

# DEEP FIELD: THE IMPOSSIBLE MAGNITUDE OF OUR UNIVERSE

## RESOURCES & EDUCATIONAL MATERIAL

deepfieldfilm.com

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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 fly-bys, with bespoke 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 & 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.

In April 2020, the NASA/ESA Hubble Space Telescope will celebrate 30 years since its launch.  
<https://www.spacetelescope.org/projects/Hubble30/>  
<https://hubblesite.org/30>

Deep Field: The Impossible Magnitude of our Universe is available upon request for:

- Film screenings (DCP available)
- Educational screenings
- To accompany live performances with orchestra & choir
- Museums, galleries, science or music festivals, concerts

This document is intended to give an overview of the existing free resources that can be used in the classroom or to promote events.

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## 1. VIDEO CONTENT

<b>An Introduction from Composer, Conductor &amp; Artistic Director Eric Whitacre</b> Video length: 4:53	<a href="#">YouTube</a>
<b>The Making Of Deep Field</b> How the Deep Field film came to exist including behind-the-scenes action at the world premiere hosted by Kennedy Space Center. Includes interview with Eric Whitacre, filmmakers from the Space Telescope Science Institute and 59 Productions. Video length: 23:46	<a href="#">YouTube</a>
<b>Simple Space Terminology</b> A series of short videos with astronomer and filmmaker Dr. Frank Summers (STScI) with simple explanations for: a planet, a star, a galaxy, a nebula. Video lengths: 0:30 – 0:48	<a href="#">YouTube</a>
<b>"The Importance of the Deep Field Image"</b> Presented by Dr. Frank Summers from the Space Telescope Science Institute Video length: 2:46	<a href="#">YouTube</a>
<b>An Astrofizicist's Guide to the Film 'Deep Field: The Impossible Magnitude of Our Universe'</b> An in-depth lecture given by Dr. Frank Summers at the Space Telescope Science Institute. Video length: 58:15	<a href="#">YouTube</a>
<b>Using Math to make Music</b> Composer Eric Whitacre describes how he uses the Fibonacci series in his compositions and specifically, within Deep Field. Video length: 4:15	<a href="#">YouTube</a>

## 2. EDUCATIONAL BADGES

As part of the Virtual Choir experience, 18 interactive challenges were created for users to learn more about STEAM subjects. Users are still able to register an account and collect all 18 badges on [deepfieldfilm.com](http://deepfieldfilm.com). Highlights include:

<b>How To Talk to Telescopes</b> A simple lesson in binary code. Activity includes creating a name badge written in binary.	<a href="http://dff.com">dff.com</a>
<b>What?! NASA really invented that?!</b> Can you identify the every-day items invented by NASA?	<a href="http://dff.com">dff.com</a>
<b>The Da Vinci Puzzler</b> A short quiz based on the life and work of Leonardo da Vinci.	<a href="http://dff.com">dff.com</a>

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**3. TELESCOPES & OUR UNIVERSE**

<b>The Official Website of the National Aeronautics and Space Administration</b>	<a href="https://www.nasa.gov">NASA.gov</a>
<b>The Official Website of the European Space Agency</b>	<a href="https://www.esa.int">ESA.int</a>
<b>HubbleSite</b> NASA's Hubble Space Telescope website including quick facts, images, videos and all press releases.	<a href="https://www.hubblesite.org">HubbleSite</a>
<b>Illuminated Universe</b> Created by STScI, this blog offers a behind-the-scenes look at how science data from observatories such as the Hubble Space Telescope and the soon-to-be launched James Webb Space Telescope are distilled to uncover the richness, diversity, and beauty of the universe.	<a href="https://www.illuminateduniverse.com">Illuminated Universe.com</a>
<b>NASA Wavelength</b> A collection of peer-reviewed NASA learning materials and resources. You can search the collection using key words and/or the drop down menus to locate resources by topic, type, and more.	<a href="https://www.nasa.gov/wavelength">NASA Wavelength</a>
<b>NASA Space Place</b> An online recourse for upper-elementary-aged children to learn about space and Earth science through games, activities, articles and short videos. There is material in English and Spanish.	<a href="https://www.nasa.gov/spaceplace">NASA SpacePlace</a>
<b>Night Sky Network</b> Astronomy clubs bringing the wonders of the universe to the public. Also advertizes stargazing events.	<a href="https://www.nightsky.org">Night Sky Network</a>
<b>Planetarium Finder</b> Created by the International Planetarium Society, the Planetarium Finder searches for nearby planetariums.	<a href="https://www.planetariumfinder.org">Planetarium Finder</a>

**4. DEEP FIELD FILM ASSETS**

<b>The Images in the film</b> A guide to the celestial objects you encounter during the film.	<a href="https://www.dff.com">dff.com</a>
<b>Promotional Images (4k)</b> The images can be used online on the condition that the following credit is used. Please contact <a href="mailto:info@musicprods.co.uk">info@musicprods.co.uk</a> for any other usages. © 2018 Eric Whitacre's Deep Field: The Impossible Magnitude of our Universe deepfieldfilm.com	<a href="https://www.dropbox.com">Dropbox</a>
<b>Soundtrack</b> Performed by the Royal Philharmonic Orchestra, the Eric Whitacre Singers and Virtual Choir 5. Conducted by the composer, Eric Whitacre.	<a href="https://www.dff.com">Listen</a>
<b>Film Credits</b> Full creative and production credits.	<a href="https://www.dff.com">dff.com</a>
<b>Event Calendar</b> All scheduled screenings and performances of the film.	<a href="https://www.dff.com">dff.com</a>

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<b>What is the Virtual Choir?</b> Find out more about the Virtual Choir and the 8,000 voices that combined to create the Deep Field soundtrack.	<a href="http://ew.com">ew.com</a>
<b>The Deep Field App</b> When Deep Field is performed live, the audience are invited to join the performance by downloading the Deep Field smartphone app. This can be tested in the classroom to accompany the film. The app is free.	<a href="#">App Store</a> <a href="#">Google Play</a>

Please direct any questions relating to Deep Field educational resources, licensing, performances or press to Meg Davies at Music Productions on [meg@musicprods.co.uk](mailto:meg@musicprods.co.uk) or at +44 1753 783 739.