Cosmos a spacetime odyssey episode 3 answers

Want to know more about The Really Cool Things behind science and history revealed in this week's episode of Cosmos: A Spacetime Odyssey? This is the place! This week we dig deeper into episode 3, When Knowledge Conquered Fear and look at the middle-earth constellations, the galaxies that shoot lasers, how awesome-not-awesome Isaac Newton was, and the galactic cataclysm pinwheeling against us right now. In the order that these concepts are explored in the episode: Tyson is not around when he points out that pattern recognition is key to our current level of intelligence. Your understanding of these sentences means you are literally recognizing the pattern of language I'm using. My writing of these sentences has me running by changing the stored patterns that I have learned. We rely constantly on patterns that we recognize as a result of advances in science, culture, and our personal growth. We are so aware of our life patterns that we are feeling when they're off, even if we don't actually know what has gone wrong. This field is so vast that the Cosmos could spend the entire series digging into the different ways that it appears in our lives. So when Robert Jordan posits his hugenormous epic fantasy Time Wheel that the whole reality basically Pattern is woven, he's not wrong. That is how we perceive reality. We are aware of the potency of model recognition, so immediately that we are imbuing that ability of our machines. The device you're reading this about possesses similar recognition skills (Damn you, auto-correct!) and Ray Singularity Kurzweil himself has spoken and written long about how artificial intelligence will emerge from this capability in the same way that our intelligence cohered millions of years ago. Our pattern recognition abilities are so aggressive that we often take to the heart false patterns, from mundane forms in clouds to conspiracy theories of obsessive compulsive disorder. Put it as an XKCD comic: correlation doesn't mean causation! But even false recognition benefits by promoting our imagination. Long ago, we saw the shapes of the stars of our world above us, making them recognizable and allowing us to track time and seasons. And we saw these constellations from countless different perspectives, as shown. Chinese constellations are broken houses and courts (The Silver River is a nice name for our galaxy, wouldn't you say?), but ours and India get divvied up among mythological beings. Even with this cultural variation, the most recognizable constellations in heaven tend to inspire similar interpretations between cultural and geographical obstacles. Orion inspires thoughts about hunting. Orion gives such the impression that he even exists in the sky of the Middle Earth under the Quenya name Menelmacar. It is said to represent Turin Turambar, and told of his possible return to Dagor Dagorath to kill Morgoth. Another of the early stars formed by the frog. This means that the Battle of Helm's Deep, which began March 3, was fought under Orion! Our solar system is ridiculously large. Remember when we celebrated that Voyager 1 had finally left the solar system and entered interstellar space? It still has got hundreds of years before it reaches our Oort Cloud. In this chart, the scale is the AU, which is the distance between earth and the Sun, which is 93 million miles. It's taken Voyager I for decades to cover 100 AUs, and it will take ten times that long to reach the Oort Cloud. There's every chance that we'll get there in a manned space before Voyager does. Full power deflectors! One of the theories behind why earth has sustained life for such a long continuous period is that we are protected by Jupiter and the outer gas giants in our solar system that act as gravitational shields that throw incoming comet away from us. For a long time we thought it was how most solar systems form, so when our search for exoplanets started seriously we were surprised to find that gas giants actually tend to stay much closer to their stars than ours do. We are weird ones. Tyson kind of leaps over the supermassive black holes in the center of our galaxy, which is unfortunate because they are so weird. We've spotted them in the center of other galaxies and we suspect that most galaxies might have black holes that gravitate to their center, although contrary to how it may seem, the black holes themselves aren't massive enough to hold the galaxy together. But they also constantly shoot out a jet of clean energy as big as our solar system, and it's pretty cool! This week's episode gave us some seriously awesome lowdown on Halley and Newton, which makes even more sense when you find out that Newton is Neil deGrasse Tyson's favorite scientist ever. He neither drunkenly explains why: (Hee hee.) Edmund Halley repeatedly exclaims Hell's calls are anachronistic because the phrase cannot be traced earlier than the 19th century. Coffee was charged in 17th-century cafes. And the coffee was weak, syrupy, and often fueled from the previous day. Still, it was a brand new confectionery for the people of England to experience, and they loved it. Well, the guys loved it. Because caffeine is awesome, but also because it was touted as sexual help, adding mental ascendancy to sperm. Isaac Newton was put-upon as he appeared on the show, but that doesn't mean he didn't also have a dick. Even Kitty Pryde agrees! Alchemy for centuries was a passion of amateur scientists and eventually gave birth to a vast but more orderly chemical field. Are you a fan of the Harry Potter series? You've been subjected to more alchemy history than you know. The cosmos are not clear in this respect, but Isaac Newton writes de Historia piscium (Fish History). The author, an ornithologist and ichthyologist named Francis Willughby, was not even alive when she debut work of Ornithologia libri tres. Fish history was probably supposed to be after vilgobia's bestselling work, but, as cosmos points out, it doesn't quite set the world on fire. (Maybe it should have been called Finding Nemo?) We know how far the Sun is thanks to the magic of parallax! Behind using transit Venus math to measure the distance from our home star is actually pretty easy to pull off these days. You can do it yourself right now! Halley's Comet last zoomed in with us in 1986, almost 30 years ago. So where is it now? Way past Neptune and almost on the way back. The episode mentions that Hooke died of malicious opium and wormwood, but what the hell is the wormwood? This is a hallucination/toxic plant that was used for brewing beer and absinthe in the Middle Ages! (And now, actually.) Exciting that the huge neighboring Andromeda galaxy is going to ruin us, isn't it? Kablammo! End of life on Earth! Except not. The clash will be so gradual that there's only a 12% chance we'll be thrown out wide of the Milky Way. (And even then, we still have anchored our star.) Also, the collision does not take four billion years, near the end of our Sun's life, and long after the Earth becomes incapable of supporting life. (But after the events of the Doctor Who episode The End of the World. Strange, isn't it?) Finally, it's not a show, but I can't help but think about it anytime I see the title of this previous weekend episode: Want more questions answered? Check out the Ask Scientist Cosmos thread on Reddit. You can watch the episode itself on Hulu. If you get something to add or edit, post away in the comments below! Chris Lough will probably also be unable to support life by the time the Andromeda Galaxy gets here. Dig for more Cosmos science here. Episode Cosmos: Spacetime OdysseyWhen knowledge was conquered by FearCosmos: Spacetime Odyssey episodeEpisode no. Episode 3 Directed by BragaWritten byAnn DruyanSteven SoterNarrated byNeil deGrasse TysonProduced byLivia HanichSteve HoltzmanFeatured musicAlan SilvestriEditing byEric LeaMichael O'HalloranJohn DuffyProduction code103Original air dateMarch 23, 2014 (2014-03-23)Running time43 minutesGuest appearance(s) Cary Elwes as Edmond Halley / Robert Hooke Tom Konkle as Samuel Pepys Alexander Siddig as Isaac Newton Episode Chronology ← PreviousSome Things what Molecules Are The Next →Sky Full Ghosts List Cosmos: Spacetime Odyssey Episodes When Knowledge Conquered Fear is the third episode of the American documentary television series Cosmos: A Spacetime Odyssey. It premiered on March 23, 2014 on Fox and premiered on March 24, 2014 on the National Geographic Channel. [1] The episode received positive reviews, with critics pointing to the homage series paid theories that evolved due to contributions from Isaac Newton, Nicolaus Copernicus, Edmond Halley, and Robert Hooke. [2] [3] Despite the fact that reviews, however, the episode received a 1.7/4 18-49 rating/share, with 4.25 million American viewers watching it live. [4] Episodes Summary Three historical figures featured episodes in narrative order, left to right, Edmund Halley (1656 - 1742), Robert Hooke (1635 - 1703) and Isaac Newton (1642 - 1727) The episode begins with Tyson describing how we were born in this world without explanation of our surroundings, much like a child abandoned on the brink. To help us learn about our surroundings, Tyson explains how we manifested ourselves in recognizing the scriptures at the beginning of mankind, sharpening the eons of evolution. We distinguish predators from prey; and poisonous plants from nourishing them - improving our ability to live and multiply, and to transfer our genes. We used article recognition in astronomy and astrology, where different cultures project different symbols and images into constellations by recognizing star patterns in the sky. We used it to predict the derailing of the seasons, including how each culture determined that comet driving was accepted as a sign. Tyson goes on to explain that the origins of comets became known only in the 20th century, thanks to jan oort's work and his hypothesis of the Oort cloud. Tyson then continues to relate the collaboration of Edmund Halley and Isaac Newton in the last part of 17th century Cambridge. The collaboration would lead to the publication of Philosophiæ Naturalis Principia Mathematica, the first major work to describe the laws of physics in mathematical terms, challenging the prevailing view that God had planned the sky, and the objections and claims of Robert Hooke's plagiarism, and the financial difficulties of London's Royal Society. Tyson explains how Newton's work could affect many factors in life, including modern space flight. Tyson further describes Halley's contributions, including setting the Earth's distance to the sun, moving stars and predicting the orbit of the then-unnamed Halley's comet using Newton's laws. Tyson contrasts these scientific approaches to understanding the galaxy compared to what early humanity had done. The episode ends with the animation of the Milky Way and the Andromeda galaxy unites based on the principles of Newton's laws. The reception episode premiere on Fox brought in a 1.7/4 18-49 rating/share, with 4.25 million American viewers watching it live. It places fourth and last in its timeslot behind the Resurrection, The Amazing Race All-Stars, and believe; and thirteenth of the eighteenth to the night. [4] References ^ Lewis, Tanya (22 March 2014). Cosmos Host Neil deGrasse Tyson reflects on TV's New Spacetime Odyssey. Yahoo! News. Retrieved 24 March 2014. ^ Baumgartner, Alison (March 24, 2014). TV Review: Cosmos: Spacetime Odyssey – When Knowledge Conquered Fear. ScienceFiction.com. Retrieved 25 March 2014. ^ Kaminskis, Jeff (March 23, 2014). Cosmos Review: Once Knowledge Fear. Geeksmash. Geeksmash. Retrieved 25 March 2014. ^ Kondolojy, Amanda (March 25, 2014). Sunday Final Ratings: America's Funniest Home Videos, Once upon a Time, American Dad & Mentalist Corrected Up; 60 Minutes, Revenge... Good wife adjusted down . a TV with digital numbers. Archived from the original on 25 March 2014. 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