

### Did you know?

India was one of the first places in the world to study the stars and planets?

Long before telescopes were invented, Indian astronomers used their eyes, clever tools, and deep thinking to understand the sky.

They watched the stars, the Moon, the Sun, and the planets and made amazing discoveries!



#### **Ancient Indian Astronomy Timeline**



Lagadha (1500 BCE)



Aryabhatta 499 CE



Varahamihira (6h century)



Bhaskara II (7th century)



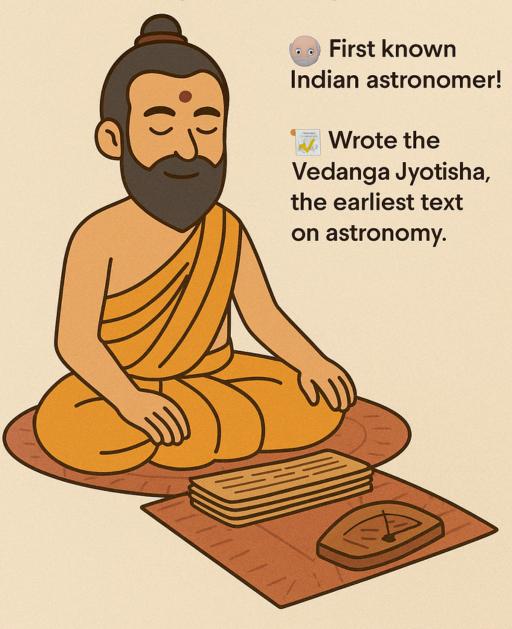
Vararhiihira

Bhaskara I (7th century)

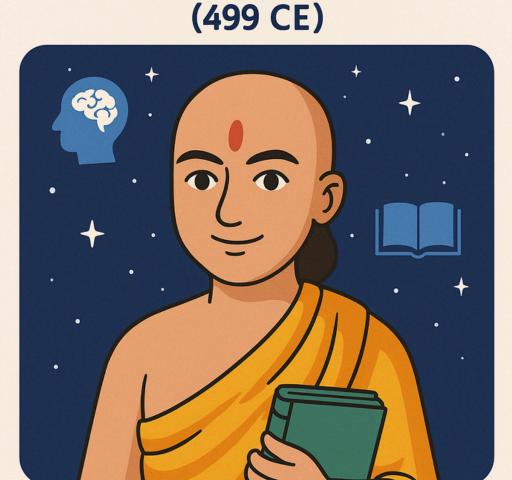
Bhaskara II (12th century)

# Lagadha

(1500 BCE)



# ARYABHATTA





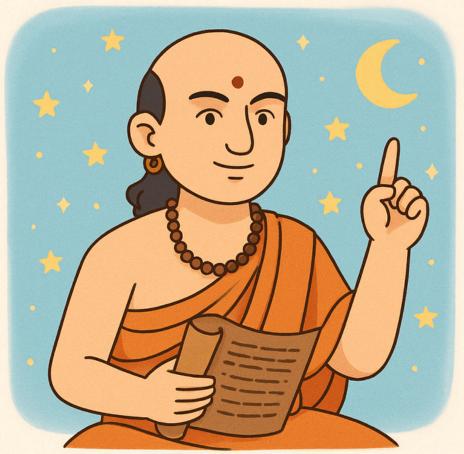
Genius who said Earth spins!



Wrote the *Aryabhatiya* at age 23!

## Varahamihira

(6th Century)

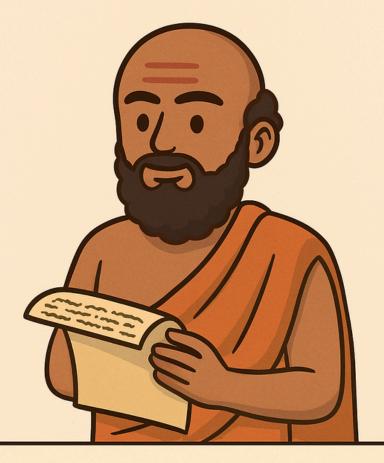




Combined astronomy with astrology.



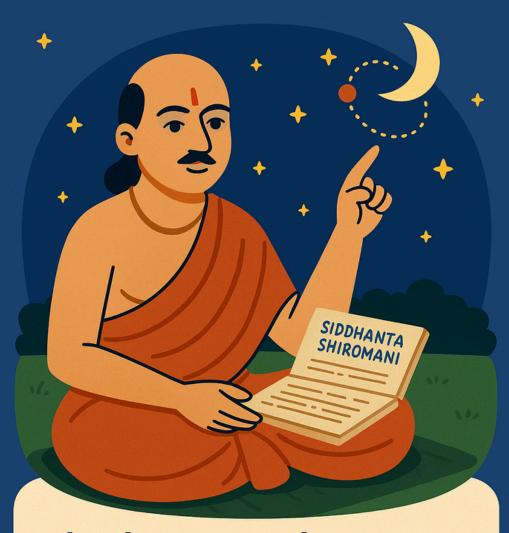
Author of *Brihat Samhita* and *Pancha-Siddhantika*.



# Bhaskara I (7th Century)

Explained Aryabhatta's math and astronomy!

Known for early trigonometric formulas.



## **Bhaskara II (12th Century)**

Studied eclipses, orbits, and gravity ideas!



🕎 Wrote Siddhanta Shiromani

## What is Astronomy?

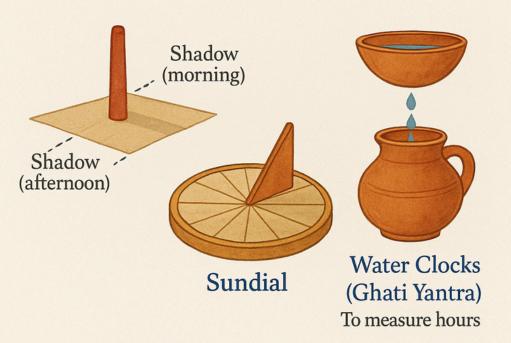
Astronomy is the science of studying the sky. It includes stars, planets, the Sun, Moon, and galaxies. Ancient Indian astronomers called it "Jyotisha," which means "light of the sky."



# How Did They Observe the Sky?

Ancient Indian scientists didn't have telescopes, but they used tools like:

- Gnomon (Shanku): A stick that casts a shadow to measure time
- Sundials: To track time using the Sun.
- Water Clocks (Ghati Yantra): To measure hours



### Aryabhatta – The Star Genius!

Aryabhatta was a famous Indian astronomer and mathematician who wrote the *Aryabhity* 

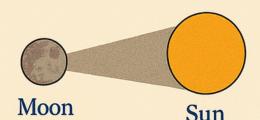
when he was just 23!

He said the Earth rotates on its axis and explained eclipses without using magic myths



#### Did You Know?

Aryabhatta figured out that the Moon and planets shine because they reflect sunlight!



**Eclipse** 

# CONSTELLATIONS IN INDIAN ASTRONOMY



Ancient Indians called constellations "Nakshatras." There are 27 Nakshatras that the Moon passes through in a month. Each has a name like Ashwini, Rohini, and Revati.

### THE PANCHANGA — ANCIENT INDIAN CALENDAR



Ancient Indians made calendars using the movement of the Sun and Moon.

They calculated:

- Tithi (Lunar Day)
   Nakshatra (Star)

Yoga

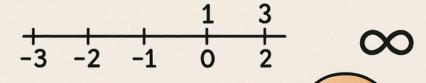
Vara

This calendar is called a Panchanga, and it's still used today for festivals and rituals!

### BLACK HOLES, ORBITS & ZERO!

Ancient Indians thought deeply about space and numbers:

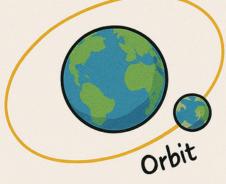
They imagined the concept of infinity.



They invented zero and place value

 They calculated the Earth's orbit and size of Moon!



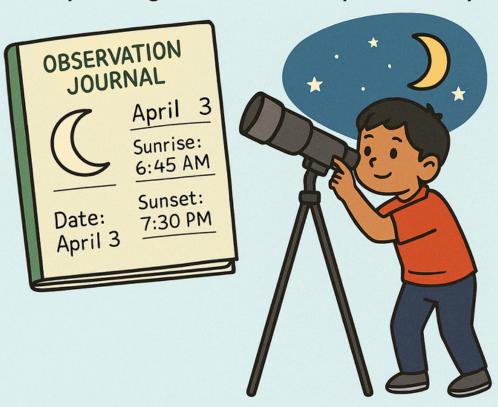


They calculated the Earth's orbit and size of Moon

## Learn Like a Young Astronomer!

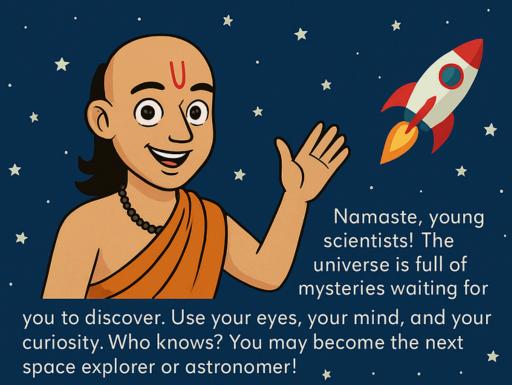
You can become a young astronomer too:

- Observe the Moon every night and draw its shape.
- Track sunrise and sunset times.
- Make your own sundial using a stick and paper.
- Try naming the Nakshatra of your birthday!





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