



## 12 Hours - Teacher's Notes

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We have 12 hours of daylight and twelve hours of night at the equator.

When people settled into agriculture and towns appeared measurements had to become uniform to control fair trade, develop technology and collect taxes. Early Assyrian and Egyptian people used their thumbs and the three joints each in their four fingers to count.



*Numbered joints*



*Thumb counting to five*

This resulted in a numerical system based on the (sacred) number 12, as compared to the present decimal system based on 10. (Some teachers may even remember that prior to the arrival of decimal coinage there were 12 pennies to one shilling and twelve inches in one foot).

Sundials broke the day into twelve sections for those who needed it.

Most people just rose at **dawn**, worked until **breakfast** (which was the first meal of the day and broke the night's fasting), returned to work only to stop about **midday** for a meal and then worked on until **sunset** when they went home for their evening meal. The nighttime wasn't broken up into sections. Sailors estimated time at night by watching the stars.



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The advanced T bar sundial developed in Egypt and shown in some tomb paintings was calibrated to divide the period between sunrise and sunset into 12 hours. Since Egypt is close to the equator throughout the year the days are of almost equal length. Elsewhere the tilt of the Earth's axis resulted in longer summer "hours" and shorter winter "hours." At night, time was estimated by movement of significant stars or by using a water clock or sand hourglass.



Although in ancient Greece about 140BC it was suggested that night and day should be divided into 24 hours of equal length most people still managed with hours that varied in length with the seasons until mechanical clocks appeared in the Middle Ages. Many early clocks only had an hour hand. Ordinary people estimated the time of day by the Sun or by church bells ringing for service.

