Second Lecture in English Language

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The Invention of the Thermometer from Galileo to Santorio

In the early 1600s, Galileo invented the thermoscope, a simple device that showed temperature changes through the movement of air or liquid. However, it lacked a scale and couldn't measure exact temperatures.

Around the same time, Santorio, an Italian doctor, developed the first practical medical thermometer in 1612. His version included a scale, allowing accurate readings of body temperature.

While Galileo introduced the concept, Santorio made it practical. Their contributions laid the foundation for modern thermometers.

Questions and Answers about Galileo and Santorio:

1. Who invented the thermoscope?

- Galileo

2. What did the thermoscope use to show temperature changes?

- Movement of air or liquid

3. Why couldn't the thermoscope measure exact temperatures?

- It had no scale

4. Who created the first practical medical thermometer?

- Santorio.

5. When did Santorio develop the thermometer?

 - He developed thermometer in 1612.

6. What improvement did Santorio add to the thermometer?

- He included a temperature scale

7. What was Galileo's contribution?

- He introduced the idea of measuring temperature

8. What is the importance of Galileo and Santorio's work?

 - They laid the foundation for modern thermometers.

Röntgen: Pioneer of Medical Physics and X-ray Discovery

Röntgen was a German physicist and is considered the first to establish the science of medical physics. In 1895, during his experiments with cathode rays, he discovered a new type of invisible rays that could pass through materials. He named them "X-rays." He took the first image using these rays of his wife's hand, in which her bones appeared clearly. This discovery revolutionized the field of medicine by making it possible to see inside the human body without surgical intervention.

Röntgen received the first Nobel Prize in Physics in 1901 in recognition of his discovery. He did not patent his invention, believing it should serve humanity. His discovery laid the foundation for medical physics, and his techniques are still used in medical diagnostics all over the world today.

1. Who was Wilhelm Röntgen?

- German physicist of medical physics.

2. What did he discover in 1895?

-Invisible rays called X-rays.

3. What was the first X-ray image?

-His wife's hand showing bones.

4. How did this discovery affect medicine?

-It allowed seeing inside the body without surgery.

5. When did he win the Nobel Prize?

-He wan it in 1901.

6. Did he patent his discovery?

-No, he wanted it to help humanity.

7. Is his discovery still used today?

 - Yes, in medical diagnostics worldwide.

Make the singular noun into a plural nouns

يكون جمع الاسم المفرد على ثلاثة أشكال:

1. جمع بإضافة حرف   s   إلى نهاية الأسم

As:

 doctor – doctors

nurse – nurses

Key – keys

boy- boys

2. جمع بإضافة حرف   es   إلى نهاية الأسم،

إذا الاسم المفرد ينتهي بأحد الحروف الأتية مثل (s, ss, sh, ch, x, y, o)

As : diagnosis مفرد تشخيص، **diagnoses** الجمع تشخيصات

مفرد أزمة **crisis,** ♦ جمع أزمات **crises**

Stitch مفرد غرزة خياطة ، **Stitches** الجمع غرز

Surgery مفرد عملية جراحيه **surgeries** عمليات جراحيه

٣. جمع شاذ ليس له قاعدة ثابته

As: bacterium مفرد بكتريا ، **bacteria** جمع بكتريا

bronchus قصبة هوائية **bronchi** قصبات هوائية

Life مفرد حياة , **lives** جمع حيوات

Man مفرد رجل , **men** جمع الرجال

Woman مفرد امرأة **women** جمع النساء

Child مفرد طفل **children** أطفال

Tooth مفرد سن , **teeth** جمع أسنان

Foot مفرد القدم , **feet** جمع الأقدام

Person شخص مفرد , **people** أشخاص جمع

Some Sentences of singular noun and plural noun

. The doctor is checking the patient's heartbeat.
(الطبيب يفحص دقات قلب المريض)

. Several doctors are working in the emergency room.
(عدة أطباء يعملون في غرفة الطوارئ)

. The nurse gave him the medicine.
(أعطته الممرضة الدواء)

. Nurses often help patients with their daily needs.
(الممرضات يساعدن المرضى في احتياجاتهم اليومية)

. The boy is waiting for his check-up.
(الولد ينتظر فحصه الطبي)

. There are many boys in the pediatric ward.
(هناك أولاد كثيرون في قسم الأطفال)

. She found the keys on the nurse's desk.
(وجدت المفاتيح على مكتب الممرضة)

. The diagnosis is not clear yet.
(التشخيص غير واضح بعد)

. The doctors gave different diagnoses for the same symptoms.
(أعطى الأطباء تشخيصات مختلفة لنفس الأعراض)

. The patient had a crisis last night.
(حدثت للمريض أزمة الليلة الماضية)

. We handled several crises in the ICU today.
(تعاملنا مع عدة أزمات في وحدة العناية المركزة اليوم)

. She received one stitch after the surgery.
(تلقت غرزة واحدة بعد العملية)

. The surgeon made ten stitches to close the wound.
(قام الجراح بعمل عشر غرز لإغلاق الجرح)

. The surgery was well.
(نجحت العملية الجراحية)

. There were five surgeries scheduled this morning.
(تم جدولة خمس عمليات جراحية هذا الصباح)

. A bacterium can cause an infection.
(يمكن أن تسبب بكتيريا واحدة عدوى)

. Bacteria are responsible for many diseases.
(البكتيريا مسؤولة عن العديد من الأمراض)

. The bronchus is blocked.
(القصبة الهوائية مسدودة)

. The patient has inflamed bronchi.
(يعاني المريض من التهاب في القصبات الهوائية)

. Life is precious.
(الحياة ثمينة)

. Many lives were saved by the doctors.
(تم إنقاذ العديد من الحيوات بفضل الأطباء)

. A man came in with chest pain.
(دخل رجل يعاني من ألم في الصدر)

. Three men were injured in the accident.
(أُصيب ثلاثة رجال في الحادث)

. A woman is having a baby.
(امرأة تلد طفلًا)

. The waiting room was full of women.
(غرفة الانتظار كانت مليئة بالنساء)

. The child has a high fever.
(الطفل لديه حمى شديدة)

. The children are playing in the hospital garden.
(الأطفال يلعبون في حديقة المستشفى)

. He lost a tooth during the accident.
(فقد سنًا أثناء الحادث)

. The dentist checked all of her teeth.
(فحص طبيب الأسنان كل أسنانها)

. She injured her foot.

(أصابت قدمها)

. Both of his feet are swollen.
(كلا قدميه متورمتان)

. There is one person in the consultation room.
(يوجد شخص واحد في غرفة الاستشارة)

. Several people are waiting outside.
(عدة أشخاص ينتظرون بالخارج)

. Both of his feet are swollen.
(كلا قدميه متورمتان)