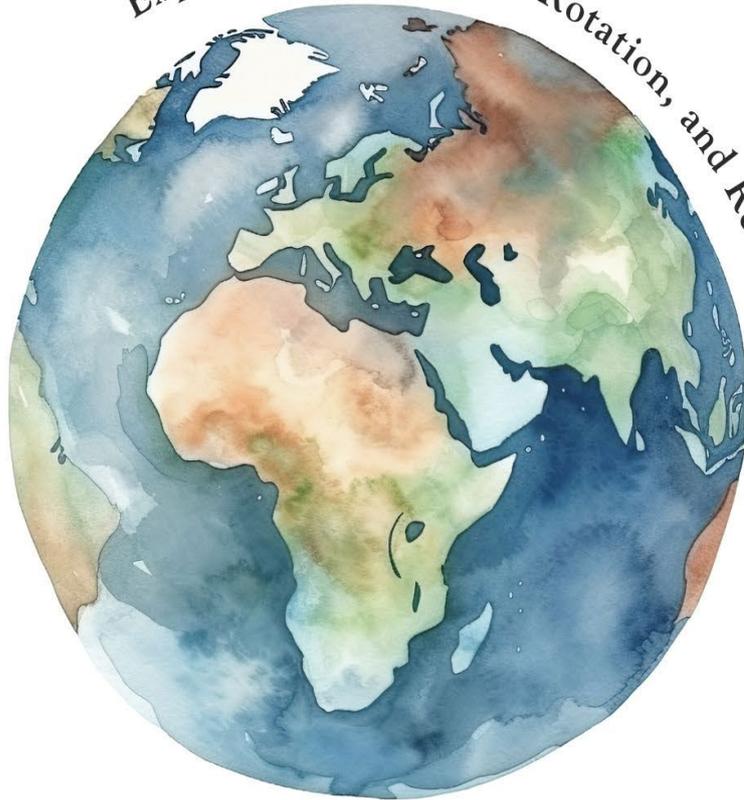


# *Circling the Sun*



*Exploring Earth's Tilt, Rotation, and Revolution*



SCIENCE YEAR 6

## Circling the Sun: Exploring Tilt, Rotation, and Revolution

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## Introduction

At My Homeschool, we study a variety of scientific disciplines, such as biology, Earth science, space science, physics, and chemistry. We use the scope and sequence laid out in the Australian Curriculum and the NSW syllabus. We also use Charlotte Mason's ideas when preparing the framework for our courses.

Each lesson is to be completed over a week. There are three parts to this resource:

- The first is our skills component: You will find a list of skills for your child to attempt over this term. Attempt to complete at least five of these skills and record them in your notebook. Spend your first week planning out what you intend to do regarding activities and then schedule them over the term.
- A science narrative for study and narration: Lessons 2 to 7 include an introductory narrative to read. From this section a written narration can be made.
- Earth Science Links: The third part is extension research to explore on the topic. These links are found online in your Virtual Cupboard. Watch the videos and explore the links and add more information to your notebook.

Our science resources combine the ideas of Charlotte Mason and modern teaching methods. The melding of these two approaches gives children the delight of learning about science through a range of literary and digital mediums. It also utilizes a core idea in the Charlotte Mason method where children make connections between all the knowledge they are acquiring across all subjects – she calls this the science of relations.

Most students will have already covered the basics of astronomy in the primary years and should have a basic knowledge of the Solar System. *Circling the Sun* and our *Earth Science Links* continue to build on that foundation.

Melding these two methods allows you to give your child a modern Charlotte Mason science curriculum that will consolidate and reinforce their science understanding and the science of relations.

I trust you will find this resource useful, and your child will be eager to learn more about the topics covered.

Michelle Morrow

## Lesson 1: Nature Study Skills & Star Gazing Activities

*“There is no need to wait until you are in the bush to study the stars. From a suburban backyard you can become familiar with the great constellations and their movements and learn to recognise the planets. Then when you glimpse through tall trees, fragments of a group far brighter. Because there is no city glare to dim its radiance. You will find recognition increasingly easy. A big difference in latitude will sink some old friends below the horizon and introduce new acquaintances. In early dusk or bright moonlight the brilliance of all will be diminished so that only stars of the greatest magnitude are visible. That is when the familiarity with a clear sky at the dark of the moon will be of help in finding your constellations. And once you have been introduced to the stars, no matter how weary you are, you will always find a few minutes to say goodnight to your friends”.*

*Thistle Harris Nature Craft in Australia © 1967*

Thistle Harris' quote beautifully encapsulates the joy of stargazing and the idea that you don't need to be in a remote location to appreciate the wonders of the night sky. Stargazing is an incredible activity for children and adults alike, and it can be an educational and awe-inspiring experience. Let's explore how stargazing can be a fantastic journey for young learners, and how a telescope can make a significant difference in their exploration of the cosmos.

Look through this list below and schedule some activities to complete over the term. Keep a record of the activities and field trips and add them to your Science Notebook.

### ***Getting Started Tips***

1. **Learn the Constellations:** Begin by learning about the great constellations, those patterns of stars that form recognizable shapes. Constellations have fascinating stories from different cultures that make stargazing even more exciting.
2. **Recognize the Planets:** Some "wandering stars" are actually planets like Venus and Jupiter. They shine brighter than regular stars and can be easily spotted. Knowing when and where to find them adds to the fun.
3. **City vs. Dark Sky:** In the city, the glow from streetlights and buildings can make stargazing challenging. However, when you step into a dark backyard, the stars shine more brilliantly, and you can see even more.

### ***The Role of a Telescope:***

While you can see many amazing things with your naked eye, but a telescope can take your stargazing experience to the next level. Here's how:

1. **Bringing Stars Closer:** Telescopes allow you to see distant objects in the night sky with greater clarity. They make stars, planets, and even distant galaxies appear closer and more detailed.
2. **Exploring the Moon:** With a telescope, you can study the Moon's craters and mountains up close. It's like having your own personal lunar adventure.

3. Spotting Rings of Saturn: One of the most awe-inspiring sights in the night sky is Saturn's rings. A telescope reveals the beauty of this planet and its magnificent rings.

4. Viewing Jupiter's Moons: Jupiter often has tiny dots around it. These are its moons, and a telescope allows you to see them and even watch them change position over time.

5. Deep Space Exploration: Beyond our solar system, telescopes can reveal distant galaxies, nebulae, and star clusters. They open a window to the vastness of the universe.

### ***Making Stargazing a Habit:***

Just like Thistle Harris mentioned, once you've been introduced to the stars, you'll always find time to say goodnight to your celestial friends. Make stargazing a regular activity, and it can become a lifelong passion. Here are a few tips for children and families:

1. Starry Nights: Look for evenings when the Moon is not too bright (not during a full moon). Clear nights are ideal for stargazing.

2. Stargazing Apps: Use stargazing apps on your smartphone or tablet to help identify stars, constellations, and planets. Some apps even provide real-time sky maps.

3. Family Activity: Make stargazing a family affair. Bring out some blankets and hot cocoa, and enjoy the night sky together.

4. Keep a Stargazing Journal: Encourage children to keep a journal where they record their observations, sketch constellations, and note any interesting events they witness.

In conclusion, stargazing is an accessible and educational activity that can inspire wonder and curiosity in children. Whether using the naked eye or a telescope, exploring the night sky can lead to a lifelong fascination with the cosmos. So, venture into your backyard, look up at the stars, and let the universe be your guide on this magical journey through the night sky.

### ***Activity***

Make a list of the activities you intend to complete and schedule them into your term calendar.