

CHAPTER 11 LESSON SUMMARY

LESSON 1 EARTH AND SUN

What causes day and night?

The Earth's rotation around its axis causes day and night. A rotation takes 24 hours.

What causes seasons?

Earth's tilt causes sunlight to hit earth at different angles. The Earth's tilt and its revolution around the sun causes seasons. A revolution takes 365 $\frac{1}{4}$ days or one year

Earth tilts at 23.5 degrees

How does the Sun's apparent path change over the seasons?

In summer, the sun rises much higher in the sky. In winter, it is much lower. That's why in summer we have longer days.

VOCABULARY LESSON 1	
Rotation دوران	The act of spinning. Earth takes 24 hours to rotate around the sun فعل الدوران. تستغرق الأرض 24 ساعة لتدور حول الشمس
Revolution ثورة	When one objects travels around another. Earth takes one year to make a revolution of the sun عندما يسافر كائن واحد حول آخر. الأرض تستغرق سنة واحدة لإحداث دوران الشمس
Orbit مدار	The path a revolving object takes المسار الذي يستغرقه الكائن الدوار
Shadow ظل	Shadow forms when light is blocked الظل يتشكل عندما يتم حظر الضوء
Apparent motion حركة الظاهرة	The way something appears to move. It is not real motion طريقة يبدو فيها شيء ما بالتحرك ولكن انها ليست حركة حقيقية

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CHAPTER 11 LESSON SUMMARY

LESSON 2 EARTH AND MOON

What is the Moon like?

- Reflects the light of the sun
- No air
- Little water
- Has lots of craters
- No life
- 28 days for the moon to orbit Earth

EARTH	<u>SAME</u>	MOON
Air	made of rocks Both orbit the sun	No air
Life		No life
Water		No atmosphere
Atmosphere		Very little water

What are the phases of the Moon?

- Phases of the moon means the shapes of the moon that we see
- Moons gravity causes tides.

What is an eclipse?

- When the Moon or the Earth cast a shadow
- LUNAR ECLIPSE- Earth casts a shadow on the Moon
- SOLAR ECLIPSE- Moon casts a shadow on Earth

What does WAXING mean?

- The moon is getting bigger

What does WANING mean?

- The moon is getting smaller

VOCABULARY LESSON 2

Crater فوهة البركان	A hole in the ground ثقب في الأرض
Meteoroid نيزك	A large rock found in space صخرة كبيرة موجودة في الفضاء
Waxing إزالة الشعر الزائد	The moon is getting bigger القمر يكبر
Waning انحسار	The moon is getting smaller القمر يصبح أصغر
Phases المراحل	لأشكال الواضحة للقمر التي نراها The apparent shapes of the moon that we see
Eclipse كسوف	When the moon or earth cast a shadow عندما يلقي القمر أو الأرض الظل
Solar eclipse كسوف الشمس	عندما يلقي القمر بظلاله على الأرض When the moon casts a shadow on earth
Lunar Eclipse خسوف القمر	عندما تلقي الأرض بظلالها على القمر When the earth casts a shadow on the moon

CHAPTER 11 LESSON SUMMARY

LESSON 3 THE SOLAR SYSTEM

What is the solar system?

The sun and all the objects in orbit around it.

How do we learn about the solar system?

Telescopes- to see faraway objects

Astronauts- get launched into space in rockets

Shuttle and Space Stations

Probes- An unmanned spacecraft that leaves Earth's Orbit

What are the rocky planets?

The four planets closest to the Sun. Mercury, Venus, Earth and Mars are rocky planets.

They are made up of rock and have iron cores.

What are the gas giants?

These are huge planets made of gas. Jupiter, Saturn, Uranus and Neptune are gas giants.

Jupiter is the largest planet.

What else is in our solar system?

Comet- Ice mixed with dust and rocks

Asteroid- Large pieces of rocks or metal in Space

Meteoroid- Smaller pieces of an asteroid. When a meteoroid enters Earth's atmosphere it is called a **METEOR.**

VOCABULARY – LESSON 3

satellite	الأقمار الصناعية
solar system	النظام الشمسي
planets	كواكب
gravity	الجاذبية
telescopes	التلسكوب
Astronauts	رائد فضاء
space shuttles	مركبة فضائية
probe	فحص
rocky planets	كوكب صخري
dwarf planets	الكوكب القزم
Pluto	بلوتو
comet	مذنب
asteroids	كويكب
meteor	نيزك
meteorite	نيازك

CHAPTER 11 LESSON SUMMARY

LESSON 4 STARS AND CONSTELLATIONS

star	نجم
light year	سنة ضوئية
andromeda	أندروميديا
constellation	كوكبة
Draco -dragon constellation	كوكبة التنين
sun	الشمس
gravity	الجاذبية

What are stars?

- A star is a sphere (ball) of hot gas that gives off light and heat.
- The only star that we can see in the day is the Sun.
- The sun is the closest star to Earth that's why it looks bigger and brighter than other stars.
- Warmer stars are white or blue.
- Cooler stars are red or orange.
- Stars found in LARGE groups are **called galaxies.**

What is a light year?

- The distance light travels in a year.

What are constellations?

- A group of stars that make a pattern or picture in the sky
- The constellation Draco looks like a dragon
- There are 88 constellation's today

What is the Sun like?

- The sun is made of layers
- The sun releases light into space
- The core or center of the Sun is the source of all its energy
- Sun provides us with heat
- Producers (plants) turn the suns energy into food
- The suns heat helps with the Water Cycle- Evaporation

Sun Safety

- Protect your eyes
- Wear sunscreen