



**Cofinanziato  
dall'Unione europea**



**CLIL: ASTRONOMY**



# CLIL?

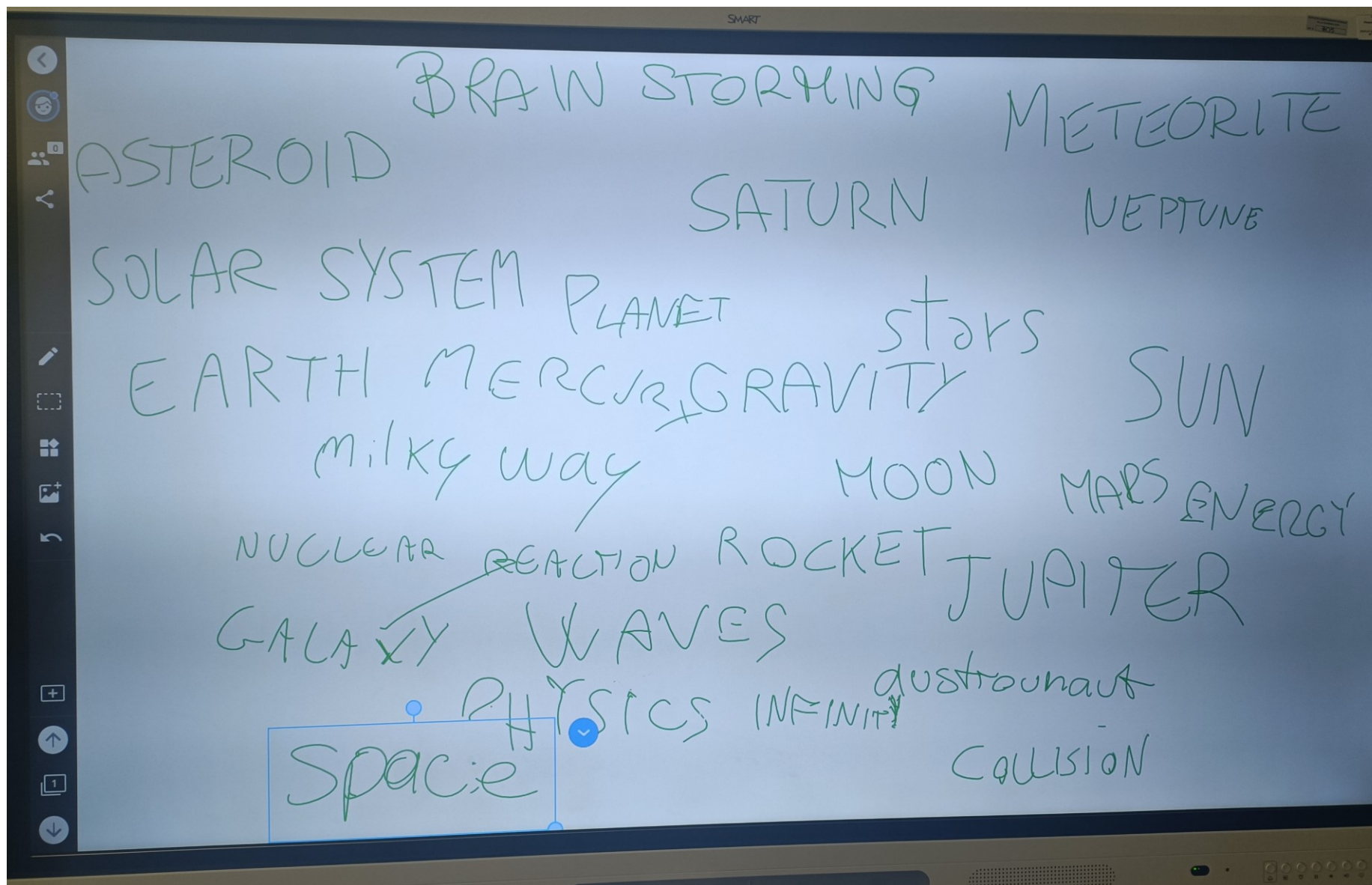
- CONTENT
- LANGUAGE
- INTEGRATED
- LEARNING

The study of a subject in a different language



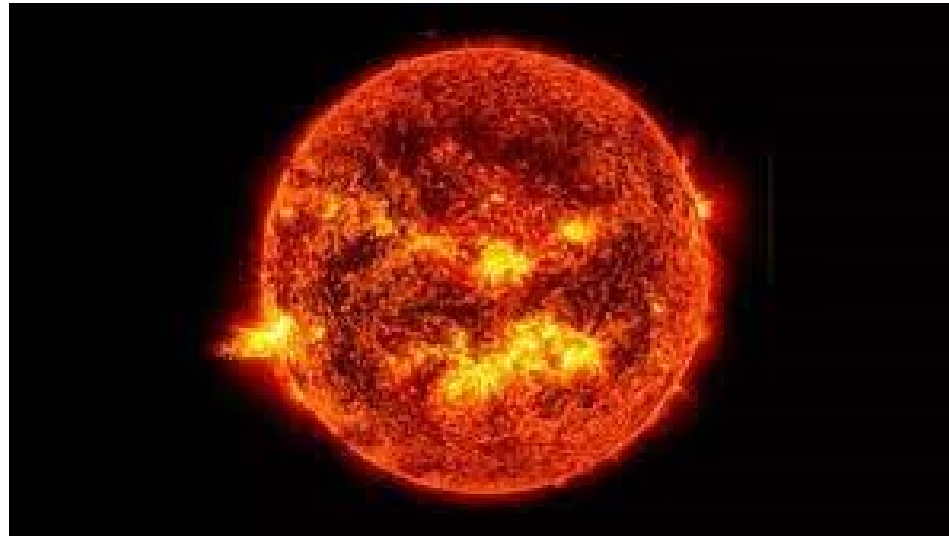


# BRAINSTORMING: ASTRONOMY



# WHAT IS ASTRONOMY?

THE STUDY OF EVERYTHING IN THE UNIVERSE BEYOND EARTH'S ATMOSPHERE



- <https://www.amnh.org/explore/ology/astronomy/what-is-astronomy>



# WHAT IS THE UNIVERSE?



The Universe is everything: it includes all of space, the whole matter and energy that space contains. It even includes time itself.

# WHAT CAN WE FIND IN THE UNIVERSE?

- STAR = a star is a huge glowing ball of hot gas, most of it is hydrogen. Hydrogen atoms smash together forming Helium so they create and release a lot of energy that heats the gas: this is called nuclear fusion, and this is why a star shines.



- SUN = our star, a yellow star, average in terms of size, “in the middle” of our solar system. It’s 4,6 billion years. <https://science.nasa.gov/sun/facts/>





# WHAT CAN WE FIND IN THE UNIVERSE?

- MOON = our natural satellite, rocky and cratered, roughly a quarter the size of Earth. “Moon” is also used referring to any satellite orbiting a planet: Jupiter has 95 moons.



- PLANET = celestial body that orbits a star, has a spherical shape and has a cleared orbit (there are no dust along its orbit). Our solar system counts 8 planets and 1 dwarf planet (Pluto)



# WHAT CAN WE FIND IN THE UNIVERSE?

- GALAXY = a galaxy is a giant spinning object made of gas, dust, and stars. Galaxies come in different sizes and shapes and can contain billions of stars. Our galaxy is the Milky Way.







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# Stellarium

Stellarium 0.22.2





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Stellarium 0.22.2

The screenshot displays the Stellarium 0.22.2 interface. The main window shows a night sky simulation with the Moon and Antihelion visible. The Moon is labeled in white text, and Antihelion is labeled in cyan text. The sky is dark with numerous stars. The foreground shows a dark landscape with hills and trees. The interface includes a top toolbar with icons for trash, screenshot, target, and settings. A left sidebar contains icons for home, clock, help, search, zoom, settings, and a question mark. The bottom status bar displays the following information: Earth, 43.1479, 12.1097, 0 m; FOV 72.8°; 9.63 FPS; 2024-01-30 05:45:59 UTC+01:00. The bottom toolbar contains icons for constellation (Orion), grid, help, search, zoom, settings, and a power button.





# Stellarium

Stellarium 0.22.2



The image shows the Stellarium software interface. The main window displays a night sky with several stars and planets labeled: Betelgeuse, Aldebaran, Sirius, Rigel, Uranus, and Jupiter. The sky is dark with a horizon line showing a silhouette of a landscape. At the bottom of the window, there is a status bar with the following information: "Earth, 43.1479, 12.1097, 0 m", "FOV 72.8°", "9.5 FPS", and "2024-01-29 23:10:46 UTC+01:00". On the left side, there is a vertical toolbar with various icons for navigation and settings. On the right side, there is a horizontal toolbar with icons for deleting objects, toggling the night/day cycle, zooming, and adjusting the view.