

STARDOME OBSERVATORY & PLANETARIUM FACTS, RESOURCES AND ACTIVITIES ON...

FLAT EARTH CONSPIRACY

There is a society of people who believe that Earth is flat. The Flat Earth Society believes, as scientists do, that we should not simply accept knowledge handed down but challenge it through experimentation and examination. This foundation for their society would then lead you to believe that they are scientists. However, their experiments and examinations conducted are aimed at proving their beliefs, not discovery. Results contradictory to their beliefs are tossed out as being not yet fully developed or understood. This goes against the scientific method and therefore cannot be considered to be scientific.



Artist's impression.

Due to precession, ancient celestial navigators noted there was no North Star. In thousands of years, Sirius will be the South Star.

In the Southern Hemisphere, we are especially fortunate as we can do our own experimentations and examinations which firmly disprove the Flat Earth doctrine without having to travel half way across the globe. Their explanations for the motions of the sky are centred around what is visible to people living between the equator and the north pole (the Northern Hemisphere).

Observations made south of the equator do not align with their Flat Earth doctrine, and so the society discounts it as being false.

The Flat Earth Societies' doctrine

"The earth is a plane, with a northern centre, over which the stars move in concentric courses at different radial distances from the northern centre as far south as and wherever observations have been made."

The Flat Earth Societies' evidence

"The Southern Cross is not at all times visible from every point of the southern hemisphere, as the 'Great Bear' is from every point in the northern, and as both must necessarily and equally be visible if the earth is globular."

The Flat Earth Societies' reasoning

"The southern region of the earth is not central, but circumferential; and therefore there is no southern pole, no south pole star, and no southern circumpolar constellations; all statements to the contrary are doubtful, inconsistent with known facts, and therefore not admissible as evidence."

Source: www.sacred-texts.com/earth/za/za48.htm

The Round Earth evidence

The 'Great Bear' is not visible from every point in the Northern Hemisphere, just as the 'Southern Cross' is not visible from every point in the Southern Hemisphere. At the equator, and latitudes nearby, both the Great Bear and the Southern Cross rise and set. The Southern Cross even sets for a brief time in locations as far south as Brisbane. However, from Auckland (and other locations at latitudes further south), the Southern Cross never sets. We can see it anytime of night, anytime of year.

Seeing southern circumpolar constellations directly contradicts the Flat Earth doctrine that there is only one pivot point in the sky. But please, don't just believe this resource, continue onto the following activity and discover the truth about the southern circumpolar constellations for yourselves!

Check out these other resources...

www.livescience.com/24310-flat-earth-belief.html

apod.nasa.gov/apod/ap160331.html

indonesiaexpat.biz/featured/stars-over-bali/

How should a scientist process information gained through research and experimentation?

The scientific method has characterised natural science since the 17th century, consisting in systematic observation, measurement, and experiment, and the formulation, testing, and modification of hypotheses. "Criticism is the backbone of the scientific method."

DISCUSSION POINTS

How should a scientist create an experiment?



ACTIVITY

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IS THERE A SOUTH CELESTIAL POLE?

In pairs or small teams, students will use the scientific method to make observations of the apparent movement of the Southern Cross.

WHAT YOU'LL NEED

- ➡ Compass (can use smart phone)
- ➡ Camera or sketching paper

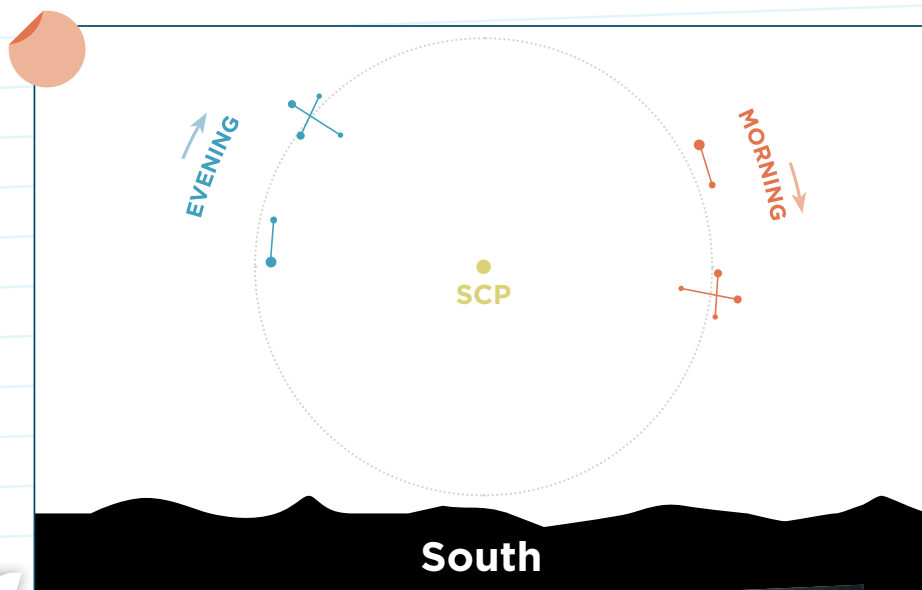
WHAT TO DO

- Have each team come up with a hypothesis for what their observations of the Southern Cross will look like.
- Assign each teammate a time to observe the location of the Southern Cross in the sky and document it's position relative to the southern horizon with a photograph or sketch of what they saw.
 - To find the Southern Cross, you can use these [star charts](#), use a [star app](#) on your smart device or use our [finding your direction activity](#).
 - Make sure each observation contains both the Southern Cross and the pointer stars to be certain that students are documenting the movement of the Southern Cross and not the False Cross, Diamond Cross, or some creation of their own stars they have connected into the shape of a cross.

- Observe over a time period of at least one day, with at least one observation after sunset and at least one observation before sunrise.
- Have teams then create an explanation for their observations, filling in the gaps in movement of the stars over one entire night. See if teams discover the South Celestial Pole. Each team should check their results with at least two other teams to verify their observations.

QUESTIONS

- Does the Southern Cross rise/set?
- Does the Southern Cross flow a long path through the sky like the Sun?
- Does the Southern Cross appear to pivot around a point in the sky?
- Were your observations the same as the other teams?
- Was human error an issue with data collection?
- Was your hypothesis verified by your observations? If not, what have you learned to create a new hypothesis?
- Have other people been able to do the same experiment but arrive at a different conclusion/collect different data? If so, why were their observations/results not the same?



IF STUDENTS ARE CONFUSED...

Yes, this disproves the Flat Earth Society but it may not prove Earth is round all on its own. Continue thinking!

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TAKE A PHOTO OF YOUR ACTIVITY AND SEND IT TO US.
WE'D LOVE TO SEE IT! EDUCATION@STARDOME.ORG.NZ

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