

Aula del Cielo

Y OBSERVATORIO ASTRONÓMICO DEL TORCAL

**Enseñanza y divulgación profesional
de la astronomía en Andalucía**

Móvil: 600 703 700

<http://www.auladelcielo.es>

correo-e: secretaria@auladelcielo.es

PRESENTATION

*More information at
www.auladelcielo.es*

Dear Principal:

I am sending you information about the activities offered by *Aula del Cielo*, which can be carried out directly at your school, as well as—regarding astronomical observations—at the Torcal Astronomical Observatory in Antequera.

Planetarium

Important note: The capacity indicated for our planetariums refers to the number of people who can attend without overcrowding the interior space, ensuring safety in case of any unforeseen situation.

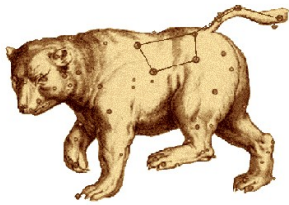
Our planetariums consist of a hemispherical dome and high-resolution and/or 4K digital projection systems, along with sound equipment and other multimedia elements inside. The digital planetarium projector simulates the night sky as seen from any



latitude, date, and time, including its motions. It also allows us to travel to planets and galaxies, enjoy the moving colors of polar auroras, observe a meteor shower, and much more. These images, along with others, are projected onto the inner surface of the dome, which acts as a large hemispherical screen. This creates an immersive experience in which participants feel fully involved.

One of our domes has a capacity of **25 people** and can be set up in a standard classroom (it was specifically designed for such spaces), ensuring that the activity can always be carried out without concerns about available room.





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Another dome has a capacity of **approximately 40 people** and is typically installed in a gymnasium or a room with high ceilings (minimum height: 3.8 m). We also have a **giant dome** with a capacity of **over 100 people**, measuring 10 meters in diameter and 6 meters in height. It requires a minimum of **90 minutes** for assembly (and the same for disassembly).

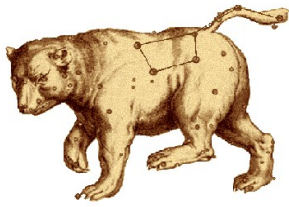
Up to **four sessions per day** can be offered with any of the planetariums, except the giant dome, which allows for three. This means that, throughout the school day, a large number of students can enjoy a complete astronomy session without leaving the school grounds, providing numerous advantages. The content of the sessions—adapted to the group's level and chosen themes—can be modified according to your needs.

Regarding installation, **no construction work or prior setup is required**. We only need an open, unobstructed space with a smooth, dust-free floor and access to a standard electrical outlet (220V). Full assembly or disassembly usually takes about **one hour**, except for the giant dome, which may require up to **one and a half hours**.



It is important to note that the sessions in live are not pre-recorded. and, in the case of film screenings, a few minutes afterwards may be dedicated to answering participants' questions, led by the astronomer conducting the session.

It is advisable for the sessions to follow the school's regular timetable. This means that the group attending the planetarium will come during the class changeover period. Once inside, the presenter will introduce themselves, explain the content of the session, and give the usual recommendations. After the students settle inside the dome, the interior lights will dim gradually and the projectors will turn on, beginning the session, which will end shortly before the next class change.



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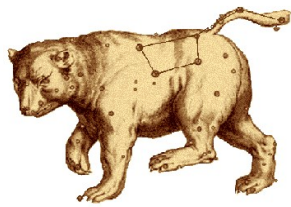
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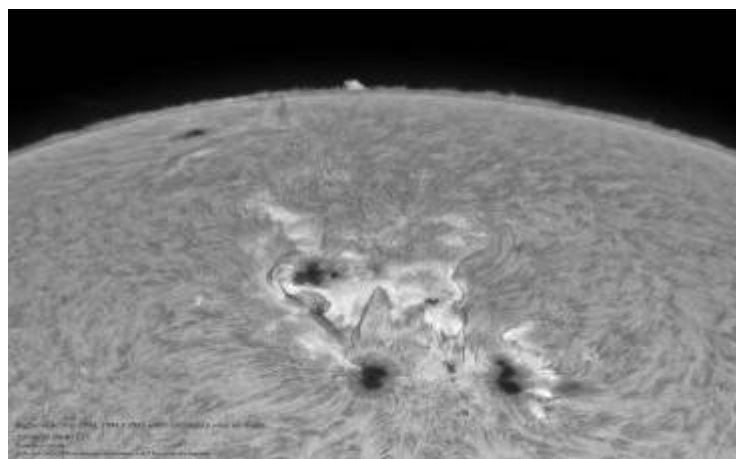
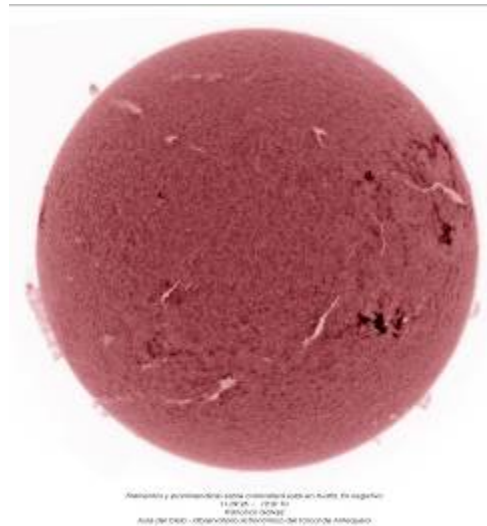
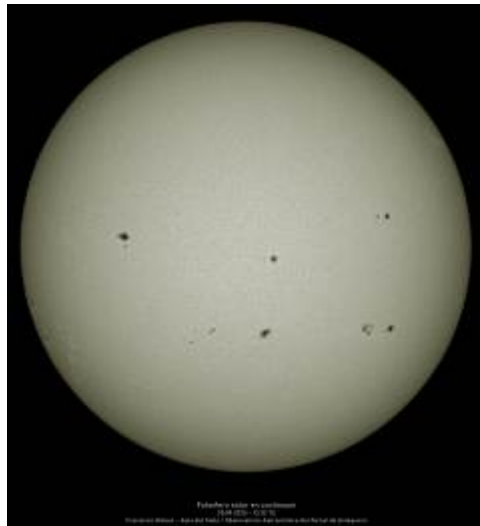
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Solar Observation

Regarding solar observation, we use telescopes and special filters that allow for the **safe viewing of the Sun**. With these instruments, and using contrast filters such as the **continuum filter**, students can study dark sunspots, faculae, and the granulation of the photosphere. With the **H-alpha filter**, they can observe solar activity in the chromosphere, including prominences, spicules, active regions, filaments, and more.

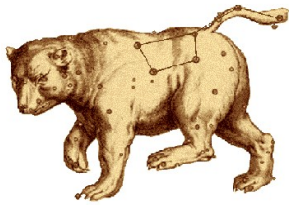


During the session, we address topics such as solar activity, the Sun's temperature and color, the origin of sunspots, auroras, the Sun as a star, distances in the Solar System, and the upcoming solar eclipses in **2026, 2027, and 2028**, among others.



Note

Whenever possible, during remote solar observations, videos of the Sun will be recorded using the different instruments. Once processed and finalized, these videos will be provided to the school for its own use **at no additional cost**.



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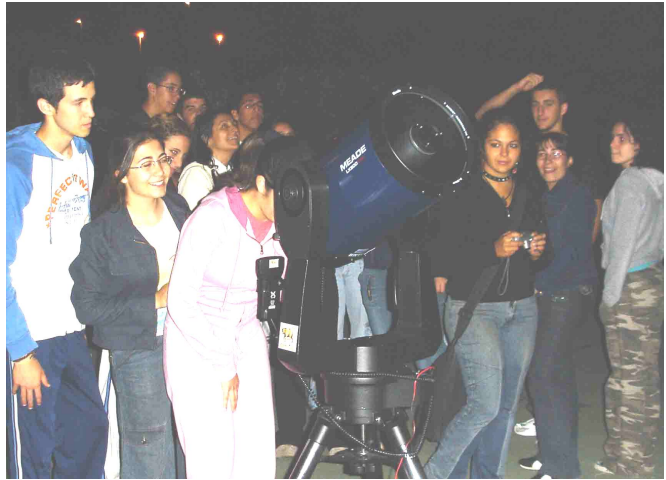
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Nighttime Observation

Regarding the nighttime observation, which lasts approximately two hours, there are two main objectives. The first is to **observe and enjoy the night sky with the naked eye**. If the activity takes place at El Torcal de Antequera, we can guarantee an excellent sky, as it is a protected natural area. Using professional green lasers, students will learn to identify the main star patterns used for orientation (such as the Big Dipper, Cassiopeia, etc.) and, from them, locate the most important star of the night: **Polaris**, the North Star. We will explain why it appears “always” in the same place in the sky and why it marks true north. We will also identify the most relevant constellations of the season and the brightest stars visible at that moment, discussing their brightness, colors, and other characteristics.



The second objective is to observe **objects of the Solar System** (planets, the Moon, satellites, etc.) and **deep-sky objects** (galaxies, nebulae, star clusters, etc.) using the powerful telescopes of the Observatory, accompanied—of course—by continuous explanations adapted to the level of the students attending



Francisco Gálvez.

Astrónomo Lcdo. en Ciencia (matemáticas), planetarista y divulgador.

Aula del Cielo/Observatorio Astronómico del Torcal de Antequera.