

# EPO UPDATE

STUC – May 2014

Hussein Jirdeh

# STATUS OF SMD EPO

- For FY14 SMD projects are directed to continue all EPO activities in the approved EPO plans with the Missions paying for EPO
- Carry over funds from FY13 reserves are being used for approved FY14 EPO activities
- FY15 President's Budget Proposal has restored 1/3 of the EPO funds for SMD
- It also states that the funds should be competed

## IMPACT

- Not enough funds to sustain current EPO programs
- The proposal may move EPO funds from the Missions to HQ
- It is not clear what the “compete” statement in the OMB language means
- Questions still remain about “Outreach” vs. “Education”

# FY15 House Appropriations Committee report language on NASA EPO

- Provides an additional \$15M above the President's Budget Proposal, but does not match last year's level of \$42M.
- Proportionally reallocates funds among the SMD divisions, resulting in a dedicated budget line for each division's own EPO activities.
- Calls for competition among projects for the best use of funds but focus that competition among projects that are more easily compared to one another.

# NEWS AND PUBLIC AFFAIRS

## News of Hubble's discoveries

For 2014:

- 18 News Releases
- 2,900 online articles with total circulation ~ **2 billion\***
- The average news release is exposed to **118 million potential readers**

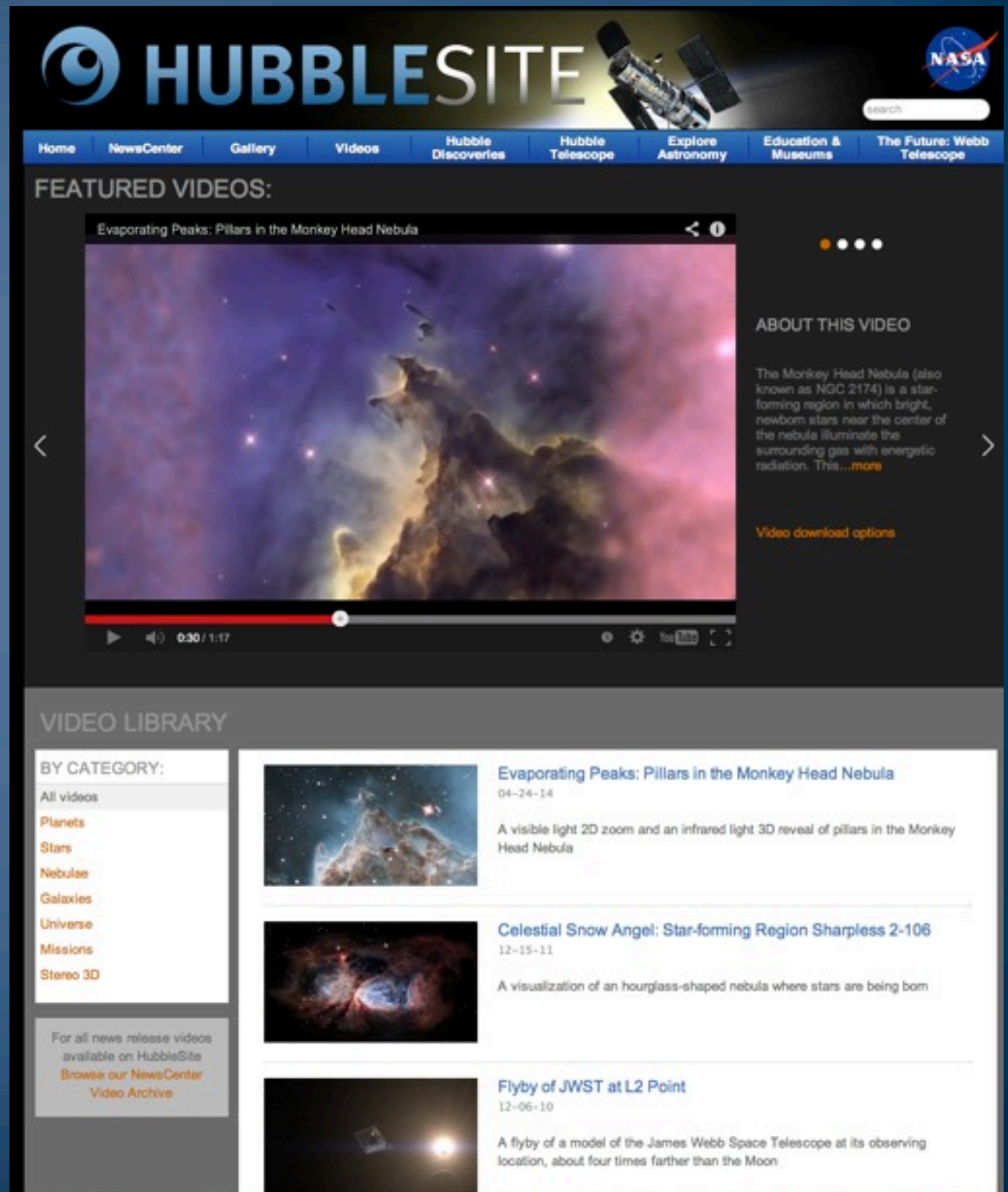


\* Meltwater News



# NEW HUBBLESITE “VIDEOS” SECTION: ASTRONOMY VISUALIZATIONS

- A new video gallery added to HubbleSite
- Best of our astronomy visualizations produced for news, outreach, and education.
- Videos are available in full HD resolution (1920x1080) as well as stereo 3-D formats.
- YouTube views on the HubbleSite channel increased five times from the previous month

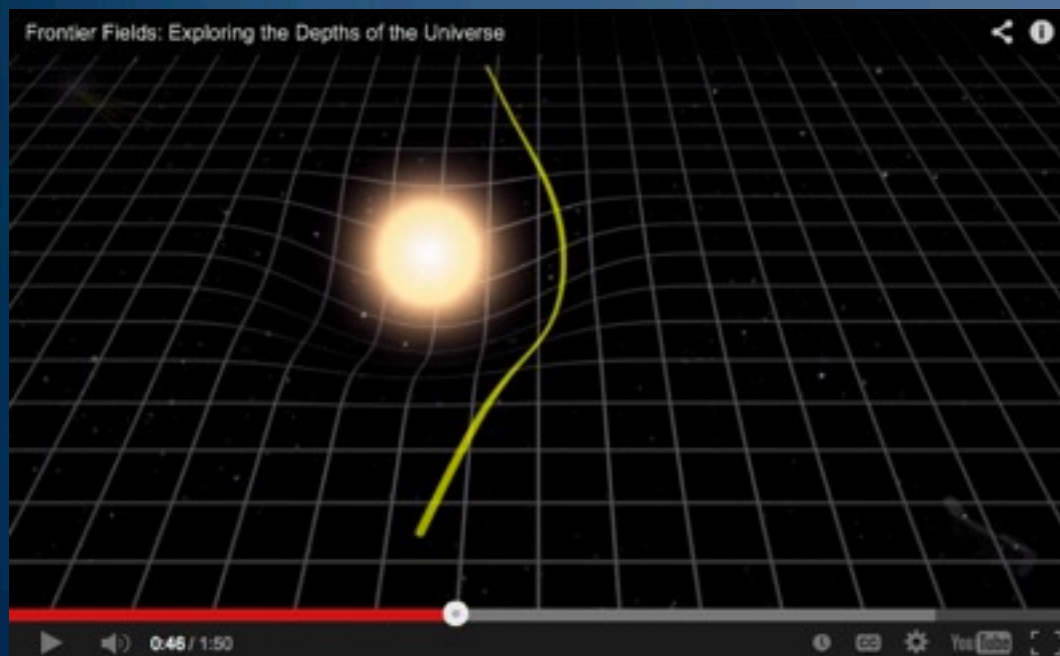


# FRONTIER FIELDS PUBLIC OUTREACH

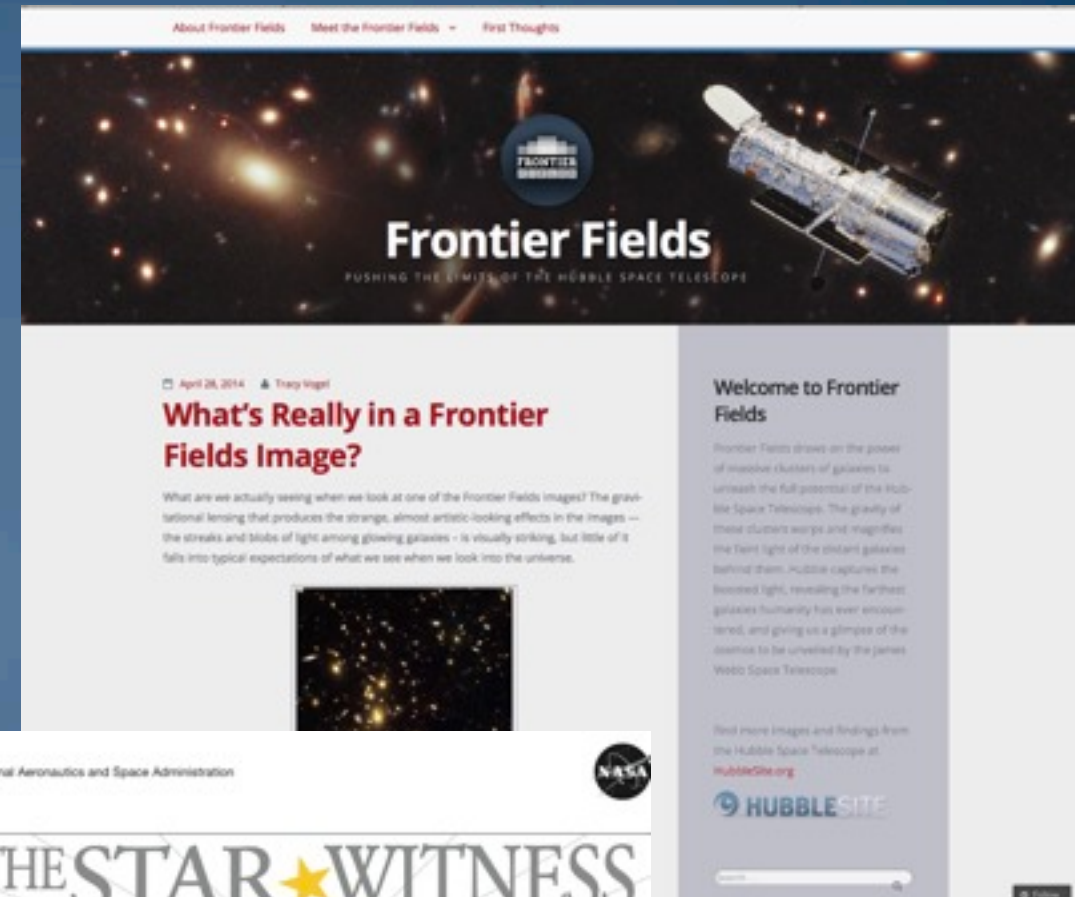
Build public interest for the Frontier Fields Project.



Google Hangouts



A two minute video



Blog



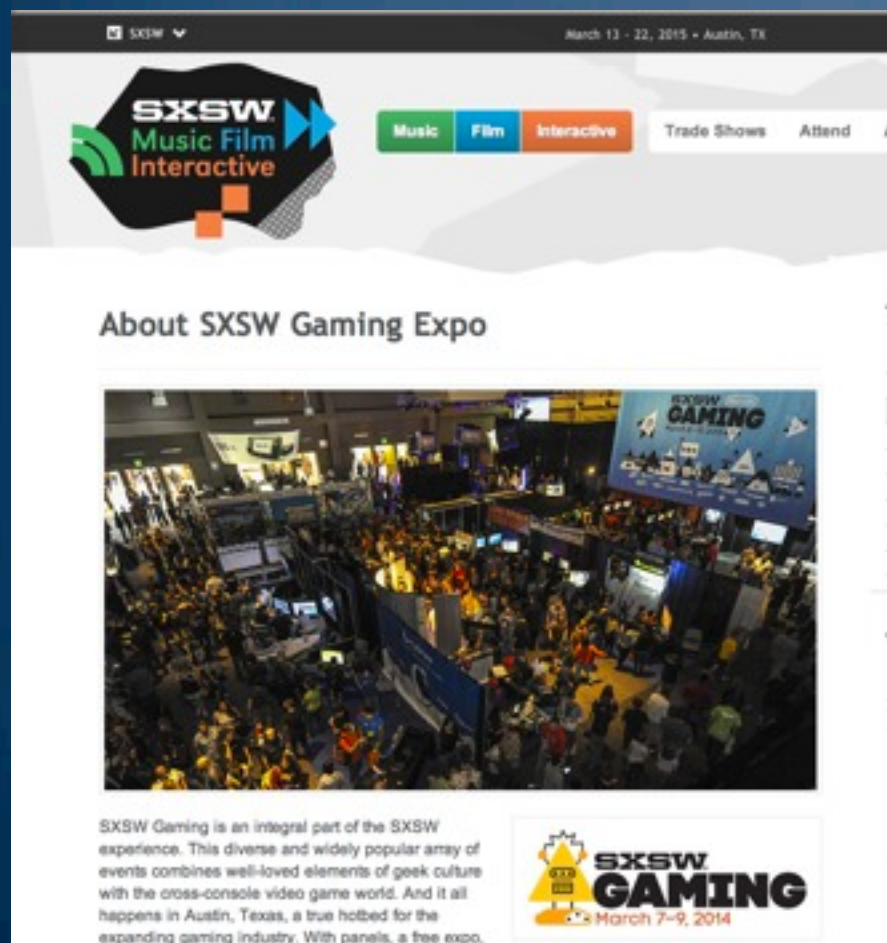
Education Products



# Outreach



Attendance over 400,000



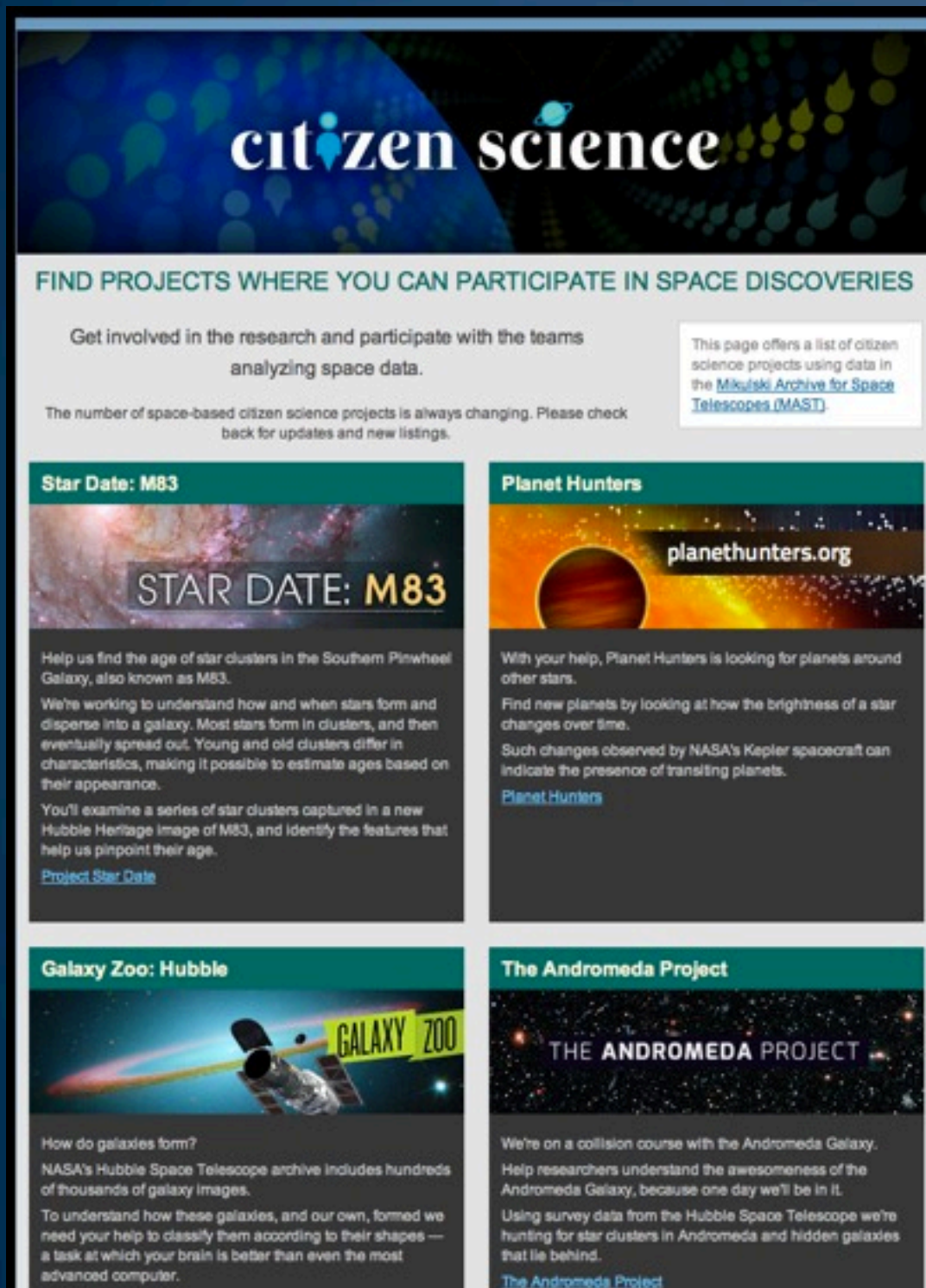
Attendance over 3 days ~ 40,000



# Outreach

## STAR DATE: M83

OPO designed and built a citizen science project entitled “Star Date: M83” in partnership with Zooniverse.



The screenshot shows the Citizen Science website with a dark blue header featuring the 'citizen science' logo. Below the header, a section titled 'FIND PROJECTS WHERE YOU CAN PARTICIPATE IN SPACE DISCOVERIES' encourages users to get involved in research and participate with teams analyzing space data. It notes that the number of space-based citizen science projects is always changing and advises users to check back for updates and new listings. A small box on the right mentions that the page offers a list of citizen science projects using data in the [Mikulski Archive for Space Telescopes \(MAST\)](#).

Four project cards are displayed in a grid:

- Star Date: M83**: Help us find the age of star clusters in the Southern Pinwheel Galaxy, also known as M83. We're working to understand how and when stars form and disperse into a galaxy. Most stars form in clusters, and then eventually spread out. Young and old clusters differ in characteristics, making it possible to estimate ages based on their appearance. You'll examine a series of star clusters captured in a new Hubble Heritage image of M83, and identify the features that help us pinpoint their age. [Project Star Date](#)
- Planet Hunters**: With your help, Planet Hunters is looking for planets around other stars. Find new planets by looking at how the brightness of a star changes over time. Such changes observed by NASA's Kepler spacecraft can indicate the presence of transiting planets. [Planet Hunters](#)
- Galaxy Zoo: Hubble**: How do galaxies form? NASA's Hubble Space Telescope archive includes hundreds of thousands of galaxy images. To understand how these galaxies, and our own, formed we need your help to classify them according to their shapes — a task at which your brain is better than even the most advanced computer.
- The Andromeda Project**: We're on a collision course with the Andromeda Galaxy. Help researchers understand the awesomeness of the Andromeda Galaxy, because one day we'll be in it. Using survey data from the Hubble Space Telescope we're hunting for star clusters in Andromeda and hidden galaxies that lie behind. [The Andromeda Project](#)



The screenshot shows the 'STAR DATE: M83' project page. At the top, a yellow banner states: 'The data collecting phase of Star Date: M83 is officially over. You can continue to use the interface, but the data will not be used for the papers we are currently working on. Thanks to all our users!'. Below this, the title 'STAR DATE: M83' is followed by the subtitle 'Uncovering the ages of star clusters in the Southern Pinwheel Galaxy'. A paragraph explains that most of the billions of stars that reside in galaxies start their lives grouped together into clusters. In this activity, users will pair their discerning eye with Hubble's detailed images to identify the ages of M83's many star clusters. This info helps us learn how star clusters are born, evolve and eventually fall apart in spiral galaxies. A large image of the Southern Pinwheel Galaxy (M83) is shown with three circular insets highlighting specific star clusters. A 'Start Here' button is located at the bottom left.

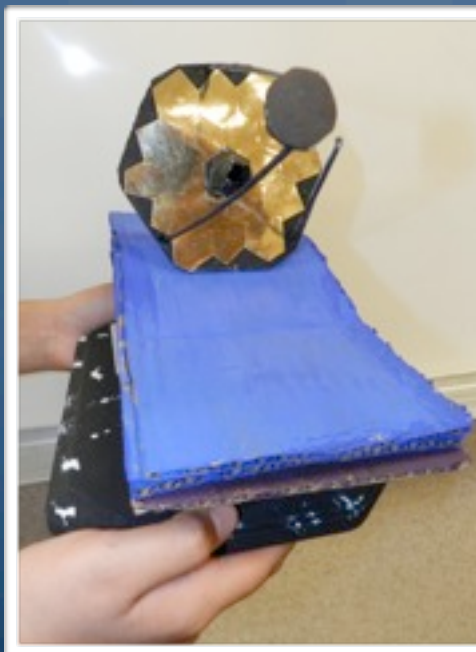
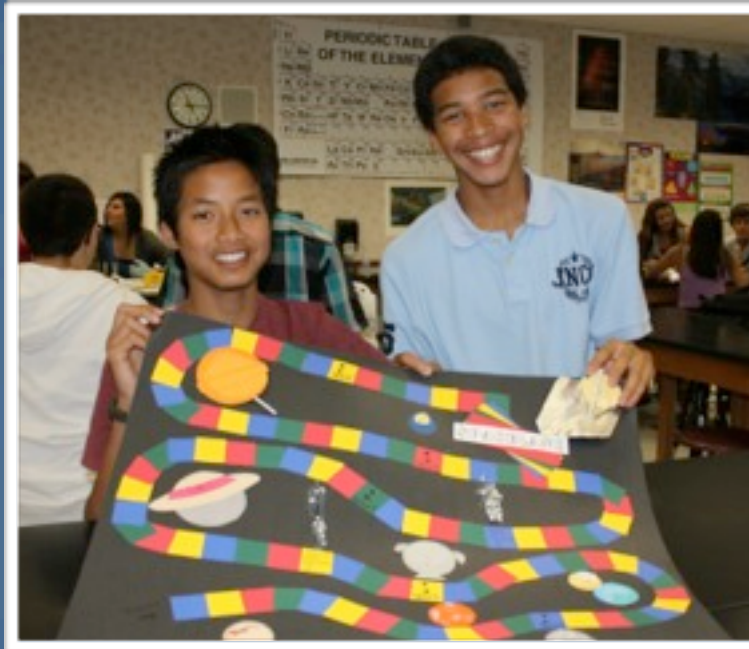






# JWST Inspires

Science Technology Engineering Mathematics





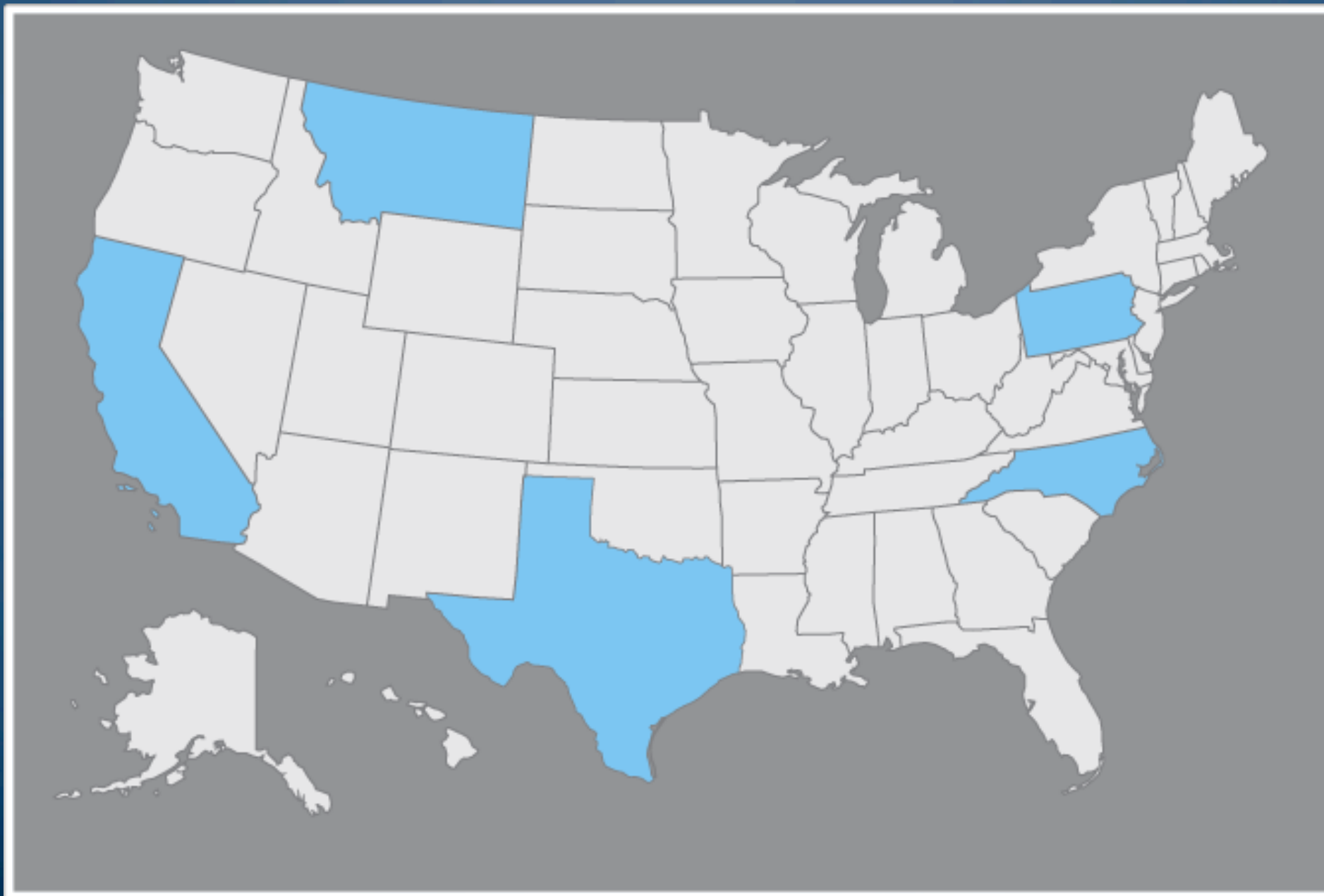
# The Implementation

2011-2012 – pilot project

8 CA schools



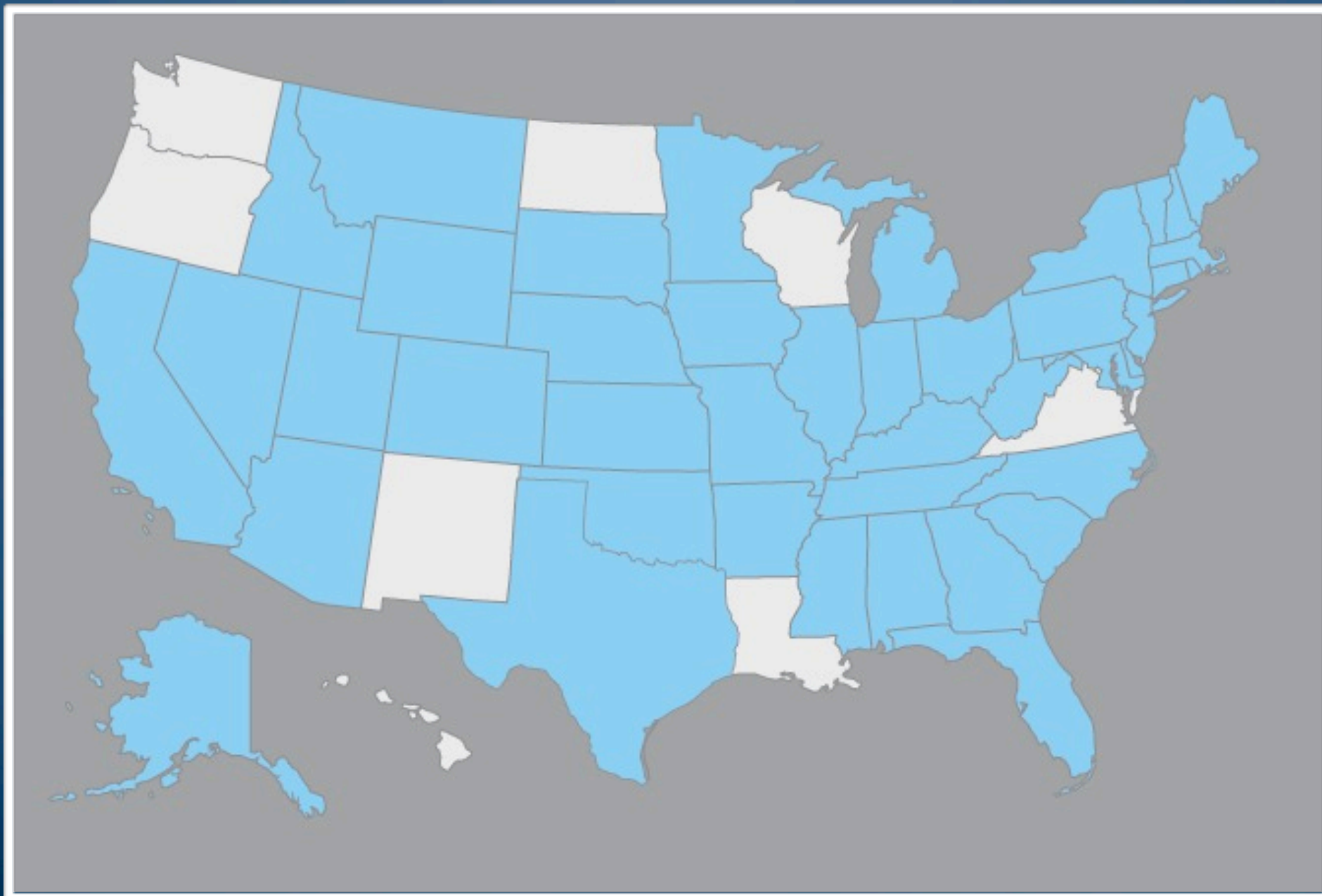
2012-2013 – 12 schools are participating  
CA, PA, NC, TX, and MT





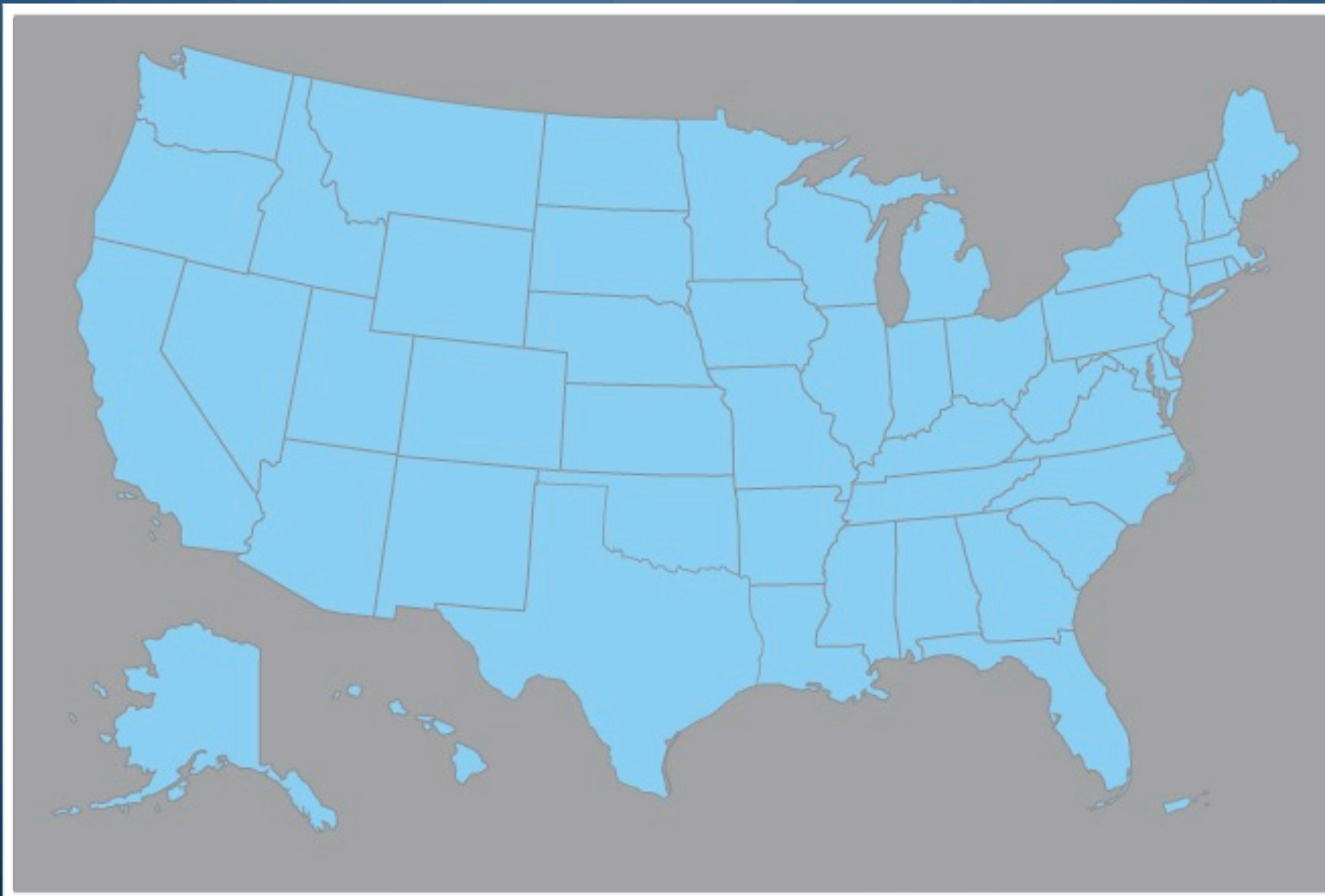
## 2013-2014 – 135 schools are participating

AL (1), AK (1), AZ (3), AR (1), CA (40), CO (1), CT (1), DE (1) DC (1), FL (3), GA (6), ID (2), IL (2), IN, IA (2), KS (1), KY (1), ME (1), MD (10), MA (2), MI (2), MN (2), MS (0), MO (1), MT (2), NE (1), NV (3), NH (3), NJ (1), NY (2), NC (8), OH (1), OK (1), PA (3), RI (1), SC (3), SD (1), TN (4), TX (3), UT (8), VT (3), WV (1), WI (1)



2014-2015 – 248 schools are participating

AL (7), AK (3), AZ (3), AR (10), CA (51), CO (2), CT (2), DE (1) DC (1), FL (8), GA (8), HI, (1) ID (2), IL (3), IN (5), IA (3), KS (1), KY (1), LA (5), ME (1), MD (14), MA (5), MI (2), MN (2), MS (5), MO (1), MT (4), NE (1), NV (3), NH (4), NJ (1), NM (2), NY (25 ), NC (10), ND (3), OH (1), OK (1), OR (2), PA (4), PR (1), RI (1), SC (3), SD (1), TN (4), TX (7), UT (10), VA (1), VT (3), WA (2), WV (1), WI (1), WY (3)





JWST STEM Innovation Project  
Bryant Middle School  
Bryant, Arkansas

Student Quote: “...we actually get to use our AutoCad program to **design the telescope like the professionals.**”  
– Erin Chappel

Educator Quote: “...specific parameters were in place incorporating a **real life project.** The students exceeded my expectations and created projects far beyond eighth grade capabilities.” – Mr. Jason Price