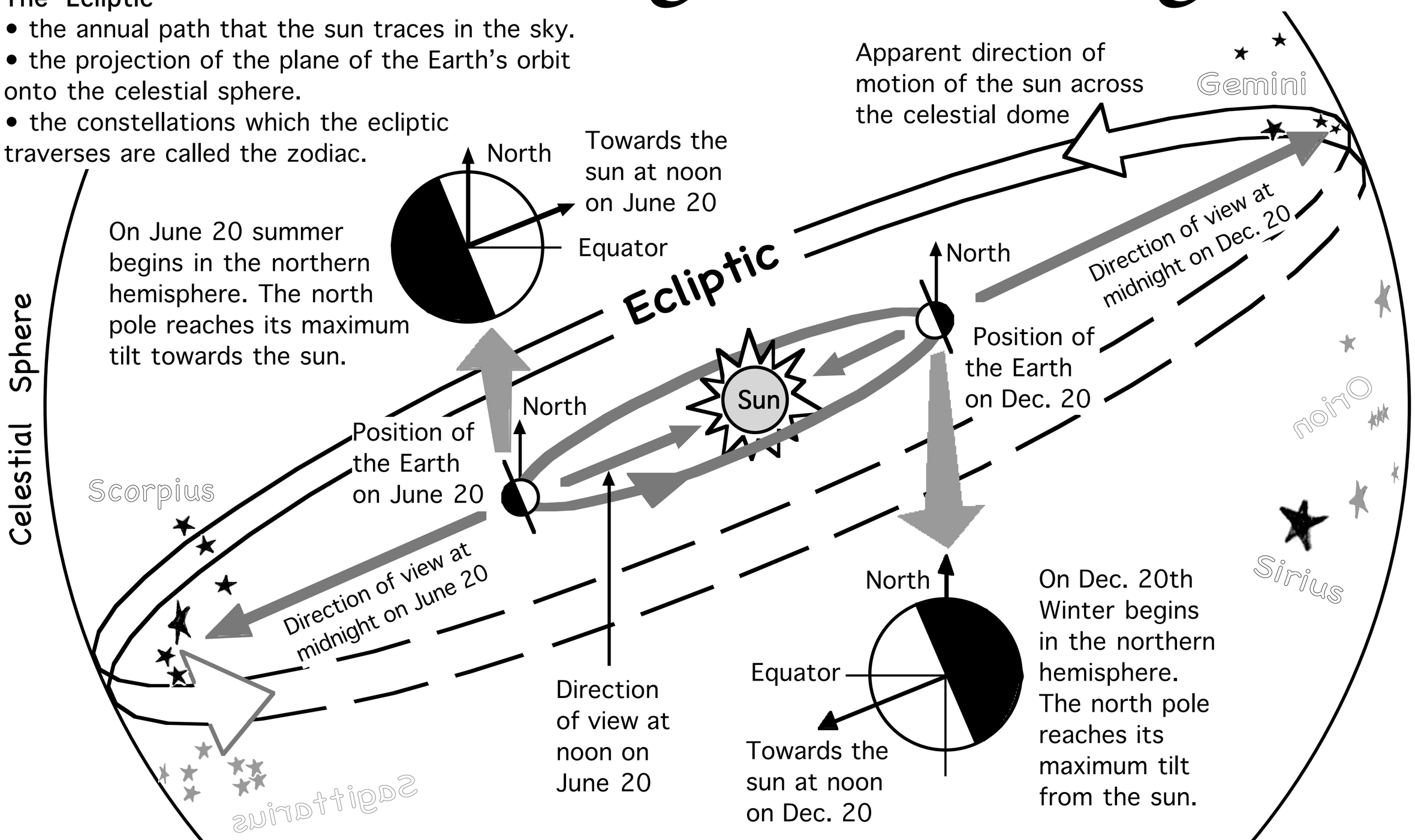
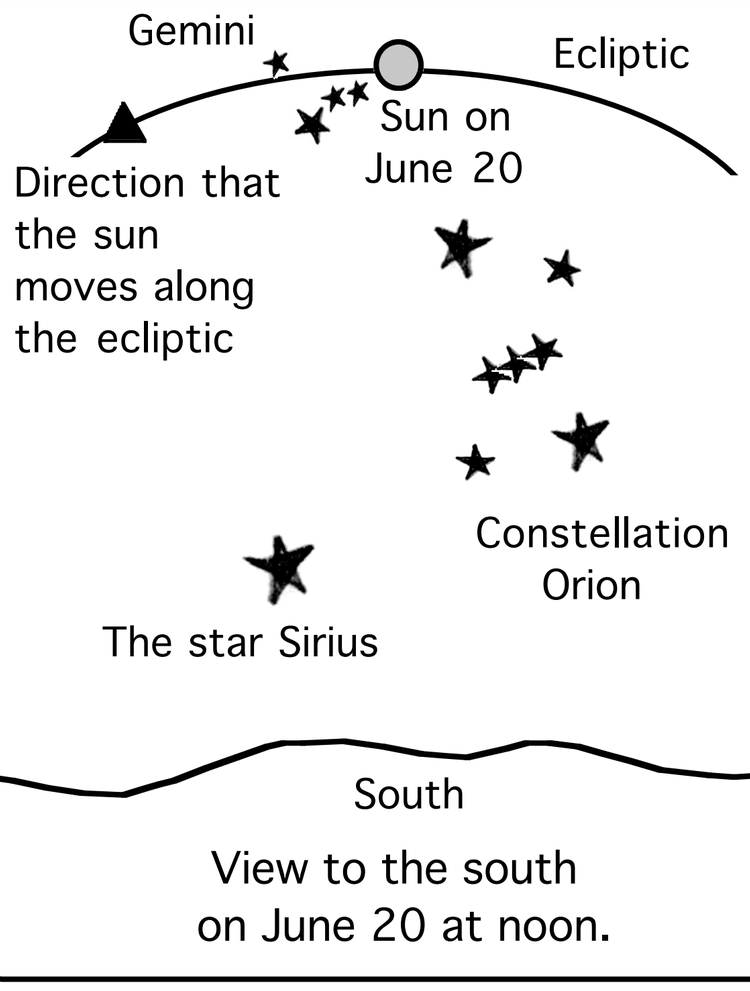
Seasons change, Stars change

The Ecliptic

- the annual path that the sun traces in the sky.
- the projection of the plane of the Earth's orbit onto the celestial sphere.
- the constellations which the ecliptic traverses are called the zodiac.



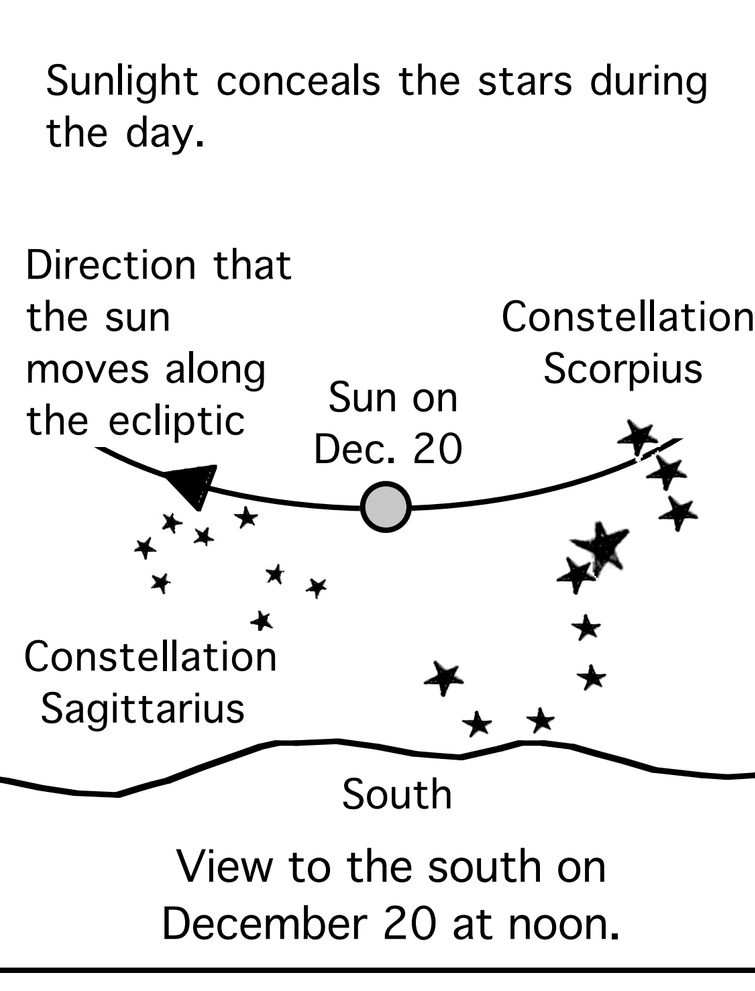


View to the south on June 20 at noon.

Consider that...

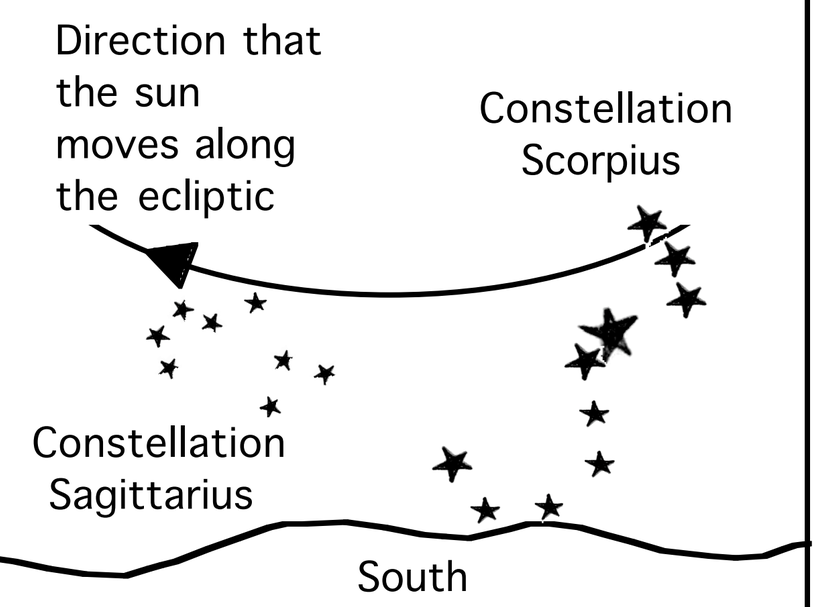
- the sun is higher at noon in June than in December,
- the sun is slightly farther from the Earth in June than in December,
- the stars that are in the midnight December sky are the same stars in the noon June sky, and vice versa,
- the ecliptic is high at midnight in December and at noon in June,
- and the ecliptic is low at noon in December and at midnight in June.

Sunlight conceals the stars during the day.

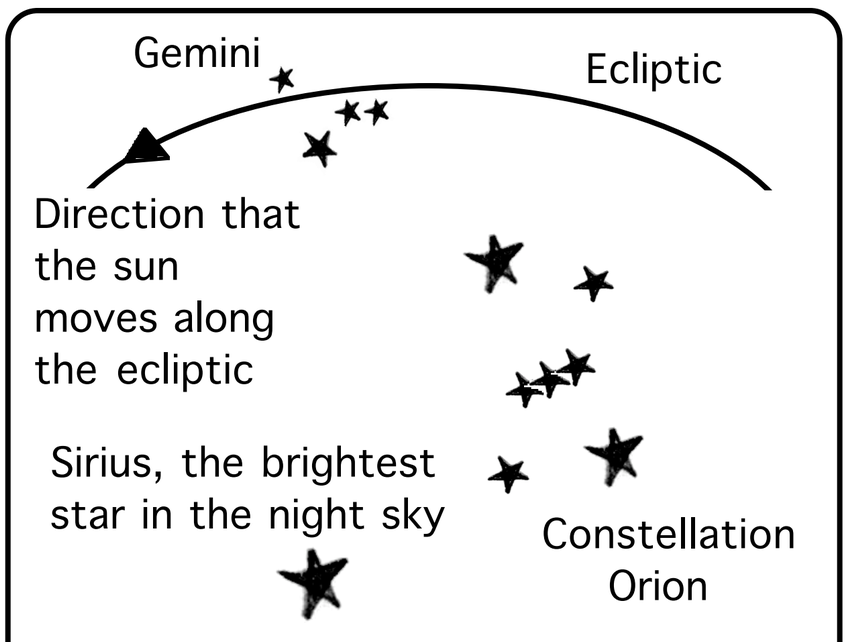


View to the south on December 20 at noon.

Of course, there are many other stars visible, some dim, some bright.



View to the south on June 20 at midnight.



View to the south on December 20 at midnight.

Consider that...

- the sun always lies directly on the ecliptic line, moving two of its own apparent diameters to the east each day,
- it takes the sun 365 days to complete one circuit around the ecliptic, and
- the moon and the planets lie either on or near the ecliptic.

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