



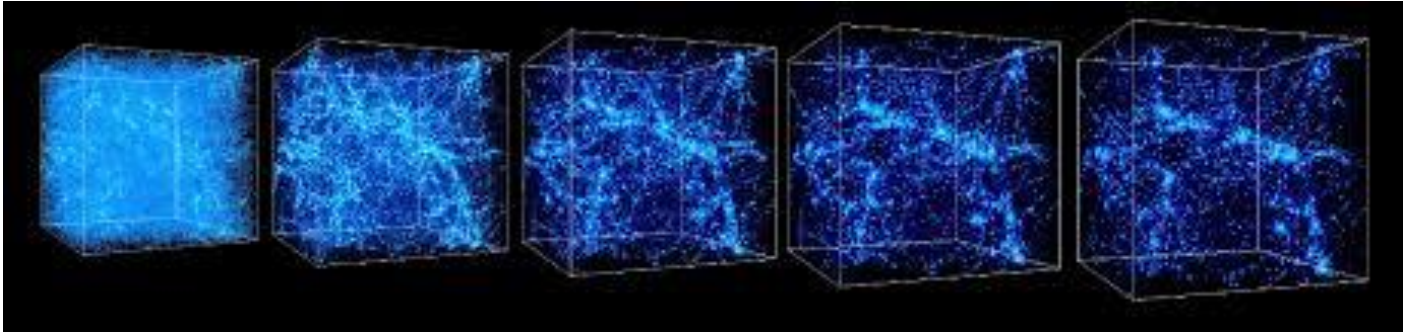
## LISTENING ACTIVITIES

"SCIENCES FOR THE CONTEMPORARY WORLD" (1<sup>st</sup> Bachillerato)  
UNIT 1: "Our place in the universe"



### 1. Watch the video and choose the correct answer to each question:

<http://www.nature.com/news/model-universe-recreates-evolution-of-the-cosmos-1.15178>



### A virtual model of the Universe

**1. The model is 350 million light years across... (0:40)**

- a. Large enough to be representative of the whole universe, but not detailed enough to see individual galaxies.
- b. Large enough to be representative of the whole universe, but detailed enough to see individual galaxies.
- c. Not large enough to be representative of the whole universe, but detailed enough to see individual galaxies.

**2. What does the model recreate? (1:12)**

- a. It recreates the galaxies and stars we can see and the dark matter and dark energy that we can't see.
- b. It recreates the dark matter and dark energy that we can't see.
- c. It recreates the galaxies and stars we can see.

**3. The simulation starts just... (1:23)**

- a. 12 million years after the Big Bang when things start to get interesting.
- b. 20 million years after the Big Bang when things start to get interesting.
- c. 12 million years before the Big Bang when things start to get interesting.

**4. What does each colour represent? (1:38)**

- a. Dark matter is shown as bright pink spots and ordinary matter (galaxies, stars and clouds of gas) as blue and green.
- b. Dark matter is shown as bright blue spots and ordinary matter (galaxies, stars and clouds of gas) as pink and green.
- c. Dark matter is shown as green spots and ordinary matter (galaxies, stars and clouds of gas) as blue and pink.

**5. The model also shows...(2:19)**

- a. Stars evolving and dying in supernovae.
- b. The distribution of different chemical elements such as helium and hydrogen.
- c. Black holes forming and spreading matter across space.

**6. Life and the formation of planets depend on elements such as: (2:41)**

- a. Basic elements such as helium and hydrogen.
- b. A mixture of chemical elements: helium, hydrogen, carbon, oxygen and metals.
- c. Heavy elements such as carbon, oxygen and metals.

**7. It was a big challenge for the designers' team...(3:03)**

- a. Recreating the large variety of galaxies we observe.
- b. Recreating spiral galaxies like the Milky Way.
- c. Recreating black holes.

**8. Simulation gives us greater confidence in our understanding of the universe because... (3:22)**

- a. It allow us do not use telescopes to observe the universe.
- b. It is very similar to the real universe as we see it through a telescope.
- c. It is a perfect model of the universe.