# Hubble Space Telescope's 30th Anniversary Image Unveiling - Resources



# Space Telescope Science Institute's Hubble 30<sup>th</sup> website resources:

### https://hubblesite.org/hubble-30th-anniversary/resources

- Videos, including a montage of more than 600 images (2:42)
- Images
- Events
- Resources for events include:
  - Exhibit Materials: an anniversary sign, a pull-up banner, and 26 Science Discovery Series panels, in English and Spanish
  - o Posters: 30 iconic Hubble pictures
  - Activities: three hands-on activities
- Additional Resources: Hubble Timeline, eBooks, Videos, Illuminated Universe blog, Learning Resources, Mission and Telescope information, future mission information

## Networks where you can find additional resources, speakers:

- Solar System Ambassadors
  - The NASA Solar System Ambassadors program is a public engagement effort that works with motivated volunteers across the nation to communicate the science and excitement of NASA's space exploration missions and discoveries with the people in their communities.
  - https://solarsystem.nasa.gov/solar-system-ambassadors/events/
- The NASA Museum Alliance
  - The Alliance is the starting point for informal educators seeking free NASA educational resources and services.
  - o https://informal.jpl.nasa.gov/museum/
- Night Sky Network
  - o Astronomy clubs bring the wonders of the universe to the public.
  - o <a href="https://nightsky.jpl.nasa.gov/">https://nightsky.jpl.nasa.gov/</a>

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#### NISE Net

- The National Informal STEM Education Network (NISE Net) is a community of informal educators and scientists dedicated to supporting learning about science, technology, engineering, and math (STEM) across the United States.
- o https://www.nisenet.org

#### STAR Net

- The STAR Library Network is a community of library and STEM professionals that work together to strengthen STEAM learning in public libraries nationwide. The Space Science Institute's National Center for Interactive Learning (NCIL) provides interactive STEM exhibits, programming, and training to public libraries nationwide through STAR Net.
- o http://www.starnetlibraries.org/

# National Girls Collaborative Project

- NGCP brings together organizations throughout the United States that are committed to informing and encouraging girls to pursue careers in science, technology, engineering, and mathematics (STEM).
- o <a href="https://ngcproject.org/">https://ngcproject.org/</a>

#### **Data Tools and Multimedia Resources**

### ViewSpace

- Explore the Universe with ViewSpace, a free, web-based collection of dozens of digital interactives and hundreds of videos highlighting the latest developments in astronomy and Earth science.
- o <a href="https://viewspace.org/">https://viewspace.org/</a>

#### Eyes on Exoplanets

- "Eyes on Exoplanets" is a fully rendered, scientifically accurate 3D universe that allows you to explore thousands of exotic planetary systems known to orbit distant stars. The program is updated daily with the latest finds from NASA's Kepler mission and from ground-based observatories around the world as they hunt for planets like our own.
- https://exoplanets.nasa.gov/eyes-on-exoplanets-web/

#### AstroPix

- AstroPix offers access to the public image galleries of many of the leading astronomical observatories under a single interface, and includes a full range of astronomical observations, artwork, and charts spanning the field of astronomy. AstroPix is updated as new images become available.
- o https://astropix.ipac.caltech.edu/

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- Hubble scientific visualizations
  - o Based on the data collected by astronomical observatories, these visualizations are grounded in science data and are accurate representations of the cosmos.
  - https://hubblesite.org/resource-gallery/videos?keyword=Scientific%20Visualizations

### Other Missions which will build on Hubble's legacy

- NASA's James Webb Space Telescope
  - Webb will build on the legacy of previous space-based telescopes (like Hubble) to push the boundaries of human knowledge even further, to the formation of the first galaxies and the horizons of other worlds. Scheduled to launch in 2021, Webb's sophisticated infrared cameras and spectrographs and 6.5 meter mirror will deepen our understanding of the cosmos, taking the most detailed views of the infrared universe to date.
  - o https://webbtelescope.org/

#### WFIRST

- WFIRST, the Wide Field InfraRed Survey Telescope, is a NASA observatory designed to settle essential questions in the areas of dark energy, exoplanets, and infrared astrophysics. Scheduled to launch in the mid-2020s, WFIRST will provide a treasure trove of Hubble-quality data with 100 times Hubble's view of the sky.
- o <a href="https://wfirst.gsfc.nasa.gov/">https://wfirst.gsfc.nasa.gov/</a>

### Other ideas for STEM resources:

- Challenger Centers for Space Science Education
  - Challenger Center and its global network of Challenger Learning Centers use spacethemed simulated learning and role-playing strategies to help students bring their classroom studies to life and cultivate skills needed for future success, such as problem solving, critical thinking, communication and teamwork.
  - o https://www.challenger.org/stem-resources/

#### Girl Scouts

- o https://www.girlscouts.org/en/about-girl-scouts/girl-scouts-and-stem.html
- Reach out to your local universities and colleges for speakers, public outreach opportunities, and other STEM resources.

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\*\*Opportunity to Feature the Film, Deep Field: The Impossible Magnitude of our Universe\*\*

Music Productions is offering the opportunity for the National Image Unveiling locations to feature the film, "Deep Field: The Impossible Magnitude of our Universe," for free, given a suitable venue.

Grammy® award-winning American composer Eric Whitacre's symphonic work Deep Field was inspired by the world's most famous space observatory, the Hubble Space Telescope, and its greatest discovery, the iconic Deep Field image. The new film, "Deep Field: The Impossible Magnitude of our Universe," illuminates the score by combining Hubble's stunning imagery, including never-seen-before galaxy flybys, with animations to create an immersive, unforgettable journey from planet Earth to the furthest edges of our universe.

The film is a first-of-its-kind collaboration between composer and conductor Eric Whitacre, producers Music Productions, scientists and visualizers from the Space Telescope Science Institute and Tony award-winning artists 59 Productions. The score and film paint the incredible story of the Hubble Deep Field. Turning its gaze to a tiny and seemingly dark area of space (around one 24-millionth of the sky) for an 11-day long period, the Hubble Space Telescope revealed over 3,000 galaxies that had never previously been seen, each one composed of hundreds of billions of stars. This discovery fundamentally changed the way we understand the universe.

The soundtrack features a new, epic Virtual Choir representing 120 countries: over 8,000 voices aged 4 to 87, alongside the Royal Philharmonic Orchestra and Eric Whitacre Singers.

If you are interested in this opportunity, please connect with Meg Davies and Music Productions.

meg@musicprods.co.uk or at +44 1753 783 739 deepfieldfilm.com

Additional information:

nasa.gov/hubble

hubblesite.org