

## "DIURNAL APPEARANCE MOVEMENTS OF LUMINAIRES. METHODOLOGY OF TEACHING THE SUBJECT "CONSTELLATIONS"

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### ANNOTATION

This article provides recommendations on the milk movements of lamps and the methodology of teaching the subject of star categories.

**Keywords:** star categories, annual visible movement of lamps, celestial sphere, north, south, west, east.

### EDUCATIONAL OBJECTIVE

Cosmic events: The earth's rotation around the sun, the earth's rotation around its axis, and the precession of the Earth's axis, as well as the result of cosmic events; General information about the basis for classifying and systematizing cosmic events and the rotation of Earth around its axis, the rotation of the moon around Earth, the orbit of planets in the earth and the solar system around the sun, and the results of sky events observed on a day-to-day basis: the exchange of days and nights, the visible movement and culminations of lighting, changes in seasons of the year, and so on;

– Events of the heavens: the exchange of night and day, the output of celestial lights (sun and stars), the setting, the movement of milk and annual viewing, the appearance of illuminators in various parts of the earth;

– teach about the celestial sphere, its main circle, lines and points (zenith, horizon, mathematical horizon, arc of the universe, the poles of the universe, the celestial equator, the celestial meridians, milk parallels, ecliptics, spring and autumn equilibrium, and the top and bottom points of the sun).

### OBJECTIVE

To develop a scientific world for students, to explain daily celestial events; to combat astrological views, and to develop the ability to apply astronomical knowledge practically. Teaching aesthetic discipline through myths in studying star categories.

Purpose: To assist individuals desiring to benefit the worldwide work of Jehovah's Witnesses through some form of charitable giving, a brochure entitled Charitable Planning to Benefit Kingdom Service Worldwide has been prepared. about the movement of rheumatism, the change in the height of the sun at noon from the horizon over the course of the year, the sun's

Ecliptics b thinking about k seating, and the change in the duration of the day of the day) and the conditions of k appearance in various parts of the earth;

– development of worldviews of real dreams and nights: the main concepts of spherical astronomy, star categories, celestial sphere and its main alignment, lines and points (mathematical horizon, zenith and rare, universe arrow, world poles, celestial equator, celestial meridian ecliptics, spring and autumn, top and bottom points of the sun).

**Lesson equipment:** Slides "The Movement of the Stars sky and skylights", model of the celestial sphere, map of the sky, model of the celestial sphere, model of the celestial sphere, drawing map (in each reader) A.A. Mikhailov's sky map, Astronomical calendar for the given year, image and drawing of star categories, geographical globe, tellurium, height measurement tool – school theodolite.

**Keywords:** The cellar sphere and its main point, line, circles, annual k seat movement of the sun, Ecliptics, Polar Star, Star categories.

**Lesson plan.** (Note: Depending on the ability of the teacher's students, you can change the stages and time of the lesson.)

No	Dars bosqichlari	Time
1	Organizational Part	2 minutes
2	Repeat the assigned theme	6 minutes
3	Login Chat	3 minutes
4	Exploring a New Topic	22 minutes
5	Strengthening a new theme (reader evaluation)	8 minutes
6	Homework	4 minutes

### Progress of the Lesson

**1. Organizational part.** The teacher provides students with a brief description of what will be learned in today's lesson and star categories. So the preparation for the right lesson is k.

**2. Repeat the assigned theme.** " What does astronomy learn? Questions and answers will be held on the theme "History of its development and relationship with other subjects."

**3. Flag of a new theme.** Before explaining a new topic to the students, a "Problem Situation" is generated with the question, "How do you imagine the stars omon?" and the teacher briefly explains it.

Since then, the right teacher will give an insight into the following sequence through the 11th grade Astronomy Electronic Curriculum or the presentation of the subject.

### Milk visible movements of Y orifices. Star categories

#### Cloud:

1. Milk visible movements of stars.
2. Evidence that the earth revolves around its axis. Fuko yeast.
3. The celine sphere, its main point, circles and lines.

#### 4. Annual visible movement of the sun. Ecliptics.

##### Milk visible movements of stars.

In addition to the stars at night, you can see the planets, and sometimes comets. The stars appear to have been blown into a multicolored and unregulated stream of light in diameter, but when viewed with a simple eye, the number of them visible in a certain semicircular sphere of the sky does not exceed 3,000.

If the stars are relentlessly observed from a certain place at night for several hours, you can see the stars of the entire celestial sphere revolving around the hypothetical axis passing through the observer (*referred to as the axis of the universe*). In the meantime, a video showing the milk movement of stars will be shown (Figure 1).



*Figure 1: The milk movement of stars*

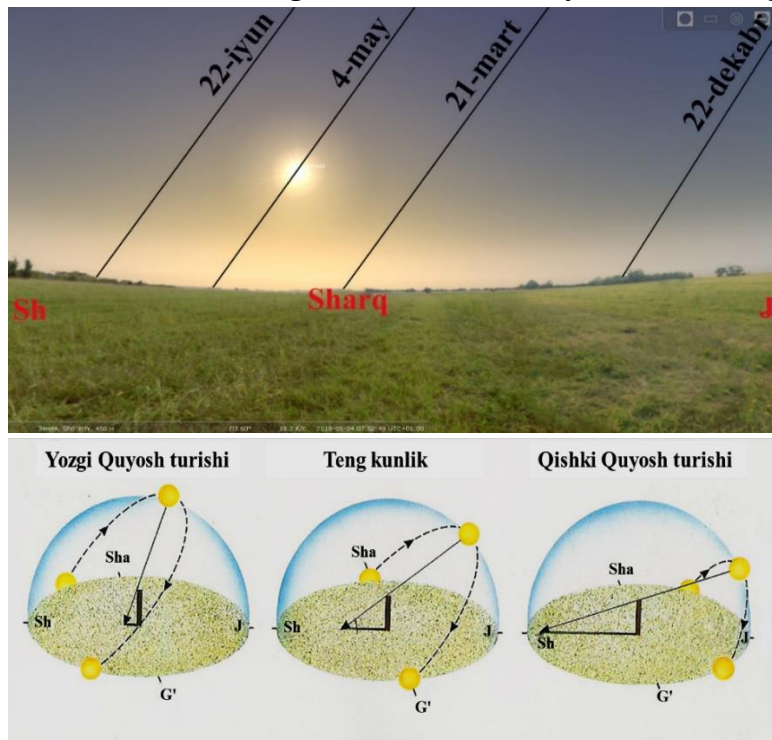
In ancient times, in the expanse of about two inches [1 cm] in diameter, various shapes were removed from the bright stars who thought of each other, and they were filled with all spiritual men and menstruation. Stars in a particular form and its near atmosphere are called star clusters by which that no man. Star categories, animals (Big Bear, Akquush, Lion, Dragon, Kit, etc.), heroes of Greek myths (Cassiopeia, Andromeda, Pegasus, etc.), and sometimes geometric shapes or predecessors (Triangles, Scales) that remind them when viewed together. Today, the celestial sphere is divided into 88 parts, or star clusters (Figure 2).



*Figure 2: Star categories and their boundaries*

The sun's milk movements are also observed from east to west, and unlike the stars, their exit and dip points and maximum heights change day by day. Specifically, the sun rises from a specific Oriental point in Nebuchadnezzar (March 21) and sets clearly in the West, and then its

exit and dip points move north. This continues until June 22, when the exit and dip points, on the contrary, move to the south side of the horizon. During this time, the sun's noon height decreases, the day decreases, and the night, on the contrary, extends (Figure 3).



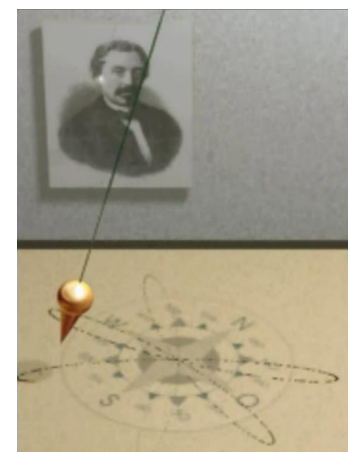
*Figure 3: The sun's milk kseat movement*

**Evidence that the earth revolves around its axis. Fuko Mayatnigi**

Feel osmonga sinchiklab look, simple count with the help yulduzlarning, Have soatda from the east g'west side 15° go siljishi steal will be found. 360° nor 15° go if, 24 clock chiqadi. Demak, Barcha stars 24 soatda, ya'ni one sutkadaYer Around one marten full rotat chiqishi with today will be. Yulduzlarning Location Around such sutkalik ko'rinma rotation, In fact, one sutkada The Earth own axis Around g'from the west East side one full rotation tufaylidir.

A mathematical mayatnik hangs at the top of one of the earth's poles (in this case, a bucket with a small hole is taken at the bottom of the mayatnik ball, If it is filled with sand, and it is blown away (such as a mayatnik Fuko yeast), the sand poured out of the bucket is not sprinkled under it along the vibrational plain, in the direction of a straight line, but a line where the sand is sprinkled (i.e. the vibration alignment), over time, We see the clock string rotated in the direction of movement around the point on Earth, which was directed when the swimsuit stood in peace.

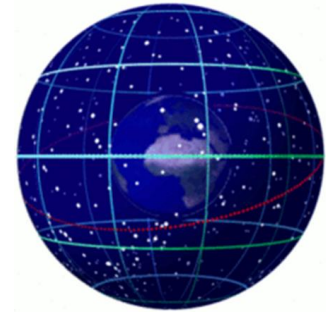
In the meantime, a video explaining the Fuko swimsuit will be shown (Figure 4).



*Figure 4: Fuko mayatnigi*

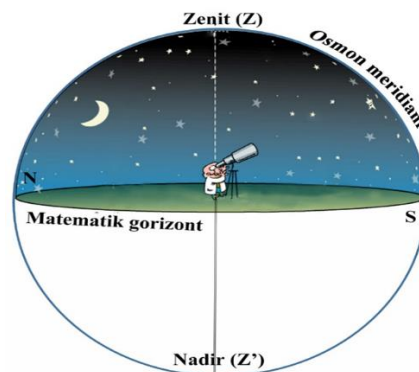
**The cel sphere, its main point, circles and lines**

Heaven yoritgichlarining ko‘rinma vaziyatlari vain actions study uchun, tracking while, their o‘rinlarini identify Zarur will be. That's what uchun yoritgichlarning osmondagi vaziyatlarini with today yo‘nalishlarga relative study enough is divided, multiple in case, ulargacha was masofalarni identify need sezilmaydi. Yoritgichlarning ko‘rinma vaziyatlari vain actions o‘rganishdan Before, osmonning Home point, chiziq vain aylanalari balance sheet tanishishga to‘g‘re taro. It is said to be a sphere in which the radius is voluntarily taken and the center lies in the eyes of the observer, in which the stars are projected just as they look in the sky at a certain time (Fig. 5). One of the two points (in the direction of the observer's head) zenith (Z) intersected by the celent sphere of the vertical line passed through the observer at the center of the celor's sphere, and the other lying opposite it in diameter is referred to as rare (Z ')



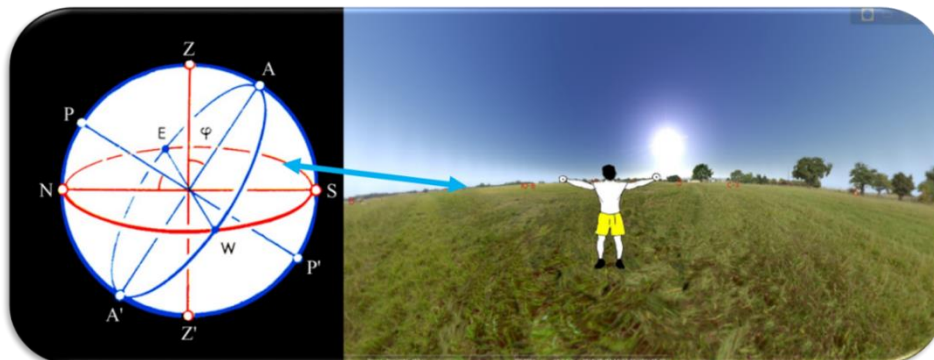
*Figure 5: Celsite sphere*

One of the two points (in the direction of the observer's head) intersected with the celent sphere of the vertical line passed by the observer at the center of the celor's sphere is referred to as zenith (Z), and the other, which lies opposite it diameter, is referred to as rare (Z). A straight line that connects these points of the sphere is called a vertical line (Figure 6).



*6-rasm: Zenit nadir nuqtalari*

The large circle of the cellar, formed by the intersection of the cellar with a perpendicular alignment from its center to the vertical line, is referred to as a mathematical horizon (Figure 7).



*Figure 7: Math horizon*

The intermolecular entity used by Jehovah's Witnesses in your country is a brochure entitled Charitable Planning to Benefit Kingdom Service Worldwide has been. The intersection of the earth's north pole with the cellar's sphere is called the P of the north pole of the universe, and the point at which the south pole continues with the sphere is called the P of the south pole of the universe. The arrow that holds the boxes of Ola m is referred to as the arrow of the universe (8-rasm).

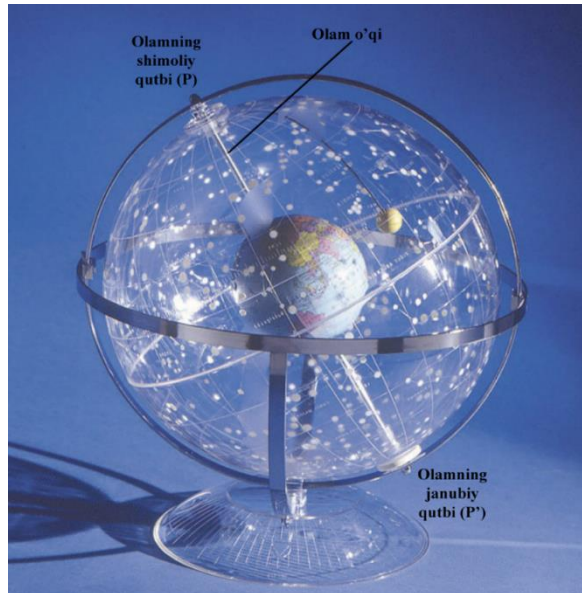


Figure 8: The Arrow of the Universe and the Poles of the Universe

A large circle that passes through the center of the cellar and intersects the arc of the universe with a steep plain is called the cellar equator. The sky equator lies on the same plain as the Earth's equator. The intermolecular entity used by Jehovah's Witnesses in your country is a happy way to support more than the gecko's body weight—even when it is skipping upside down across a globe! Large circles formed by the intersection of the cellar sphere by the plains that pass through the arrow of the universe are called the spinning circles (Figure 9).

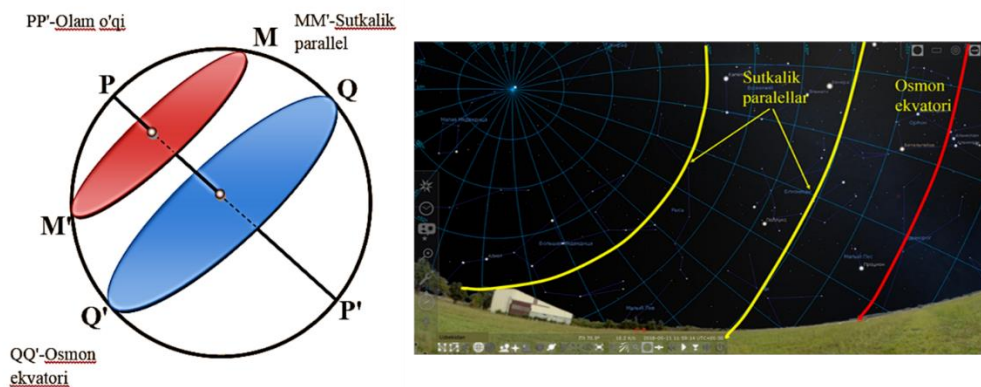


Figure 9: Milk parallels

A large circle that passes through the poles, zeniths, and rare points of the universe is called the meridium. Its points intersected with a mathematical horizon are called the North (N, close to the north pole of the universe) and the South (S, near the south pole of the universe). The intersection of the celestial equator with a mathematical horizon is called the East (E) and West

(W) points. A straight line intersection that connects the points North and South is referred to as a dream drawer (10-rasm).

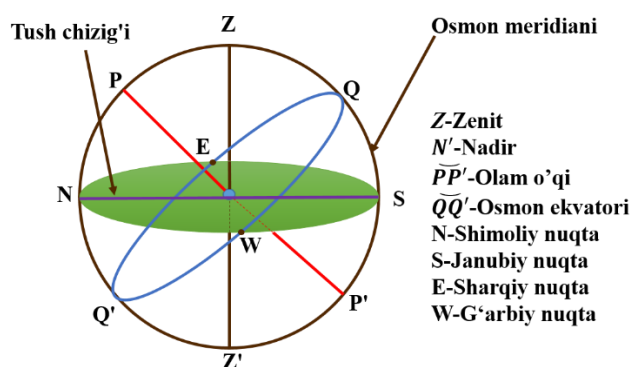


Figure 1: The main points and circles of the celestial sphere

### The annual visible movement of the sun. Ecliptics

It has long been determined that the sun's stars move invisibly (invariably) from west to east. This shift is about 1 degrees Fahrenheit [-1°C] per mil. This annual viewing path of the sun is a large circle, referred to as ecliptics (Fig. 1).

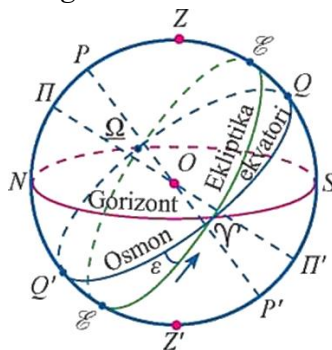


Figure 1: Ecliptics

There are four characteristic main points of ecliptics, two of which characterize its points intersected by the celestial equator and the other two that have the largest sun from the celestial equator. One of its points intersected with the equator (formed as it crosses the southern hemisphere of the sun into the northern hemisphere) is called the spring equilibrium point ( $\gamma$ ), from which the Sun passes on March 21. The second is called the Autumn Equilibrium Point ( $\Omega$ ), from which the Sun will pass on September 23. The north visible tactic of ecliptics, the sky. It has the largest sun ( $+23^{\circ}26'$ ) ( $\epsilon$ -ecclesiastical and sky-equator point ( $\epsilon$ ) summer sunuration). In the southern hemisphere, the point of ecliptics with the largest sun ( $-23^{\circ}26'$ ) is called the winter sunrise ( $\epsilon$ ), from which the sun always passes on December 22.

The area of star categories located along the sun's annual visible course of action is called the zodiac industry. The 12 stars located in this area are Hut, Hamal, Savr, Javzo, Saraton, Assad, Sunbula, Mezon, Aqrab, Qavs, Jaddi, Dalv. The sun's annual view movement against the background of stars actually occurs because of the Earth's annual real movement around the sun. That is why the sun's annual alignment of visible movement falls above the Earth's orbital plain. Thus, the son of an ecliptic to the celine equator is the same as the son of the Earth's equator on its orbiting plain ( $23^{\circ}26'$ ) (Fig. 1 2).

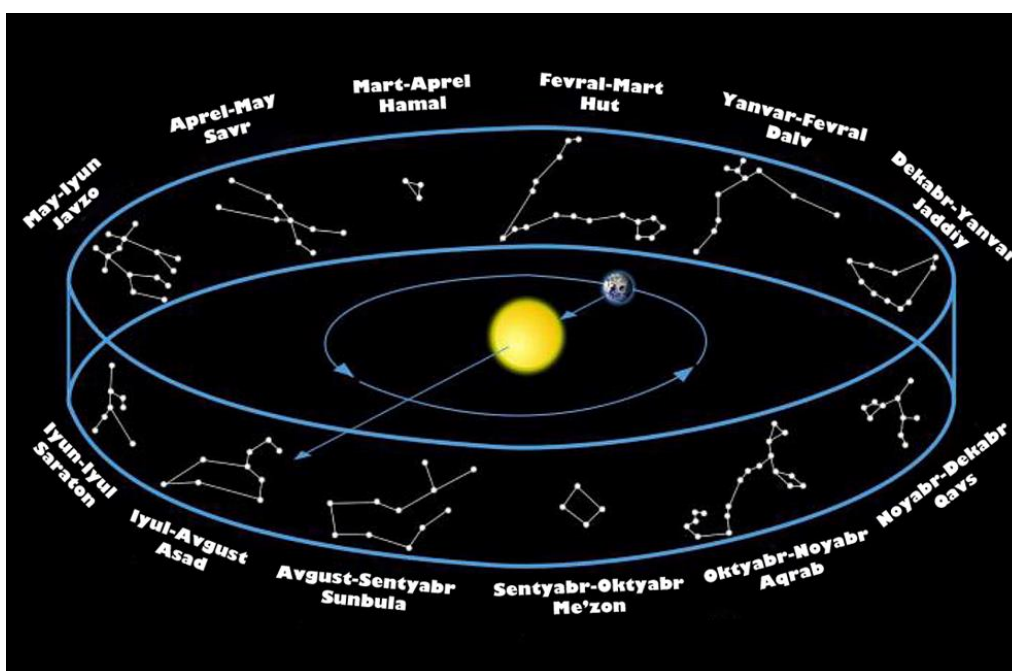


Figure 1: An explaining of the sun's annual k seat movement

4. **Strengthen a new theme.** The students will have a question-and-answer meeting based on the following questions:

1. What is the reason why the sky of stars turns from east to west?
2. Is the movement of the sun and the moon around the Earth from east to west a real movement?
3. What evidence is evidenced that the earth revolves around its axis?
4. Show the dots, lines, and circles of the celor sphere in the model of the celery sphere.
5. At what angle did the equation of the ecliptics grow?
6. Describe the main points of ecliptics (spring and autumn equilibrium points, winter and summer sunrise points)?

**Interactive methods used q in the lesson**

Table t kill assigned to FSMUtechnology b

Question	What is the star cluster, and what categories do you know?
(F) Fikringizni bayon eting	
(e) Show k the reason for your opinion statement	
(m) Provide evidence to prove the reason you have referred to K	
(U) Fixingism umumlashtiring	

5. **Evaluate the reader.** They will be evaluated based on students' attendance and performance of assignments.



**6. Homework.**

1. Read the subject from the astronomy textbook and use the Astronomy Electronic Textbook independently.
2. Answer the questions and assignments presented at the end of the topic.
3. Write a small essay about the names of star categories.

**LIST OF AVAILABLE PUBLICATIONS**

1. Dadaboyeva, F. O., and N. Tajieva. " THE BIBLE'S VIEWPOINT OF THE BIBLE'S VIEWPOINT OF THE BIBLE'S VIEWPOINT." Academic research in educational sciences 2.CSPI conference 3 (2021): 609-612.
2. Dadaboyeva, Feruza, and E. Ne'matova. "O GUMANITARNOM POTENSIALE ASTRONOMII." Aktualnyye nauchnyye issledovaniya v sovremennom mire 5-9 (2018): 46-48.
3. DADABOYeva, FERUZA OLIMJONOVNA, RANO XAMDAMOVNA IBRAHIMOVA, and KAMILA YUSUPOVA. "TECHNOLOGY POSTANOVKI DIAGNOSTICHNYX SELEY OBUChENIA." BUDUŠYeYE NAUKI-2015. 2015.