



WWT Ambassadors: WorldWide Telescope For Interactive Learning

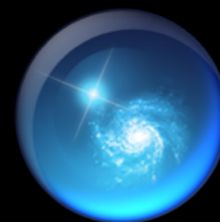
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In this short talk, we will describe the results of a Pilot Study where volunteer Ambassadors helped sixth-graders use WWT during their six-week Astronomy unit. The results of the study compare learning outcomes for 80 students who participated in WWT and 80 students who only used traditional learning materials. In the comparison, we find that, after the six-week unit: twice as many “WWT” as “non-WWT” students understand complex three-dimensional orbital relationships; and tremendous gains are seen in student interest in science overall, astronomy in particular, and even in using “real” telescopes.

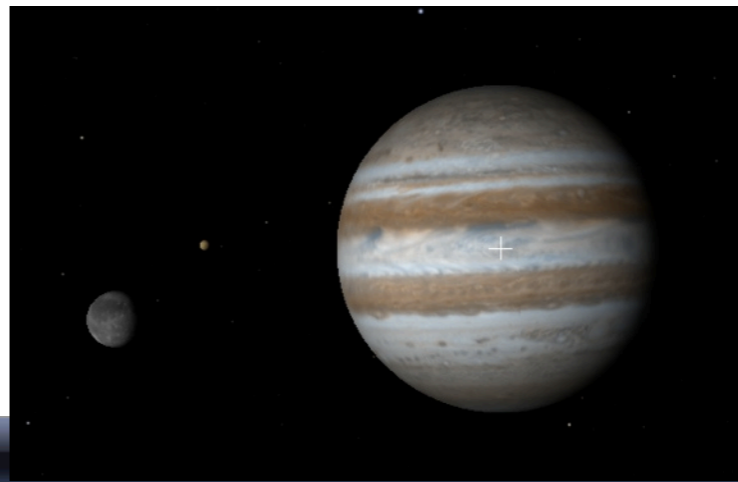
Plans for WWT include expansion to five US sites within the coming year, and ultimately to an International Program. Online materials will ultimately be available through several sites (at WGBH, Harvard and Microsoft), and will be integrated with existing online curriculum programs such as WGBH’s Teachers’ Domain and Microsoft’s Partners in Learning. More information is presently available at www.cfa.harvard.edu/WWTAmbassadors/



Microsoft® Research WorldWide Telescope

Expert led tours of the Universe

Speed up time to see how the night sky changes



Different viewing modes, including detailed images of the solar system, 3-D maps of nearby stars and faraway galaxies, and 360 degree views of lunar and martian terrain

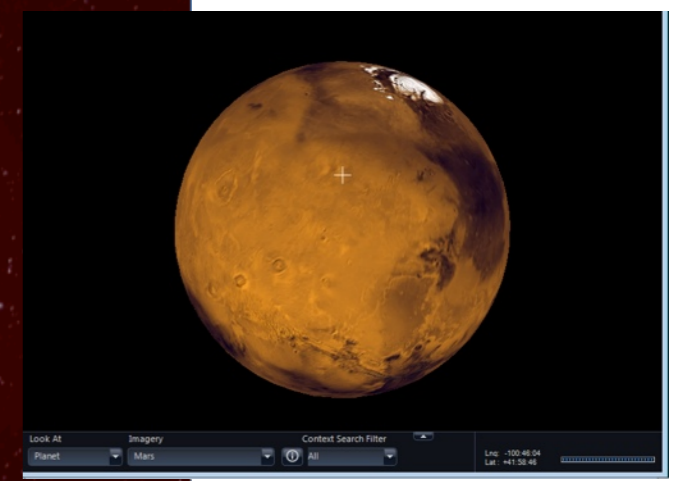
Explore Guided Tours Search View Settings



Seamlessly explore imagery from the best ground and space-based telescopes in the world



View and compare images from across the electromagnetic spectrum



Finder Scope links to Wikipedia, Journals, and Data, so you can learn more

Finder Scope

Classification: Spiral Galaxy in Andromeda

NGC224

RA:	00h42m42s	Magnitude:	3.4
Dec:	41 : 16 : 00	Distance:	n/a
Alt:	70 : 06 : 26	Rise:	05:14
Az:	275 : 42 : 17	Transit:	14:53
Set:			00:35

Image Credits:
Data provided by two NASA satellites, the Infrared Astronomy Satellite (IRAS) and the Cosmic Background Explorer (COBE). Processing <http://astro.berkeley.edu/~marc/dust/>

Buttons: Research, Show Object, Close

Context bar shows items of interest in current field of view

Look At: Sky

Imagery: Digitized Sky Surveys

Image Credits: Data provided by two NASA satellites, the Infrared Astronomy Satellite (IRAS) and the Cosmic Background Explorer (COBE). Processing <http://astro.berkeley.edu/~marc/dust/>

Buttons: Research, Show Object, Close

Context Bar: NGC221, M31

RA : 00h42m40s
Dec : 41:13:35

Andromeda 01:58:26

View panel and Celestial globe show where you are on the sky

<http://www.worldwidetelescope.org>



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About the WWT Telescope Ambassadors Program



WorldWide Telescope (WWT) is a rich visualization environment that functions as a virtual telescope, allowing anyone to make use of professional astronomical data to explore and understand the universe. As of early 2010, the new WWT Ambassadors Program is recruiting astronomically-literate volunteers, including retired scientists and engineers—all of whom will be trained to be experts in using WWT as a teaching tool. Ambassadors will give volunteer presentations at public libraries, community centers, museums, and schools, demonstrating WWT's power to help laypeople visualize and understand our universe.

[Read more](#)

John Huchra's Universe

Submitted by [patudom](#) on Jan. 11

John Huchra, former president of the **American Astronomical Society**, passed away on October 8, 2010.

John's colleagues at the Harvard-Smithsonian Center for Astrophysics, in collaboration with the creators of WorldWide Telescope at Microsoft Research, have created a new, interactive, WWT Tour to honor John and his career. The Tour primarily focuses on John's quest to map the Universe in three dimensions. It is 12.5 minutes long.

The Tour is best experienced inside the WorldWide Telescope program itself. (**Note: You must have the version of WWT released on 1/13/2011 to view all of this Tour's content. You can download it from [here](#).**) As viewed within the WWT program, the Tour content is interactive, allowing users to pause and explore the parts of the Universe featured in the tour, explore web hyperlinks, and more. For those who do not have the desktop client, the Tour has been posted as a video as well.

Video (Interactive WWT features will be disabled)

John Huchra's Universe



Friends of John Huchra have released a new WWT Tour to honor John and his work. The Tour primarily focuses on John's quest to map the Universe in three dimensions. You can view the Tour [here](#).

Upcoming

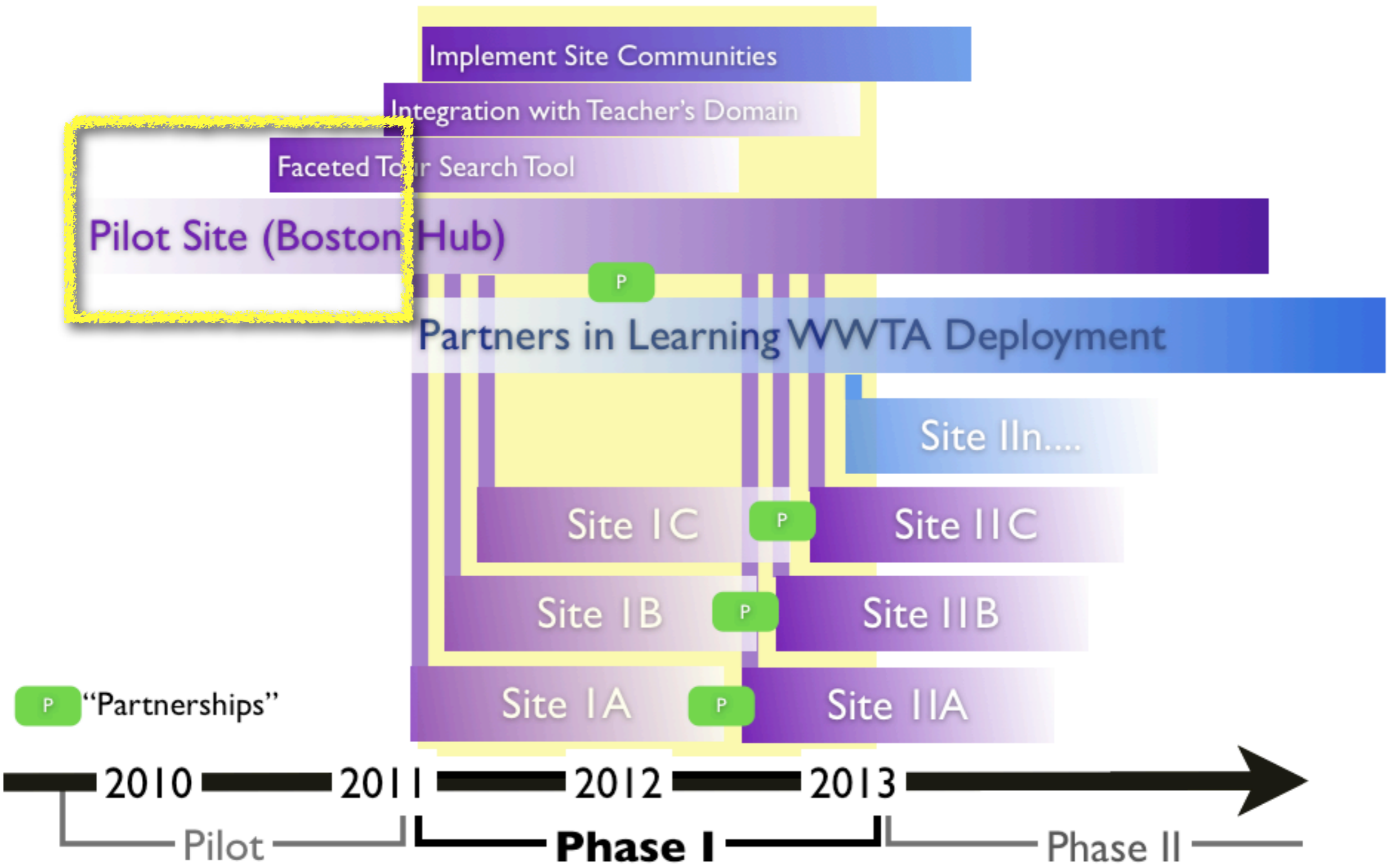
- [Cyberlearning Tools for STEM Education Conference](#)
Mar. 8 - Mar. 9
- [Cambridge Science Festival](#)
Apr. 30 - May. 10

Using WWT to give experts and learners access to the Universe

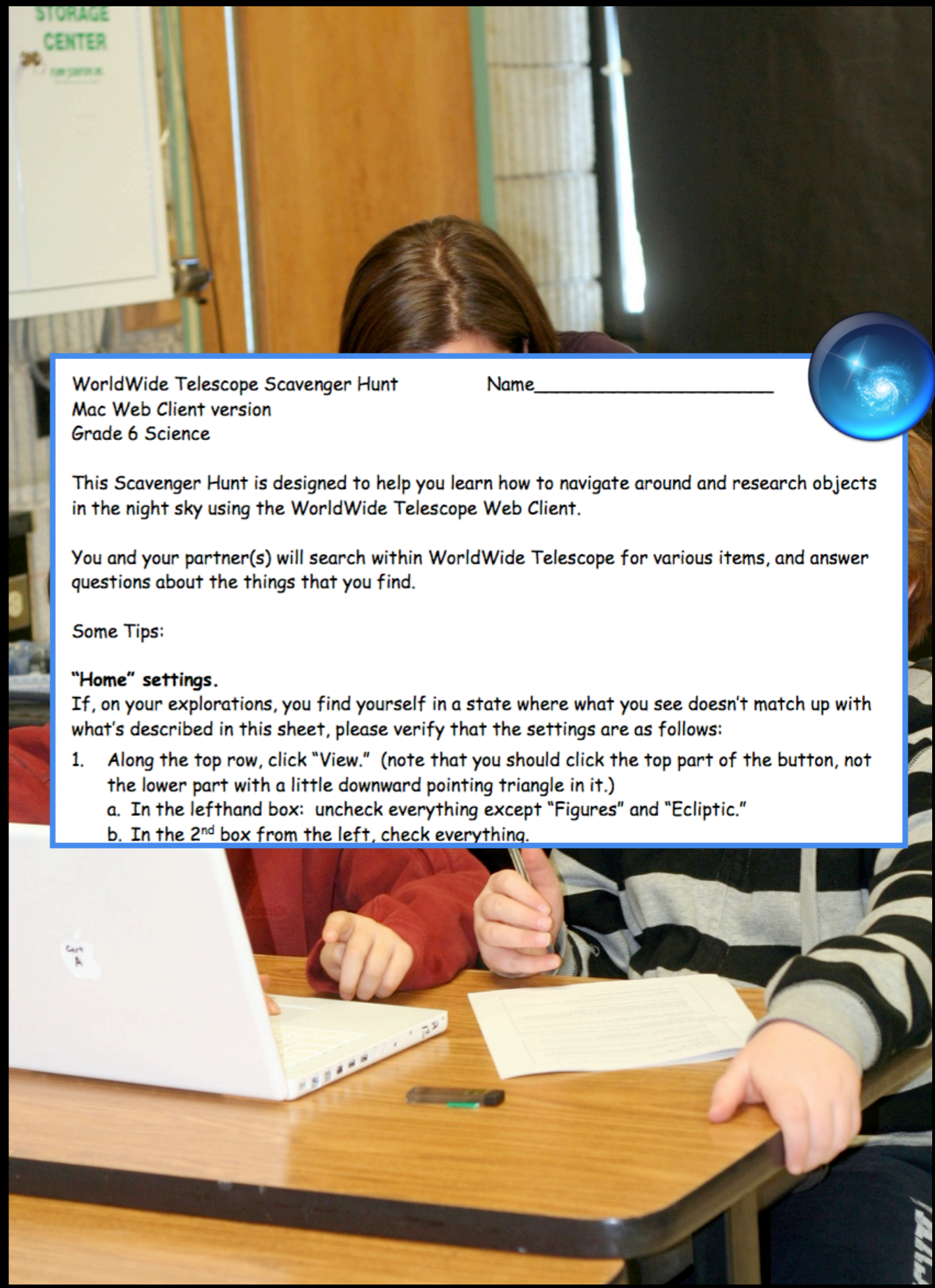
WWT Ambassadors Program
Recruiting, Vetting, Coordination



WWTA Phases



from (pending) Fall 2010 NSF Proposal for WWTA



WorldWide Telescope Scavenger Hunt
Mac Web Client version
Grade 6 Science

Name _____

This Scavenger Hunt is designed to help you learn how to navigate around and research objects in the night sky using the WorldWide Telescope Web Client.

You and your partner(s) will search within WorldWide Telescope for various items, and answer questions about the things that you find.

Some Tips:

"Home" settings.

If, on your explorations, you find yourself in a state where what you see doesn't match up with what's described in this sheet, please verify that the settings are as follows:

1. Along the top row, click "View." (note that you should click the top part of the button, not the lower part with a little downward pointing triangle in it.)
 - a. In the lefthand box: uncheck everything except "Figures" and "Ecliptic."
 - b. In the 2nd box from the left, check everything.

Clarke Middle School, Lexington, MA (WWT Ambassadors Pilot School)

“Why is one polar ice cap on Mars bigger than the other?”
– Clarke Middle School 6th Grader

The screenshot shows the Microsoft WorldWide Telescope interface. The main window displays a 3D view of Mars, showing its reddish-orange surface and a large, bright white polar ice cap at the top. The interface includes a top navigation bar with options like 'Explore', 'Guided Tours', 'Search', 'Community', 'Telescope', 'View', and 'Settings'. Below this is a 'Collections' bar with various categories such as 'My Collections', 'Constellations', 'Solar System (Sky)', 'All-Sky Surveys', 'Spitzer Studies', 'Chandra Studies', 'Hubble Studies', 'Astrophotography', 'Radio Studies', 'NOAO Studies', 'Gemini Studies', and 'Messier Catalog'. At the bottom, there is a control panel with 'Look At' (set to SolarSystem), 'Imagery' (set to 3D Solar System View), a 'Tracking' section (set to Mars), a 'Context Search Filter' (set to All), and a 'Planet Size' slider (set to Ursa Major, 8187 km). A small inset window shows a larger view of Mars. The text '[Demo]' is overlaid on the right side of the image.



“I never knew programs like this could even exist. It’s just amazing.”

–Clarke Middle School 6th grade student

More from Clarke 6th Graders

“Learning about our Universe by actually seeing and exploring it makes it easier to contemplate and more fun.”

“You can explore the Universe yourself and you don't always have to only learn from the teacher.”

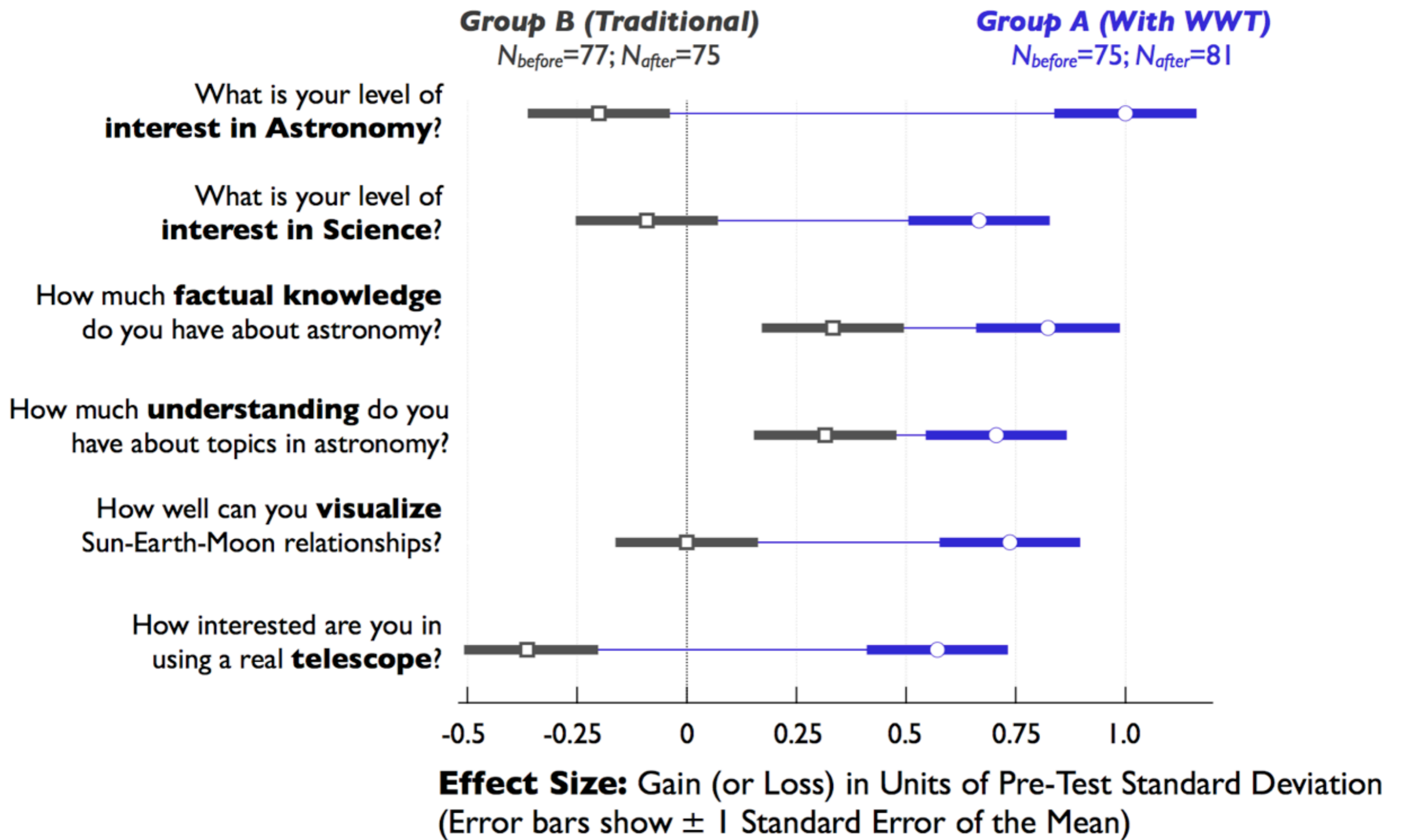
*“It gave me a **better mental map of the universe.**”*

“Awesome, amazing, cool, incredible (repeat 30 times)”

(And of the 72 surveys we’ve collected, 71 are positive toward WWWT Ambassadors.)

Gains in Student Interest and Understanding

(“Traditional Way” vs “WWT Way”)





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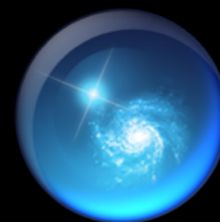
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Student Understanding of Moon Phases

(“Traditional Way” vs “WWT Way”)

	Q1: Memorization		Q2: Understanding	
	Group A (WWT)	Group B (no WWT)	Group A (WWT)	Group B (no WWT)
(N _A =79; N _B =71)				
Incorrect	7%	5%	38%	65%
Partially Correct	31%	33%	21%	16%
Correct	62%	61%	41%	19%



Michelle Bartley interviews her 6th-grade science class about WWT
December 23, 2009