The resources in this list pertain to the presentation given on November 3, 2016, titled, "Frontier Fields: NASA's Great Observatories Team Up to View the Distant Universe".

NASA's Universe of Learning is a program which will integrate NASA's Astrophysics Science Mission Directorate programs, and will advance STEM learning and literacy by creating and delivering a unified suite of education products, programs, and professional development that spans the full spectrum of NASA Astrophysics.

NASA's Universe of Learning is partnering with the Museum Alliance to provide professional development briefings for the informal science education community. These briefings provide current NASA Astrophysics themes, content, and resources to the informal community. These curated lists present the resources described during the briefings. To find the briefings, you can go here: http://universe-of-learning.org/science_briefing

**Frontier Fields Blog**

**Notes:** The Frontier Fields public outreach blog supports and builds public interest in this long-term project. This is a great resource for understanding about the science of the Frontier Fields program, and a place where you can find images, videos, and visualizations related to gravitational lensing, galaxy clusters, and the distant universe.

**External Resource URL:** [https://frontierfields.org/](https://frontierfields.org/)

**Universe Discovery Guides**

**Notes:** Universe Discovery Guides - November & May - The Universe Discovery Guides showcase education and public outreach resources from across more than 20 NASA astrophysics missions and programs. The November guide is titled, "What is the Fate of the Universe?," and the May guide is titled, "A Family Scrapbook of the Universe." Both the November and May Universe Discovery Guides feature content and hands-on activities directly related to NASA's exploration of the furthest reaches of our Universe.

**AAAS Benchmarks:** 4A/M1bc, 4A/M2de, 4A/H2ab, 4A/H2ef, 4A/H6

**More info:** [http://nasawavelength.org/resource/nw-000-000-003-839](http://nasawavelength.org/resource/nw-000-000-003-839)


**Learn About Galaxy Clusters - Chandra X-ray Observatory**

**Notes:** Galaxy clusters are the largest objects in the Universe held together by gravity. Chandra detects the superheated gas that fills the space between the...
hundreds and thousands of galaxies in these enormous clusters. Galaxy clusters are used to investigate mysteries of dark matter and dark energy.

**External Resource URL:** [http://chandra.harvard.edu/learn_galaxyCluster.html](http://chandra.harvard.edu/learn_galaxyCluster.html)

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**Astro101 Slide Set: Multiple Views of an Extremely Distant Galaxy**

**Notes:** Made for introductory college-level astronomy courses, this slide set focuses on the discovery of an extremely distant galaxy as a result of gravitational lensing. It is one of a series of short, topical presentations on new developments from NASA astrophysics missions, relevant to introductory astronomy topics. These resources are intended to help instructors include the latest discoveries (not yet in their textbooks) into their courses. The slide sets are constructed to be easily included as a lecture supplement including synopsis, references, and graphics.

**More info:** [http://nasawavelength.org/resource/nw-000-000-004-254](http://nasawavelength.org/resource/nw-000-000-004-254)

**Resource URL:**