

University of Puerto Rico at Humacao

Unit 7: Great Inventors

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Think and Discuss

1. Make a list of items and devices that you use every day.
 - Cellphone
 - Computer
 - Television
 - Car
 - Smart watch
 - Brush
 - Clothing
 - Glasses
 - Shoes
 - Headphones
2. Do you know who invented any of the things on your list?
The reality is that I don't know who invented the things I mentioned on my list.

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Explore the Theme

A.

1. Frenchman Paul Cornu created the first helicopter that flew with a pilot. This he did in the year 1907.
2. The first signal flare was completed by Martha Coston. This began after the death of her husband in 1848.
3. Maria Beasley and Horace Carley invented the designs for a life raft. The first person was Maria Beasley in 1882 and Horace Carley followed in 1903.
4. In my opinion the most important invention would be the signal flare. I believe this because without it the rescuers would not be able to know the location of those people who might be in an emergency. You need to know where they are to help.

B.

- If you described something, you give details about it.
- If you invented something, you are the first person to make it.
- A machine is an object that uses power to move.

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Reading 1

Preparing to Read

A.

1. b
2. e
3. d
4. c
5. a

B.

1. will
2. won't

C.

- | | | | |
|----|-----------------|--------------|-------------|
| 1. | Float | leaf | ship |
| 2. | Rock | coins | glasses |
| 3. | Car | motorcycle | lawn mower |
| 4. | Albert Einstein | Isaac Newton | Marie Curie |

- D. In the first paragraph of the reading on pages 115-116 an amazing clock created by a man from southern Turkey is described. The author describes this invention as an amazing one because it was large and had a life-size elephant on its base. Also every half hour something amazing happened. It was something out of the ordinary and surprising.

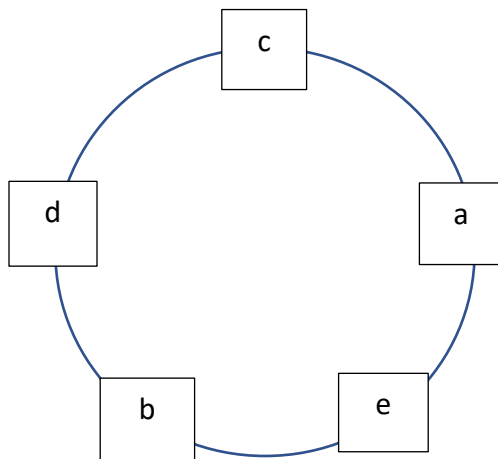
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Understanding the Reading

A.

1. engineer
2. Diyarbakir
3. Eight hundred
4. Elephant Clock
5. Wrote a book
6. engines

B.



C.

1. In paragraph B the opinion that the author give us about al-Jazari is that he is probably one of the best engineers in history. That is exactly why he is called “the father of modern-day engineering.”
2. The author supports his opinion by indicating that he created machines of all shapes and sizes and many of the elements we use have his ideas. Also that he knows more about al-Jazari from a book he wrote, in addition to the fact that the book has drawings showing how each machine works.

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Developing Reading Skills

A.

- He: It is singular. It is masculine.
- It: It is singular. It is gender-neutral.
- They: It is plural. It is gender-neutral.

B.

- He: Refers to al-Jazari.
- It: Refers to the book that al-Jazari wrote.
- They: Refers to the machines of all shapes and sizes that al-Jazari created,

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Video

Before Viewing

- A. In the history of my country, an event that can be described as a Golden Age is the abolition of slavery. This gave way to a better quality of life and eliminated abuse and mistreatment thus ensuring a better future for every individual born or raised here.
- B.
1. impact
 2. foundations
 3. ingenious
 4. civilization

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- C.
1. The period after A.D.500 is known as the Dark Ages because the Roman Empire fell and with this many of the improvements that had been achieved were lost.
 2. Some historians think the name is not suitable as research has shown that many achievements were made in the Dark Age period both in Europe and in other parts of the world.

While Viewing

- A.
- There were many great discoveries made during this time.
 - Ideas from many different cultures around the world came together.

B.

1. c
2. b
3. a

After Viewing

A.

1. He discovered how the eyes work and with this he benefited the camera technology.
2. He had a few ideas about flying so he benefited from aviation technology.
3. He was an engineer who created the great clock of the United Nations and with his inventions he managed to contribute to engine technology.

B. I think that of the discoveries that I mentioned before the most used is that Al-Jazari because he contributed to the creation of engines and today it is necessary to have at least one car that has one. It is what makes us get to places and not only by car, but by boat, motorcycle, among other things. Every day we need to mobilize so for me that discovery is the one that has probably been used the most.

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Reading 2

Preparing to Read

A.

1. aim
2. reason
3. brilliant
4. celebrated
5. Grew up
6. huge
7. programs
8. discussing

B.

- | | | |
|-----------------|-----------------|--------------------------|
| 1. My birthday | Christmas | Thanksgiving Day |
| 2. Learn | Communicate | Professional development |
| 3. Isaac Newton | Albert Einstein | Marie Curie |

C. I suppose this reading will have to do with the creation of computers. By saying that it is the mother, I understand that it is a woman who created them, so that is the achievement that she achieved.

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Understanding the Reading

A. c

B.

1. nineteen
2. mathematician
3. seventeen
4. Charles Babbage
5. math
6. computer
7. computer program
8. October 16

C.

1. To describe Lovelace's ability in math and science, the author uses the adjective brilliant.
2. In the last sentence the author uses the phrase "Ada Lovelace continue to be a role model for young women around the world" to describe his opinion of her.
3. In paragraph E, the author uses as support for his opinion the fact that she did a step-by-step calculation in the Analytical Engine, considered the first computer program.

D. The things that al-Jazari and Ada Lovelace have in common is that they are great inventors, that they were the first to publicize their respective discoveries, that they made history with their projects, and that they started many innovations.

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Writing

A.

Base Form	Simple Past Form
Create	Created
Try	Tried
Say	Said
Have	Had
Design	designed
Save	Saved

Base Form	Simple Past Form
Begin	Began
Invent	Invented
Build	Built
Grow up	Grew up
Go	Went
Discover	Discovered

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B.

1. Hungarian László Bíró invented (invent) the first ballpoint pen in the early 20th century. Bíró's brother helped (help) him with the invention. Bíró and his brother were born in Hungary, but they went (go) to Argentina in 1943. Bíró died (die) in 1985.
2. In 1903, inventor Mary Anderson had (have) an idea. She noticed that car drivers needed (need) to open their windows when it rained so that they could (can) see. Anderson created (create) a swinging rubber arm that drivers could control by using a lever inside a car. The invention was very popular and became (become) known as the windshield wiper.
3. Archaeologists found (find) the world's first bars of soap in Babylon, in modern-day Iraq. Babylonians mixed (mix) animal fat with wood ashes and water to make the soap.

C.

1. Ada Lovelace lived in 1815.
2. Ada Lovelace grew up in London, England.
3. What Ada Lovelace's mother did was be a mathematician.
4. Ada Lovelace at the age of 13 created a design for a flying machine.
5. When Ada Lovelace was 17, she met a mathematician named Charles Babbage.
6. Ada Lovelace wrote the first computer program in 1843 when she wrote step-by-step calculations.

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D.

1. Ada Lovelace was good at math.
2. She and Charles Babbage were friends.
3. Charles Babbage was a mathematician.
4. There were not many female scientists in Lovelace's time.
5. Lovelace's mother was not a computer programmer.
6. Al-Jazari was an engineer.
7. Al-Jazari and Ada Lovelace were not doctors.
8. Al-Jazari's clock was not small.

E.

1. Pythagoras was a Greek philosopher and mathematician.
2. Aristotle was interested in biology, philosophy, and politics.
3. Albert Einstein was not a good student.
4. Isaac Newton was not a child with an easy childhood.

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Writing Task

Ricardo Alegria was a historian and archaeologist known as “The father of modern Puerto Rican archaeology”. His day would be April 14 of each year. The aim of celebrating his day is to celebrate a pioneer in the anthropology of Taino culture and African heritage in Puerto Rico. Alegria with his studies managed to understand how the Tainos lived before and after the arrival of the Spaniards. He also discovered that a certain number of Puerto Ricans have Taino ancestry and therefore were never completely extinct. With all his findings Ricardo obtained valuable awards and prizes, among them the Chronic-Shield Award and the National Humanities Medal. He was also founder and organizer of the School and Workshops of Plastic Arts in Puerto Rico, professor of anthropology, director of the Institute of Puerto Rican Culture, among other things.

His work to recognize the Puerto Rican culture led him to capture material in various essays such as “La fiesta de Santiago Apostol en Loiza Aldea” and “Gozos a Santiago y canticos de vejigantes”. His writings on the Puerto Rican population also stand out, such as “Cacicazgo among the aborigines of the West Indies” and “La población aborigen antillana y su relacion con otras areas de America”. Undoubtedly, Dr. Ricardo Alegria created an essential cultural movement. He introduced us to pieces of our history that we did not know in a fractional or complete way. His passion for Puerto Rican culture and past was undeniably noticeable with all that he stood out for. His legacy leaves us with an incredible report of what we were, what we lived and what we carry with us as Puerto Ricans. It is for all of the above that Ricardo Alegria is a Puerto Rican inventor whose career should be recognized and celebrated in the best possible way.

Unit Review

1.

- Live: lived
- Go: went
- Try: tried
- Meet: met
- Stop: stopped
- Build: built

2. Some examples of modern technology using Al-Jazari ideas are care engines and robots.

3.

Reading 1:

- Describe
- Engineer
- Invent
- Drawing
- Float
- Machine
- Engine
- History
- Model

Reading 2:

- Discuss
- Program
- Brilliant
- Grow up
- Reason
- Celebrate
- Huge