



N.	The word	The meaning
1	<b>arithmetic</b> علم الحساب	(noun) the branch of mathematics concerned with numerical calculations such as addition, subtraction, multiplication and division. فرع من الرياضيات الذي يهتم بالحسابات العددية مثل الجمع والطرح والضرب والقسمة.
2	<b>geometry</b> الهندسة	(noun) the branch of mathematics concerned with the properties, relationships and measurement of points, lines, curves and surfaces <b>geometric</b> (adjective) – <b>geometrically</b> (adverb) فرع من الرياضيات الذي يهتم بالخصائص والعلاقات وقياس النقاط والخطوط والمنحنيات والسطوح. هندسية (صفة) – بشكل هندسي (ظرف)
3	<b>mathematician</b> عالم رياضيات	(noun) a person who studies Mathematics to a very complex level. <b>mathematics</b> (noun) – <b>mathematical</b> (adjective) - شخص الذي يدرس الرياضيات لمستوى متطور جدا. علم الرياضيات (اسم) – رياضي (صفة)
4	<b>philosopher</b> فيلسوف	(noun) someone who studies and writes philosophy professionally, or an undergraduate student of Philosophy. - الشخص الذي يدرس ويكتب الفلسفة بمهنية، او طالب يدرس الفلسفة. <b>philosophise</b> (verb) – <b>philosophical</b> (adjective)
5	<b>physician</b> طبيب	(noun) someone qualified to practise medicine, especially one who specialises in diagnosis and treatment. الشخص المؤهل لممارسة الطب، وخاصة الشخص الذي يتخصص في التشخيص والعلاج.
6	<b>polymath</b> موسوعي متعدد الثقافة	someone who has a lot of knowledge about many different subjects. الشخص الذي لديه الكثير من المعرفة حول مختلف المواضيع.
7	<b>algebra</b> علم الجبر (n) <b>algebraic</b> (adj) جبري	a type of mathematics system where letters and symbols are used to represent numbers. نوع من نظام الرياضيات حيث الأحرف والرموز تستخدم لتمثيل الأرقام.
8	<b>inheritance</b> إرث / <b>inherit</b> (V) يرث	(noun) money or things that you get from someone after they die المال او الاشياء التي تحصل عليها من شخص بعد ان يموت
9	<b>musical harmony</b> مقطوعة موسيقية	(noun) a pleasant sound in music, made by playing or singing a group of different notes together. <b>harmonious</b> (adjective) – <b>harmonise</b> (verb) صوت موسيقي جميل، ينجز بالعزف او الغناء على مجموعة من الالحن مع بعضها. / متناغم (صفة) - يلحن (فعل)
10	<b>ground breaking</b> طريقة مبتكرة	(adj) new, innovative / مبتكر، جديد، مبتكر <b>break</b> (V) / بينكر (فعل)
11	<b>revolutionise</b> يحدث او يقوم بثورة	(verb) to completely change the way people do something or think about something/ <b>revolution</b> (n) <b>revolutionary</b> (adj) يغير بالكامل طريقة الناس في عمل الاشياء او التفكير في شيء. / ثورة (اسم) / ثوري (صفة).
12	<b>Composition</b> تأليف مقطوعة موسيقية	(noun) [of music] a piece of music that someone has written / <b>compose</b> (verb) 8- [يتعلق بالموسيقى] مقطوعة موسيقية التي قد كتبها شخص / يؤلف لحنا (فعل)

## The importance of Islamic achievements in history

### أهميعة الانجازات الإسلامية في التاريخ

جابر بن حيان *Jabir ibn Hayyan*

(born 722 CE, died 815 CE) (م، توفى 815 م)

الشخص تاريخه كيميائيين المشهورين العالم العربي  
The Arab world has many famous chemists in its 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 weighted items in a laboratory: his scales could weigh items over 6,000 times smaller than a kilogram.



its= The Arab world/ who= the person/ he, his = Jabir ibn Hayyan/ which= asset of scales/ which = the way

العالم العربي يزخر بالعديد من الكيميائيين المشهورين في تاريخه، ولكن الشخص الذي يعرف بمؤسس علم الكيمياء ربما هو جابر بن حيان. وهو معروف أكثر في بدايات إنتاج حمض الكبريتيك. أنشأ أيضا مجموعة من الموازين التي غيرت الطريقة التي فيها الكيميائيين يزنون الأشياء في المختبر، ميزانه استطاع أن يزن أشياء أصغر 6,000 مره من كيلو غرام.

علي بن نافع ' (Ziryab) (زريب)

(born 789 CE, died 857 CE) (م، توفى 857 م)

الطائر الأسود زريب معروف بـ  
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. He revolutionised musical theory, and is also the person who introduced the oud to Europe.



He, him= Ziryab/ who = the person/ it was= that led him to Cordoba in the ninth century CE.

علي بن نافع 'كما هو معروف' زريب 'أو' الطائر الأسود'، بسبب صوته الجميل). كان تلميذا موهوبا لموسيقار شهيرة من بغداد، وموهبته في الموسيقى هي التي قادته إلى قرطبة في القرن التاسع الميلادي. وكان الضيف للحاكم الأموي هناك. وهو الشخص الذي أنشأ أول مدرسة للموسيقى في العالم في قرطبة، الأندلس، لتدريس الإيقاعات الموسيقية وتأليفها. أحدث ثورة في النظرية الموسيقية، وهو أيضا الشخص الذي أدخل العود لاوروبا.

فاطمة بنت الفهري *Fatima al-Fihri*

(born early 9<sup>th</sup> century, died 880 CE) (م، توفى 880 م)

استخدمت ثري ابنة  
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.



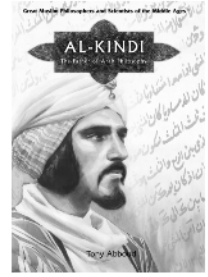
Moreover, it was Fatima's sister, Mariam, who supervised the building of the Andalus Mosque, which was not far from the learning centre.

مركز التعليم لم يكن بعيداً عن  
Moreover, it was Fatima's sister, Mariam, who supervised the building of the Andalus Mosque, which was not far from the learning centre.



فاطمة بنت-الفهري هي ابنة رجل أعمال ثري. استخدمت ميراث أبيها لبناء مركز تعلم في مدينة فاس بالمغرب. أصبح هذا المركز التعليمي الجامعي الأعلى في المغرب، وحيث يأتي العديد من الطلاب من جميع أنحاء العالم للدراسة. وعلاوة على ذلك، كانت شقيقة فاطمة، مريم، التي أشرفت على بناء مسجد الأندلس، الذي لم يكن بعيداً عن مركز التعلم.

she, her= Fatima al-Fihri/ it = this learning center/ it is where= Morocco's top university/ it was Fatima's sister, Mariam /who= Mariam/ which= the Andalus Mosque



الكندي (، توفي 873 م ولد حوالي 801 ) *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.

*it= his work in arithmetic and geometry/ that = his work in arithmetic and geometry/ he,him= Al-Kindi*

وكان الكندي طبيباً، فيلسوفاً، عالم رياضيات، وصيدلي، وموسيقي وفلكي – موسوعة حقيقية. قدم كثيراً من الاكتشافات الخلاقة والمبدعة في كل هذه الحقول والمجالات ولكن من المحتمل ان عمله كرياضي وهندسي جعلت منه أكثر شهرة .

### Questions:-

- 1- There were two achievements made by Jabir ibn Hayyan. Mention them.
- 2- How did the development of scales by Jabir ibn hayyan help other chemists in weighting items in a laboratory?
- 3- Why was Ali ibn Nafi called as Ziryab or ‘Blackbird’?
- 4- Write down two achievements for Ali ibn Nafi?
- 5- Quote the sentence which indicates that Fatiam's institute was developed to be the most famous university in the World.
- 6- Al-Kindi was expert in many scientific subjects. Write down four of them?

1- هنالك انجازين من قبل جابر بن حيان، اذكرهما؟ 2- كيف ساعد تطوير الموازين من قبل جابر بن حيان الكيميائيين الاخرين في توزيع الاشياء في المختبر؟ 3- لماذا لقب علي بن نافع بزرياب او الطائر الاسود؟ 4- اذكر انجازين لعلي بن نافع؟ 5- اقتبس الجملة التي تشير

### Answers:-

- 1- the production of sulphuric acid, He also built a set of scales
- 2- his scales could weight items over 6,000 times smaller than a kilogram.
- 3- because of his beautiful voice
- 4- established the first music school in the world in Cordoba, revolutionised musical theory, introduced the oud to Europe.
- 5- This learning centre became Morocco’s top university, and it is where many students from all over the world come to study.
- 6- Al-Kindi was a physician, philosopher, mathematician, chemist, musician and astronomer.

**2 Match the words with the correct definitions. One definition is not needed. The first one is done for you.** صل بين الكلمات والتعريفات الصحيحة. احد التعريفات غير مطلوبة. (تم حل جميع الكلمات).

N.	word	meaning
1	talent موهبة	special ability قدرة خاصة
2	founder مؤسس	the person who starts something new, such as an organisation or a city الشخص الذي يبدأ شيئاً جديداً، مثل منظمة او مدينة.
3	scales ميزان	an instrument to measure weight جهاز لقياس الوزن
4	polymath	an expert in many subjects خبير في عدة مواضيع
5	arithmetic	the study of numbers دراسة الارقام
6	laboratory مختبر	a room for scientific experiments غرفة للتجارب العلمية

## Activity Book, page 20, exercises 1 and 2

### Vocabulary

1 Complete the sentences with the words in the box. One word is not needed. The first one is done for you. اكمل الجدول التالي بالكلمات من الصندوق. احدى الكلمات غير مطلوبة. تم حل اول جملة:-.

الهندسة **geometry**, كيميائي **chemist**, متعدد الثقافة **polymath**, الحساب **arithmetic**, فيلسوف **Philosopher**, طبيب **physician**, علم رياضيات **mathematician**

- 1 My father teaches Maths. He's a **mathematician**.
  - 2 You must not take in medicine without consulting a.....
  - 3 We learn about shapes, lines and angles when we study.....
  - 4 Mr Shahin is a true....., working in all kinds of creative and Scientific fields.
  - 5 Ramzi is very good with numbers and calculations. He always scores high in.....
  - 6 A..... is someone who thinks and writes about the meaning of life.
- 1- أبي يعلم الرياضيات، انه رياضي. 2- يجب أن لا نتناول الدواء دون استشارة الطبيب. 3- نتعلم حول الأشكال، الخطوط والزوايا عندما ندرس الهندسة. 4- السيد شاهين بالفعل متعدد الثقافة، يعمل في كل أنواع الحقول العلمية والإبداعية. 5- رمزي جيد بالأرقام والحسابات، انه دائما يحقق مستوى عال في الحساب. 6- الفيلسوف هو الشخص الذي يفكر ويكتب حول معنى الحياة.

Answers:- 1 mathematician 2 physician 3 geometry 4 polymath 5 arithmetic 6 philosopher

### Comprehension: Page 29, exercises 4 and 5

#### Comprehension الاستيعاب

4- Listen to and read the article again. Working in pairs, summarise the achievements of the four people in the text.

استمع واقرا المقالة مرة اخرى. اعمل بشكل ثنائي، لخص الانجازات للاشخاص الاربعة في النص.

#### Suggested answers

- Jabir ibn Hayyan is known as the founder of chemistry. He began the production of sulphuric acid and invented scales that could weigh very light things.  
- جابر بن حيان يعرف بانه مؤسس الكيمياء. بدأ بانتاج حمض السولفوريك واخترع موازين الذي يمكنه وزن اشياء خفيفة جدا.
- Ali ibn Nafi ' established the first music school in the world in Cordoba, Al-Andalus, and introduced the oud to Europe.  
- علي بن نافع اسس اول مدرسة للموسيقى في العالم في قرطبة الاندلس، وادخل العود الى اوروب.
- Fatima al-Fihri built a learning centre in Morocco, which became a world famous university.  
- فاطمة بنت الفهري بنت مركز للتعليم في المغرب، والذي اصبح جامعة مشهورة عالميا.
- Al-Kindi was a polymath, most famous for his work in arithmetic and geometry.  
- الكندي كان متعدد الثقافة، ومشهور بشكل اكبر في عمله في الحساب والهندسة.

5-Do you think that it was easier or more difficult in those days to reach such high levels of achievement in comparison with the present day? Give a reason for your opinion.

هل تعتقد أنه كان من السهل أو أكثر صعوبة في تلك الأيام للوصول إلى مثل هذه المستويات العالية من الإنجاز مقارنة مع يومنا هذا؟ اعط سببا لرايك.

#### Suggested answer

I think that it was more difficult for people in the past to reach such high levels of achievement in comparison with the present day: there was much less access to information in the past, so people like Al-Kindi had to be truly creative in their thinking in order to succeed.

أعتقد أنه كان من الصعب على الناس في الماضي الوصول إلى مثل هذه المستويات العالية من الإنجاز مقارنة مع يومنا هذا: كان الوصول إلى المعلومات أقل بكثير في الماضي، لذلك الناس مثل الكندي كان عليهم أن يكونوا مبدعين وخلاقين في تفكيرهم من أجل تحقيق النجاح.

#### Research box

Which Arab optical scientist invented the camera obscura?

صندوق البحث:- أي من علماء البصرييات العرب الذي اخترع الكاميرا المظلمة؟

#### Answer

Ibn al-Haitham invented it. A camera obscura (dark room) is an optical device that projects an image of its surroundings onto a screen. Its invention led to the invention of the camera.

اخترعها ابن الهيثم، الكاميرا المظلمة جهاز بصري يعرض صورة بمحيطها على شاشة. انها اختراع ادى الى اختراع الكاميرا.

## TEST YOURSELF

The Arab world has many famous chemists in **its** 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 weighted items in a **laboratory**: **his scales** could weigh items over 6,000 times smaller than a kilogram.

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**. He **revolutionised** musical theory, and is also the person who introduced the oud to Europe.

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..

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. Who was the most famous Arab chemist?  
.....
2. Write down two of Jabir Ibn Hayyan's most important achievements  
.....
3. What is revolutionary about Ibn Hayyan's scales?  
.....
4. Write down the sentence that indicates the thing which made Ibn Hayyan most famous.  
.....
5. Write down the sentence that indicates that Jabir Ibn Hayyan was the first person to find chemistry.  
.....
6. Why is Ibn Nafi' known as Ziryab?  
.....
7. What did Ziryab teach at the music school in Cordoba?  
.....
8. What gave him the chance travel to Cordoba?  
.....
9. Write down two of Ziryab's most important achievements.  
.....
10. Ziryab taught two things at the music school. Write them down.  
.....
11. Where was Ziryab from?  
.....
12. What information in the text shows the date in which Ziryab moved to Cordoba.  
.....

13. Who was the person who established the first musical school? Where?

14. Write down Fatima's most famous achievements.

15. Write down the sentence that tells you that Fatima's father was rich.

16. What did Fatima do in order to build the learning center?

17. What made Al-Kindi famous?

18. Write down Al-Kindi's most important achievements.

19- Find a word in the text which means "a piece of music that someone has written"

20- Find a word in the text which means " to completely change the way people do something "

21- Find a word in the text which means "a pleasant sound in music, made by playing or singing a group of different notes together."

22- Find a word in the text which means " money or things that you get from someone after they die"

23- Find a word in the text which means " a type of mathematics system where letters and symbols are used to represent numbers."

24- Find a word in the text which means " the branch of mathematics concerned with numerical calculations such as addition, subtraction, multiplication and division."

25- Find a word in the text which means " a person who studies Mathematics to a very complex level"

26- Find a word in the text which means " the branch of mathematics concerned with the properties, relationships and measurement of points, lines, curves and surfaces .

27- Find a word in the text which means " someone who studies and writes philosophy professionally, or an undergraduate student of Philosophy"

28- Find a word in the text which means " someone qualified to practise medicine, especially one who specialises in diagnosis and treatment"

29- Find a word in the text which means " someone who has a lot of knowledge about many different subjects"

30- It is said that every one can become a scientist, explain this statement and suggest three things can any one does to become a scientist.

1. من هو الكيميائي العربي الأكثر شهرة؟
2. أكتب أهم إنجازين لجابر بن حيان؟
3. ما هو الشيء المميز في مقاييس ابن حيان؟
4. أكتب الجملة التي تشير إلى الشيء الأكثر شهرة عمله ابن حيان؟
5. أكتب الجملة التي تشير بأن جابر بن حيان أول شخص أوجد الكيمياء؟
6. لماذا عرف ابن نافع بـ"زرياب"؟
7. ماذا تعلم زرياب في مدرسة الموسيقى في قرطبة؟
8. ما هي الفرصة التي سمحت له السفر إلى قرطبة؟
9. أكتب أهم إنجازين لـ "زرياب"؟
10. درس زرياب شيئاً في مدرسة الموسيقى. أذكره؟
11. من أين كان زرياب؟
12. ما المعلومات في النص التي تبين تاريخ انتقال زرياب إلى قرطبة؟
13. من أو شخص أسس المدرسة الموسيقية؟ أين؟
14. أكتب إنجازات فاطمة الأكثر شهرة؟
15. أكتب الجملة التي تخبرنا بأن والد فاطمة كان غنياً؟
16. ماذا عملت فاطمة لكي تبني مركز التعلم؟
17. ما الذي جعل الكندي مشهوراً؟

18. أكتب إنجازات الكندي الأكثر أهمية؟

19. -29 استخرج الكلمات من الجدول

30 يقال بان شخص يمكنه ان يصبح عالما، فسر هذه العبارة مقترحا الاشياء التي يجب على الشخص القيام بها ليصبح عالما.

#### Answers:

1. He was Jabir Ibn Hayyan.
  2. He began the production of sulphuric acid and invented scales that could weigh very light things.
  3. his scales could weigh items over 6,000 times smaller than a kilogram.
  4. He is most well known for the beginning of the production of sulphuric acid.
  5. The person *who* is known as the founder of chemistry is probably Jabir ibn Hayyan.
  6. Because of his beautiful voice.
  7. Musical harmony and compositions.
  8. It was his talent.
  9. Ali ibn Nafi ' established the first music school in the world in Cordoba, Al-Andalus, and introduced the oud to Europe.
  10. Musical harmony and compositions
  11. He was from Baghdad.
  12. it was *his* talent for music that led *him* to Cordoba in the ninth century CE.
  13. Ziryab in Cordoba
  14. Fatima al-Fihri built a learning centre in Morocco, which became a world famous university.
  15. Fatima al-Fihri was the daughter of a wealthy businessman.
  16. She used her father's inheritance to build a learning centre in Fez, Morocco.
  17. *his* work in arithmetic and geometry that has made him most famous.
  18. Al-Kindi was a polymath, most famous for his work in arithmetic and geometry
  - 19-29- اكتب بقلمك جميع المعاني
- 30- I think that there are many things can any one do to become a scientist, for example-**
- he should be polymath so that he can think in any subject.
  - he should work hard.
  - he should know other languages so that he can study foreign sciences.

## Cleft sentences الجملة الجزأة ( SB 29 )

- A cleft sentence is a complex sentence (one with a main clause and a dependent clause). It is called 'cleft' sentence because there are two parts to the sentence.

- الجملة الجزأة هي جملة مركبة ( بجملة رئيسية واخرى فرعية). وتسمى بالجملة "الجزأة او المقسمة" لانها تحتوي على قسمين

.**Function:- to emphasise certain pieces of information.**

وظيفته:- لكي نؤكد على جزء معين من المعلومات:-

- We join the most important piece of information to a relative clause, often with *who*, *where* or *that*.  
( who, where, that, why, when ) مثل الربط من المعلومات باستخدام أدوات الربط مثل ( who, where, that, why, when )
- We can start cleft sentences with the following phrases, among others:

- نستطيع ان نبدا الجملة الجزأة باستخدام المصطلحات التالية :-

The thing that ... الشيء الذي

The person who ... الشخص الذي

The time when ... الوقت الذي

The place where ... المكان الذي

The way in which ... الطريقة التي بها..

What ... الشيء

It ... انه

لتوضيح طريقة استخدام الأدوات السابقة :- اليكم هذا المثال من دليل المعلم:-

- **Mr. Omar** took our class to the museum on Thursday. السيد عمر اخذ صفنا الى المتحف يوم الخميس  
لو اردنا تقسيم الجملة لوجدنا ان الفاعل هو السيد عمر، والمتحف هو المكان ، ويوم الخميس هو الزمان . فلذلك يمكن التركيز على احد هذه الأدوات باستعمال الطرق السابقة واليكم الطريقة بالتفصيل:-

1- **Mr. Omar** took our class to the museum on Thursday. نريد التركيز على الفاعل

- **The person who** took our class to the museum on Thursday **was** Mr. Omar .

- **الشخص الذي** اخذ صفنا الى المتحف يوم الخميس **كان** السيد عمر.

-Mr. Omar **was the person who** took our class to the museum on Thursday.

- السيد عمر **كان الشخص الذي** اخذ صفنا الى المتحف يوم الخميس.

- **It was** Mr. Omar **who/ that** took us to the museum on Thursday.

- **لقد كان** السيد عمر **الذي** اخذنا الى المتحف يوم الخميس.

لاحظ كيف ركزنا على ان السيد عمر هو الذي اخذنا الى المتحف باستعمال ( was the person who ) او بطريقة ( the person who )

2- Mr. Omar took our class to **the museum** on Thursday. نريد التركيز على المكان

-**The place where** Mr. Omar took us on Thursday **was** the museum.

- **المكان الذي** اخذنا إليه السيد عمر **كان** المتحف.

- The museum **was the place where** Mr. Omar took us on Thursday

- لقد كان المتحف هو المكان الذي اخذنا اليه السيد عمر.

- **It was** to the museum **that** Mr. Omar took us on Thursday.

- **لقد كان** المتحف **الذي** اخذنا السيد عمر اليه يوم الخميس.

3- Mr. Omar took our class to the museum on **Thursday**. نريد التركيز على الزمن

- **The day when** Mr. Omar took us to the museum **was** Thursday.

- Thursday **was the time when** Mr. Omar took us to the museum.

**It was** on Thursday **that** Mr. Omar took us to the museum.

لاحظت انه يمكننا استخدام طريقة اسهل من كل ما سبق وذلك باستعمال اداة ( **Who** .... **it was**.... للإشارة للفاعل حصريا ) و ( **that** .... **was**.... للإشارة الى المكان والزمان والفاعل على حد سواء )



\*\*\*\*\*قاعدة الدرس

- The person who..... is/was <b>الشخص</b> . - <b>الشخص</b> is the person who ..... - It is/was <b>الشخص</b> that .....	- The place where..... is/was <b>المكان</b> . - <b>المكان</b> is the place where ..... - It is/was <b>المكان</b> that .....
- The time when..... is/was <b>الوقت</b> . - <b>الزمن</b> is the time when ..... - It is/was <b>الوقت</b> that .....	- The thing which..... is/was <b>الشيء</b> . - <b>الشيء</b> is the thing which ..... - It is/was <b>الشيء</b> that .....

**1- Huda won the prize for Art last year. هدى كسبت جائزة الفنون**

**The person who** won the prize for Art last year **was** Huda. **الشخص الذي** كسب جائزة في الفنون العام الماضي هي هدى.

**The prize that** Huda won last year **was** for Art. **الجائزة التي** كسبتها هدى العام الماضي كانت في الفنون.

**It was** last year **that** Huda won the prize for Art. **لقد كان** في العام الماضي بان هدى كسبت الجائزة في الفنون.

**2- The Olympic Games were held in London in 2012 CE. تم عقد الالعاب الاولمبية في لندن في 2012.**

**It was** in 2012 CE **that** the Olympic Games were held in London. **لقد كان** في عام 2012 بان عقدت الالعاب الاولمبية في لندن.

London **was the place where** the Olympic Games were held in 2012 CE. **لندن كانت** المكان حيث عقدت فيها الالعاب الاولمبية في عام 2012.

**The event that took place** in London in 2012 CE **was** the Olympic Games. **الحدث الذي** وقع في لندن في عام 2012 كان الالعاب الاولمبية.

**The thing which** was held in London in 2012 CE **was** the Olympic Games. **الشيء الذي** كان الالعاب الاولمبية.

**Grammar: Cleft sentences (SB 29)**

**جميع تمارين المنهاج فيما يتعلق بالجمل المجزأة**

**6 - We want to emphasise the part of the sentence which is in bold in sentences 1–3. Match each one to an appropriate cleft sentence a–c.**

- نريد ان نشدد على الجزء في الجملة بالخط الغامق في الجمل من 1- 3. صلها مع الجمل المجزأة المناسبة. (تمت الاجابة)

**1** The Great Mosque in Cordoba was built in 784 CE by **Abd al-Rahman 1**.

**2** **The Great Mosque in Cordoba** was built in 784 CE by Abd al-Rahman 1.

**3** The Great Mosque in Cordoba was built **in 784 CE** by Abd al-Rahman 1.

1- المسجد الكبير في قرطبة بني في 784 من قبل **عبدالرحمن الاول**.

2- **المسجد الكبير في قرطبة** بني في 784 من قبل عبدالرحمن الاول.

3- المسجد الكبير في قرطبة **بني في 784** من قبل عبدالرحمن الاول.

**Answers**

**1-** Abd al-Rahman **I was the person who** built the Great Mosque in Cordoba in 784 CE.

- عبدالرحمن الاول هو الشخص الذي بنى المسجد الكبير في قرطبة في 784 ميلادي.

**2- The mosque that** was built by Abd al- Rahman I in 784 CE **was** the Great Mosque in Cordoba.

- **المسجد الذي** بني من قبل عبدالرحمن الاول في 784 ميلادي هو المسجد الكبير في قرطبة.

**3- The year when** the Great Mosque in Cordoba was built **was** 784 CE.

- **السنة التي** المسجد الكبير في قرطبة بني فيها كانت 784 ميلادية.

( انتهى السؤال واجباته حسب ما طلب دليل المعلم، لكن احي الطالب لتعيد كتابة الجمل السابقة بطرق اخرى عنك تستوعبها جميعا احتياط)

\*The Great Mosque in Cordoba was built in 784 CE by Abd al-Rahman 1.

1- The person who built the Great Mosque in Cordoba in 784 CE was Abd al-Rahman 1.

- الشخص الذي بنى المسجد الكبير في قرطبة في 784 ميلادي هو عبدالرحمن الاول.

Or

- It was Abd al-Rahman 1 who/that built the Great Mosque in Cordoba in 784 CE.

- لقد كان عبدالرحمن الاول الذي بنى المسجد الكبير في قرطبة في 784 ميلادي.

Or

Abd al-Rahman 1 is The person who built the Great Mosque in Cordoba in 784 CE.

- عبدالرحمن الاول هو الشخص الذي بنى المسجد الكبير في قرطبة في 784 ميلادي.

\*The Great Mosque in Cordoba was built in 784 CE by Abd al-Rahman 1.

2 It was the Great Mosque in Cordoba that was built in 784 CE by Abd al-Rahman I.

- لقد كان المسجد الكبير في قرطبة الذي تم بناؤه في 784 من قبل عبدالرحمن الاول.

Or

-The thing that was built in 784 CE by Abd al-Rahman I was the Great Mosque in Cordoba.

- الشيء الذي تم بناؤه في 784 من قبل عبدالرحمن الاول كان المسجد الكبير في قرطبة.

Or

The Great Mosque in Cordoba is the thing which was built in 784 CE by Abd al-Rahman 1.

- المسجد الكبير في قرطبة هو الشيء الذي تم بناءه في 787 من قبل عبدالرحمن الاول.

3 It was in 784 CE that the Great Mosque in Cordoba was built by Abd al-Rahman I.

- انها سنة 784 ميلادي التي فيها المسجد الكبير في قرطبة تم بناؤه من قبل عبدالرحمن الاول.

7- Write this sentence in three different ways, emphasising the parts underlined in each case.

اكتب هذه الجملة بثلاث طرق مختلفة وذلك بالتركيز على الاجزاء التي تحتها خط في كل حانة.

Al-Jazari invented the mechanical clock in the twelfth century.

الجزار اخترع الآلة الميكانيكية في القرن الثاني عشر.

1- The person .....

-It was .....

2- The thing .....

- It was .....

3- The period/time .....

-It was .....

Answers

1- The person who invented the mechanical clock in the twelfth century was Al-Jazari.

OR It was Al-Jazari who/that invented the mechanical clock in the twelfth century.

2- The thing that Al-Jazari invented in the twelfth century was the mechanical clock.

OR It was the mechanical clock that Al-Jazari invented in the twelfth century.

3- The period/time when Al-Jazari invented the mechanical clock was the twelfth century.

OR It was in the twelfth century that Al-Jazari invented the mechanical clock.

من خلال الشرح السابق – يمكن ان نستشرف شكل الامتحان على هذا الدرس في امتحان الوزارة القادم على المنهاج الجديد، وفضل مثال على ذلك هو التمرين اللاحق اسفل:-

**8- Rewrite these sentences, emphasising the part in bold, and using the structure as shown.**

اعد كتابة الجمل، مع التركيز على الجزء بالخط الغامق، وباستخدام التركيب التالي:-

**1 Al-Kindi** contributed to the invention of the oud.

The person who.....

**2 Jabir ibn Hayyan** did his research in a laboratory **in Iraq**.

The country where.....

**3 Ali ibn Nafi** ' established the first music school in the world.

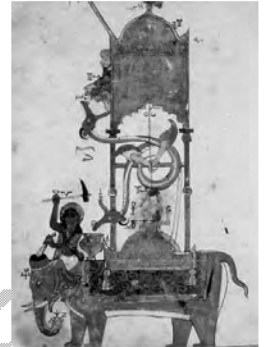
It was.....

**4 Jabir ibn Hayyan** also invented ink that can be read in the dark.

It was.....

**5 Al-Kindi** is especially famous for **his work in geometry**.

It is.....



**Answers**

**1 The person who** contributed to the invention of the oud **was** Al-Kindi.

**2 The country where** Jabir ibn Hayyan did his research in a laboratory **was** Iraq.

**3 It was** Ali ibn Nafi' **who** established the first music school in the world.

**4 It was** Jabir ibn Hayyan **who/that** also invented ink that can be read in the dark.

**5 It is** for his work in geometry **that** Al-Kindi is especially famous.

**Activity Book, page 20, exercise 3**

**Grammar**

**3 Make cleft sentences, stressing the information in bold. The first one is done for you.**

- اكتب جملا مجزأة، مشددا على المعلومات بالخط الغامق. تم حل الجملة الاولى.

**1 Queen Rania** opened the Children's Museum of Jordan in 2007 CE.

It was *Queen Rania who opened the Children's Museum of Jordan in 2007 CE.*

**2 Petra** was made a World Heritage Site in **1985 CE**.

The year .....

**3 I stopped working at 11 p.m.**

It was .....

**4 My father** has influenced me most.

The person .....

**5 I like Geography** most of all.

The subject .....

**6 The heat** made the journey unpleasant.

It was .....

**Answers:-**

1- **It was** Queen Rania **who** opened the Children's Museum of Jordan in 2007 CE.

2- **the year when/in which** Petra was made a World Heritage Site **was** 1985 CE

3- **It was** 11 p.m. **when** I stopped working

4- **The person who/that** has influenced me most **is** my father

5 - **The subject that/which** I like most of all **is** Geography

6- **it was** the heat **that/which** made the journey unpleasant

## Speaking المحادثة SB 29

9- Ask and answer these questions with your partner. Use cleft sentences in your answers.

- اسأل واجب عن هذه الاسئلة مع زملائك . استخدم جملا مجزأة في اجابتك.

- 1 Which successful person has influenced you the most in your life and why?  
- من هو الشخص الناجح الذي اثر اكثر في حياتك ولماذا؟
- 2 Which person in exercise 3 do you think was the most successful and why?  
- أي شخص من المقالة تعتقد انه الاكثر نجاحا ولماذا؟
- 3 How would you define success? (Start your answer *The way in which ...*)  
- كيف تود تعريف النجاح؟ ابدأ اجابتك بـ ( الطريقة التي بها ...)

### Suggested answers

- 1 My father **was the person who** influenced me most because he was so kind.
- 2 **The person in the article that** I think was the most successful **was** Al-Kindi because he was an expert in many fields.
- 3 **The way in which** I would define success **is** being very good at something you care about.

• When we start a sentence with **What**, we structure it as follows:

- عندما نبدا الجملة بـ "what"، يتم تكوين الجملة على النحو التالي:-

I would like to go to London next year. اود ان اذهب الى لندن السنة المقبلة.

**What** I would like to do next year **is** go to London. **ما** اود فعله السنة المقبلة **هو** الذهاب الى لندن.

### - القاعدة العامة

- The person who..... is/was <b>الشخص</b> .	- The place where..... is/was <b>المكان</b> .
- <b>الشخص</b> is the person who .....	- <b>المكان</b> is the place where .....
- It is/was <b>الشخص</b> that .....	- It is/was <b>المكان</b> that .....
- The time when..... is/was <b>الوقت</b> .	- The thing which..... is/was <b>الشيء</b> .
- <b>الزمن</b> is the time when .....	- <b>الشيء</b> is the thing which .....
- It is/was <b>الوقت</b> that .....	- It is/was <b>الشيء</b> that .....

\*\*\*\*\* Rewrite these sentences, emphasising the part in bold, and using the structure as shown.

اعد كتابة الجمل، مع التركيز على الجزء بالخط الغامق، وباستخدام التركيب التالي:-

- 1- **Mr. Omar** took our class to the museum on Thursday.  
-Mr. Omar .....
- The person who .....
- It was .....
- 2- Mr. Omar took our class to **the museum** on Thursday. نريد التركيز على المكان.  
-The place where .....
- It was .....
- 3- Mr. Omar took our class to the museum on **Thursday**. نريد التركيز على الزمن.  
- The day .....
- It was .....
- 4- Huda won the prize for Art last year.  
The person who .....
- 5- Huda won **the prize** for Art last year.  
The prize that .....
- 6- Huda won the prize for Art **last year**.  
It was .....
- 7- The Olympic Games were held in London **in 2012 CE**.  
It was .....

8- The Olympic Games were held in **London** in 2012 CE.

- The place where .....
- London was the place where .....

9- **The Olympic Games** were held in London in 2012 CE.

- The things that .....
- The event that .....

10- The Great Mosque in Cordoba was built in 784 CE by **Abd al-Rahman 1**.

- Abd al-Rahman 1 was the person who .....
- The person who .....
- It was .....

11- **The Great Mosque in Cordoba** was built in 784 CE by Abd al-Rahman 1.

- The mosque that .....
- It was .....
- The thing that .....

12- The Great Mosque in Cordoba was built **in 784 CE** by Abd al-Rahman 1.

- The year when .....
- It was .....

13- **Al-Jazari** invented the mechanical clock in the twelfth century.

- The person .....
- It was .....
- Al-Jazari .....

14- Al-Jazari invented **the mechanical clock** in the twelfth century.

- The thing that .....
- It was .....

15- Al-Jazari invented the mechanical clock in **the twelfth century**.

- The period/time w.....
- It was .....

16- **Al-Kindi** contributed to the invention of the oud.

The person who.....

17- Jabir ibn Hayyan did his research in a laboratory **in Iraq**.

The country where.....

18 **Ali ibn Nafi** ' established the first music school in the world.

It was.....

19- **Jabir ibn Hayyan** also invented ink that can be read in the dark.

It was.....

20- Al-Kindi is especially famous for **his work in geometry**.

It is.....

21- **Queen Rania** opened the Children's Museum of Jordan in 2007 CE.

It was .....

22- Petra was made a World Heritage Site in **1985 CE**.

The year .....

23- I stopped working **at 11 p.m.**

It was .....

24- **My father** has influenced me most.

The person .....

25- I like **Geography** most of all.

The subject .....

26- **The heat** made the journey unpleasant.

It was .....

27- I would like to go to **London** next year.

What .....

28- I need more time to study my subjects.

What I need is more time to study my subject.

29- How would you define success? (Start your answer *The way in which ...*) نشاط داخل المنهاج

(- كيف تود تعريف النجاح؟ ابدأ اجابتك بـ ( الطريقة التي بها...))

**The way** .....

30- He has written many books, but his final book made him famous all over the world.

He has written many books, but **it** .....

31- The Egyptians built the pyramids. المصريون بنو الأهرامات.

It was the Egyptians.....

### Answers:-

1-Mr. Omar was the person who took our class to the museum on Thursday.

- The person who took our class to the museum on Thursday was Mr. Omar .

- It was Mr. Omar who/ that took us to the museum on Thursday.

2-The place where Mr. Omar took us on Thursday was the museum.

- It was to the museum that Mr. Omar took us on Thursday.

3- The day when Mr. Omar took us to the museum was Thursday.

It was on Thursday that Mr. Omar took us to the museum.

4- The person who won the prize for Art last year was Huda.

5- The prize that Huda won last year was for Art.

6- It was last year that Huda won the prize for Art.

7- It was in 2012 CE that the Olympic Games were held in London.

8- The place where the Olympic Games were held in 2012 CE.

- London was the place where the Olympic Games were held in 2012 CE.

9- The thing that were held in London in 2012 CE was the Olympic Games.

The event that took place ( were held) in London in 2012 CE was the Olympic Games.

10- Abd al-Rahman I was the person who **built** the Great Mosque in Cordoba in 784 CE.

- لاحظ كيف حولنا الفعل (was built) الى (built) لاننا حولنا الجملة من مبني للمفعول الى مبني للمجهول.

- The person who built the Great Mosque in Cordoba in 784 CE was Abd al-Rahman I.

- It was Abd al-Rahman I who/that built the Great Mosque in Cordoba in 784 CE.

11- The mosque that was built by Abd- Rahman I in 784 CE was the Great Mosque in Cordoba.

- It was the Great Mosque in Cordoba that was built in 784 CE by Abd al-Rahman I.

-The thing that was built in 784 CE by Abd al-Rahman I was the Great Mosque in Cordoba.

12- The year when the Great Mosque in Cordoba was built was 784 CE.

- It was in 784 CE that the Great Mosque in Cordoba was built by Abd al-Rahman I.

13 -The person who invented the mechanical clock in the twelfth century was Al-Jazari.

- It was Al-Jazari who/that invented the mechanical clock in the twelfth century.

14- The thing that Al-Jazari invented in the twelfth century was the mechanical clock.

- It was the mechanical clock that Al-Jazari invented in the twelfth century.

15-The period/time when Al-Jazari invented the mechanical clock was the twelfth century.

- It was in the twelfth century that Al-Jazari invented the mechanical clock.

16- The person who contributed to the invention of the oud was Al-Kindi.

17- The country where Jabir ibn Hayyan did his research in a laboratory was Iraq.

18- It was Ali ibn Nafi' who established the first music school in the world.

19- It was Jabir ibn Hayyan who/that also invented ink that can be read in the dark.

20- It is for his work in geometry that Al-Kindi is especially famous.

21- It was Queen Rania who opened the Children's Museum of Jordan in 2007 CE.

22- the year when/in which Petra was made a World Heritage Site was 1985 CE

23- It was 11 p.m. when I stopped working

24- The person who/that has influenced me most is my father

25 - The subject that/which I like most of all is Geography

26- it was the heat that/which made the journey unpleasant.

27- What I would like to do next year is go to London.

What I would like to do **is** go to London next year

28- What I need **is** more time to study my subject.

29- **The way in which** I would define success **is** being very good at something you care about.

- الطريقة التي بها اود تعريف النجاح هي ان تكون جيد جدا شيء تهتم بها.

30- is/was his final book that made him famous all over the world.

31- It was the Egyptians who built the Pyramids.

شئوي 2016 -

3. The first athletic event for disabled athletes took place in 1948 CE.  
The year .....

شئوي 2016 -

1. Taha Hussein is especially famous for his work in literature.  
It is .....

1- the year **when** the first athletic event for disabled athletes too place **was** in 1948 CE.

- the year **in which** the first athletic event for disabled athletes too place **was** 1948 CE.

2- **It is** Taha Hussein **who/ that** is especially famous for his work in literature.





### Speaking المحادثة SB 30

1- Work in pairs. Which of these items are an everyday part of your life or life in your community? Look up any new words in a dictionary.

اي هذه الاشياء هي جزء من حياتك اليومية أو حياة مجتمعك؟ ابحث عن الكلمات الجديدة في القاموس.

Coffee قهوه, chess شطرنج, flying طيران, clock منبه, windmills طواحين الهواء, algebra الجبر, soap صابون, fountain pen قلم سائل, crystal كريستال, glasses نظارات, inoculation التلقيح, cheques الشيكات, carpets السجاد

N.	The word	The meaning
1	<b>fountain pen</b> قلم ريشة	a pen which needs ink cartridge refills and the nib of which takes ink from these cartridges to write. القلم الذي يحتاج تعبئة علب الحبر والريشة التي تأخذ الحبر من هذه العلي للكتابة.
2	<b>inoculation</b> اللقاح	(noun) an injection you can have to protect you from a disease. <b>inoculate</b> (verb) – <b>inoculable</b> (adjective) اللقاح (حقة) تمتلكها لحمايتك من مرض. / <b>يلقح</b> (فعل) - <b>قابل للتلقيح</b> (صفة)
3	<b>windmill</b> طواحين هوائية	(noun) a building that uses its sails and wind power to grind corn into flour بناء الذي يستخدم المراوح وطاقة الرياح لطحن الحبوب الى دقيق.

### Listening الاستماع

2 What do the items in exercise 1 have in common? اي من الأشياء في التمرين الاول اكثر شيوعا

**Answer** They all have their roots in Arab or Islamic discoveries and inventions made in the past.

### Audioscript شريط الكاسيت

Coffee, chess, flying, the clock, **windmills**, **algebra**, soap, the **fountain pen**, crystal glasses, **inoculation**, cheques, carpets ... What all these items have in common is their origins. They all have their roots in Arab or Islamic discoveries or inventions made in the past. It was the time when Arab and Islamic rulers established one of the largest empires in history. During this period, artists, engineers, scholars, poets, **philosophers**, geographers and traders in the Islamic world made **ground-breaking** advancements in many different areas, from agriculture and industry to **philosophy**, science and technology, literature, music and the arts.

القهوة، والشطرنج، الطيران، الساعة، وطواحين الهواء، والجبر، والصابون، والقلم السائل، نظارات الكريستال، والتلقيح، والشيكات، والسجاد ... كل هذه العناصر المشتركة لها أصولها. أنها جميعا لها جذورها في الاكتشافات أو الاختراعات العربية أو الإسلامية التي تحققت في الماضي. وهي تلك الفترة التي أنشأ الحكام العرب والمسلمين واحدة من أكبر الإمبراطوريات في التاريخ. خلال هذه الفترة، فإن الفنانين والمهندسين والعلماء والشعراء والفلاسفة والجغرافيين والتجار في العالم الإسلامي انجزوا التطورات غير المسبوقة في العديد من المجالات المختلفة، من الزراعة والصناعة للفلسفة والعلوم والتكنولوجيا والأدب والموسيقى والفنون.

It was another area of Arab and Islamic expertise, that of navigation and trade, that introduced their discoveries, inventions and developments to other parts of the world. In Al-Andalus, for example, trade and agriculture improved under Arab rule. There were huge advancements in arts and science, and Cordoba, the capital of Andalusia at that time, became the largest and greatest city in Europe.

ولقد كان مجال اخر في الخبرة العربية والإسلامية، والتي هي الملاحة والتجارة، التي أدخلت الاكتشافات والاختراعات والتطورات الى أجزاء أخرى من العالم. في الأندلس، على سبيل المثال، تحسنت التجارة والزراعة تحت الحكم العربي. كانت هناك تطورات هائلة في مجال الفنون والعلوم، وأصبحت قرطبة عاصمة الأندلس في ذلك الوقت، وأكبر مدينة في أوروبا.

By the tenth century, Cordoba had a population of about 500,000. There were 700 mosques, about 60,000 palaces and 70 libraries, the largest of which had 600,000 books! Cordoba also had around 900 public baths, and it was there where Europe's first street lights appeared. Just outside the city stood the magnificent Madinat az-Zahra', the royal palace. It took 40 years to build and, until it was destroyed in the eleventh century, it was one of the wonders of the age. It is now in the process of being restored to its former glory.

وبطول القرن العاشر، كان قرطبة يبلغ عدد سكانها حوالي 500,000. هناك أكثر من 700 مسجدا، حوالي 60,000 من القصور و 70 مكتبة، أكبرهن تحتوي على 600,000 كتاب! كان قرطبة أيضا حوالي 900 من الحمامات العامة، وكان هناك أول ظهور لأضواء الشوارع في أوروبا. بالقرب من خارج المدينة تقع مدينة الزهراء الرائعة، والقصر الملكي. استغرق الأمر 40 عاما لبنائها، حتى تم تدميرها في القرن الحادي عشر، كانت واحدا من عجائب العصر. هي الآن في طور استعادة مجدها السابق.

### Comprehension الاستيعاب

3 Listen again and complete the sentences. استمع مرة أخرى واكمل الجمل.

1 Under Arab rule ... 2 The capital of Andalusia was ... 3 Cordoba had a population of ... 4 The building of the royal palace took...

**Answers** 1 Under Arab rule, trade and agriculture improved in Andalusia. There were also huge advancements in arts and science. 2 The capital of Andalusia was Cordoba. 3 Cordoba had a population of about 500,000. 4 The building of the royal palace took 40 years.

صيفي 2016 :-

### Question Number Five (15 points)

#### A. EDITING (4 points)

Imagine you are an editor in the Jordan Times. You are asked to edit the following lines that have four mistakes (one grammar mistake, one punctuation mistake and two spelling mistakes). Find out these four mistakes and correct them. Write the correct answers down in your ANSWER BOOKLET.

Coffee, chess, flying, the clock, windmills, algebra, soap, the foantain pen, crystal glasses, inoculation, and carpets... What all these items have in common is their origins, They all have their roots in Arab or Islamic discoveries or inventions make in the past. It was the time when Arab and Islamic rulers established one of the largest empires in history.

1- fountain 2- inoculation 3- origins. 4- made

## Grammar: Revision of relative clauses

### النقطة : مراجعة الجمل الموصولة

#### 1- Defining relative clauses الجمل الموصولة المحددة

● Defining relative clauses are used to identify which particular person, place or thing is being talked about.

وتستخدم الجمل الموصولة المحددة للتعرف على شخص أو مكان أو شيء معين يراد التكلّم عنها.

The defining relative clause is usually connected to the main clause by a relative pronoun such as *who*, *which*, *that*, *where* or *when*.

- defining relative pronouns give essential information

ضمائر الجمل الموصولة المحددة تعطي معلومات أساسية لا يمكن ان نستغني عنها لتوضيح معنى الجملة. أي ان الجملة لا تكتمل إلا بوجودها.

جملة الوصل المحددة تربط غالبا مع الجملة الرئيسية باستخدام ضمير الوصل مثل (who, which, that, when, whose).  
هنالك خمسة ضمائر رئيسية لتقديم شبه الجملة هي

#### 1- **who** (subject) الذي للفاعل

- The Muslim **who** invented the clock was Al-jazari.

- A chemist is a person **who** works in a laboratory.

#### 2- **whom** (object) للأشخاص

The person **whom** you saw yesterday is my brother.

#### 3- **whose** للتملك

The man **whose** car is red is my uncle.

- The man **whose** daughter I met is American.

#### 4- **which** للأشياء

- Geometry and arithmetic are subjects **which** are studied by mathematicians.

#### 5- **that** للأشياء والأشخاص

- A chemist is a person **that/who** works in a laboratory.

- Geometry and arithmetic are subjects **that/ which** are studied by mathematicians.

#### 6- **where** للمكان

there are also about twenty-three stables **where** horses may have been kept.

#### 7- **when** للزمان

It was the month of Ramadan **when** Ibn Sina died, in June 1037 CE.

#### Non-defining relative clauses الجمل الموصولة غير المحددة

● A non-defining relative clause differs from a defining relative clause in that it gives additional, information and, without it, the sentence would still convey meaning.

الجمل الموصولة غير المحددة تختلف عن الجمل المحددة بأنها تعطي معلومات إضافية (ليست أساسية أو ضرورية) أي أنه بدونها، تبقى الجملة تعطي المعنى كاملا.

The Sahara desert, which is in Africa, is very hot.

الصحراء الكبرى، التي هي في أفريقيا، حارة جدا.

The Sahara desert is very hot.

الصحراء الكبرى حارة جدا.

4- Read the passage below and answer the questions. (SB 30) اقرأ التصص واوب عن الاسئلة

The Giralda جبرالدا



The Giralda tower, **which** is one of the most important buildings in Seville, Spain, stands at just over 104 metres tall. The person **who** is believed to be responsible for the design of the tower, **which** was originally a minaret, is the mathematician and astronomer Jabir ibn Aflah. The architect of the tower was Ahmad Ben Baso, **who**



began work in 1184 CE. He died before the tower was completed in 1198 CE. The design of the tower is believed to be based on the Koutoubia Mosque, **which** is in Marrakesh, Morocco, and the Hassan Tower in Rabat.

برج جبرالدا، الذي يعد واحدا من أهم المباني في اشبيلية، إسبانيا، يبلغ ارتفاعه 104 مترا. الشخص الذي يعتقد أن يكون مسؤولا عن تصميم البرج، الذي كان في الأصل منڈنة، هو عالم الرياضيات وعالم الفلك جابر بن أفلح. كان المهندس المعماري للبرج أحمد بن باسو، الذي بدأ العمل في 1184 م. وتوفي قبل الانتهاء من البرج في 1198 م. ويعتقد أن تصميم البرج كان من الاصل مقره في مسجد الكتبية، الذي هو في مراكش، المغرب، وفي صومعة حسان في الرباط.

1- Identify the defining and non-defining relative clauses in the text.

- حدد الجمل الموصولة المحددة وغير المحددة في النص:-

1 Defining relative clauses: الجمل الموصولة المحددة

- who is believed to be responsible for the design of the tower

Non-defining relative clauses: الجمل الموصولة غير المحددة

- which is one of the most important buildings in Seville, Spain
- which was originally a minaret
- who began work in 1184 CE
- which is in Marrakesh, Morocco

2 What relative pronouns do we use for the things in the box?

- ما هي ضمائر الوصل التي يمكن استخدامها للكلمات في الصندوق؟

الاماكن places الحيوانات والاشياء animals and things الناس people

Answers

2 people – who, that, animals and things – which, that, places – where, which, that

**5 -Complete the text with the correct word from the box. Sometimes, more than one answer is possible.** اكمل النص التالي بالكلمة الصحيحة من الصندوق. أحيانا ستكرر الكلمة (تمت الاجابة)

**that which where who**

Qasr Bashir is an extremely well-preserved Roman castle (1) **which** is situated in the Jordanian desert, and is about eighty kilometres south of Amman.

The walls and huge corner towers of the castle, (2) **which** was built at the beginning of the fourth century CE, are still standing.

It is thought that Qasr Bashir was built to protect the Roman border. Apart from the rooms in the castle, there are also about twenty-three stables (3) **where** horses may have been kept.

People (4) **who** love exploring historical Roman ruins will certainly find a visit to Qasr Bashir very rewarding. Once inside the building, one can imagine very vividly what it would have been like to live there during the times of the Roman Empire.

قصر البشير هو قلعة رومانية تم الحفاظ عليه جيدا والذي يقع في الصحراء الأردنية، بحوالي ثمانين كيلومترا إلى الجنوب من عمان.

ان الجدران والابراج الركنية الضخمة من القلعة، التي بنيت في بداية القرن الرابع الميلادي، مازالت قائمة.

ويعتقد أن قصر البشير تم بناءه لحماية الحدود الرومانية. بالإضافة الى الغرف في القصر، وهناك أيضا حوالي ثلاثة وعشرون من الاسطبلات حيث يتم الحفاظ على الخيول فيها.

ان الناس الذين يحبون استكشاف الآثار الرومانية التاريخية سيجدون بالتأكيد ان زيارة قصر البشير مفيدة للغاية. وعند الزيارة الاولى لداخل المبنى، ويمكن للمرء أن يتصور بوضوح جدا ماذا كان يمكن أن يكون مثل العيش هناك خلال زمن الإمبراطورية الرومانية.

1 which/that 2 which 3 where 4 who/that

**Activity Book, page 21, exercises 4 and 5**

**4 Match the beginnings with the correct endings and join them with a relative pronoun. Then, write the sentences out in full. The first one is done for you.**

طابق البدايات مع النهايات الصحيحة وضمها مع بعضها مستخدما ضمير الوصل المناسب واكتبها كاملة

Beginnings	Endings
1 A mathematician is someone ...	a are studied by mathematicians.
2 Geometry and arithmetic are subjects ...	b means 'doctor'.
3 'Physician' is an old-fashioned word ...	c works with numbers.
4 A chemist is a person ...	d astronomers study
5 The stars and planets are things ...	e works in a laboratory

**Answers**

1 c: A mathematician is someone **who** works with numbers.

2 a: Geometry and arithmetic are subjects **that/which** are studied by mathematicians.

3 b: 'Physician' is an old-fashioned word **that/which** means 'doctor'.

4 e: A chemist is a person **who/that** works in a laboratory.

5 d: The stars and planets are things **that/which** astronomers study.

عالم الرياضيات هو الشخص هو الذي يتعامل بالارقام.

2- الهندسة والحساب هما الموضوعان اللذان يدرسان من قبل الرياضيين.

3- كلمة "Physician" هي كلمة قديمة والتي تعني طبيب.

4- الكيميائي هو الشخص الذي يعمل في المختبر.

5- النجوم والكواكب هي الاشياء التي يدرسها علماء الفلك.

**5 Complete the text about Ibn Sina, using the relative pronouns in the box. One pronoun is used twice. Add commas for the non-defining relative clauses. (AB 21)**

أكمل النص عن ابن سينا، مستخدماً ضمائر التوصل في المربع. يمكن أن نستخدم ضمير واحد مرتين.

**that when which who**

Ibn Sina (1)..... is also known as Avicenna was a polymath. Ibn Sina was influenced as a young man by the works of the philosopher Aristotle. He wrote on early Islamic philosophy (2)..... Included many subjects, especially logic and ethics. He also wrote *Al Qanun fi Tibb*, the book (3)..... became the most famous medical textbook ever. In the last ten or twelve years of his life, Ibn Sina started studying literary matters. His friends (4)..... were worried about his health advised him to relax. He refused and told them ‘I prefer a short life with width to a narrow one with length.’ It was the month of Ramadan (5)..... Ibn Sina died, in June 1037 CE.

ابن سينا، الذي يعرف أيضاً باسم أفيسينا كانت متعدد الثقافات. ابن سينا تأثر كشاب بأعمال الفيلسوف أرسطو. وكتب في الفلسفة الإسلامية المبكرة التي شملت العديد من الموضوعات، لا سيما المنطق والأخلاق. وكتب أيضاً *القانون في الطب*، الكتاب الذي أصبح من الكتب الطبية الأكثر شهرة على الإطلاق. في السنوات العشر أو الاثنتي عشرة الأخيرة من حياته، بدأ ابن سينا في دراسة المواضيع الأدبية. أصدقائه الذين كانوا بالقلق حول صحته نصحوه بالاسترخاء. ورفض وقال لهم 'أنا أفضل حياة قصيرة واسعة بوحدة طويلة ضيقة'. لقد كان في شهر رمضان حيث توفي ابن سينا، في حزيران/يونيو 1037 م.

**Answers**

- 1 , **who** is also known as Avicenna,
- 2 , **which** included many subjects,
- 3 **that**
- 4 , **who** were worried about his health,
- 5 **when**

**Speaking SB 31**

**6 Discuss these questions in small groups.**

1- What buildings or places in your country do you think are important, in terms of Arabic and Islamic history? Make a list.

ما هي المباني أو الأماكن في بلدك برأيك هامة، من حيث التاريخ العربي والإسلامي؟ اعمل قائمة.

2 -What do you know about the history of these places?? ماذا تعرف عن تاريخ هذه الأماكن؟

3 -What is it about these places that you admire most?? ما تعرف حول هذه الأماكن التي انت معجب بها؟

**7 Compare your list with other groups. Which places do you all agree are important?**

7 Compare your list with other groups. Which places do you all agree are important?

قارن بين القائمة الخاصة بك مع المجموعات الأخرى. أي الأماكن التي توافقون بتنها هامة؟



Ibn Tulun Mosque in Cairo, Egypt



The Ummayed Mosque in Damascus, Syria



Al-Aqsa Mosque, Jerusalem

## والخاص الكورسي

ربط جمل باستعمال أدوات الجمل الموصولة (relative clauses pronouns) والتي من المحتمل ان تأتي كسؤال منفرد في السؤال الرابع

1- **who** (subject) الذي للفاعل

- The Muslim **who** invented the clock was Al-jazari.

- A chemist is a person **who** works in a laboratory.

2- **whom** (object) للأشخاص الذي للمفعول به

The person **whom** you saw yesterday is my brother.

3- **whose** is for possession. للتملك

The man **whose** car is red is my uncle.

- The man **whose** daughter I met is American.

4- **which** is for things. للأشياء

- Geometry and arithmetic are subjects **which** are studied by mathematicians.

5- **that** can be used for things and people. للأشياء والأشخاص

- A chemist is a person **that/who** works in a laboratory.

- Geometry and arithmetic are subjects **that/ which** are studied by mathematicians.

6- **where** للمكان

there are also about twenty-three stables **where** horses may have been kept.

7- **when** للزمان

It was the month of Ramadan **when** Ibn Sina died, in June 1037 CE.

1- London is a huge city. **It**'s the capital of the UK. لندن مدينة ضخمة إنها عاصمة المملكة المتحدة.

London, .....

2- Ibn Sina's friends advised him to relax. **They** were worried about his health .

Ibn Sina's friends,.....

3- The Giralda tower stands at 104 metres tall. **It** is one of the most important buildings in Spain.

The Giralda tower, .....

4- Ibn Sina's wrote the book Al Qanun fi –Tibb. **The book (it)** became the most famous medical textbook ever.

Ibn Sina wrote Al Qanun fi –Tibb .....

5- The walls and huge corner towers of the castle are still standing. **They** were built in the fourth century.

The walls and huge corner towers of the castle, .....

6- Qasr Bashir has also about twenty-three stables . Horses may have been kept **there (in it)**.

7- The Sahara desert is very hot. **It** is in Africa.

8 -A mathematician is someone . **He** works with numbers.

9 - Geometry and arithmetic are subjects. **They** are studied by mathematicians.

10 - 'Physician' is an old-fashioned word. **It** means 'doctor'.

11 - A chemist is a person. **He** works in a laboratory.

12 -The stars and planets are things . astronomers study **them**.

لاحظ ان الجمل ( 8 الى 12 بالاضافة الى جملة 4 و 6 ) لا تحتاج الى فواصل لانها جمل محددة بمعنومة واحدة اساسية. في حين ان الجمل المتبقية هي جمل غير محددة وتحتوي على معلومتين احدهما اضافية.

Answers;- 1- London, **which** is the capital of the UK, is a huge city. لندن، والتي هي عاصمة المملكة المتحدة، ضخمة جدا.

2- Ibn Sina's friends, **who** were worried about his health, advised him to relax.

3- The Giralda tower, **which** It is one of the most important buildings in Spain, stands at 104 metres tall.

4- Ibn Sina wrote Al Qanun fi –Tibb **which** the most famous medical textbook ever.

5- The walls and huge corner towers of the castle, **which** were built in the fourth century CE, are still standing.

6- Qasr Bashir has also about twenty-three stables **where** horses may have been kept.

7- The Sahara desert, **which** is in Africa, is very hot.

8 -A mathematician is someone **who** works with numbers.

9 - Geometry and arithmetic are subjects **that/which** are studied by mathematicians.

10 - 'Physician' is an old-fashioned word **that/which** means 'doctor'.

11 - A chemist is a person **who/that** works in a laboratory.



12 -The stars and planets are things that/which astronomers study.

شتوي 2016 :- من ناحية تصحيح الخطأ

**Question Number Four (8 points)**

**A. The underlined words in the following sentence are not used correctly. Replace these words with the correct ones, and write the answers down in your ANSWER BOOKLET. (2 points)**

Most Jordanians used to the hot weather where we have in summer.

لاحظ ان *where* خطأ لانها اتت بعد كلمة *weather* أي طقس، فلماذا نستبدلها بـ *that/which*.

- 1- London, where is the capital of the UK, is a huge city.
- 2- Ibn Sina's friends, whose were worried about his health, advised him to relax.
- 3- The Giralda tower, who It is one of the most important buildings in Spain, stands at 104 metres tall.
- 4- Ibn Sina wrote Al Qanun fi –Tibb who the most famous medical textbook ever.
- 5- The walls and huge corner towers of the castle, when were built in the fourth century CE, are still standing.
- 6- Qasr Bashir has also about twenty-three stables which horses may have been kept.
- 7- The Sahara desert, where is in Africa, is very hot.
- 8 -A mathematician is someone whom works with numbers.
- 9 - Geometry and arithmetic are subjects whom are studied by mathematicians.
- 10 - 'Physician' is an old-fashioned word who means 'doctor'.
- 11 - A chemist is a person which works in a laboratory.
- 12 -The stars and planets are things when astronomers study.

Answers: - 1- which 2- who 3- which 4- which 5- which 6- where 7- which 8 - who 9 - that/which 10 - that/which 11 - who/that 12 - that/which

شتوي 2016 :- من ناحية تصحيح الكتابة الموجهة

**B. GUIDED WRITING (4 points)**

Read the information below, and then in your ANSWER BOOKLET, write two sentences using the given notes below about Qasr Bashir. Use the appropriate linking words.

**Location:** Jordanian desert.

**Date of construction:** beginning of the 4<sup>th</sup> century.

**Purpose of building:** protection of the Roman borders.

**Description of the building:** huge towers, 23 rooms

- Qasr Bashir, which is situated in the Jordanian desert, was built at the beginning of the 4<sup>th</sup> century.
- Qasr Bashir was built to protect (for protection) the Roman border, it has huge towers and 23 rooms.



**Activity Book, page 21, exercises 6 and 7**

**6- 'I prefer a short life with width to a narrow one with length.' Do you agree with Ibn Sina's quote? Why/Why not? Try to use cleft sentences with defining and non-defining relative clauses in your answer.**

"انني افضل حياة قصيرة اعيشها كلها على اخرى ضيقة بطول مدتها" هل تتفق مع اقتباس ابن سينا؟ لماذا/لماذا لا؟ استخدم الجملة المجرأة مع ضمير التوصل المعرف وغير المعرف.

**Suggested answer:** Yes, I agree with Ibn Sina; he is a famous polymath **who** has influenced me significantly. He shows that if you work hard you can achieve so much in a short space of time

جواب مقترح: نعم، وأنا اتفق مع ابن سينا؛ وهو الموسوعة الشهير الذي أثر في الى حد كبير. أنه يبين أنه إذا كنت تعمل بجد يمكنك تحقيق الكثير في فترة قصيرة من الوقت.

**Vocabulary**

تمرين اشتقاق مهم جدا في امتحان الوزاري والذي سيتم شرحه في الوحدة الخامسة لتشمل جميع تمارين المنهاج

**7 Complete the sentences with words formed from the words in brackets.**

**AB 21**

- 1 The Middle East is famous for the..... of olive oil. (**produce**)
- 2 Ibn Sina wrote..... textbooks. (**medicine**)
- 3 Fatima al-Fihri was born in the..... century. (**nine**)
- 4 My father bought our house with a..... from his grandfather. (**inherit**)
- 5 Scholars have discovered an..... document from the twelfth century. (**origin**)
- 6 Do you think the wheel was the most important .....ever? (**invent**)
- 7 Al-Kindi made many important mathematical..... (**discover**)
- 8 Who was the most .....writer of the twentieth century?(**influence**)

**Answers:-**

1 production 2 medical 3 ninth 4 inheritance 5 original 6 invention 7 discoveries 8 influential

**SB 31**

**8- Pronunciation: Minimal pairs (1) النطق:- الاحرف المتشابهة**

8 - Listen to each pair of words. Which sounds do you hear? Answer the questions.

استمع لكل زوجي كلمات. أي الاصوات تسمعها؟ اجب عن الاسئلة.

**Audioscript** شريط الكاسيت

**a** -pen bend back pack rope robe

**b** -song sun singing India wing win

**a** Which words contain the **p** sound /p/ and which contain the **b** sound /b/? Write **1** (/p/) or **2** (/b/) for each word.

أي الكلمات تحتوي صوت /p/ وايها تحتوي الصوت /b/؟ اكتب رقم 1 لثحرف p والرقم 2 لثحرف b.

**Answers** الاجابات

**a** 1 pen, pack, rope 2 bend, back, robe

**b** Which words contain the **n** sound /n/ and which contain the **ing** sound /ng/? Write **1** (/n/) or **2** (/ng/) for each word.

أي من الكلمات تحتوي الصوت /n/ وايها تحتوي الصوت /ng؟ اكتب 1 للمجموعة الاولى و 2 للمجموعة الثانية.

**Answers** الاجابات

**b** 1 sun, India, win 2 song, singing, wing



## Student's Book, pages 32 and 33

### Speaking

**1 The photographs show examples of a megaproject. Work in pairs and answer the questions.**

**1** What do you understand, after looking at the photographs, about megaprojects? ما الذي تفهمه بالنظر الى صور المشاريع العملاقة?

**2** In your opinion, why do they exist? برأيك ما الهدف من وجودها?

**3** What are the advantages and disadvantages of megaprojects to people and the environment? ما حسنات وسيئات المشاريع العملاقة بالنسبة للناس والبيئة?



### Suggested answers إجابات مقترحة

**1** Megaprojects are huge investment projects that cost a lot of money. Examples include developments such as airports, bridges, stations, entire city complexes, etc.

المشاريع الضخمة هي المشاريع الاستثمارية الضخمة التي تكلف الكثير من المال. وتشمل التطورات مثل المطارات والجسور، والمحطات، ومجمعات المدينة بأكملها، إلخ.

**2** They exist to bring new economic growth and benefits to cities.

أنها موجودة لتحقيق النمو الاقتصادي الجديد وفوائد للمدن.

**3** Disadvantages are that they are all brand new and some people think it would be better to spend the money on regenerating old towns, etc. However, the advantages include installing the latest technology that helps cities to become environmentally friendly.

ان سيئاتها هي أنها جميعا كبيرة وجديدة وبعض الناس يعتقدون أنه سيكون من الأفضل أن تنفق الأموال على تجديد المدن القديمة، إلخ. ومع ذلك، تتضمن المزايا تثبيت أحدث التكنولوجيا التي تساعد المدن لتصبح صديقة للبيئة.

### Reading

**2 Read this academic essay about a megaproject. Check your answers to exercise 1.**

قراءة هذا المقال الأكاديمية حول المشاريع العملاقة. والتحقق من إجاباتك في تمرين 1.



## Masdar City – a positive step?

ومدينة مصر – بخطوة إيجابية؟



N.	The word	The meaning
1	<b>artificially-created</b> (adj) المصطنعة	not real or <u>not made of natural things</u> but made to be like something that is real or natural غير حقيقي او مصنوع من مواد طبيعية لكن تم صنعه ليكون مشابه لشيء حقيقي او طبيعي <b>create</b> (verb) – <b>creation</b> (noun) (اسم) – صنع (فعل) يخلق (فعل)
2	<b>carbon-neutral</b> محايدة الكربون	(adj) <u>not affecting the total amount of carbon dioxide in Earth's atmosphere.</u> لا يؤثر بالكمية الإجمالية لثاني أكسيد الكربون في غلاف الأرض. <b>neutralise</b> (verb) – <b>neutrality</b> (noun) (اسم) – حياد (فعل) / يجعله طبيعياً (فعل)
3	<b>criticize</b> (v) ينتقد	<u>judge (something) with disapproval</u> ; to evaluate or analyse (something) يحكم (على شيء) بالرفض، يقيم أو يحلل (شيئاً). critic or <b>criticism</b> (noun) – <b>critical</b> (adjective) (اسم) – نقدي (صفة) انتقاد (اسم)
4	<b>desalination</b> (n) تحلية المياه <b>desalinate</b> (v) يحلي	the process of <u>removing salt from sea water so that it can be used</u> عملية إزالة الملح من مياه البحر بحيث يمكن استخدامها
5	<b>grid</b> شبكة	[energy grid] <u>a system of wires through which electricity is connected to different power stations across a region.</u> [ شبكة الطاقة ] نظام من الاسلاك والتي من خلالها الكهرباء تكون متصلة بمحطات طاقة مختلفة عبر المنطقة.
6	<b>installation</b> (n) معرض بصري <b>install</b> (v) يركب	an <u>art exhibit</u> often involving video or moving parts. معرض فني غالباً يتضمن الفيديوها أو الرسوم المتحركة
7	<b>megaproject</b> مشروع عملاق	a very <u>large, expensive, ambitious business project</u> مشروع تجاري، طموح، ثمين، وكبير جداً.
8	<b>outweigh</b> تفوق	to be <u>more important than something else</u> تكون أكثر أهمية من شيء آخر.
9	<b>pedestrian</b> (n) المشاة	<u>someone who is walking</u> , especially along a street or another place that is used by cars. الشخص الذي يسير، وخاصة على طول الشارع أو مكان آخر يستخدم من قبل السيارات. <b>pedestrian</b> (adjective). (صفة) مترجل
10	<b>sustainability</b> (n) الاستدامة <b>sustain</b> (v) يدعم <b>sustainable</b> (adj) مستدام	the state of <u>being able to continue forever</u> , or for a very long time; for example, the sustainability of the environment involves emitting less pollution and using less water. حالة أن تكون قادراً على الاستمرار إلى الأبد، أو لفترة طويلة جداً. على سبيل المثال، استدامة البيئة يتطلب انبعاث أقل من التلوث واستخدام كميات أقل من المياه.
11	<b>zero-waste</b> صفر النفايات	<u>producing no waste</u> , or having parts that can be reused عدم إنتاج النفايات، أو لديه أشياء يمكن استخدامها
12	<b>vary</b> يتنوع، يختلف <b>variation</b> (noun) <b>variable</b> (adj)	(V) to differ according to the situation. يختلف حسب الوضع. <b>اختلاف</b> (اسم) – <b>متنوع</b> (صفة)

المشاريع العملاقة **Megaprojects** are extremely large investment projects, **which** are designed to encourage economic growth and bring new benefits to cities. Although megaprojects **vary** in terms of size and cost, **they** are all, by definition, expensive, public projects that attract a high level of interest and media coverage. Projects range from motorways, airports, stations, tunnels, bridges, etc. to entire city complexes.

Which, all= megaprojects

(المشاريع العملاقة) هي مشاريع استثمارية كبيرة للغاية، والتي ترمي إلى تشجيع النمو الاقتصادي وتحقيق منافع جديدة للمدن. على الرغم من أن المشاريع العملاقة تختلف من حيث الحجم والتكلفة، وكلها، بحكم التعريف، مشاريع مكلفة، والعمامة التي تحظى بدرجة عالية من الاهتمام والتغطية الإعلامية. مشاريع نطاقها مجموعة من الطرق السريعة، والمطارات، والمحطات، والإنفاق، والجسور، إلخ لمجمعات المدينة بأكملها.

The concept of a megaproject is always based on the benefits **it** brings to a community. However, many megaprojects have been **criticised** because of **their** negative effects on a community or the environment. This essay will look at these issues with regard to Masdar City, a megaproject in Abu Dhabi.

it= a megaproject/ their= many megaprojects/

مفهوم المشاريع العملاقة دائماً يستند إلى المزايا التي تحققها في المجتمع. ومع ذلك، العديد من المشاريع العملاقة تتعرض لانتقادات بسبب آثارها السلبية على المجتمع والبيئة. هذه المقالة سوف تبحث في هذه القضايا فيما يتعلق بمدينة مصدر، المشروع العملاق في أبو ظبي.

Masdar City, **which** began **its** development in 2006 CE, will be the world's first **carbon-neutral, zero waste artificially-created** city. Covering an area of six square kilometers, when **it** is completed in 2025 CE, **it** is expected to house more than 40,000 residents, 50,000 commuters, and 1,500 businesses involved in mainly environmentally-friendly products.

which, its, it, it = Masdar city/ it= to house more than 40,000 residents, 50,000 commuters, and 1,500 businesses involved in mainly environmentally-friendly products

وستكون مدينة مصدر، الذي بدأ تطويرها في عام 2006 م، المدينة الأولى في العالم محايدة الكربون، مدينة خالية من النفايات-المصطنعة. تغطي مساحة ستة كيلومترات مربعة وعند اكتمالها في عام 2025 م، من المتوقع إيواء أكثر من 40.000 من السكان و50.000 والركاب و1.500 من الشركات المشاركة في منتجات صديقة للبيئة أساساً.

The city will run entirely on renewable energy sources. **It** is built on an advanced energy **grid** **which** monitors exactly how much electricity is being used by every outlet in the complex. Furthermore, in order to reduce **its** carbon footprint, Masdar City will be a car-free zone, designed to be pedestrian and cycle-friendly. Electric, driverless cars will operate as public transport vehicles, and the city will be connected to other locations by a network of roads and railways.

it, its=the city or Masdar city /which= advanced energy grid

سيتم تشغيل المدينة كلياً على مصادر الطاقة المتجددة. وهي مبنية على شبكة الطاقة المتقدمة التي ترصد بالضبط كمية الكهرباء المستخدمة من قبل كل منفذ في المجمع. وعلاوة على ذلك، بهدف تقليل منتجات الكربون، مدينة مصدر ستكون منطقة خالية من السيارات، مصممة لتكون للمشاة وراكبي الدراجات الهوائية. السيارات الكهربائية، وبدون سائق ستعمل ك مركبات نقل عام، وسيتم ربط المدينة بالمواقع الأخرى بشبكة من الطرق والسكك الحديدية.

بناء خطط مزارع الرياح الطاقة الشمسية توفير الطاقة  
 Energy will be provided by solar power and wind farms, and there are also plans to build the world's largest hydrogen plant. A **desalination** plant will be used to provide the city's water, with 80% of water used being recycled. Biological waste will be used as an energy source too, and industrial waste will be recycled.

سيتم توفير الطاقة بالطاقة الشمسية ومزارع الرياح، وهناك أيضا خطط لبناء أكبر مصنع في العالم للهيدروجين. ستستخدم محطة لتحلية المياه لتوفير المياه في المدينة، مع 80 في المائة من المياه المستخدمة ويجري إعادة تدويرها. سيتم استخدام النفايات البيولوجية أيضا كمصدر للطاقة، والنفايات الصناعية يتم إعادة تدويرها.

للعلوم معهد طلاب مدينة مصدر السكان الحاليين  
 The current residents of Masdar City are all students at the Masdar Institute of Science and Technology, a university **whose** students are fully committed to finding solutions to the world's energy problems. While the project has the support of many global, environmental and conservation organisations, there is some **criticism** of it. It is felt that, instead of building an artificial **sustainable** city, **sustainability** should be made a priority of existing cities.

whose = a university /it= Masdar city/ it = instead of ..... cities.

المقيمين حاليا في مدينة مصدر هم جميع الطلاب في معهد مصدر للعلوم والتكنولوجيا، طلاب الجامعة ملتزمون التزاما تاما بإيجاد حلول لمشاكل الطاقة في العالم. في حين ان المشروع حصل على دعم العديد من الهيئات العالمية والبيئية والمحافظة، هناك بعض الانتقادات لها. ويقال انه، بدلاً من بناء مدينة اصطناعية مستدامة، الاستدامة ينبغي ان تكون أولوية للمدن القائمة.

البيئة للمجتمع فوائد في الخلاصة  
 In conclusion, the benefits of Masdar City for the community and the environment greatly **outweigh** any disadvantages. If the aims of the developers are realised, Masdar City will be a blueprint for future urban planning that will inspire similar megaprojects in other countries.

في الخلاصة، فوائد مدينة مصدر للمجتمع والبيئة تفوق أية سينات. إذا هي حققت أهداف المطورين، ستكون مدينة مصدر مخططا للتطوير الحضري المستقبلي والتي ستكون قدوة لمشروعات عملاقة مماثلة في بلدان أخرى.

### Comprehension SB 33

#### 3 Read the essay again and answer the questions.

1 What examples of megaprojects are provided in the essay?

2 What are the advantages of the creation of Masdar City? What are the disadvantages?

3 Do you think that Masdar City is a beneficial project or not? Give your reasons

4- There are many things that will Masdar City depends on in order to be environmentally- friendly city. Write down five of them.

5- Masdar city will depend on many useful energy sources in the future. Write down three of these sources.

6- What do some experts criticize Masdar Cit for?

7- Quote the sentence which indicates that Masdar City is going to remove salt from sea water in order to be used for human consumption.

8- Find a word in the text which means " **producing no waste, or having parts that can be reused**".

- 9- Find a word in the text which means " **the process of removing salt from sea water so that it can be used**".
- 10- Find a word in the text which means " **to judge (something) with disapproval; to evaluate or analyse**".

- 1- ما هي الامثلة على المشاريع العملاقة التي تقدمها المقالة  
2- ما هي حسنات انشاء مدينة مصدر؟ وما هي السيئات؟  
3- هل تعتقد ان مدينة مصدر هي مشروع مربح ام لا؟ قدم اسبابا.  
4 - هنالك العديد من الاشياء التي تعتمد عليها مدينة مصدر لكي تكون مدينة صديقة للبيئة. اذكر خمسة منها.  
5 -مدينة مصدر ستعتمد على عدة مصادر للطاقة المتجددة في المستقبل. اكتب ثلاثة منها؟  
6- بماذا ينتقد بعض الخبراء مدينة مصدر  
7- اقتبس الجملة التي تشير الى ان مدينة مصدر ستزيل الاملاح من مياه البحر بهدف استعماله للاستهلاك البشري.

### Answers

- 1 Examples of projects include motorways, airports, stations, tunnels, bridges and entire city complexes.  
2 The advantages include the fact that it will be the world's first carbon-neutral, zero-waste city. It will also be a car-free zone, although there will be excellent public transport. The disadvantage is that existing cities are nowhere near as environmentally clean, and many people think the money should have been spent on cleaning up existing places and making them more sustainable.  
3- I think it is a beneficial project because it will encourage other companies to build new cities which protect the environment and save the natural energy resources.  
4- 1- carbon-neutral 2- renewable energy sources. 3- hydrogen plant 4- A desalination plant 5- Biological waste will be used as an energy source.  
5- solar energy, wind energy, biological waste, hydrogen.  
6- It is felt that, instead of building an artificial sustainable city, sustainability should be made a priority of existing cities.  
7- A desalination plant will be used to provide the city's water, with 80% of water used being recycled.  
8- zero-waste. 9- desalination. 10- criticise

### Vocabulary: SB 33, exercises 4 and 5

4- Look at the nouns in the box. Which adjectives collocate with them? Write them next to the adjectives.

انظر إلى الأسماء في الصندوق. أي الصفات تتلازم مع بعضها.

التخطيط, growth, effect, transport, footprint, waste, planning, مخلفات, بصمة, الأثر, النقل, نمو

1 urban مدني 2 public العام 3 biological بيولوجي 4 carbon الكربون 5 negative سلبي 6 economic اقتصادي

### Answers

- 1 urban planning التخطيط المدني 2 public transport النقل العام  
3 biological waste المخلفات البيولوجية 4 carbon footprint (قياس الكمية المنبعثة) بصمة الكربون  
5 negative effect التأثير السلبي 6 economic growth نمو اقتصادي

5 Complete the sentences with the correct collocations from exercise 4.

- 1 -When people talk about ....., they can mean either an improvement in the average standard of living, or an increase in the value of a country's products.  
2 -Pollution has some serious .....on the environment, such as the death of wildlife and plant life.  
3 -We can all work hard to reduce our ..... by living a more environmentally-friendly lifestyle.  
4- If we take .....more often, there will be fewer cars on the roads, which will result in cleaner air in our cities.  
5- Hospitals need to dispose of a lot of ....., and it should be carefully managed because it can be dangerous.  
6- The need for more effective ..... is evident when we consider modern day problems like traffic.

1 - عندما يتحدث الناس حول **النمو الاقتصادي**، فانهم يمكن أن يقصدوا أما تحسنا في متوسط مستوى المعيشة، أو زيادة في قيمة منتجات الدولة.

2 - التلوث له بعض **الاثار السلبية** الخطيرة على البيئة، مثل وفاة حياة النباتات والحياة البرية.

3 - بإمكاننا العمل بجد **للتقليل بصمة الكربون** بالعيش بطريقة صديقة للبيئة.

- 4- اذا استعملنا **النقل العام** أكثر، سيكون هنالك اقل من السيارات على الطرقات، والذي سيؤدي الى هواء انظف في مدننا.  
5- المستشفيات تحتاج الى التخلص من العديد من **المخلفات البيولوجية**، ويجب ان تدار بدقة لانها يمكن ان تكون خطيرة.  
6- الحاجة الى **تخطيط عمراني** فعال هو واضح عندما نأخذ بالاعتبار مشاكل العصر في الازدحام المروري.

### Answers

- 1 economic growth نمو اقتصادي 2 negative effect التأثير السلبي  
3 carbon footprint بصمة الكربون (قياس الكمية المنبعثة) 4 public transport النقل العام  
5 biological waste المخلفات البيولوجية 6 urban planning التخطيط المدني

### Speaking/ SB 33

**6 Do you think that a similar project to Masdar City would be successful in Jordan? What advantages and disadvantages can you think of? Discuss in pairs.**

- هل تعتقد بأن مشروع مشابه كمدينة مصدر سيكون ناجحاً في الاردن؟ ما هي الحسنات والسيئات حسب رأيك؟ ناقش زملائك.

**Suggested answer** I think that a megaproject like Masdar City would be very successful in Jordan: it would encourage investment in the country and benefit the population by providing an environmentally-friendly space for people to live in. However, we would have to be careful not to overshadow the natural beauty of our country with too much building: we would have to find the perfect balance between modernity and nature.

أعتقد أن المشاريع العملاقة مثل مدينة مصدر ستكون ناجحة جداً في الأردن: سوف تشجع الاستثمار في البلد ويستفيد السكان بتوفير مكان للبيئة الصديقة للناس من أجل العيش. ومع ذلك، سيتعين علينا أن نكون حريصين أن لا تلقي بظلالها على الجمال الطبيعي لبلدنا بكثير من البناء: سيتعين علينا إيجاد التوازن المثالي بين الحداثة والطبيعة.

**7 - In pairs, present your argument to the class. Do other students share your opinions?**

على شكل أزواج، قدم حجتك لنصف. هل طلبة آخرون يشاركونك ارائك؟

### Writing

**8- Write a summary of the article about Masdar City on page 32. Remember to be concise and write between 100 and 150 words.**

- اكتب ملخصاً للمقالة حول مدينة مصدر. تذكر ان تكون موجزاً و اكتب تقريبا بين 100 و 150 كلمة.



## TEST YOURSELF

**Megaprojects** are extremely large investment projects, **which** are designed to encourage economic growth and bring new benefits to cities. Although megaprojects vary in terms of size and cost, **they** are all, by definition, expensive, public projects that attract a high level of interest and media coverage. Projects range from motorways, airports, stations, tunnels, bridges, etc. to entire city complexes.

The concept of a megaproject is always based on the benefits **it** brings to a community. However, many megaprojects have been **criticised** because of **their** negative effects on a community or the environment. This essay will look at these issues with regard to Masdar City, a megaproject in Abu Dhabi.

Masdar City, **which** began **its** development in 2006 CE, will be the world's first **carbon-neutral, zero waste artificially-created** city. Covering an area of six square kilometers, when **it** is completed in 2025 CE, **it** is expected to house more than 40,000 residents, 50,000 commuters, and 1,500 businesses involved in mainly environmentally-friendly products.

The city will run entirely on renewable energy sources. **It** is built on an advanced energy **grid** **which** monitors exactly how much electricity is being used by every outlet in the complex. Furthermore, in order to reduce **its** carbon footprint, Masdar City will be a car-free zone, designed to be pedestrian and cycle-friendly. Electric, driverless cars will operate as public transport vehicles, and the city will be connected to other locations by a network of roads and railways.

Energy will be provided by solar power and wind farms, and there are also plans to build the world's largest hydrogen plant. A **desalination** plant will be used to provide the city's water, with 80% of water used being recycled. Biological waste will be used as an energy source too, and industrial waste will be recycled.

The current residents of Masdar City are all students at the Masdar Institute of Science and Technology, a university **whose** students are fully committed to finding solutions to the world's energy problems. While the project has the support of many global, environmental and conservation organisations, there is some **criticism** of **it**. **It** is felt that, instead of building an artificial **sustainable** city, sustainability should be made a priority of existing cities.

In conclusion, the benefits of Masdar City for the community and the environment greatly **outweigh** any disadvantages. If the aims of the developers are realised, Masdar City will be a blueprint for future urban planning that will inspire similar megaprojects in other countries.

1. What examples of megaprojects are provided in the essay?  
.....
2. What are the advantages of the creation of Masdar City? What are the disadvantages?  
.....
3. Do you think that Masdar City is a beneficial project or not? Give your reasons.  
.....
4. Megaprojects have a lot of benefits. Write down two of these benefits.  
.....
5. What is the main ( aim, purpose, goal ) of Megaprojects.  
.....
6. Masdar city will depend on a lot of things to become an environment-friendly. Write down two of these things.  
.....

7. Find a word in the text which means " **the process of removing salt from water**".
8. Megaprojects can come in different forms. Write down two of them.
9. When will the work on Masdar city be finished?
10. What is the expected result after the work on Masdar city completed?
11. What is the result of using an advanced energy grid to run Masdar city?
12. In order to reduce the effects ( amount ) of carbon, Masdar city will take some procedures. Write them down.
13. What information in the text shows that cars are not allowed, and only bikes are used in Masdar city.
14. Write down the sentence that shows that a certain kind cars will be used in Masdar city.
15. How will the city be provided with water?
16. How will the city of Masdar benefit from the used water and the industrial waste?
17. It is said that Masdar is an environment-friendly city. Explain this statement, and in two sentences write your opinion giving evidence from the text.
18. Masdar city will entirely run on renewable energy sources. Explain this statement giving three of these renewable resources.
19. Do you think that a similar project to Masdar City would be successful in Jordan? What advantages and disadvantages can you think of?
20. Megaprojects undergo a lot of criticism. Explain this statement giving reasons from the text in support of this criticism.

1. ما هي الأمثلة للمشاريع الضخمة المقدمة في المقالة؟
2. ما هي إيجابيات ابتكار مدينة مصدر؟ ما هي السلبيات؟
3. هل تعتقد بأن مدينة مصدر هي مشروع مربح أم لا؟ أعط الأسباب.
4. للمشاريع الضخمة فوائد عديدة. أكتب فائدتين.
5. ما هو الهدف الرئيسي للمشاريع الضخمة؟
6. مدينة مصدر ستعتمد على الكثير من الأشياء لكي تصبح صديقة للبيئة. أذكر اثنتين.
7. جد كلمة من النص تعني " the process of removing salt from water".
8. المشاريع الضخمة تأتي بأشكال مختلفة، أذكرها.
9. متى سيتم الإنتهاء من العمل على مشروع مدينة مصدر؟
10. ما هي النتيجة المتوقعة بعد الإكتمال من مدينة مصدر؟
11. ما هي النتيجة من استخدام شبكة الطاقة المتقدمة لتشغيل مدينة مصدر؟
12. لتقليل تأثير الكربون، مدينة مصدر ستتخذ بعض الإجراءات. أذكرها.
13. ما المعلومات في النص التي تبين بأن السيارات غير مسموح بها في مدينة مصدر وإنما فقط استخدام الدراجات الهوائية المسموح.
14. أكتب الجملة التي تبين بأن أنواع معينة من السيارات ستستخدم في مدينة مصدر.
15. كيف سيتم تزويد المدينة بالماء؟
16. كيف ستستفيد مدينة مصدر من المياه المستخدمة والمخلفات الصناعية؟

17. يقال بأن مدينة مصدر هي عبارة عن مدينة صديقة للبيئة. اشرح هذه العبارة، وبجملتين، أكتب رأيك مقدماً دليل من النص؟
18. مدينة مصدر ستعمل بشكل كامل بمصادر الطاقة المتجددة. اشرح هذه العبارة مع ذكر ثلاثة مصادر متجددة؟
19. هل تعتقد بأن مشروع مشابه لمدينة مصدر سيكون ناجحاً في الأردن؟ ما هي باعتقادك الإيجابيات والسلبيات؟
20. تتعرض المشاريع الضخمة للكثير من الانتقاد. اشرح هذه العبارة ذاكراً الأسباب من النص لدعم هذا الانتقاد.

**Answers:**

1. Examples of projects include motorways, airports, stations, tunnels, bridges and entire city complexes.
2. Disadvantages are that they are all brand new and some people think it would be better to spend the money on regenerating old towns, etc. However, the advantages include installing the latest technology that helps cities to become environmentally friendly.  
The advantages include the fact that it will be the world's first carbon-neutral, zero-waste city. It will also be a car-free zone, although there will be excellent public transport. The disadvantage is that existing cities are nowhere near as environmentally clean, and many people think the money should have been spent on cleaning up existing places and making them more sustainable.
3. I think it is beneficial because it is an environment-friendly city, which will help people live in a healthy world. It will be the world's first carbon-neutral, zero-waste city. It will also be a car-free zone, although there will be excellent public transport.
4. Any two of the following:
  - a. It will be the world's first carbon-neutral.
  - b. It will be zero-waste city.
  - c. It will also be a car-free zone.
  - d. there will be excellent public transport.
5. They exist to bring new economic growth and benefits to cities.
6. City will be a car-free zone, designed to be pedestrian and cycle-friendly. Electric, driverless cars will operate as public transport vehicles. Biological and industrial waste will be recycled.
7. desalination
8. Examples of projects include motorways, airports, stations, tunnels, bridges and entire city complexes.
9. 2025
10. It is expected to house more than 40,000 residents, 50,000 commuters, and 1,500 businesses involved in mainly environmentally-friendly products.
11. To monitor exactly how much electricity is being used by every outlet in the complex.
12. 1. Masdar City will be a car-free zone. 2. It is designed to be pedestrian and cycle-friendly.  
3. Electric, driverless cars will operate as public transport vehicles. 4. The city will be connected to other locations by a network of roads and railways.
13. Masdar City will be a car-free zone, designed to be pedestrian and cycle-friendly.
14. Electric, driverless cars will operate as public transport vehicles
15. A desalination plant will be used to provide the city's water, with 80% of water used being recycled.
16. A desalination plant will be used to provide the city's water, with 80% of water used being recycled. Biological waste will be used as an energy source too, and industrial waste will be recycled.
17. It said that Masdar is an environment-friendly city. Explain this statement, and in two sentences write your opinion giving evidence from the text.
18. Energy will be provided by solar power, wind farms and biological waste will be used as an energy source too.
19. I think that a megaproject like Masdar City would be very successful in Jordan: it would encourage investment in the country and benefit the population by providing an environmentally-friendly space for people to live in. However, we would have to be careful not to overshadow the natural beauty of our country with too much building: we would have to find the perfect balance between modernity and nature.
20. They are all, by definition, expensive, public projects. It is felt that, instead of building an artificial sustainable city, sustainability should be made a priority of existing cities.

Activity Book, 22, exercises 8 and 9 -Reading

A founding father of farming

الأب المؤسس للترواح

N.	The word	The meaning
1	<b>irrigate (V)</b> يسقي، يروي <b>irrigation (n)</b> ري	to <u>supply land with water</u> so that crops and plants will grow. تزويد الارض بالماء بحيث المحاصيل والنباتات تنمو.
2	<b>founder</b> مؤسس	the <u>person who starts something new</u> , such as an organisation or a city الشخص الذي يبدأ شيئاً جديداً، مثل منظمة او مدينة.
3	<b>legacy</b> إرث	what someone leaves to the world after their death.
4	<b>fertile</b> ارض خصبة	<u>agriculturally productive</u> ; 'produced more than enough food.' منتجة زراعيًا، تنتج طعامًا أكثر من الكافية.

Ibn Bassal was a <sup>كاتب</sup> writer, a <sup>عالم</sup> scientist and an <sup>مهندس</sup> engineer <sup>عاش في</sup> who lived in Al-Andalus in the <sup>الحادي عشر</sup> eleventh century CE. He worked in the court of Al-Ma'mun, <sup>عواطفه الجياشه</sup> who was the King of Toledo. His great passions were <sup>توليدو</sup> botany, <sup>ملك</sup> which is the study of plants, and <sup>عالمًا كبيرًا</sup> agriculture. Although <sup>الأرض</sup> he was a great scholar, <sup>العمل</sup> he was also a practical man and all of <sup>من كتابته</sup> his writing came from <sup>الخبرة</sup> his own 'hands-on' experience of working the land.

He, his, his, his= Ibn Bassal/ who= Al-Ma'moun /which= botany

كان ابن بصال كاتب وعالم ومهندس والذي عاش في الأندلس في القرن الحادي عشر الميلادي. وقد عمل في بلاط المأمون، (الذي كان ملكًا على طليطلة). عواطفه الجياشه كانت في علم النبات، (وهو دراسة علم النبات)، والزراعة. على الرغم من أنه كان عالمًا كبيرًا، وكان أيضًا رجل عمل عملي وجميع كتاباته جاءت من كتابته بالخبرة في العمل في الأرض.

One of the many things <sup>الكتاب</sup> which <sup>كتاب الزراعة</sup> Ibn Bassal achieved was <sup>حققها</sup> *A Book of Agriculture*. The book <sup>الأعشاب وكذلك</sup> consisted of sixteen chapters <sup>الفصول</sup> which <sup>الطريقة المثلى تشرح</sup> explain how best to grow trees, fruit and vegetables, as well as herbs <sup>وصف</sup> and sweet-smelling flowers; perhaps the most famous chapter of <sup>الفصل</sup> all was the <sup>الأكثر شهرة</sup> one that described how to <sup>ري</sup> treat different types of soil. Ibn Bassal also worked out how to <sup>عمل</sup> irrigate the land by finding underground <sup>ري</sup> water and digging wells. <sup>نظم الري</sup> He designed water pumps and <sup>مضخات</sup> irrigation systems. All of these things were <sup>نظم الري</sup> passed on through his writing.

which = one of many things/ which, all= sixteen chapters /He, his= Ibn Bassal/ the one= the most famous chapter of all/ that =the one/

واحدة من الأشياء العديدة التي حققها ابن بصال "كتاب الزراعة". الكتاب يتألف من الفصول الستة عشر التي تشرح الطريقة المثلى لزراعة الأشجار، والفواكه والخضروات، وكذلك الأعشاب والزهور زكية الرائحة؛ ربما كان الفصل الأكثر شهرة هو واحد (وصف كيفية التعامل مع أنواع مختلفة من التربة). ابن بصال عمل أيضًا على كيفية ري الأراضي بالبحث عن المياه الجوفية وحفر الآبار. قام بتصميم نظم الري ومضخات المياه. كل هذه الأمور قد وردت في كتاباته.

The influence of Ibn Bassal's book was enormous. As farmers down the generations followed <sup>اتبعوا</sup> his instructions and advice, the land became wonderfully <sup>أجيال</sup> fertile and produced more than enough food <sup>منحدرين</sup> for the fast-growing population. The <sup>كمزارعين</sup> irrigation systems that <sup>هانألا</sup> he and his followers put in place are still in <sup>ما يكفي</sup> evidence in Spain. Although his name is not widely known, Ibn Bassal's <sup>أنتجت</sup> legacy to the world has been <sup>وضعتها</sup> great. <sup>لا تزال</sup>

He, his, his, his= Ibn Bassal/ that= the irrigation systems/ which= botany

وكان تأثير كتاب ابن بصال هائلة. وكما زارعين منحدره في اجيال اتبعوا ارشاداته ونصائحه، أصبحت الأرض رائعة خصبة وأنتجت أكثر من ما يكفي من الغذاء للسكان المتزايدة النمو بسرعة. نظم الري (التي وضعها هو واتباعه) لا تزال دليلاً في إسبانيا. على الرغم من أن اسمه غير معروف على نطاق واسع، ما ورثه ابن بصال للعالم عظيم.

**9 -Read the text again and answer the questions.**

1 Name two of Ibn Bassal's achievements.

2 Find a verb in the second paragraph that means 'supply land with water'.

3 Guess the meaning of 'fertile land' in the third paragraph. Which part of the text illustrates its meaning?

4 Guess the meaning of 'legacy' in the third paragraph. What does the author suggest is Ibn Bassal's legacy to the world?

5 Which paragraph suggests that Ibn Bassal was a polymath? Give examples of his areas of knowledge.

6 Why do you think the area around Toledo had a 'fast-growing population'?



1- اسم اثنين من إنجازات ابن بصال. 2- جد فعل في الفقرة الثانية والذي يعني وسائل 'إمداد الأرض بالمياه' 3- خمن معنى 'أرض خصبة' في الفقرة الثالثة. أي جزء من النص الذي يوضح معناها؟ 4- خمن معنى 'إرث' في الفقرة الثالثة. ما اقترح الكاتب ابن بصال هو إرث إلى العالم؟ 5- أي فقرة تشير إلى أن ابن بصال موسوعة؟ إعط أمثلة على مجالات المعرفة. 6- لماذا تعتقد أن المنطقة المحيطة بتوليدو لديها سرعة في النمو السكاني؟

1- writing *A Book of Agriculture*; designing water pumps and irrigation systems

2 irrigate

3 agriculturally productive; 'produced more than enough food ...' (lines 28–29)

4 'Legacy' means what someone leaves to the world after their death. Ibn Bassal's legacy is his agricultural instructions and advice.

5 the first paragraph: writing, science, engineering, botany, agriculture

6 **Suggested answer:** I think that the area around Toledo had a fast-growing population for two reasons. Firstly, I think that many people would want to live around Toledo, and Al-Andalus in general, at that time because Al-Andalus was a very prosperous place. Secondly, because the area was producing a lot of food as a result of Ibn Bassal's irrigation systems, people would be healthier and more able to provide for more children than they could before.

أعتقد أن المنطقة المحيطة بتوليدو كان عدد سكانها يتزايد بسرعة لمسيبين. أولاً، أعتقد أن الكثير من الناس تريد أن تعيش حول توليدو، والاندلس بشكل عام، في ذلك الوقت لأن الأندلس كانت مكاناً مزدهراً جداً. ثانياً، نظراً لأن المنطقة كانت تنتج الكثير من المواد الغذائية نتيجة لنظم ري ابن بصال، سيكون الناس أكثر صحة وأكثر قدرة على توفيرها للأطفال أكثر مما كان يمكن من قبل.

**Vocabulary/الكلمات AB 23**

10 Complete the sentences with words from the box. One word is not needed.

ودود، لطيف friendly، خالي، غير مشغول free، بصمة footprint، مزارع farms، فائدة، يفيد benefit، مخلفات waste، متجددة renewable، طاقة power، مشاة pedestrian، محايد neutral

1 In hot countries, solar..... is an important source of energy.

2 'Green' projects are environmentally.....

3 Wind.....are an example of energy.....

4 If a city recycles everything and doesn't throw anything away, it is zero-.....

5 We burn carbon whenever we use oil, coal or gas. This is known as our carbon.....

6 If we replace as much carbon as we burn, we are carbon-.....

7 A place where no cars are allowed is a car-.....zone, and it is.....friendly.

1- في الدول الحارة، الطاقة الشمسية هي مصدر مهم للطاقة. 2- المشاريع الخضراء (الصديقة للبيئة) هي صديقة للبيئة. 3- مزارع الرياح هي مثال للطاقة المتجددة. 4- إذا أي مدينة إعادة تدوير أي شيء ولم ترمي أي شيء بعيداً، فإنها تكون صفر نفايات. (خالية من النفايات). 5- نحن نحرق الكربون عند استخدامنا النفط، الفحم والغاز. هذا يعرف ببصمة الكربون. 6- إذا استبدلنا كمية الكربون التي نحرقها، فنحن محايدون في الكربون. 7- المكان حيث لا يسمح للسيارات هي منطقة خالية من السيارات، وهي صديقة للمشاة.

**Answers:- الاجابات**

1 power 2 friendly 3 farms; renewable 4 waste 5 footprint 6 neutral 7 free; pedestrian

## TEST YOURSELF

Ibn Bassal was a writer, a scientist and an engineer **who** lived in Al-Andalus in the eleventh century CE. He worked in the court of Al-Ma'mun, **who** was the King of Toledo . His great passions were botany, **which** is the study of plants , and agriculture. Although **he** was a great scholar, **he** was also a practical man and all of **his** writing came from **his** own 'hands-on' experience of working the land.

One of the many things **which** Ibn Bassal achieved was *A Book of Agriculture*. The book consisted of sixteen chapters **which** explain how best to grow trees, fruit and vegetables, as well as herbs and sweet-smelling flowers; perhaps the most famous chapter of **all** was the **one that** described how to treat different types of soil . Ibn Bassal also worked out how to **irrigate** the land by finding underground water and digging wells. **He** designed water pumps and **irrigation** systems. All of these things were passed on through his writing.

The influence of Ibn Bassal's book was enormous. As farmers down the generations followed his instructions and advice, the land became wonderfully **fertile** and produced more than enough food for the fast-growing population. The **irrigation** systems that **he** and his followers put in place are still in evidence in Spain. Although his name is not widely known, Ibn Bassal's **legacy** to the world has been great.

1. Name two of Ibn Bassal's achievements.  
.....
2. Find a verb in the second paragraph that means '*supply land with water*'.  
.....
3. Guess the meaning of '*fertile land*' in the third paragraph. Which part of the text illustrates its meaning?  
.....
4. Guess the meaning of '*legacy*' in the third paragraph. What does the author suggest is Ibn Bassal's legacy to the world?  
.....
5. Which paragraph suggests that Ibn Bassal was a polymath? Give examples of his areas of knowledge.  
.....
6. Why do you think the area around Toledo had a '*fast-growing population*'?  
.....
7. Ibn Bassal has many achievements as a botanist. Write down two of his achievements.  
.....
8. Write down the sentence which shows the most important part of Ibn Bassal's book.  
.....
9. Ibn Bassal discovered two ways to irrigate the land. Write them down.  
.....
10. In his work, Ibn Bassal explained how to grow many types of plants. Write down two of them.  
.....
11. Write down the sentence which indicates that what Ibn Bassal has written is applied in practice.  
.....
12. Write down the sentence which indicates that Ibn Bassal was a polymath.  
.....
13. Ibn Bassal's legacy to the world has been great. Write down two examples of his legacy.  
.....
14. The influence of Ibn Bassal's book was enormous. Write down an evidence on that from the text.  
.....

1. سمّ اثنتين من إنجازات ابن بصال؟
2. جد الفعل من الفقرة الثانية الذي يعني " *supply land with water* ".
3. خمن معنى " *fertile land* " في الفقرة الثالثة. أي جزء من النص الذي يبين معناها؟
4. خمن معنى " *legacy* " في الفقرة الثالثة. ماذا يعني الكاتب بإرث ابن بصال للعالم؟
5. أي فقرة تقترح بأن ابن بصال كان متعدد الثقافات؟ أعط أمثلة لمجالات معرفته؟
6. لماذا برأيك للمنطقة حول توليدو " نمو سكاني سريع"؟
7. لابن بصال إنجازات عديدة كعالم نبات، أذكر اثنتين.
8. أكتب الجملة التي تبين الجزء الأكثر أهمية لكتاب ابن بصال؟
9. ابن بصال اكتشف طريقتين لري الأرض. أذكرها؟
10. في عمله، ابن بصال شرح كيف نزرع أنواع عديدة من النباتات. أذكر اثنتين منها؟
11. أكتب الجملة التي تشير بأن ما كتبه ابن بصال يطبق عملياً؟
12. أكتب الجملة التي تشير بأن ابن بصال كان متعدد الثقافات؟
13. إرث ابن بصال للعالم كان عظيماً. أذكر مثالين لإرثه.
14. تأثير كتاب ابن بصال كان كبيراً. أكتب دليلاً من النص على ذلك.

Answers:

1. Any two of the following:

writing *A Book of Agriculture*; designing water pumps and irrigation systems

2. irrigate

3. agriculturally productive; 'produced more than enough food ...' (lines 28–29)

4. 'Legacy' means what someone leaves to the world after their death. Ibn Bassal's legacy is his agricultural instructions and advice.

5. the first paragraph: writing, science, engineering, botany, agriculture

6. **Suggested answer:**

I think that the area around Toledo had a fast-growing population for two reasons. Firstly, I think that many people would want to live around Toledo, and Al-Andalus in general, at that time because Al - Andalus was a very prosperous place. Secondly, because the area was producing a lot of food as a result of Ibn Bassal's irrigation systems, people would be healthier and more able to provide for more children than they could before.

7. See 1

8. perhaps the most famous chapter of all was the one that described how to treat different types of soil.

9. Ibn Bassal also worked out how to irrigate the land by finding underground water and digging wells.

10. fruit and vegetables, as well as herbs and sweet-smelling flowers.

11. all of **his** writing came from **his** own 'hands-on' experience of working the land.

12. Ibn Bassal was a writer, a scientist and an engineer **who** lived in Al-Andalus in the eleventh century CE.

13. Any two of the following:

writing *A Book of Agriculture*; designing water pumps and irrigation systems

14. As farmers down the generations followed **his** instructions and advice, the land became wonderfully fertile and produced more than enough food for the fast-growing population.

### Writing الكتابة / AB 23

Read the text on page again. Underline the parts that give you basic information about Ibn Bassal and write them below. ضع خطا تحت الأجزاء التي تعطيك معلومات أساسية حول ابن باسل واكتبها..

Name الاسم	Ibn Bassal
Date التاريخ	lived in the eleventh century CE
Location الموقع	Al-Andalus
Occupation and interests المهنة والاهتمامات	writer, scientist and engineer / interested in botany and agriculture
Achievements الانجازات	writing A Book of Agriculture; designing water pumps and irrigation systems
Legacy إرث	نصائح وارشادات زراعية. agricultural instructions and advice.

Answers:-

- Ibn Bassal lived in the eleventh century CE **in** Al-Andalus. **He was a** writer, a scientist and an engineer **and he** was interested in botany and agriculture.

- **In addition, He had many achievements such as** writing A Book of Agriculture; designing water pumps and irrigation systems agricultural instructions and advice

مهم:- هذا التمرين في الكتاب كان شكلا مقترحا للكتابة الموجهة في شتوي 2016 :-

#### B. GUIDED WRITING (4 points)

Read the information below, and then in your ANSWER BOOKLET, write a brief biography using all the given notes below about Mahmoud Darwish. Use the appropriate linking words.

Name: Mahmoud Darwish.



Date (born and died): 1942 -2008

Professions: poet and author

Achievements: - Leaves of Olives and Wingless Birds

Mahmoud Darwish **was born in** 1942. **He was a** poet and author, **he had many achievements such as** leaves of Olives and Wingless Birds. **He died in** 2008

Write a short biography about The Muslim Scientist Ali ibn Nafi' (Ziryab) in two sentences.

Name	Ali ibn Nafi ' (Ziryab)
Place/ Date of birth	Iraq, 789 CE,
Place/ Date of death	Cordoba, 857 CE
Profession	musician
Achievements	-established the first music school in the world. - introduced the oud to Europe.

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