



مدارس الجزيرة

Units 4+5

English

المستوى الثالث



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Unit Four

Waiting ..for
the perfect
man



Module Three

Achievements

Word	Meaning	English Meaning
Algebra	علم الجبر	a type of mathematics system where letters and symbols are used to represent numbers.
arithmetic	علم الحساب	the study of numbers.
artificially-created	مصطنع	not real or not made of natural things but made to be like something that is real.
breathtaking	مثير / فائن	wonderful, awe-inspiring.
camera obscura	كاميرا / الغرفة المظلمة	an optical device that led to photography and the invention of the camera. Latin for 'dark room';
carbon-neutral	انبعاثات كربون معتدلة	not affecting the total amount of carbon dioxide in Earth's atmosphere.
ceramics	الخزف / أواني خزفية	the art of producing something made from clay or porcelain, or the clay or porcelain items themselves.
Composition	توليفة موسيقية	a piece of music that someone has written.
Conservatory	معهد موسيقي	a school where people are trained in music or acting.
craftsman	حرفي	someone who is very skilled at a particular craft, a job or an activity that requires skills and in which they make things with their hands.
criticize	ينتقد	to judge (something) with disapproval; to evaluate or analyse (something).
Demonstration	شرح	an act of explaining and showing how to do something, or how something works.
Desalination	تحلية المياه	the process of removing salt from sea water so that it can be used.
fountain pen	قلم حبر	a pen which needs ink cartridge refills and the nib which takes ink from these cartridges to write.
founder	مؤسس	the person who starts something new, such as an organisation or a city.
furnishings	المفروشات	the furniture and other things, such as curtains, in a room.
geometry	علم الهندسة	the branch of mathematics concerned with the properties, relationships and measurement of points, lines and curves.

Glassblowing	فن تشكيل الزجاج	the art of shaping a piece of hot, melted glass by blowing air into it through a tube.
Grid (energy grid)	شبكة (الكهرباء)	a system of wires through which electricity is connected to different power stations across a region.
ground-breaking	جديد / مبتكر	new, innovative.
Hanging	تعليقة	a large piece of cloth that is hung on a wall as a decoration.
Inheritance	ميراث	money or things that you get from someone after they die.
Inoculation	تلقيح / تطعيم	an injection you can have to protect you from a disease inoculate.
Installation	معرض فني	an art exhibit often involving video or moving parts.
irrigate	يروي	to supply land with water.
Legacy	إرث	something that someone has achieved that continues to exist after they stop working or die.
lifelike	مشابه	very similar to the person or thing represented.
laboratory	مختبر	a room for scientific experiments.
Mathematician	متخصص بالرياضيات	a person who studies Mathematics to a very complex level.
Megaproject	مشروع كبير جدا	a very large, expensive, ambitious business project.
minaret	مئذنة	the tall, thin tower of a mosque from which Muslims are called to prayer.
musical harmony	تناغم موسيقي	a pleasant sound in music, made by playing or singing a group of different notes together.
Outweigh	فاق أهمية	to be more important than something else.
Pedestrian	مشاة/ على الارجل	someone who is walking, especially along a street or another place that is used by cars.
performing arts	الفنون المسرحية	a type of art that can combine acting, dance, painting and film to express an idea.
Philosopher	فيلسوف	someone who studies and writes philosophy professionally.
Physician	طبيب	someone qualified to practise medicine, especially one who specialises in diagnosis and treatment.
polymath	متقن/ متعدد المعرفة	someone who has a lot of knowledge about many different subjects.

qualify	يتأهل	to be entitled to a particular benefit or privilege by fulfilling a necessary condition.
restore	رَمَّم	to repair or renovate a building, work of art, etc., so as to bring it back to its original condition.
Revolutionise	يُحدث ثورة	to completely change the way people do something or think about something.
sand artist	فنان الرمال	someone who models sand into an artistic form.
scales	موازين	an instrument to measure weight.
showcase	يعرض	to exhibit or display.
Sustainability	استدامة	the state of being able to continue forever.
Silk	حرير	A type of soft material used to make clothes.
Talent	موهبة	special ability.
Textiles	منسوجات	types of cloth or woven fabric.
Translation	ترجمة	the process of converting documents from one language to another.
underline	يسلط الضوء	to emphasise, to highlight.
vary	يختلف	to differ according to the situation.
visual arts	الفنون البصرية	art such as painting or sculpture that you look at, as opposed to literature or music.
windmill	طاحونة هواء	a building that uses its sails and wind power to grind corn into flour.
zero-waste	بدون نفايات	producing no waste, or having parts that can be reused.
wooden toys	العاب خشبية	Toys made of wood.
furnace	فرن	a large piece of equipment that is used to melt metals.
solidifying	يتحجر / يتصلب	to make solid.
semi-opaque	شبه معتم	not completely impossible to see through.
fine	جيد	good enough.
transparent	شفاف	clear or thin enough to see through.
cobalt	معدن الكوبالت	cobalt is a metal and it gives a dark blue colour to the glass.
turquoise	لون فيروزي	it is a sea green colour.

• Complete the sentences with the words in the box. One word is not needed. A.B. p. 20

philosopher / arithmetic / polymath / chemist /
geometry / mathematician / physician

1. My father teaches Maths. He's a _____
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.

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

• Complete the sentences with words from the box. One word is not needed. A.B p. 23

benefit / farms / footprint / free / friendly /
neutral / pedestrian / power / renewable / waste

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.

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

Collocations

- Look at the nouns in the box. Which adjectives collocate with them? Write them next to the adjectives. S.B p. 33

growth effect transport footprint waste planning

- urban _____ : التخطيط العمراني
- public _____ : المواصلات العامة
- biological _____ : المخلفات البيولوجية
- carbon _____ : انبعاثات كربونية
- negative _____ : تأثير سلبي
- economic _____ : النمو الاقتصادي

Answers:

1 urban planning 2 public transport 3 biological waste
4 carbon footprint 5 negative effect 6 economic growth

- Complete the sentences with the correct collocations.

- 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.
- Pollution has some serious _____ on the environment, such as the death of wildlife and plant life.
- We can all work hard to reduce our _____ by living a more environmentally-friendly lifestyle.
- If we take _____ more often, there will be fewer cars on the roads, which will result in cleaner air in our cities.
- Hospitals need to dispose of a lot of _____, and it should be carefully managed because it can be dangerous.
- The need for more effective _____ is evident when we consider modern day problems like traffic.

Answers:

1 economic growth 2 negative effects 3 carbon footprint
4 public transport 5 biological waste 6 urban planning

Choose the correct words to complete the following sentences. A.B p. 24

1. Watch people acting a story at a theatre / an installation.
2. Admire textiles / ceramics but don't break them!
3. Look at beautiful pieces of art at a play / gallery.
4. Look at an installation / a theatre that has been set up in a public space.
5. Look at and touch textiles / handicrafts that have been sewn together.

Answers: 1 a theatre 2 ceramics 3 gallery 4 an installation 5 textiles

Match the words in the box with the correct meanings. One word is not needed. A.B p. 24

ceramics / exhibition / gallery / handicrafts / heritage / sculpture / textiles

1. beautiful objects made by hand: _____
2. a place where art is shown: _____
3. a solid piece of art, usually made of stone, metal or wood : _____
4. an event during which works of art are displayed: _____
5. art made from clay: _____
6. traditional culture, such as art architecture, customs and beliefs: _____

Answers: 1. handicrafts 2 gallery 3 sculpture 4 exhibition 5 ceramics 6 heritage

Complete the sentences with the correct adjective. One adjective is not needed. A.B p. 24

contemporary / cultural / educational / major / ongoing / visual

1. We went to a concert yesterday. The music was written by a new young composer, so it was _____
2. When we go on school trips, we always learn new things because the trips are _____
3. King Hussein was a _____ world figure in the twentieth century.
4. Photography and painting are two examples of the _____ arts.
5. Art, music and literature are all part of our _____ life.

Answers: 1 contemporary 2 educational 3 major 4 visual 5 cultural



The importance of Islamic achievements in history: SB p. 28

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

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 weighed items in a laboratory: his scales could weigh items over 6,000 times smaller than a kilogram.

العالم العربي لديه العديد من الكيميائيين المشهورين عبر تاريخه, لكن الشخص الذي يُعرف كمؤسس علم الكيمياء هو علي الأرجح جابر ابن حيان. يُعرف جابر جيدا بأنه الشخص الذي بدأ بانتاج حامض الكبريتيك. بنى جابر ايضا مجموعة من الموازين التي غيرت الطريقة التي كان يزن الكيميائيون بها الأشياء في المختبر: موازينه كان بإمكانها ان تزن أشياء أقل ب 6000 مرة من الكيلوغرام.

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

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

علي ابن نافع يعرف ايضا ب زرياب (أو الطائر الأسود بسبب صوته الجميل). كان تلميذا موهوبا لموسيقي مشهور (اسحق الموصلي) من بغداد, وكانت موهبته الموسيقية هي التي قادت به الى قرطبة في القرن التاسع الميلادي. كان ضيف الحاكم الأموي هناك. وهو ايضا الشخص الذي أسس أول مدرسة موسيقية في العالم في قرطبة, الأندلس, تُدرس التناغم والتأليف الموسيقي. لقد أحدث تغييرا جذريا في النظرية الموسيقية, وكان أيضا الشخص الذي أدخل العود لـ أوروبا

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

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

فاطمة الفهري كانت ابنة رجل أعمال ثري. استخدمت إرث والدها لتبني مركز تعليمي في فاس, المغرب. أصبح هذا المركز التعليمي أفضل جامعة في المغرب, وكانت هذه الجامعة المكان الذي يأتي إليه الطلاب من جميع أنحاء العالم للدراسة. علاوة على ذلك, كانت مريم أخت فاطمة هي التي أشرفت على بناء مسجد الأندلس, الذي لم يكن بعيدا عن مركز التعلم.

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.

كان الكندي طبيباً، وفيلسوفاً، وعالم رياضيات، وكيميائياً، وموسيقياً، وعالم فلكياً – لقد كان متعدد المعرفة بحق. لقد قام باختراعات مبتكرة في العديد من هذه المجالات، لكن على الأرجح عمله في علم الحساب والهندسة هو السبب وراء شهرته.

Questions

1. Who is the founder of chemistry?

2. Mention down two main achievements of Jabir ibn Hayyan.

3. The set of scales which Jabir ibn Hayyan invented was very important for a reason.

4. Ali ibn Nafi' is also known as 'Ziryab' or 'Blackbird' for a reason. Write down this reason.

5. In the ninth century CE, Ali ibn Nafi' moved to Cordoba for a reason. Write down this reason.

6. Write down the sentence that shows that Ali ibn Nafi' was hosted by the Umayyad caliph.

7. What did the school that Ali ibn Nafi' opened in Cordoba teach?

8. List two main achievements of Ali ibn Nafi'.

9. How did Fatima al-Fihri use her father's inheritance?

10. What did Fatima's sister, Mariam, work?

11. Al-Kindi made ground-breaking discoveries in many fields. Write down two main fields.

12. 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.

Masdar City – a positive step? SB p. 32

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.

المشاريع العملاقة هي مشاريع استثمارية كبيرة جداً، والتي تم تصميمها لتشجيع النمو الاقتصادي ولجلب منافع جديدة للمدن. بالرغم من ان المشاريع العملاقة تختلف من حيث الحجم والتكلفة، لكنهم جميعاً، كأمر مفروغ منه، مشاريع عامة مكلفة تجذب مستوى عال من الاهتمام والتغطية الإعلامية. تتنوع المشاريع من طرق سريعة، ومطارات، ومحطات، وأنفاق، وجسور، الخ الى مجمعات 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.

فكرة المشروع العملاق تستند دائماً على المنافع التي يأتي بها للمجتمع. ومع ذلك، العديد من المشاريع العملاقة تم انتقادها بسبب آثارها السلبية على المجتمع والبيئة. هذه المقالة ستلقي النظر على هذه القضايا مع الأخذ بعين الاعتبار مدينة مصدر، المشروع العملاق في أبوظبي.

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 kilometres, 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.

مدينة مصدر، التي بدأت بالتطور في 2006، ستكون أول مدينة تم صنعها في العالم ذات انبعاثات كربونية معتدلة، وخالية من النفايات. مغطاة لمنطقة مساحتها 6 كيلومتر، عندما تكتمل في 2025، يتوقع ان تؤوي 40,000 مقيم، 50,000 عامل مسافر، و 1,500 شركة تعمل بشكل رئيسي في منتجات صديقة للبيئة.

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.

ستعمل المدينة بشكل كامل على مصادر الطاقة المتجددة. تم بناؤها على شبكة طاقة متقدمة تراقب كمية الكهرباء المستخدمة بالضبط من كل مخرج كهرباء في المجمع. علاوة على ذلك، لكي تقلل من انبعاثاتها الكربونية، ستكون مدينة مصدر منطقة خالية من السيارات، مصممة لتكون على الاقدام وصديقة للدراجات الهوائية. ستعمل السيارات الكهربائية بدون سائق كمركبات مواصلات عامة، وستكون المدينة متصلة مع مواقع أخرى عن طريق شبكة من الطرق والسكك الحديدية.

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 التزود بالطاقة بواسطة الطاقة الشمسية ومزارع الطواحين الهوائية، وهناك ايضا خطط لبناء أكبر مصنع هيدروجين في العالم. سيتم استخدام محطة تحلية مياة لتزويد المدينة بالماء، وسيتم تدوير نسبة 80% من هذه المياه. سيتم استخدام النفايات البيولوجية كمصدر طاقة أيضا، وسيتم تدوير المخلفات الصناعية.

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.

المقيمون الحاليون في مدينة مصدر هم جميعا طلاب في مؤسسة مصدر للعلوم والتكنولوجيا، وهي جامعة طلابها ملتزمون بإيجاد حلول لمشاكل الطاقة في العالم.

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.

على الرغم من أن المشروع يلقي دعم من العديد من المنظمات العالمية والبيئية، إلا أنه يعاني من بعض الانتقادات. يُرى أنه، بدلا من بناء مدينة صناعية مستدامة، فإن الاستدامة يجب أن تكون أولوية للمدن الموجودة.

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 الخاتمة، منافع مدينة مصدر للمجتمع والبيئة تفوق بشكل كبير جميع عيوبها. إذا تم ادراك أهداف المطورين، ستكون مدينة مصدر كنموذج لتخطيط للتطوير الحضري في المستقبل والذي سيلهم مشاريع عملاقة مشابهة في دول أخرى.

Questions

1. What are the advantages and disadvantages of megaprojects to people and the environment?

2. Megaprojects are designed for two purposes. Write down these two purposes.

3. Megaprojects vary in terms of two things. Write down these things.

4. Megaprojects have several features. Write down two of these features.

5. There are several examples of megaprojects. Write down two of examples.

6. The concept of a megaproject is always based on one factor. Write down this factor.

7. Many megaprojects have been criticised for two reasons. Write down these two reasons.

8. Masdar City has two main advantages. Write down these two advantages.

9. Masdar City is expected to house many groups. Write down three groups.

10. Quote down the sentence that shows that Masdar City uses environmentally-friendly energy.

11. Quote down the sentence that shows that electricity usage in Masdar City is controlled.

12. Masdar City will be a car-free zone for a reason. Write down this reason.

13. The transportation system in Masdar City has two qualities. Write them down.

14. There are three renewable sources of energy Masdar City uses. Write down these sources.

15. A desalination plant will be used for one main purpose. Write down this purpose.

A founding father of farming: WB p. 22

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.

ابن بصال كان كاتباً، وعالماً ومهندساً عاش في الأندلس في القرن الحادي عشر. كان يعمل في بلاط المأمون، الذي كان ملكاً لـ طليطلة. كان شغفه الأكبر (البوتاني) - و هو دراسة النباتات - والزراعة. بالرغم من أنه كان عالماً عظيماً، إلا أنه كان انساناً عملياً وجميع كتاباته جاءت من خبرته العملية في العمل في الأرض.

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.

كان كتاب الزراعة واحداً من الكثير من الأشياء التي حققها ابن بصال. تألف الكتاب من 16 فصل يوضحون أفضل طرق زراعة الأشجار، والفواكه والخضراوات، بالإضافة إلى الأعشاب والزهور ذات الرائحة الجميلة؛ لعل أشهر الفصول من بين الجميع هو الفصل الذي كان يصف كيفية التعامل مع أنواع التربة المختلفة. استنبط ابن بصال أيضاً طريقة ري الأرض عن طريق إيجاد المياه الجوفية وحفر الآبار. لقد صمم مضخات مياه وأنظمة ري. جميع هذه الأشياء كانت قد وصلت إلينا عن طريق كتاباته.

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.

تأثير كتاب ابن بصال كان هائلاً. المزارعون وجيلاً بعد جيل اتبعوا تعليماته ونصائحه، ونتيجة لذلك أصبحت الأرض خصبة بشكل مذهش وانتجت طعام أكثر من اللازم لعدد السكان المتزايد بشكل سريع. أنظمة الري التي وضعها هو وأتباعه لا تزال دليلاً في إسبانيا. بالرغم من أن اسمه غير معروف على نطاق واسع، إلا أن إرث ابن بصال إلى العالم ما زال عظيماً.

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'?

7. What kind of person was Ibn Bassal?

8. What is botany?

9. The chapters of Ibn Bassal's book explain how several agricultural products are best grown. Write down three of these products.

10. What is the most famous chapter of Ibn Bassal's book?

11. Ibn Bassal worked out two techniques of irrigation. Write them down.

12. Ibn Bassal's book has enormous benefits. Write down two of these benefits.

Model Answers: Reading Comprehension Unit 4

The importance of Islamic achievements in history

1. Jabir ibn Hayyan.
2. He is most well known for the beginning of the production of sulphuric acid. He also built a set of scales.
3. They changed the way in which chemists weighed items in a laboratory: his scales could weigh items over 6,000 times smaller than a kilogram.
4. Because of his beautiful voice.
5. It was his talent for music that led him to Cordoba in the ninth century CE.
6. He was the guest of the Umayyad ruler there.
7. Musical harmony and composition.
8. He revolutionised musical theory, and is also the person who introduced the oud to Europe.
9. She used her father's inheritance to build a learning centre in Fez, Morocco.
10. Civil engineer.
11. Arithmetic and geometry.
12. I think that it was more difficult to reach such high levels of achievement in comparison with the present day because nowadays everything is available for people to invent and innovate.

Masdar City – a positive step?

1. **Disadvantages:** (1) they are all brand new and some people think it would be better to spend the money on regenerating old towns, etc. (2) they are expensive and they have negative effects on a community or the environment.

The advantages include (1) installing the latest technology that helps cities to become environmentally friendly. (2) encouraging economic growth and bringing new benefits to cities.

2. They are designed to encourage economic growth and bring new benefits to cities.
3. Megaprojects vary in terms of size and cost.
4. Megaprojects are extremely large investment projects. They are all, by definition, expensive, public projects that attract a high level of interest and media coverage.
5. Motorways, airports, stations, tunnels, bridges, etc.
6. **The concept of megaprojects is always based on one factor. Write down this factor.**

The concept of a megaproject is always based on the benefits it brings to a community.

7. Many megaprojects have been criticised because of their negative effects on a community or the environment.
8. It will be the world's first carbon-neutral, zero-waste artificially-created city. It will also be a car-free zone

9. Residents, commuters and businessmen.
10. The city will run entirely on renewable energy sources.
11. It is built on an advanced energy grid which monitors exactly how much electricity is being used by every outlet in the complex.
12. In order to reduce its carbon footprint.
13. 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. Solar power, wind farms, and there are also plans to build the world's largest hydrogen plant.
14. A desalination plant will be used to provide the city's water, with 80% of water used being recycled.

A founding father of farming

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. **Firstly**, I think that many people would want to live around Toledo at that time because it was a very prosperous place. **Secondly**, because the area was producing a lot of food.
7. Ibn Bassal was a writer, a scientist and an engineer who lived in Al-Andalus in the eleventh century CE. He was a great scholar and a practical man.
8. The study of plants, and agriculture.
9. Trees, fruit and vegetables.
10. The most famous chapter of all was the one that described how to treat different types of soil.
11. Ibn Bassal also worked out how to irrigate the land by finding underground water and digging wells.
12. 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.

Relative Clauses

A **defining relative clause** identifies or classifies a noun. It gives **essential** information about the noun or noun phrase it modifies. **No commas** are needed. The defining relative clause is usually connected to the main clause by a relative pronoun such as *who*, *which*, *that*, *where* or *when*.

e.g. *He's the man **whose** daughter I met in Jordan.*

A **non-defining relative clause** adds **extra information** about a noun which already has a clear reference and **has commas** at both ends. The non-defining relative clause is usually connected to the main clause by a relative pronoun such as *who*, *which*, *where* or *when*.

e.g. *The Sahara desert, **which** is in Africa, is very hot.*

e.g. *The Mona Lisa was painted by Leonardo da Vinci, **who** was also a prolific engineer and inventor.*

Important Notes:

- If the subject in the main clause is **different** from the subject in the defining relative clause, we normally **omit** the pronoun.
The student ~~whom~~ you saw in Oxford is my neighbour.
The bike ~~that~~ she borrowed belongs to me.
- If the subjects in both parts of a sentence are the **same**, we **cannot omit** the pronoun.
The driver who took you to school is from York.
The pen that is on the desk is new.
- In non-defining relative clauses, the relative pronoun is never omitted.
- **Non-defining relative clauses** can use most relative pronouns (which, whose etc,) but they **CAN'T** use '*that*'. *The film, ~~that~~ stars Tom Carter, is released on Friday.*

Relative Pronouns

Who (and sometimes that) to refer to **people**

- The man who called you has just arrived.
- Children who hate chocolate are uncommon.

Which and that to refer to **things and animals**

- This is the book which I wanted.
- Can you see the tree which has no leaves?

Where to refer to **places**

- That's the restaurant where we met for the first time.
- I live in the city where I study.

When to refer to **times**

- I remember the day when we first met.
- The summer when I graduated from university was long and hot.

Whose is the **possessive** form of *who*

- He's the man whose daughter I met in Jordan.
- The woman whose car is a BMW is coming tonight.

Choose the correct relative pronoun from a, b, c, or d.

- Do you know anyone _____ could help me fix my computer?
a. where b. which c. who d. whose
- A hammer is a tool _____ is used to knock nails into wood.
a. that b. who c. whom d. whose
- This is the time of the year _____ many people suffer from hayfever.
a. which b. whose c. when d. where
- The shop _____ we usually buy our bread has closed down.
a. that b. where c. who d. whose
- The boy _____ dog was hit by a car has not been to school for 3 days.
a. that b. which c. who d. whose
- An orphanage is a place _____ children who have no parents can live and be looked after.
a. that b. who c. which d. where
- My friend, _____ doesn't have a cell phone, suddenly knocked on the door last night.

Fill in the blanks with the correct relative pronoun

- I talked to the girl _____ car had broken down in front of the shop.
- Mr Richards, _____ is a taxi driver, lives on the corner.
- July and August are the months _____ most people go on holiday.
- We often visit our aunt in Norwich _____ is in East Anglia.
- This is the girl _____ comes from Spain.
- The restaurant _____ she works is very expensive.
- That's Peter, the boy _____ has just arrived at the airport.
- A boy _____ sister is in my class was in the bank at that time.
- Thank you very much for your e-mail _____ was very interesting.
- The day _____ I arrived was very nice.
- My brother lives in a small town _____ there is only one library.
- The man, _____ father is a professor, forgot his umbrella.
- The children, _____ shouted in the street, are not from our school.
- The car, _____ driver is a young man, is from Ireland.
- My sister lives in a big city _____ has several libraries.
- What did you do with the money _____ your mother lent you?
- A woman _____ daughter was crying tried to calm her.

- Complete the text with the correct word from the box. Sometimes, more than one answer is possible. S.B. p. 31

that / which / where / who

Qasr Bashir is an extremely well-preserved Roman castle (1) _____ is situated in the Jordanian desert, and is about eighty kilometres south of Amman. The walls and huge corner towers of the castle, (2) _____ 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) _____ horses may have been kept. People (4) _____ 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.

Answers: 1. which/that 2. which 3. where 4. who/that

- 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. W.B p. 21

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.

Answers:

- 1., who is also known as Avicenna,
- 2., which included many subjects,
3. That
- 4., who were worried about his health,
5. When

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.

- 1- Identify the defining and non-defining relative clauses in the text.
- 2- What relative pronouns do we use for the things in the box?

People animals and things places.

Answers:

1- Defining relative clauses:

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

Non-defining relative clauses:

- 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- people – who, that; animals and things – which, that; places – where, which, that

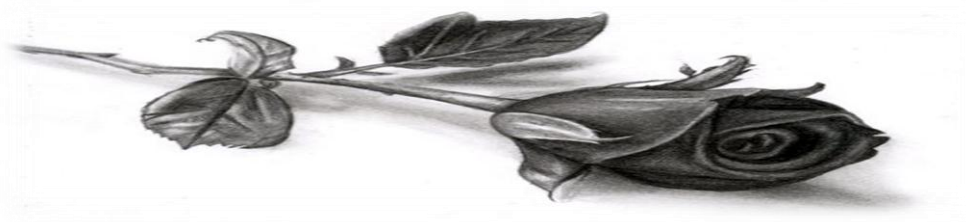
Activity Book p. 21: Match the beginnings with the correct endings and join them with a relative pronoun. Then, write the sentences out in full.

1 A mathematician is someone ...	a are studied by mathematicians.
2 Geometry and arithmetic are subjects ...	b means 'doctor'.
3 'Physician' is an oldfashioned 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.

- 1
 2
 3
 4
 5

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.



Cleft Sentences

- A cleft sentence is a complex sentence (one with a main clause and a dependent clause).
- We use cleft sentences in order to emphasise certain pieces of information.
- We join the most important piece of information to a relative clause, often with *who*, *where* or *that*.

تتكون هذه الجمل من عبارتين: واحدة مستقلة (main/ independent clause) والآخرى غير مستقلة (dependent relative clause). يطلق على هذه الجمل اسم الجمل المشقوقة لأنها تتكون من شقين/قسمين. نستخدم هذا النوع من الجمل للتركيز على معلومة معينة في الجملة عن طريق ربط المعلومة المهمة بجملة وصل

الطريقة الأولى

The thing that ... + the sentence + be + focus

Your generosity impresses more than anything else.

The thing that impresses me more than anything else **is** your generosity.

The person who ... + the sentence + be + focus

Huda won the prize for Art last year.

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

The time when ... + the sentence + be + focus

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

The time when the Olympic Games were held **was** 2012 CE.

The place where ... + the sentence + be + focus

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

The place where the Olympic Games were held in 2012 CE **was** London

الطريقة الثانية


Focus + be + - the person who

- the place where


- the time when

- the thing that

+ the sentence


Huda won the prize for Art last year.

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


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

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


الطريقة الثالثة

It + be + focus + that + the sentence

* When we begin a cleft sentence with It, the relative clause usually begins with that.


Huda won the prize for Art **last year**.


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


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

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

الطريقة الرابعة

What ... I would like to do + the sentence + be + focus


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

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

Make cleft sentences, stressing the information in bold. A.B p. 20

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

It was _____

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. Queen Rania who opened the Children's Museum of Jordan in 2007 CE.
2. when Petra was made a World Heritage Site was 1985 CE.
3. 11 p.m. when I stopped working.
4. who/that has influenced me most is my father.
5. that /which I like most of all is Geography.
6. the heat that/which made the journey unpleasant.

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. S.B p. 29

1. The Great Mosque in Cordoba was built in 784 CE by **Abd al-Rahman I**. ____
 2. **The Great Mosque in Cordoba** was built in 784 CE by Abd al-Rahman I. ____
 3. The mosque that was built by Abd al-Rahman I **in 784 CE** was the Great Mosque in Cordoba. ____
- a. The mosque that was built by Abd al- Rahman I in 784 CE was the Great Mosque in Cordoba.
- b. The year when the Great Mosque in Cordoba was built was 784 CE.
- c. Abd al-Rahman I was the person who built the Great Mosque in Cordoba in 784 CE.

Answers: 1-b / 2-c / 3-a

Write this sentence in three different ways, emphasising the parts underlined in each case. S.B p. 29

1

2

3

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

1

The person _____

It was _____

2

The thing _____

It was _____

3

The time _____

It was _____

Answers:

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.

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.

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.

Rewrite these sentences, emphasising the part in bold, and using the structure as shown. S.B p. 29

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 p.30 Write one sentence that means the same.

1. The Egyptians built the pyramids.

It was the _____

2. Ali attends to finish his project tonight.

Ali is _____

3. London is a huge city. It's the capital of the UK.

London _____

Answers:

1. It was the Egyptians that/who built the pyramids.
2. Ali is planning to finish his project tonight.
3. London, which is the capital of the UK, is a huge city.

Unit Five

The arts in Jordan (S.B. p. 34)

Jordan has a very rich cultural heritage thanks to the support of the Department of Culture and the Arts, which was founded in 1966 CE. Since then, the department has built up an exciting, ongoing programme of cultural activities related to all the arts: music, visual arts, performing arts and the written word.

الأردن لديها تراث ثقافي غني جداً والشكر يعود لدعم وزارة الثقافة والفنون، التي تم تأسيسها في عام 1966 للميلاد. ومنذ ذلك الحين، والوزارة تطور برنامجاً مثيراً ومستمراً للأنشطة الثقافية المتعلقة بجميع أنواع الفنون: كالموسيقى، والفنون البصرية، والفنون الأدائية والكلمة المكتوبة.

In 1979 CE, the Royal Society of Fine Arts (RSFA) was established to promote visual arts in Jordan and other countries in the region. It has links with major art galleries around the world in order to encourage artists from different cultures to learn from each other.

في عام 1979 للميلاد، تم إنشاء الجمعية الملكية للفنون الجميلة (RSFA) لدعم الفنون البصرية في الأردن وبلدان أخرى في المنطقة. لدى الجمعية روابط مع معارض فنية رئيسية حول العالم لتشجيع الفنانين من مختلف الثقافات ان يتعلموا من بعضهم البعض.

The Jordan National Gallery of Fine Arts is one of the most important art museums in the Middle East. The collection includes over 2,000 works of art, including paintings, sculptures, photographs, installations, textiles and ceramics, by more than 800 artists from 59 countries. In 2013 CE, it held Jordan's largest art exhibition called '70 Years of Contemporary Jordanian Art'.

يعتبر المتحف الوطني الأردني للفنون الجميلة واحداً من أهم المعارض الفنية في الشرق الأوسط. تضم المجموعة أكثر من 2,000 عمل فني، بما فيها الرسومات، والمنحوتات، والصور الفوتوغرافية، والمعارض الفنية، والمنسوجات، والأواني الخزفية من قبل أكثر من 800 فنان من 59 بلد. في عام 2013، أقام المتحف أكبر معرض فني أردني أطلق عليه اسم "70 سنة من الفن الاردن المعاصر".

Until the 1990s, most Jordanian literature was only available in Arabic. However, thanks to PROTA (the Project of Translation from Arabic), many Jordanian plays, novels, short stories and poems are now translated into English, and people all over the world are able to read and appreciate them.

حتى التسعينيات، معظم الأدب الأردني كان فقط متوفراً باللغة العربية. على كل، بفضل PROTA (مشروع الترجمة من اللغة العربية)، العديد من المسرحيات الأردنية، الروايات، القصص القصيرة والقصائد تمت ترجمتهم الى اللغة الانجليزية، والناس حول العالم أصبح بإمكانهم ان يقرأوا ويقدروا هذه الأعمال.

Every year, the United Nations Educational, Scientific and Cultural Organization (UNESCO) chooses a different Arab city as the Arab Cultural Capital. In 2002 CE, the city of Amman was awarded this title.

كل عام، منظمة الأمم المتحدة للتعليم، والعلمية والثقافية (UNESCO) تختار مدينة عربية مختلفة كعاصمة الثقافة. في عام 2002 ميلادي، مدينة عمان مُنحت هذا اللقب.

Jordan has a centuries-old musical heritage. The National Music Conservatory (NMC) opened in 1986 CE, making it possible for more Jordanian students to study music seriously.

الأردن لديها ثراث موسيقي منذ قرون. أفتتح المعهد الموسيقي الوطني (NMC) في عام 1986 ميلادي، جاعلاً بإمكان المزيد من الطلاب الأردنيون ان يدرسوا الموسيقى بشكل جاد.

In 1987 CE, the National Centre for Culture and Arts was created, which showcases theatre and dance in Jordan and in the region.

في عام 1987 ميلادي، تم إنشاء المركز الوطني للفنون والثقافة، والذي يعرض المسرح والرقص في الأردن وفي المنطقة.

Realising the value of art and culture, Jordan decided to offer Jordanians and the world an annual arts festival. In 1981 CE, the Jerash Festival for Culture and Arts was founded. This three-week-long summer programme is one of the largest cultural activities in the region. It takes place in the important archaeological site of Jerash, which underlines the close relationship between the arts and Jordan's cultural history.

لإدراكها لقيمة الفن والثقافة، قررت الأردن ان تقدم للأردنيين وللعالم مهرجان سنوي للفنون. في عام 1981 ميلادي، تم تأسيس مهرجان جرش للثقافة والفنون. هذا البرنامج الصيفي والذي يمتد لثلاثة أسابيع هو واحد من أكبر النشاطات الثقافية في المنطقة. ويقام في الموقع الأثري المهم في جرش، الذي يؤكد العلاقة الوثيقة بين الفنون وتاريخ الأردن الثقافي.

Questions

1. How does the Royal Society of Fine Arts show its support for the arts in Jordan?

2. What makes the Jordan National Gallery of Fine Arts a major institution in the world of art?

3. How has translation helped Jordanian literature?

4. What is the significance of the location of the annual Jerash Festival?

5. Write down the sentence that shows the importance of the Department of Culture and the Arts.

6. The department has built up an exciting, ongoing programme of cultural activities. Write down two of these activities.

7. In 1979 CE, the Royal Society of Fine Arts (RSFA) was established for a reason. Write down this reason.

8. What does the acronym (RSFA) stand for?

9. RSFA has links with major art galleries around the world for a reason. Write down this reason.

10. Quote down the sentence that shows that the Jordan National Gallery of Fine Arts hosted an exhibition in 2013.

11. The collection of the Jordan National Gallery of Fine Arts includes over 2,000 works of art. Write down two of these works.

12. Quote down the sentence that shows that Amman was chosen as the Arab Cultural Capital.

13. Quote down the sentence that shows that Jordan has a musical history.

14. What is the importance of The National Music Conservatory?

15. Jordan decided to offer Jordanians and the world an annual arts festival for a reason.

16. Quote down the sentence that shows that Jerash Festival lasts for three weeks.

17. 'To truly understand a country's culture, you have to understand its artistic heritage.' Do you agree or disagree? Justify your answer.

Glass-Making. S.B P. 38

Adnan, a professional craftsman, is at work in his studio. With the oven at 1,400 degrees Centigrade, 20 hours a day, a glass-making studio isn't the most comfortable place to be. For Adnan, however, this is more than just a job. 'My family has been blowing glass for around 700 years,' he says. 'My father learnt the craft from his father, and he taught it to me when I was a child.'

عدنان، وهو حرفي محترف، يعمل الآن في الاستوديو الخاص به. بفرن درجة حرارته 1.400 درجة مئوية. و لمدة 20 ساعة في اليوم، لن يكون استديو صناعة الزجاج المكان الأكثر راحة. بالنسبة لعدنان، ومع ذلك، هذه أكثر من مجرد وظيفة. يقول عدنان "عائلتي ما زالت تقوم بنفخ الزجاج منذ حوالي 700 سنة". "والدي تعلم الحرفة من والده، وهو علمها لي عندما كنت طفلاً."

Adnan is passionate about this ancient craft, and regularly gives demonstrations and workshops to teach young people the skills of glassblowing. He strongly believes that unless we interest more young people in learning the craft, nobody will know how to make hand-blown glass in the future. 'These days, young people don't always want to follow their parents' professions, and, added to that, glassblowing isn't an easy job. It has to be an obsession, as it is for me!'

عدنان حماسي تجاه هذه الحرفة القديمة، ويعطي بانتظام شروحات وورش عمل ليعلم الشباب مهارات النفخ في الزجاج. يعتقد عدنان بقوة أنه إذا لم نثير انتباه شباب أكثر لتعلم الحرفة، لا أحد سيعرف كيفية صناعة زجاج منفوخ باليد في المستقبل. يقول عدنان: "هذه الأيام، الشباب لا يريدون دائماً أن يتبعون مهنة آبائهم، و، يضيف الى ذلك ان، نفخ الزجاج ليست بالوظيفة السهلة. يجب ان تكون هوس، كما هي بالنسبة لي."

Adnan still uses the technique that was first developed by the Phoenicians some 2,000 years ago. First, he pushes a thin metal blowpipe into the boiling hot **furnace**. Secondly, he lifts out the liquid sand and lays it on a metal plate. After that, he blows the red-hot glass until it becomes more flexible. Then he pulls and bends the glass into shape. He has to work extremely quickly because the liquid sand is already **solidifying** into glass. Adnan is making a delicate swan. Through the **semi-opaque** glass, you can see fine lines of turquoise, green and blue.

ما زال عدنان يستخدم التقنية التي طُوّرت لأول مرة من الفينيقيين قبل نحو 2000 عام. أولاً، يقوم بدفع انبوب نفخ معدني رفيع الى فرن ساخن يغلي. ثانياً، يرفع الرمل السائل ويضعه على صفيحة معدنية. بعد ذلك، ينفخ الزجاج الأحمر الساخن حتى يصبح أكثر مرونة. ثم يسحب ويحني الزجاج ليشكله. يجب عليه ان يعمل بسرعة كبيرة لأن الرمل السائل يتصلب بسرعة ليصبح زجاج. يصنع عدنان بجة لطيفة. ومن خلال الزجاج شبة المعتم، بإمكانك ان ترى خطوط رائعة من الفيروزي، والاخضر والأزرق.

'The sand gives us **transparent**, or "white", glass,' Adnan explains. 'We get this beautiful dark, cobalt blue by adding the metal **cobalt** to the melted glass. Then, this blue

becomes a lighter, sea-green **turquoise** after adding copper. Finally, we decorate the glass by hand.'

يوضح عدنان: " يعطينا الرمل زجاج شفاف أو أبيض. " نحصل على اللون الأزرق الكوبالتي الداكن عن طريق اضافة معدن الكوبالت الى الزجاج المنصهر. ثم, يصبح هذا اللون الأزرق فيروزيا بحريا فاتحا بعد اضافة النحاس. أخيرا, نزين الزجاج باليد. "

'These days we recycle broken glass. We also use commercially produced colours instead of using natural ingredients as in the past. Apart from that, nothing else about this craft has changed through the centuries. You can't use a machine to do this work,' he says. 'The old ways are still the best.'

يقول عدنان: " هذه الأيام نقوم باعادة تدوير الزجاج المكسور. نستخدم ايضا اللون منتجة تجاريا بدلا من استخدام المكونات الطبيعية كما في السابق. بعيدا عن ذلك, لا شيء آخر تغير في هذه الحرفة عبر القرون. لا يمكنك ان تستخدم آلة لتقوم بهذا العمل. الطرق القديمة ما زالت الأفضل. "

• Read the article again and choose the correct answers.

1. A glass-making studio isn't comfortable because
 - A it hasn't changed much in hundreds of years.
 - B it's incredibly hot.
 - C everything is done by hand.
 - D it is very small.
2. Adnan runs workshops and gives demonstrations because
 - A he wants young people to learn the craft.
 - B glassblowing isn't an easy job.
 - C it is an ancient craft.
 - D he has to work quickly.
3. A glassblower has to work very fast because
 - A the furnace is extremely hot.
 - B machines are not used to do the work.
 - C hot, liquid glass becomes hard very quickly.
 - D he is making a glass swan.

Questions

1. For Adnan, a glass-making studio isn't the most comfortable place to be for two reasons. Write down these two reasons.

2. Beside glass-making, Adnan do several activities. Write down two of these activities.

3. Adnan follows the Phoenician technique of making glass. Write down two steps of this technique.

4. How does glass get this beautiful dark, cobalt blue?

5. What is copper used for in the production of glass?

6. Two aspects of glass-making craft have changed. Write down these aspects.

7. Work in pairs. Try to work out the meanings of the highlighted words in the article. Then check in a dictionary.

Rashed's blog: WB p. 26

Hi! My name is Rashed. I'm staying in London for a week, with my family. I hope you enjoy reading my blog.

مرحباً! اسمي راشد. أنا أمكث في لندن لأسبوع، مع عائلتي. أأمل أن تستمتعوا بقراءة مدونتي.

Wednesday

Yesterday was brilliant. We decided to go to the Victoria and Albert Museum (also known as the V&A), which is a big museum of art and design in central London. It has one of the largest collections of Islamic art in the world and, as you can imagine, we were keen to **have a look**.

الأربعاء

كان الأمس رائعاً. قررنا أن نذهب إلى متحف فيكتوريا وألبرت (يعرف أيضاً بـ V&A)، وهو متحف كبير للفن والتصميم في وسط لندن. ويوجد به أكبر مجموعة من الفن الإسلامي في العالم، وكما بإمكانك أن تتصور، كنا حريصون أن نلقي نظرة.

We spent most of our time in the Jameel Gallery, which opened in 2006 CE. There were about 10,000 items on display (no, I didn't count them; the guide told us!). There were carpets and other textiles as well as pottery, ceramics, paintings and things made of ivory (from elephants), wood, metal and glass. My **favourite** thing was a beautiful Egyptian jug, which looked as if it was made out of glass. In fact it is rock crystal, and it was made over ten thousand years ago. The person who made it must have been incredibly skilled.

قضينا معظم وقتنا في معرض جميل، والذي افتتح في عام 2006 ميلادي. هنالك تقريباً 10,000 قطعة معروضة (لا، لم أقم بعدّها؛ أخبرنا الدليل). هنالك سجاد ومنسوجات أخرى بالإضافة إلى فخار، الأواني الخزفية، والرسومات، وأشياء مصنوعة من العاج (من الفيلة)، والخشب، والمعدن والزجاج. كان الشيء المفضل لدي هو إبريق مصري جميل، والذي بدى كما لو أنه مصنوع من الزجاج. في الحقيقة هو من البلور الصخري، وصنع قبل أكثر من عشرة آلاف عام. الشخص الذي صنعه لا بد أنه كان ماهراً بشكل لا يصدق.

We were at the V&A all day (there's a good café there, and an excellent shop too!). Then, although we were quite tired, in the evening we went to a concert at the Royal Albert Hall. The orchestra was from Germany and it was brilliant! We had comfortable seats, but a lot of people stood right in front of the orchestra. They didn't sit down at all! **I've never stood all the way through a concert**, and I don't think I'd like to!

كنا في V&A طوال اليوم (هنالك مقهى جيد، ومتجر ممتاز أيضاً!). وبعد ذلك، على الرغم من أننا كنا متعبين جداً، إلا أننا ذهبنا في المساء إلى حفلة في قاعة ألبرت الملكية. كانت الأوركسترا من ألمانيا وكانت رائعة! حصلنا على مقاعد مريحة، لكن الكثير من الناس وقفوا تماماً امام الأوركسترا. لم يجلسوا أبداً! لم أقف أبداً خلال حفل موسيقي، ولا اعتقد أنني أود أن أفعل!

Questions

1. Where was Rashed when he wrote the blog?

2. What did he most enjoy looking at?

3. Why did Rashed and his family decide to go to the V&A Museum?

4. Where did he go in the evening?

5. What bothered him?

6. Name four materials that Rashed mentions.

7. Look at the words and phrases in bold. Is Rashed using British or American English?
Justify your answer.

8. Look at the sentences in brackets in lines 5–6. In your opinion, what question is Rashed answering and why?

9. Would you stand up all the way through a concert? Why/Why not?

10. In the Jameel Gallery, There were about 10,000 items on display. Write down three of these items.

11. What do Rashid and his family do at the Royal Albert Hall?

Model Answers: Reading Comprehension Unit 5**The arts in Jordan**

1. It shows its support by having links with major art galleries around the world and by promoting visual arts in Jordan.
2. It is so important because it has over 2,000 works of art by more than 800 artists from 59 countries.
3. Translation has helped Jordanian literature by making it more accessible to people all over the world.
4. It takes place in Jerash, which is an important archaeological site. This shows the close relationship between the arts and Jordan's cultural history.
5. Jordan has a very rich cultural heritage thanks to the support of the Department of Culture and the Arts, which was founded in 1966 CE.
6. Music and visual arts.
7. To promote visual arts in Jordan and other countries in the region.
8. the Royal Society of Fine Arts.
9. In order to encourage artists from different cultures to learn from each other.
10. In 2013 CE, it held Jordan's largest art exhibition called '70 Years of Contemporary Jordanian Art'.
11. Paintings and sculptures.
12. In 2002 CE, the city of Amman was awarded this title.
13. Jordan has a centuries-old musical heritage.
14. It made it possible for more Jordanian students to study music seriously.
15. Because it realizes the value of art and culture.
16. This three-week-long summer programme is one of the largest cultural activities in the region.
17. I agree with this statement. If we say that a culture is informed by the ideas and the physical artifacts from its past (as well as its present), we can say that artistic heritage gives us, at the very least, an excellent insight into the social structure of any given people.

Glass-Making

1. B
2. A
3. C

-
1. With the oven at 1,400 degrees Centigrade, 20 hours a day, a glass-making studio isn't the most comfortable place to be.
 2. He regularly gives demonstrations and workshops to teach young people the skills of glassblowing.
 3. First, he pushes a thin metal blowpipe into the boiling hot **furnace**. Secondly, he lifts out the liquid sand and lays it on a metal plate.
 4. By adding the metal **cobalt** to the melted glass.
 5. To make the blue colour a lighter, sea-green **turquoise**.
 6. These days we recycle broken glass. We also use commercially produced colours instead of using natural ingredients as in the past.
 7. Find the meanings in the table of meanings.

Rashed's blog

1. He was in London.
2. a beautiful Egyptian jug.
3. because the V&A has one of the largest collections of Islamic art in the world
4. a concert at the Royal Albert Hall
5. A lot of people stood in front of the orchestra and didn't sit down at all.
6. glass, metal, ivory, wood.
7. Rashed is using British English. He says 'have a look' instead of 'take a look'; he spells 'favourite' with 'ou' instead of 'o'; and he uses the Present Perfect instead of the Past Simple in 'I've never stood all the way through a concert.'
8. He is answering the reader's questions: Did you count them? How do you know the number of items displayed? He thinks the reader might not understand how he knows the number.
9. No, I wouldn't. Because I will bother the audience and prevent them from seeing the orchestra.
10. There were carpets and other textiles as well as pottery, ceramics, paintings ...
11. They wanted to attend a concert.

Articles (A/An/The)

Indefinite Articles: A / An

✓ The article *An* is used before singular, countable nouns which begin with vowel sounds.

- She didn't get **an** invitation.
- I saw **an** eagle at the zoo.

✓ The article *A* is used before singular, countable nouns which begin with consonant sounds.

- She doesn't own **a** car.
- I saw **a** bear at the zoo.

✓ (*A/An*) mean "one" or "a single".

- I saw a bear in Yellowstone National Park.

✓ *A* and *An* are called indefinite articles. "Indefinite" means "not specific". Use (*A/An*) when you are talking about a thing in general, NOT a specific thing.

- Hassan lives in a big house. There is a garden next to it with an apple tree.
- I need **a** phone. *Not a specific phone, any phone.*

Definite Articles: The

✓ However, if we are talking about something that the listener/reader knows about, we use **THE**. Repeated nouns.

- Hassan lives in the big house near the post office.
- Can you give me **the** book on the table?
- Do you own a car? Is **the** car blue?
- The garden is beautiful.



✓ We use **The** when we are talking about something that is unique.

- The Earth goes round the Sun.
- She's the only woman to have won two Nobel Prizes.

✓ We use **The** when we are talking about seas, oceans, rivers, groups of islands (but NOT individual islands), mountain ranges and countries that include the in their name.

- The Mediterranean Sea separates Europe from Africa.
- Sri Lanka is in the Indian Ocean.
- They took a boat trip along the river Nile.
- Mallorca is one of the Balearic Islands.
- The Rocky Mountains are in the United States.

✓ We use **the** when we are talking about superlative adjectives.

The longest river in the USA is the Mississippi.

No Article

✓ We use no article with uncountable and plural nouns, and for **general statements**.

- Chocolate tastes good.
- That shop sells sweets.
- Children usually like sweets and chocolate.
- Sheep produce wool, and hens lay eggs.

✓ We use no article before most countries, languages, continents, individual mountains (but NOT mountain ranges), lakes, waterfalls, towns, streets, days, months and years.

- The language spoken in Jordan is Arabic.
- Libya is in Africa.
- He was the first man to climb Mount Everest in the Himalayas.
- They have a home near Lake Geneva.
- Niagara Falls separates Canada from the USA.
- They live in Oxford Street in London.
- She was born on Monday, 23 April.
- The university was opened in 2001 CE.

قائمة لأهم الاسماء غير المعدودة

Advise	Peace	Equipment
Information	Poverty	Furniture
News	Weather	Snow
Money	Water	Rice
Salt	Rain	Tea
Coffee	Music	Food
Bread	Sugar	Luck
Butter	Milk	Meat
Pepper	Vocabulary	Knowledge
Ignorance	Cheese	Patience
Intelligence	Wealth	Happiness
Sadness	Violence	Transportation

• Complete the text with *a, an, the* or – (zero article). S.B p. 35

The Amman International Theatre Festival is said to be (1) _____ biggest of its kind across (2) _____ entire Middle East and (3) _____ North Africa. It is held annually in (4) _____ April, and (5) _____ festival is (6) _____ attempt to promote (7) _____ Jordanian theatre. Performances are in (8) _____ English and (9) _____ Arabic. Many international stars and famous people from (10) _____ Hollywood attend. Usually, (11) _____ festival lasts for about eight days. (12) _____ visitors can choose (13) _____ days on which they want to attend. This is (14) _____ great way to learn about different cultures at one event.

Answers: 1 the 2 the 3 – 4 – 5 the 6 an 7 – 8 – 9 – 10 – 11 the 12 – 13 the 14 a

• Complete the sentences with *a, an, the* or –. A.B p. 24

- _____ Amman is _____ capital of _____ Jordan.
- It's one of _____ oldest cities in _____ world.
- _____ Petra is in _____ south of Jordan. It's _____ important archaeological site.
- It was _____ important city until _____ huge earthquake destroyed it in about 663 CE.
- _____ Aqaba is next to _____ Red Sea; _____ people often go there for their holidays.
- I'm very interested in _____ history, in particular _____ history of Jordan.

Answers: 1 –; the; – 2 the; the 3 –; the; an 4 an; a 5 –; the; – 6 –; the; –



• Read and correct the dialogues. Add *a, an* or *the* where necessary. A.B p. 25

1. A: I'm reading really good book.
B: Oh, what's title?
2. A: Do you ever go to art galleries?
B: Yes, I do. There's big gallery in our town, and I often go there.
3. A: Where are Pontic Mountains?
B: They're in Turkey.
4. A: Is there art museum in Amman?
B: Yes, go to National Museum of Fine Arts.
5. A: Do you like music?
B: Yes, I do. I play piano, actually.

Answers:

- 1 A: *a really* B: what's *the* title? 2 B: *a big ...* 3 A: *the* Pontic ...
4 A: *an* art ... B: *the* National ... 5 B: *the* piano

Student's Book page.35 بالرجوع لقطعة فنون الاردن

Find an example of the following uses of articles in the report. (The Arts of Jordan)

1. The/ when the speaker and listener know what/who is being spoken about.
2. A, An/ when it is not known what/who is being spoken about or it does not matter.
3. The/ when we refer to a proper noun where there is only one of its type.
4. Zero article/ before uncountable and plural nouns, and when we talking about something in general.
5. Zero article/ before the names of most countries, mountain ranges, languages, continents, towns, streets, days, months and years.

Answers:

1. the department (line 3)
2. an exciting, ongoing programme (line 4) a; different Arab city (line 26-27)
3. the Department of Culture and the Arts (line 2); the Royal Society of Fine Arts (line 7); the National Centre for Culture and Arts (line 33)
4. music (line 5); art galleries (line 9); artists (line 10); literature (line 19)
5. Jordan (line 1); 1979 (line 7); 2013 (line 17); 2002 (line 27); Amman (line 28); 1987 (line 33); Jerash (line 41)

Extra?

A. Find out the mistakes and correct them.

1. I like blue T-shirt over there better than a red one.
2. Their car does 150 miles a hour.
3. Where's an USB drive I lent you last week?
4. Do you still live in the Bristol?
5. Is your mother working in the old office building?
6. Carol's father works as a electrician.
7. The tomatoes are 99 pence an kilo.
8. What do you usually have for the breakfast?
9. Ben has an terrible headache.
10. After this tour you have a whole afternoon free to explore the city.

Answers: 1-the/the 2-an 3-the 4-x 5-an 6-an 7-a 8-x 9-a 10-the

B. Complete the article by inserting a / an or the, leave a blank where no article is needed.

On April 26, 1986, (1) fires and explosions following (2)..... unauthorized experiment caused (3)..... worst accident in (4)..... history of nuclear power at the nuclear power plant in Chernobyl, Ukraine. At least thirty-one people were killed in (5)..... disaster itself, and (6)..... radioactive material was released into the atmosphere. Approximately 135,000 people were evacuated from (7)..... vicinity.

Answers: 1. x 2.an 3.the 4.the 5.the 6.x 7. the

Complete the sentences using (a \ an \ the \ x)

1. I've got two penfriends one in _____ United Arab Emirates and another in _____ Japan.
2. _____ Nile is _____ longest river in _____ world. _____ Volga is _____ longest river in Europe. It flows into _____ Caspian Sea.
3. Everest is in _____ Himalayas on the border of _____ Nepal and Tibet.
4. Malta is an island in _____ Mediterranean Sea.
5. _____ Dead Sea is an inland sea in Jordan valley.
6. London is capital of _____ United Kingdom.
7. _____ Jamaica is in _____ West Indies. The capital is _____ Kingston.
8. You have to find _____ pen. Sometimes _____ pen doesn't write.
9. I'm writing to _____ friend . I prefer letters.
10. I think letters are _____ most polite way of contacting client.
11. Put the letter in _____ envelope , stick a stamp on _____ envelope and take it to _____ post office .
12. Fawzia's father is _____ teacher.
13. _____ United States have border with _____ Canada and _____ Mexico .
14. I sent _____ letter To one of my friends last night .
15. _____ London is capital of _____ United Kingdom.
16. A: " What is your father's job ?" B: "He is _____ engineer ".
17. _____ Mount Everest is _____ highest mountain on earth.
18. Bring _____ umbrella. It is going to rain.
19. I arrived in _____ USA last Monday
20. Her cousin has _____ very good job.
21. On the following day we left for _____ New York.
22. That was _____ interesting game.
23. I like _____ blue T-shirt over there better than _____ red one
24. Their car does 150 miles _____ hour.
25. Do you still live in _____ Amman?
26. Carol's father works as _____ electrician.
27. She has never been to _____ Alps before
28. Emily needs _____ new desk in her room.