WorldWide Telescope in the Classroom

Patricia **Udomprasert,** Alyssa **Goodman**,
Mary **Becker**, Erin **Braswell**
Harvard-Smithsonian Center for Astrophysics

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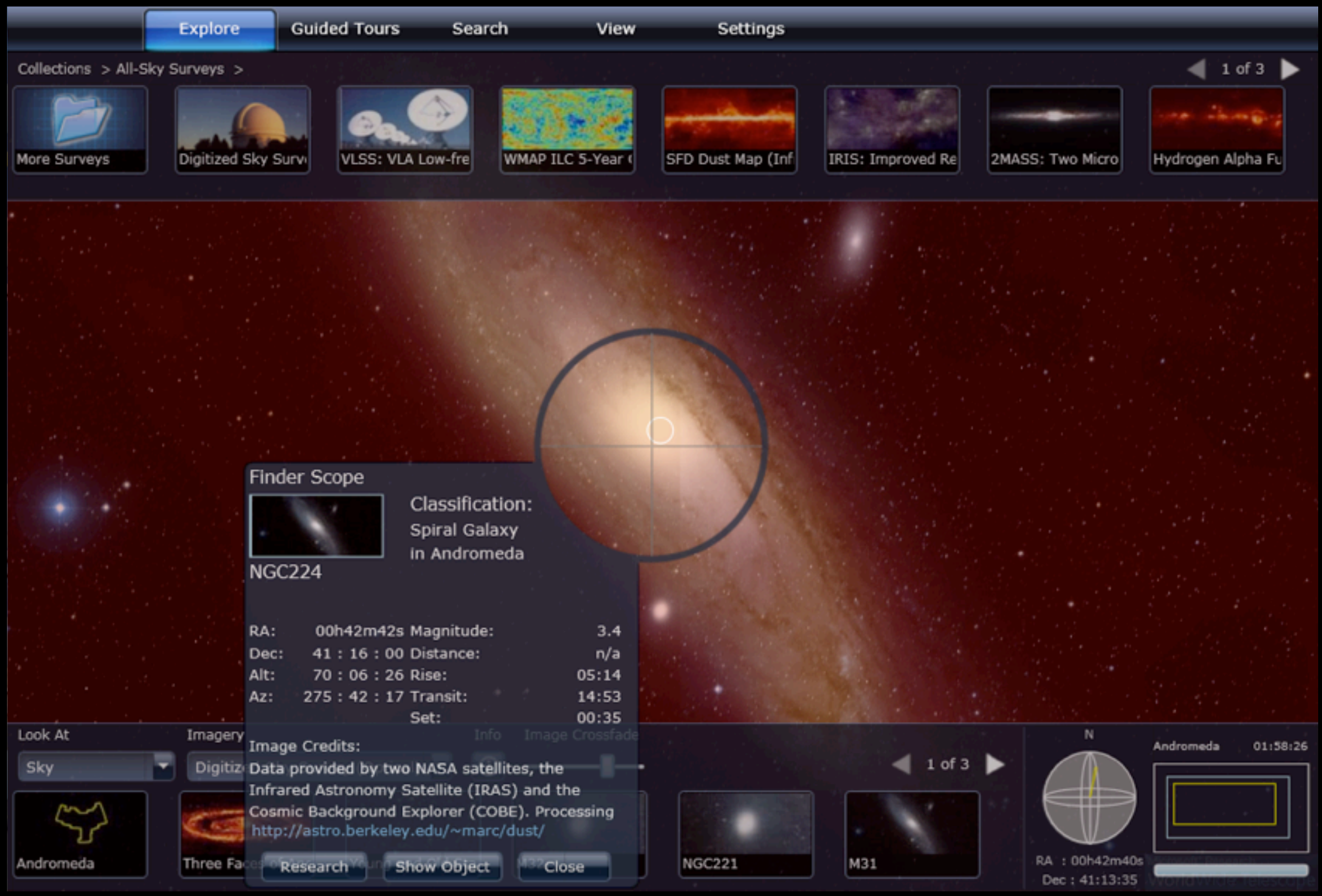

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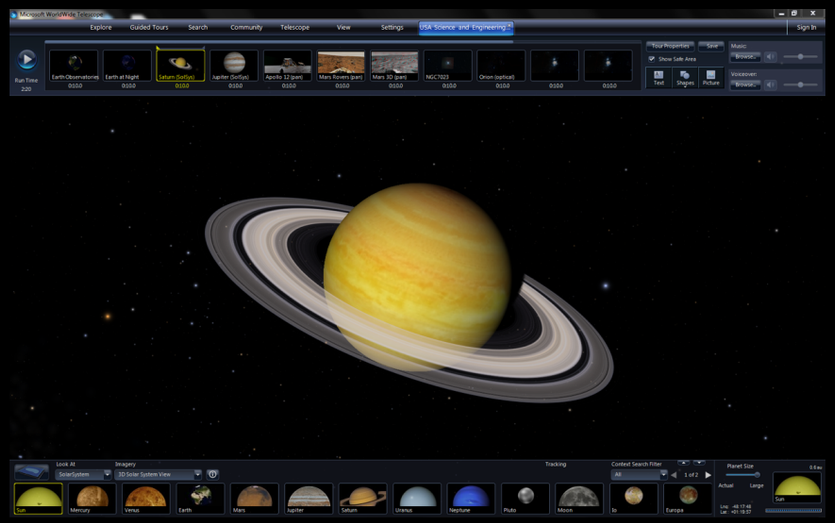
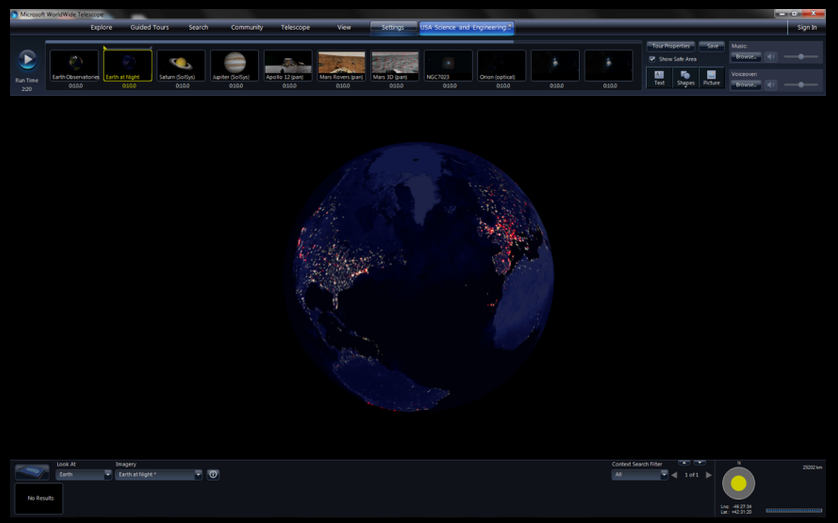
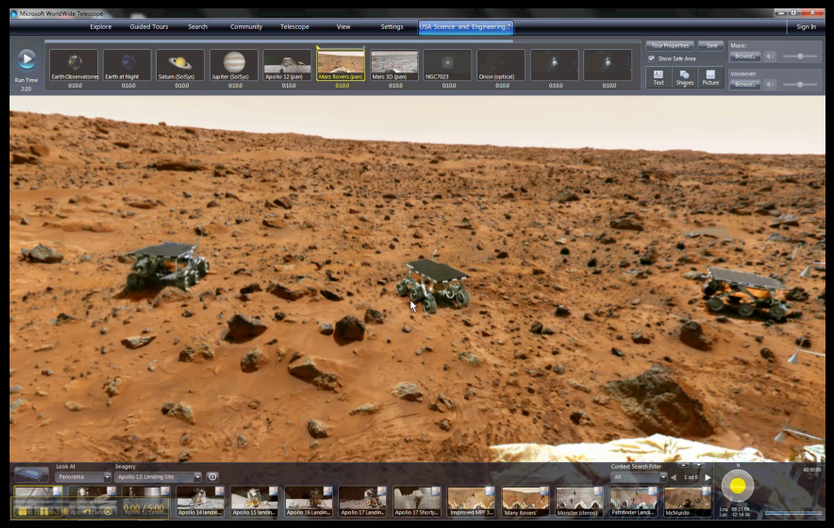
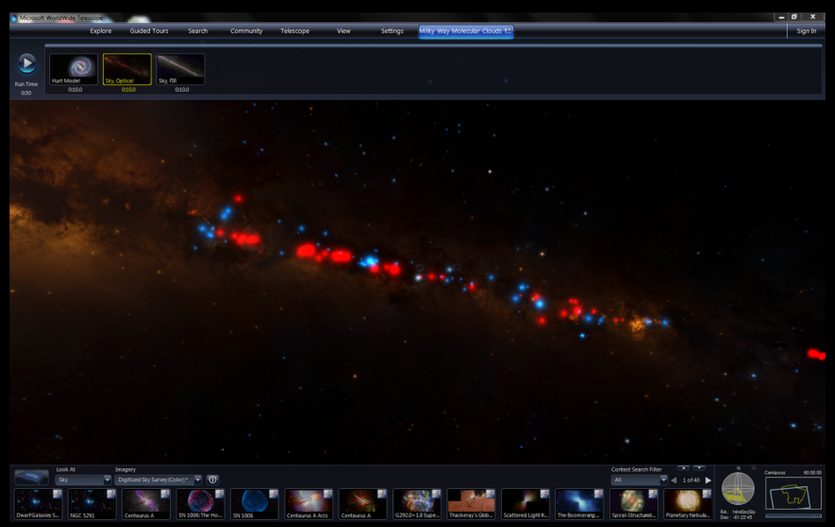
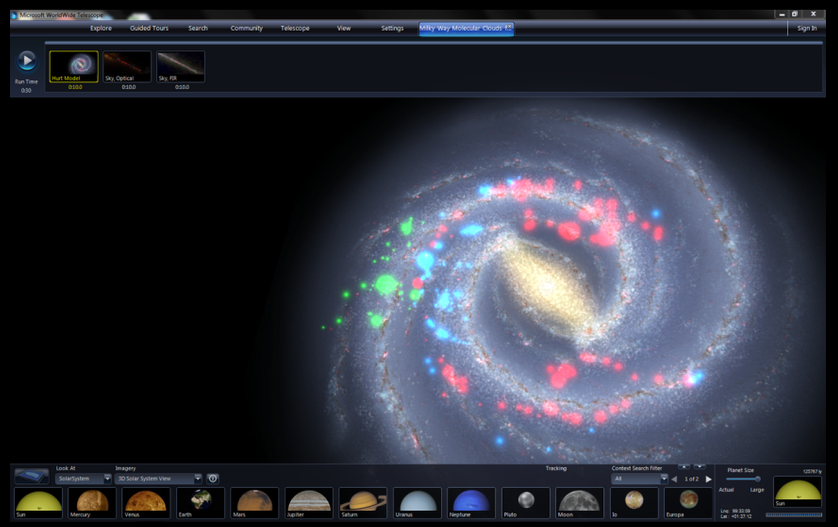
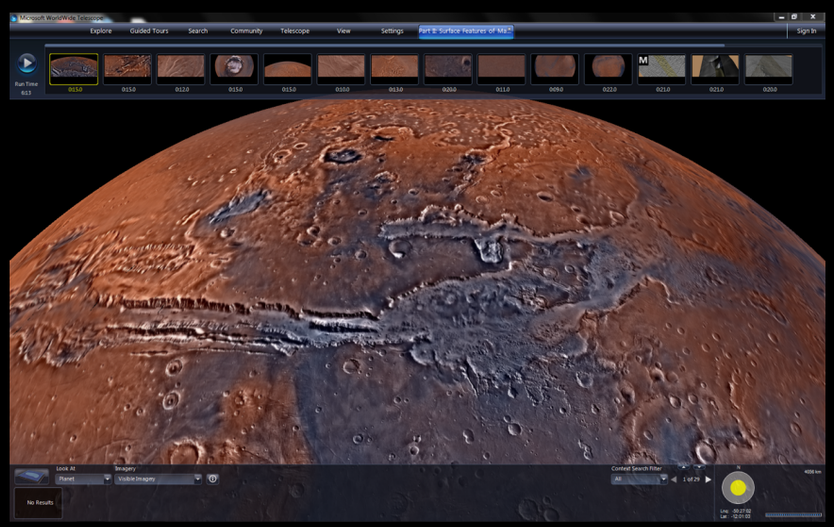


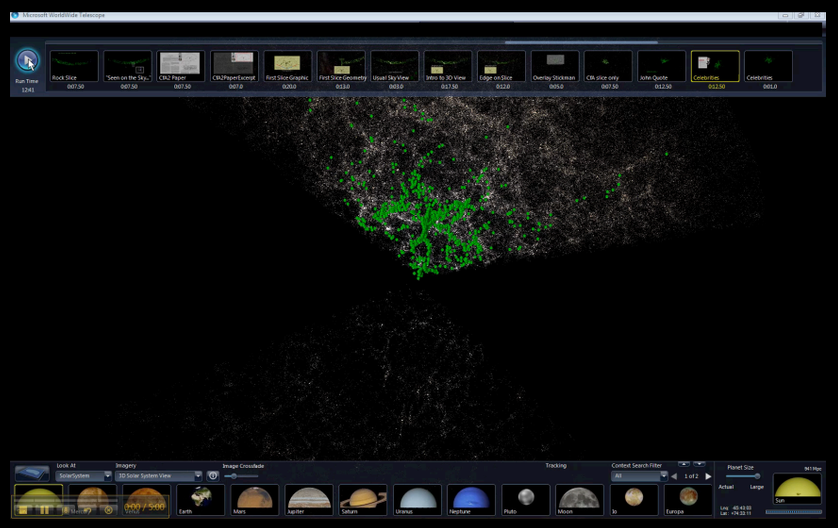








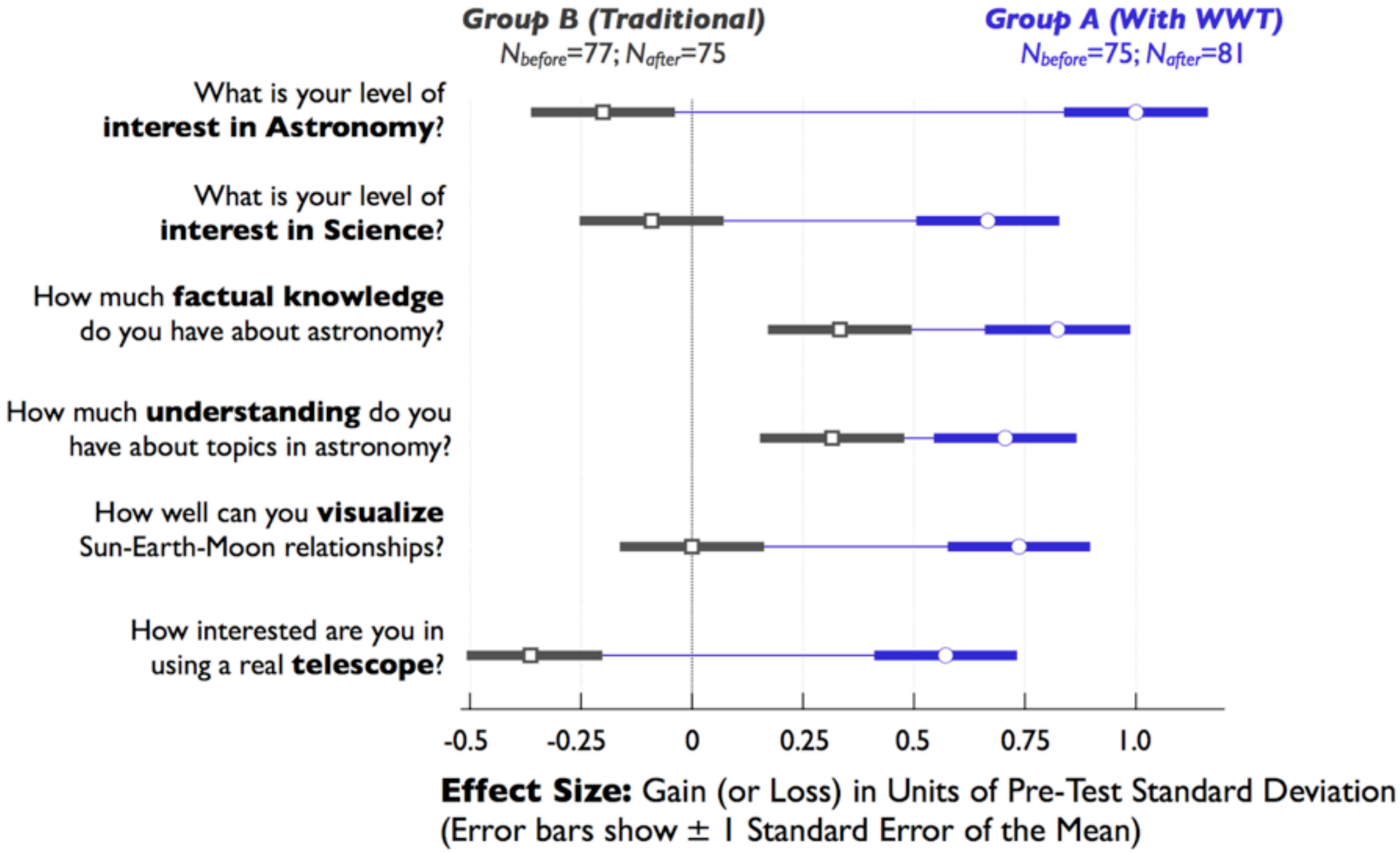




Experience WWT at **worldwidetelescope.org**

Gains in Student Interest and Understanding

("Traditional Way" vs "WWT Way")



Gains in Student Interest and Understanding

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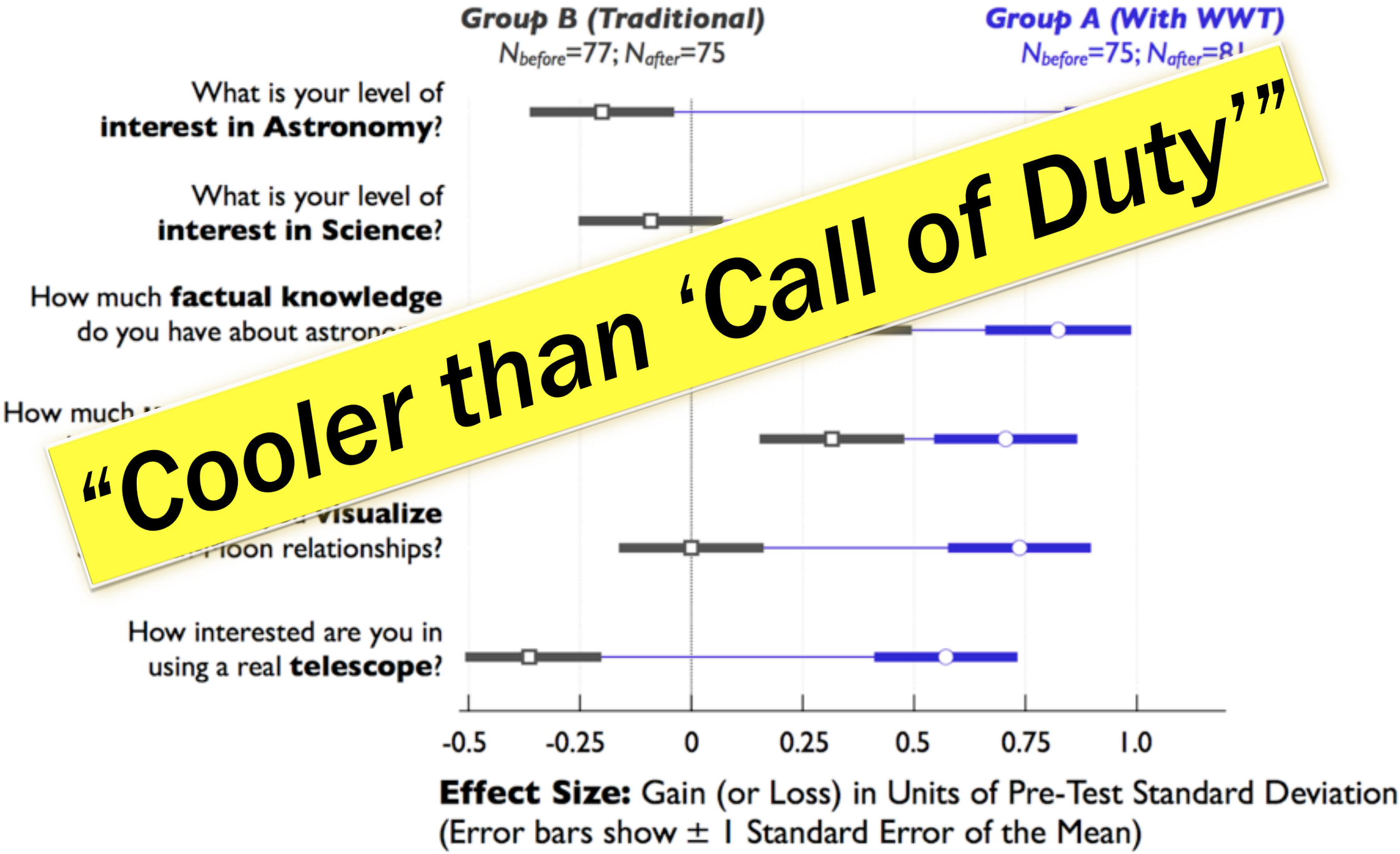

"Cooler than 'Call of Duty'"

"I never knew programs like this could even exist. It's just amazing."

– Middle School 6th grade student

More quotes from 6th Graders

"It gave me a better mental map of the universe."

"Awesome, amazing, cool, incredible (repeat 30 times)"

"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."

WWT vs Simple 2D simulator
(both in conjunction with styrofoam ball/lamp model)

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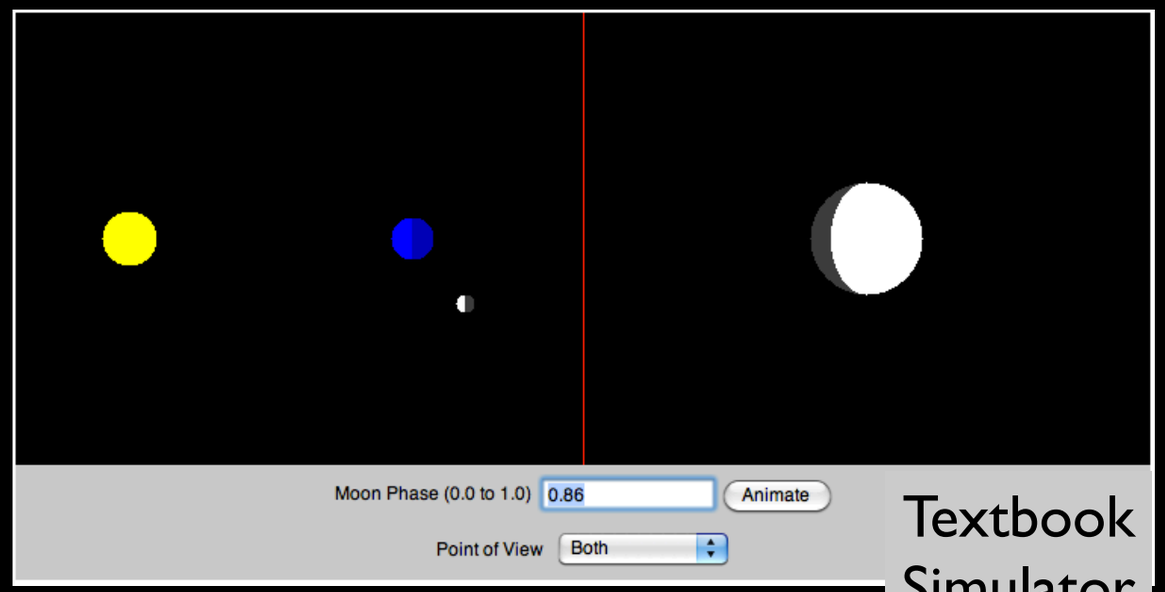

Textbook Simulator

Phase 1: Learning Comparison
WWT vs Textbook Simulator
(both with styrofoam/lamp model)

	Avg Pretest score out of 7 (stdev)	*Avg Posttest score out of 7 (stdev)*	*Gain*	*Effect Size*
WWT (N=39)	2.7 (1.2)			
Textbook Simulator (N=38)	2.6 (1.2)			

Phase 1: Learning Comparison
WWT vs Textbook Simulator
(both with styrofoam/lamp model)

Astronomy and Space Science Concept Inventory (Sadler et al 2009)

	Avg Pretest score out of 7 (stdev)	*Avg Posttest score out of 7 (stdev)*	*Gain*	*Effect Size*
WWT (N=39)	2.7 (1.2)			
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Phase 1: Learning Comparison
WWT vs Textbook Simulator
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Astronomy and Space Science Concept Inventory (Sadler et al 2009)

	Avg Pretest score out of 7 (stdev)	*Avg Posttest score out of 7 (stdev)*	*Gain*	*Effect Size*
WWT (N=39)	2.7 (1.2)	5.1 (1.3)		
Textbook Simulator (N=38)	2.6 (1.2)	4.3 (1.4)		

Phase 1: Learning Comparison
WWT vs Textbook Simulator
(both with styrofoam/lamp model)

Astronomy and Space Science Concept Inventory (Sadler et al 2009)

	Avg Pretest score out of 7 (stdev)	*Avg Posttest score out of 7 (stdev)*	*Gain*	*Effect Size*
WWT (N=39)	2.7 (1.2)	5.1 (1.3)	2.5	
Textbook Simulator (N=38)	2.6 (1.2)	4.3 (1.4)	1.7	

Phase 1: Learning Comparison
WWT vs Textbook Simulator
(both with styrofoam/lamp model)

Astronomy and Space Science Concept Inventory (Sadler et al 2009)

	Avg Pretest score out of 7 (stdev)	*Avg Posttest score out of 7 (stdev)*	*Gain*	*Effect Size*
WWT (N=39)	2.7 (1.2)	5.1 (1.3)	2.5	**2.0**
Textbook Simulator (N=38)	2.6 (1.2)	4.3 (1.4)	1.7	1.5

Phase 1: Learning Comparison
WWT vs Textbook Simulator
(both with styrofoam/lamp model)

Astronomy and Space Science Concept Inventory (Sadler et al 2009)

	Avg Pretest score out of 7 (stdev)	*Avg Posttest score out of 7 (stdev)*	*Gain*	*Effect Size*
WWT (N=39)	2.7 (1.2)	5.1 (1.3)	2.5	**2.0**
Textbook Simulator (N=38)	2.6 (1.2)	4.3 (1.4)	1.7	1.5

These students continued to explore WWT independently!

Find out more about using WWT in your classroom.

or

Email pudompra@cfa.harvard.edu

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