

## **Nonnweiler Star Labyrinth**

### **16 stations**

The Nonnweiler Star Labyrinth features 16 selected stars, each with its corresponding constellation. The 16 stations are scattered throughout the town of Nonnweiler. They are arranged in a similar way to how you would find them on a star chart or in the night sky. These stations, together with the streets and paths in Nonnweiler, give the following map the appearance of a labyrinth.

The text panels light up temporarily by turning a handle and by pressing buttons, information about the star or constellation is played out loud.

The starting point is the town square in Nonnweiler. The circular route and all individual stations are barrier-free. A particular highlight of this route is the section along a railway cycle path, which runs through the well-lit, 260 metre-long Bierfelder Tunnel. Shortcuts are available.

The Star Labyrinth was created in 2023 by the municipality of Nonnweiler with funding support from the Saarland Ministry of Economic Affairs, Innovation, Digitalisation and Energy

as part of a Saarland state programme focused on implementing public tourism initiatives.

Mr Dietmar Fries is responsible for the concept and texts. The design and graphics are the work of Agentur HG Schneider, Trier. The constellation illustrations by Kay Elzner have been taken from the German book “Wie der Löwe an den Himmel kam” (How the Lion Made It Into The Sky) with the kind permission of publisher Kosmos Verlag. Dietmar Fries created the star and constellation maps with the help of the software program “Cartes du Ciel”. The aerial photograph, LVGL licence no. DOP - 07/09, has been provided by the Saarland State Office for Surveying, Geoinformation and Rural Development.

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### **Information Panel**

When seen with the naked eye or through binoculars, every star looks like a bright point of light. Stars vary in their brightness and, when you look more closely, also in their colour. These days we know that stars are all actually very different. Each information panel lists the colour and surface temperature of a star. Details on luminosity, mass and diameter are described in comparison to our sun. The diameters of the stars are enormous and vary dramatically. You can get a rough idea by comparing them with the solar system model on the Nonnweiler Planet Trail at the Nonnweiler Dam.

The distance to the earth is described in light years for each star. To give you an idea of how this compares to our solar system, 4 light years on the Planet Trail model at the Nonnweiler Dam would be about the same as the circumference of the Earth. The information on nighttime visibility provides an idea of when it is easiest to see the star and its constellation in the sky.

All stars have a similar structure to our sun. Energy is released in the star's core through nuclear fusion. This energy spreads outwards and heats up the surface, which then glows in the colour corresponding to its temperature.

Stars go through various stages of development. What is known as the stable phase is when hydrogen in the star's core is converted to helium by nuclear fusion. These stars are called main sequence stars. Our sun has been one of these for several billion years. When the hydrogen supply in the star's core starts running out, an unstable phase begins. The luminosity, size and surface temperature of the star changes. Different fusion processes take place after this, depending on the star's size. During this time, a star expands massively and becomes a giant or supergiant star.

Constellation information panel

The stars seem to be randomly arranged in the sky. They keep their distances and positions in relation to each other as they orbit the celestial pole in around 24 hours. People across all cultures have invented imaginary shapes (constellations) to orient themselves by.

Seen from Earth, all the stars in a constellation appear to

be close to one another when viewed from a certain direction. In actual fact, however, they are generally different distances away from us and have nothing to do with each other.

Each constellation information panel describes its position in the sky. It also provides details of any other features such as nebulae or star clusters that can be seen within the constellation.

The panel ends with a mythical story about the constellation, which gave the shape its name.

These stories usually draw on Greek and Roman mythology. There are often further stories to be found in literature, which likewise seek to explain the origins of constellations.