

# Maharashtra Board Class 10 My English Coursebook

## Solutions Chapter 4.6 A Brave Heart Dedicated to Science and Humanity

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English Workshop:

1. Write one sentence each, why the following years were landmarks in the lives of Pierre and Marie Curie:

Question 1.

Write one sentence each, why the following years were landmarks in the lives of Pierre and Marie Curie: (Answers are directly given.)

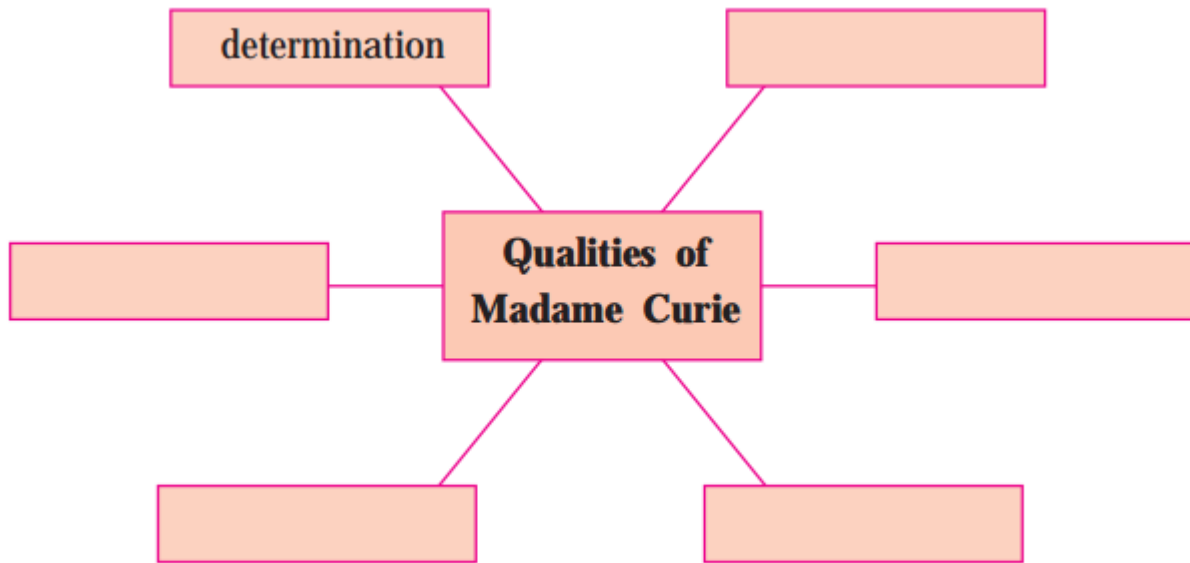
Answer:

1. 1895 – Marie and Pierre got married.
2. 1902 – Radium was discovered.
3. 1903 – The Curies along with Henry Becquerel were awarded the Nobel Prize in Physics for the discovery of Radium and Polonium.
4. 1906 – Pierre was knocked down and killed by a horse-drawn wagon.
5. 1911 – Marie was awarded the Nobel Prize for the second time for Chemistry.

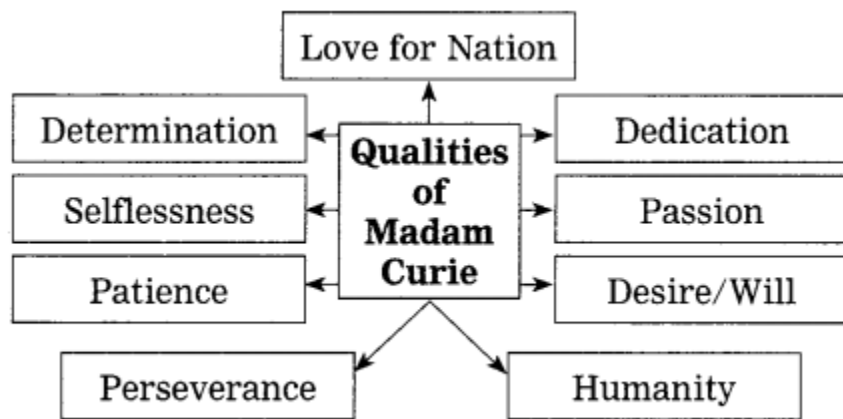
2. Complete the web diagram with the qualities of Madame Curie:

Question 1.

Complete the web diagram with the qualities of Madame Curie:



Answer:



3. Name the following:

Question (a)

Two discoverers of New lands.

1. ....
2. ....

Answer:

1. Columbus
2. Vasco da Gama

Question (b)

Two conquerers of the peak of Mt. Everest.

1. ....

2. ....

Answer:

1. Hillary
2. Tenzing

Question (c)

Original name of Madame Curie.

.....

Answer:

Marja Sklowdaska

Question (d)

Her place of birth.

.....

Answer:

Warsaw, in Poland

Question (e)

Subjects Marie majored in, at the University of Paris.

.....

Answer:

Physics and Mathematics.

Question (f)

Nationality of her husband Pierre:

.....

Answer:

French.

Question (g)

Scientist who discovered the properties of uranium-

Answer:

Henri Becquerel

Question (h)

Two radioactive elements discovered by Curies-

Answer:

Polonium and Radium.

4. Read the text carefully and match the incidents occurred in Madam Curie's life given in table A with the years in table B.

Table A	Table B
1. Henri Becquerel discovered that uranium had the property where radio-active elements can give off rays which can penetrate substances that are opaque to light.	1902
2. Maria Sklodowska was born in Warsaw, Poland.	1934
3. Marie was awarded Nobel Prize.	1896
4. Curie couple discovered radium.	1867
5. Marie passed away.	1911

5. Think and answer in your own words.

Question (a)

What common characteristics did Marie and Pierre share, as a student?

Answer:

When Marie went to Sorbonne the University of Paris she spent her days in poverty. Her friend Pierre was brilliant but a poor scientist. Due to lack of money they began to work in a shabby laboratory. Being students they were brilliant scholars but poverty was an obstacle in their way.

Question (b)

Which of the two scientists was greater than the other? Say why.

Answer:

I think Madame Curie was greater than Pierre Curie because she wanted to study in Paris but the poverty at home did not allow her to continue. But with her own efforts and confidence she could fulfil her childhood dream. Even in that condition she got married to a person who was poor. And even after his death, she did not deter and continued her work and was awarded the Nobel Prize. It shows that she was really a great human being and a scientist.

Question (c)

Why was the gift of a ton of pitchblende, a great stroke of luck to the Curies?

Answer:

Being very expensive the Curies couldn't buy pitchblende on a large scale but when their admirer, the emperor of Austria gifted them the most precious gift of a ton of pitchblende they could do their experiment on a large scale and find out what they wanted to achieve. So it was a great stroke of luck to the Curies.

Question (d)

Besides the uses of Radium and Polonium mentioned in the text, in what other way do you think, it is used in the field of medicine?

Answer:

Radium is used to produce radon gas which in turn, is used to treat cancer. Radiation given off by radium is sometimes used also to study the composition of metals, plastics and other material.

The alpha rays emitted by Polonium can be used to eliminate static electricity. Polonium is also used in anti-static brushes to eliminate dust on photographic film.

Question (e)

What proves that Marie Curie was a true lover of humanity and not of wealth?

Answer:

Marie Curie could have patented her discovery and earned a lot of money. But she believed in working for Science and whatever she discovered belonged to the people and not to her so in real sense she thought about humanity not money. She was a true lover of humanity and not of wealth.

6. Find words/phrases from the text that are synonyms of the word 'brave':

Question 1.

Find words/phrases from the text that are synonyms of the word 'brave':

Answer:

courageous indomitable powerful

7. Read and understand the following words. Find out/search for proverbs/thoughts/quotes/slogans that are related to each of them:

Question 1.

Read and understand the following words. Find out/search for proverbs/thoughts/quotes/slogans that are related to each of them:

Answer:

(a) Courage: Courage is the complement of fear. One with courage to laugh is master of the world. Courage is a kingdom without a crown.

(b) Strength of character: Knowledge will give you power, but weakness of attitude becomes weakness of character.

(c) Determination: A dream doesn't become reality through magic, it takes sweat, determination and hardwork. The difference between the impossible and the possible lies in a man's determination.

(d) Hard-work: Success is the result of perfection, hardwork, learning from failure, loyalty and persistence. There is simply no substitute for hardwork when it comes to achieving success.

8. Match the branches of Science with what fields they study:

Question 1.

Match the branches of Science with what fields they study:

'A'	B'
(a) Ecology	(i) Study of Atmosphere
(b) Geology	(ii) Study of Plant-life
(c) Meteorology	(iii) Study of the Universe
(d) Anatomy	(iv) Study of living organisms and environment
(e) Botany	(v) Study of human mind and emotions
(f) Psychology	(vi) Study of structure and functions of the body
(g) Cosmology	(vii) Study of solid earth and rocks

Answer:

- (a) Ecology – Study of living organisms and environment
- (b) Geology – Study of solid earth and rocks
- (c) Meteorology – Study of Atmosphere
- (d) Anatomy – Study of structure and functions of the body
- (e) Botany – Study of Plant-life
- (f) Psychology – Study of human mind and emotions
- (g) Cosmology – Study of the Universe

9. Imagine that your school needs some Scientific equipment, apparatus and formulae charts for the laboratory. Being the in-charge of Science Committee, write a letter to the Headmaster of your school suggesting him some Scientific equipment and apparatus required for Standard X Science practicals. Take help of the information given below to complete your letter.

Question 1.

Imagine that your school needs some Scientific equipment, apparatus and formulae charts for the laboratory. Being the in-charge of Science Committee, write a letter to the

Headmaster of your school suggesting him some Scientific equipment and apparatus required for Standard X Science practicals. Take help of the information given below to complete your letter.

Sanjay Sharma  
In-charge of Science Committee,  
New English High School, Akola  
1 January, 2018

To  
The Headmaster,

.....  
.....

Sub : .....  
Sir/Madam,

- various experiments included in Standard X syllabus
- purpose of your requirements
- equipments, apparatus etc.
- quality and quantity
- benefits and utility
- add your own points

Thank you,

Yours obediently,

.....  
.....

Answer:

Sanjay Sharma,  
In-charge of Science Committee,  
New English High School,  
Akola-444 001.  
1 January, 2020.

To,  
The Headmaster,  
New English High School,  
Akola.

Subject: Requirement of scientific equipment, apparatus and formulae charts for the laboratory.

Respected sir,

With regard to learning Science content, processes and views of the nature of Science experiments play significant role in Science. As per the new syllabus, new subjects and some experiments are included in revised Science coursebooks. Experiments give immense pleasure of self-learning and observations.

The equipment and apparatus that we have been using in our Science laboratory are outdated and rarely of any use. If we bring some new, definitely it will arise interest in learning Science and doing some experiments on our own. Being in-charge of Science Committee, I request you on behalf of all students and teachers to bring following equipment and apparatus in our Science laboratory.

1. 2 compound microscope
2. 2 Hand lens
3. 6 Beakers
4. 3 Beakers Tongs
5. 3 Test Tube holder
6. Thermometer
7. Safety goggles-6
8. 6 funnels
9. 1 microwave oven
10. 2 pipette
11. Graduated Cylinder
12. Vernier Calliper
13. Meters
14. Compass
15. Stop clock

You are well aware that due to lack of equipment our Science teachers can't conduct some experiments in the lab.

Hope you will understand our difficulty and buy the listed equipment and apparatus as early as possible so that the subject of Science can be well understood by doing various experiments in the laboratory.

Anticipating your valuable help in this respect.



Thanking you,

Yours obediently,

Sanjay Sharma

In-charge of Science Committee.

10. 'There is no short-cut to success'. Expand this maxim with a suitable introduction, body, examples and conclusion. Write it in your notebook in about 20 lines.

Question 1.

'There is no short-cut to success'. Expand this maxim with a suitable introduction, body, examples and conclusion. Write it in your notebook in about 20 lines.

Answer:

'There is no Short-cut to Success.'

It is often said that success requires hardwork and great diligence as well as commitment. This makes success a long-term achievement. Everybody thinks that there are some easier ways to live life, no need to work hard for livelihood but the truth is that easier ways are always the toughest ways. Most of us forget that for reaching success, the road is not strewn with roses. Success is an achievement by constant diligence and most of us lack the essential quality, diligence. The magic of hardwork and perseverance cannot be underestimated.

Most of the time it happens that we start our efforts but soon lose heart half-way and give up our efforts and thus fail to reach the pinnacle of success. If we have the confidence in our efforts, there is nothing that can deter us from achieving. Sitting in front of Television and watching the shopping network channel, fascinating over the new-miracle making abs machine which promises you the six- pack abs only in 5 minutes of daily exercises, you think that product is heaven sent, so you grab your phone book the order and start dreaming about your perfect body. Two months later, that wonder abs machine is at the back of your master closet gathering dust. As you can see, you will have to do the work when reaching a goal and the success that comes with it.

You have to understand that you might have to make sacrifices during your journey and you need to put in the hours required in order to get where you want to reach. Those who sit pretty and just complain about the success of others are the ones who do not do much in life. Those who make continuous efforts for a long time in the right direction rarely lose in the struggle of life. So one important password for all of us to follow is that there is no short cut to success.

Project:

The life and work and inventions of Marie Curie are given in detail in the text. Go to your library or search on internet at least five famous scientists who have given great inventions to the world and write about them or prepare a chart showing the information about them.

Language Study:

1. Pick out the Prefixes and Suffixes from the following words and find the root word:

Question 1.

Pick out the Prefixes and Suffixes from the following words and find the root word:

Word	Prefix	Suffix	Root Word
1. unattainable			
2. indomitable			
3. disheartening			
4. incalculable			
5. disconsolate			
6. ensuring			

Answer:

Word	Prefix	Suffix	Root Word
1. unattainable	un	able	attain
2. indomitable	in	able	–
3. disheartening	dis	ing	hearten
4. incalculable	in	able	calculate
5. disconsolate	dis	ate	console
6. ensuring	en	ing	sure

2. Say whether the Predicates in the sentences below contain Objects/Complements/Adverbials:

Question (A)

Say whether the Predicates in the sentences below contain Objects/Complements/Adverbials: (Answers are directly given.)

Answer:

- (a) Madame Curie discovered radium. – Object
- (b) Pierre was knocked down. – Complement
- (c) Pitchblende was expensive. – Complement
- (d) The couple took a flat. – Object
- (e) They moved cautiously, success came finally. – Adverbial

#### Question (B)

Pick out the Conjunctions in the following sentences and say whether they are Subordinators or Coordinators.

Answer:

- (a) There are women who show extreme courage. – who – subordinator
- (b) Pitchblende was an extremely expensive substance, so they could not afford to buy. – so-subordinator
- (c) After her daily household work, Marie settled down to study. – After-subordinator
- (d) Marie wanted to study in Paris but her father could not afford it. – but-coordinator
- (e) History is full of chapters that tell of extraordinary people! – that-subordinator

Live English!

#### Question (a)

What is Blogging?

Answer:

The term blog is short for web log. It is an online public diary which lists each diary entry in reverse order so that new diary entries are placed on the top of the page, and older entries are placed below. Each entry is called a post.

#### Question (b)

Who Blogs?

Answer:

Anyone can create a blog, if they have a basic understanding of the way the software works. There are privately owned blogs on individual webpages, which require a little knowledge about creating webpages, but there are also blog creation services which allow you to quickly and easily set up your own blog. You can add posts as often as you like, and can say almost anything that you want. Blogs are created for a lot of different reasons, and by many different people.

#### Question (c)

What Are Blogs About?

Answer:

There are many topics that a blog may contain, depending on who is updating it and why. Many blogs provide news or comment in response to a particular subject, like local news,

politics or even hobbies. Food blogs are popular for people who want to share recipes, and many political activists and writers have blogs which are used to respond to current political topics. Many blogs also function as personal online diaries.

Question (d)

Blog Classification

Answer:

A blog is usually textual, based on news and commentary, although there are other types of blogs which are gaining popularity. Artlogs are blogs which focus on art, Photoblogs focus on photography, Sketch- blogs focus on sketching, and so on. There are also a few specialised types of blogs, including Vblogging or video blogging, and Podcasting or audio blogging.

Question (e)

Creating a Blog on the Internet

Answer:

If you have a good understanding of webpage design and development, you may be able to create your own blog on a personal website. Otherwise, your best option is to choose a website that does the setting up for you, so that all you have to do is join, customise a little and begin to write. There are many blog websites like [www.livejournal.com](http://www.livejournal.com), [www.wordpress.com](http://www.wordpress.com), [www.blogger.com](http://www.blogger.com) or [www.blogs.myspace.com](http://www.blogs.myspace.com) which will allow you to quickly and easily create your own blog. They also give you the option to set controls so that you can choose to allow only friends or only yourself to read them.

Question (f)

Blog Popularity

Answer:

Blogs are becoming more and more popular for many reasons. This is because they offer a wealth of information on a lot of different topics. They also drive traffic to websites by attracting new visitors with interesting blog column commentary. Blogs are a great tool because they allow anyone to express themselves on the Internet. If you are looking for a way to express yourself online, or to share information regarding a favourite subject of yours, beginning your own blog may be the best option for you because everyone has an opinion on the Internet, and soon everyone will have their own personal weblog too.

Now with the help of your teacher create your own Blog on one of the following given topics.

1. Your experiences and recently celebrated birthday party.
2. Your expectations from the school.
3. Describe the surroundings of your residence.
4. Describe a cultural programme/campaign/project conducted at your school.



## ✓ Dos

1. Model good behaviour
  2. Promote your innovative and good work
  3. Post stories, pictures or videos that are bound to make people think
  4. Use it to motivate others and interact with them
  5. Be active but don't overdo it
  6. Make sure your message is clear and brief
  7. Make sure all of your sharing is valid
  8. Understand which social media platforms are best for your expressions
  9. Take care of privacy settings as well as your passwords
  10. Use common sense as to what you share. Your post becomes a representation of your personality
  11. Know the pros and cons of various chat messengers
  12. Rely on secure web portals
  13. Nurture existing relationships and develop new ones by sharing useful content
  14. Avoid poor grammar and spelling mistakes
  15. Think before tagging, posting and sharing anything: 'Is it true?', 'Is it pleasant?', 'Is it useful?'
- ...



## ✗ Don'ts

1. Don't be fake
  2. Don't let it become your dumping ground
  3. Don't post so often that you overwhelm or annoy people
  4. Don't like your own post
  5. Don't share too much information
  6. Don't be spammy
  7. Don't forget about privacy settings
  8. Don't ignore others' comments
  9. Don't delete negative comments
  10. Don't post constantly. It has a negative effect that can lead to quick unfollows
  11. Don't write in ALL CAPS
  12. Don't share the exact same message again and again
  13. Don't use abusive language for anyone
  14. Don't get engrossed in any social media
  15. Don't waste your valuable time only in chatting or posting
- ...