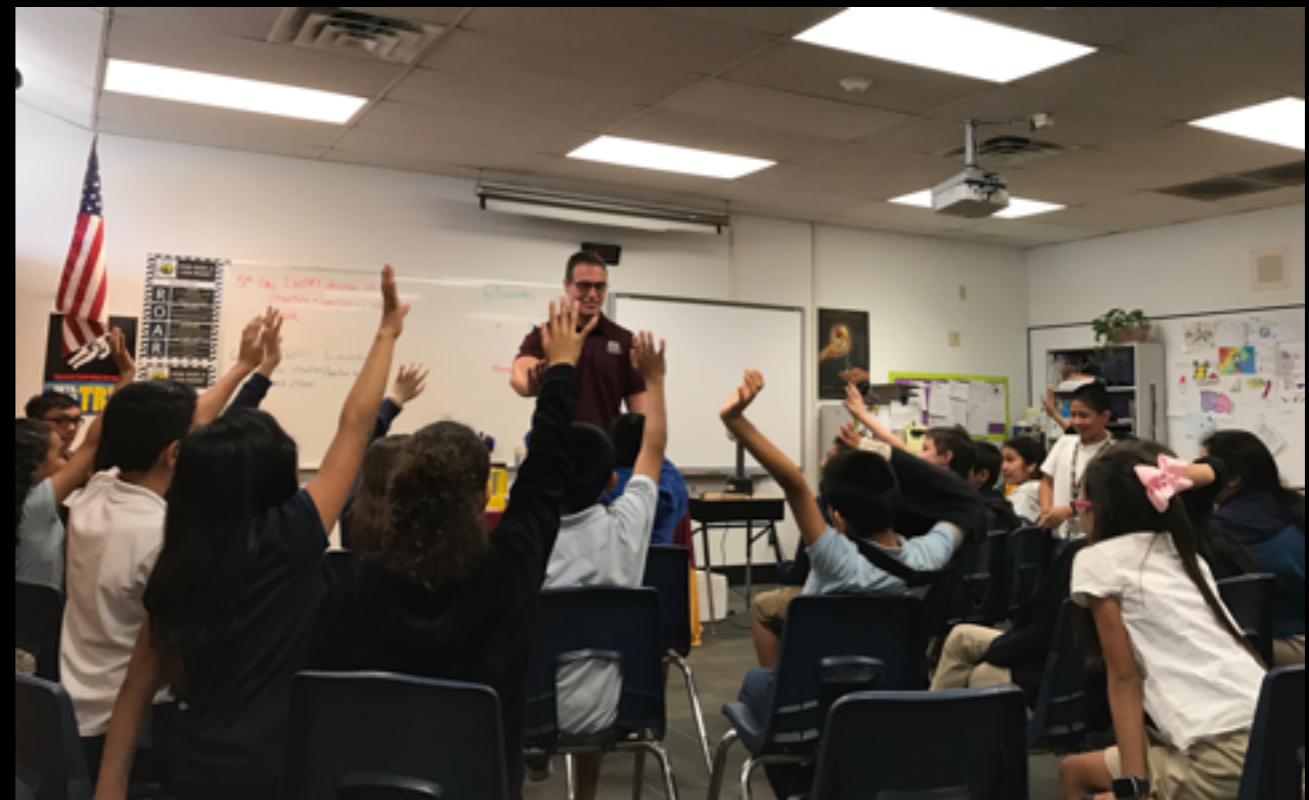
- Roadshow formula:
  1. Simple question
  2. Demonstration
  3. Explanation
  4. Tougher question
  5. Demonstrative answer
  6. Further challenge



- Each demonstration focuses around a key word or phrase associated with the scientific process.

# Results

- Each roadshow ends in a verbal survey with questions that are answered by the key word or phrase learned during the presentation
- Participation is rewarded with SIF/ ASU gear (i.e. lanyards, stickers, pens, etc.)



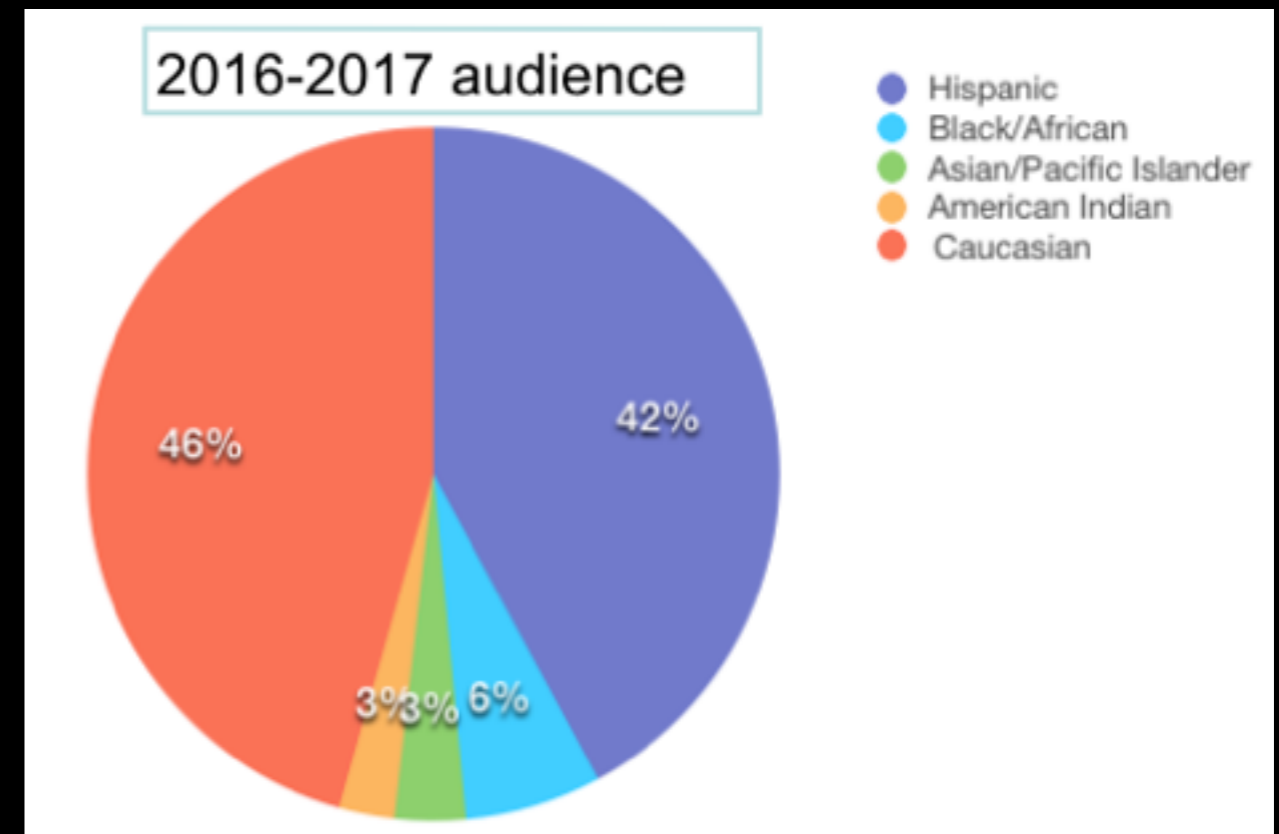
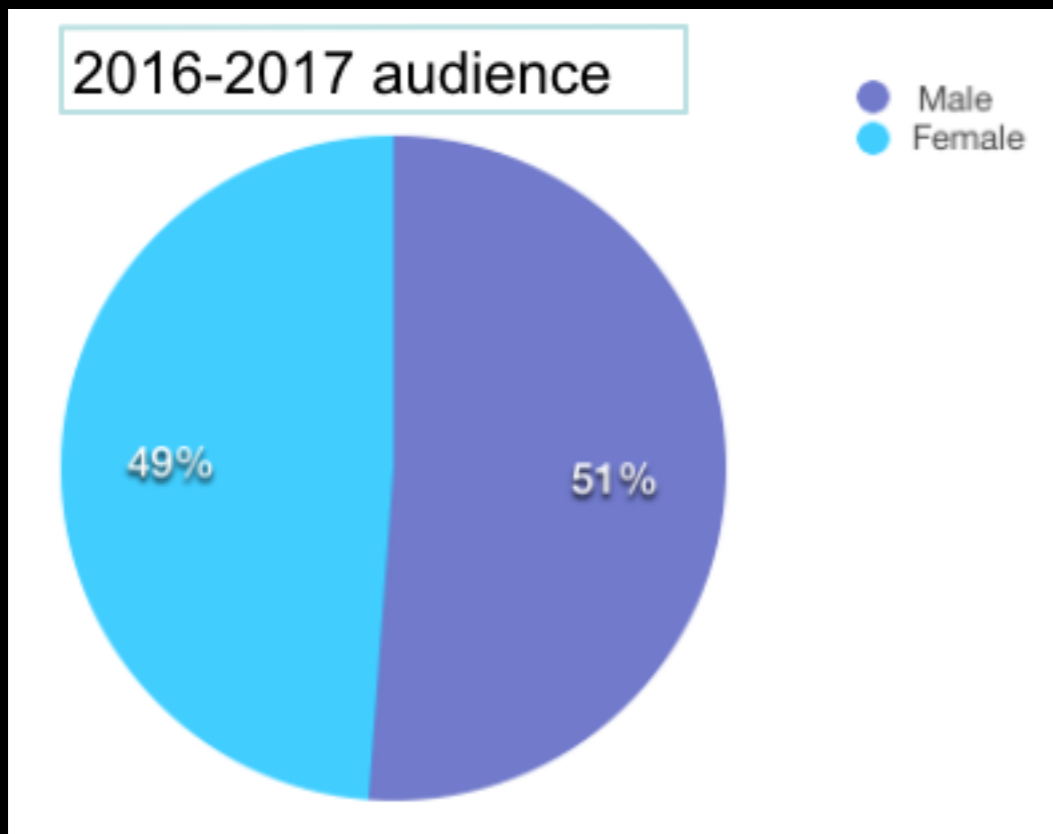
# Results

- SIF has more than doubled in membership as well as community involvement from the 2015-16 to the 2016-17 school year
- Special projects with local teachers and schools are currently underway



# Results

- Data regarding our audience is collected from schools we visit and is used to qualitatively evaluate SIF's impact
- Future research will include best assessment measures quantitatively



# Acknowledgements

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Thank You