

بسم الله الرحمن الرحيم

(2018 - 2019)

Action Pack 12



Units 1 - 4

ملخص القطع - ٢٠١٩
الدورة الشتوية



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The importance of Islamic achievements in history

Jabir ibn Hayyan (born 722 CE, died 815 CE)

The Arab world has many famous chemists in its (The Arab world) history, but the person who is known as the founder of chemistry is probably Jabir ibn Hayyan. He is most well known for the beginning of the production of sulphuric acid. He also built a set of scales which changed the way in which chemists weighed items in a laboratory: his scales could weigh items over 6,000 times smaller than a kilogram.

1. Who is Jabir bin Hayyan ?

He is the founder of Chemistry . (A famous Arab chemist)

2. Mention two of Jabir Ibn Hayyan's achievements :

- The production of sulphuric acid.
- He also built a set of scales which changed the way in which chemists weighed items in a laboratory.

3. What are the features of scales in a laboratory ?

His scales could weigh items over 6,000 times smaller than a kilogram.

4. In which field was Jaber Ibn Hayyan famous for ?

Chemistry

Ali ibn Nafi ' (Ziryab) (born 789 CE, died 857 CE)

Ali ibn Nafi ' is also known as 'Ziryab' (or 'Blackbird', because of his beautiful voice). He was a gifted pupil of a famous musician from Baghdad, and it was his talent for music that led him to Cordoba in the ninth century CE. He was the guest of the Umayyad ruler there. He is the person who established the first music school in the world in Cordoba, Al-Andalus, teaching musical harmony and composition, revolutionized musical theory, and is also the person who introduced the oud to Europe.

1. Mention two names for Ali bin Nafi' "

- 'Ziryab'
- 'Blackbird'

2. Why was he called " Blackbird" ?

Because of his beautiful voice .

3. Mention two of Ali Bin Nafi''s achievements :

- He established the first music school in the world in Cordoba, Al-Andalus.
- He introduced the oud to Europe.
- He revolutionized musical theory.

4. What is the purpose of establishing the music school?

Teaching musical harmony **and** composition.

5. Why did Ali Ibn Nafi' go to Cordoba ? What led him to Cordoba ?

His talent for music led him to Cordoba.

6. Who learnt Ali Bin Nafi' music and where ?

A famous musician in Baghdad.

Fatima al-Fihri (born early 9th century, died 880 CE)

Fatima al-Fihri was the daughter of a wealthy businessman. She used her father's inheritance to build a learning centre in Fez, Morocco. This learning centre became Morocco's top university, and it is where many students from all over the world come to study. Moreover, it was Fatima's sister, Mariam, who supervised the building of the Andalus Mosque, which was not far from the learning centre.

1. What was the achievement of Fatima al-Fihri ?

She built a learning centre in Fez, Morocco. (Morocco's university)

2. What was the achievement of Fatima's sister Mariam ?

She supervised the building of the Andalus Mosque.

3. How did Fatma build the learning centre ?

She used her father's inheritance.

Al-Kindi (born around 801 CE, died 873 CE)

Al-Kindi was a physician, philosopher, mathematician, chemist, musician and astronomer – a true polymath. He made ground-breaking discoveries in many of these fields, but it is probably his work in arithmetic and geometry that has made him most famous.

1. What was AlKindi good at ? (His interests)

Al-Kindi was a physician, philosopher, mathematician, chemist, musician and astronomer.

2. What made him most famous ?

His work in *arithmetic* and *geometry* has made him most famous.

3. What is his achievement ?

He made ground-breaking discoveries in many fields.

4. Find a word in the text which means " someone who has a lot of knowledge about many different subjects".
polymath

5. Quote the sentence which indicates that AlKindi has a lot of knowledge about many different subjects.

"Al-Kindi was a physician, philosopher, mathematician, chemist, musician and astronomer – a true polymath.

Key Word	Meaning in English	Arabic
Arithmetic	– the study of numbers	الحساب
Geometry	the study of of points, lines, curves and surfaces	الهندسة
Mathematician	a person who studies Mathematics to a very complex level	عالم رياضيات
Philosopher	someone who studies and writes philosophy professionally	فيلسوف
Physician	someone qualified to practice medicine, (a doctor)	فيزيائي
Polymath	someone who has a lot of knowledge about many different subjects - expert	متعدد الثقافة
talent	Special ability	موهبة
founder	The person who starts something new	مؤسس
scale	An instrument to measure weight	مقياس
laboratory	A room for scientific experiment	