

MODULE 1

Class Title: Muslim Scientists- part 2 (2nd part of a 2 part series)

Aim of the lesson: To understand why Muslims today are so far behind in modern scientific development

Category: Islam & Science

Lesson Format: Power point presentation with discussion

Greeting to students) *Assalam alaikum wa Rahmatullahi wa Barakatuh*

(*Taooz*) *Aodhubillahi min AsShaytanir Rajeem*

(*Tasmiyah*) *Bismillahir Rahmanir Raheem*

(*Du'a*) *Rabbish rahli sadri wa yassirli amri wahlul uqdatum millisani yafqahu qawli*

(Surah At Ta-Ha 20: Verse 25-28)

Teacher: Do you all remember what we talked about last time?

Students: Muslims scientists.

Teacher: Okay and what did you understand in the class?

Student: The Muslim scholars always asked for Allah's (swt) help and were firm in their belief.

Student: And they worked hard too.

Student: I think they worked hard and tried to do their best because they knew that Allah (swt) would only help them when they help themselves.

Teacher: *MashaAllah*, very nicely put. Today we are going to discuss the topic further. Last time our focus was on how Muslim scholars from the 7th to the 16th centuries gained success and how their period came to be known as the Golden Age while the other part of the world was engulfed in darkness.

Slide 3:

Today we are going to discuss the inventors of today.

Slide 4:

First, let's watch this video about Nobel Prize winners. (Play video)

These were just a few people who won the Nobel Prize in the field of Chemistry 2009. There is Prof. Thomas from U.S.A., prof. Younauth from Israel and also there is an Indian guy, Prof. Rama Krishna.

Slide 5:

This video was about Nobel Prize winners in 2009. In 2010, Richard. F. Heck and Akira Suzuki won because of their ground breaking research in organic chemistry and Andre Geim and Konstantin Novoselov won because of their ground breaking research into the properties of a substance called 'graphene'. Where do you think these people belong to?

Student: They come from all around the world like India, America and Israel. They are scientists from all around the world.

Teacher: But were there any winners from the Islamic world?

Student: No.

Teacher: And how big is the Islamic world? How big is it? Why were Muslims inventing and discovering things previously while there is such dearth now?

Student: People lost faith actually. Sometimes they believe that Allah (swt) will do it all and sometimes they believe that they will do it all by themselves. But Allah's (swt) showing them that neither will work and they have to work hard as well as pray for Allah's help.

Teacher: Very nicely put.

Slides 6 - 9:

Where do we get all our branded stuff from?

Student: We get it from abroad.

Teacher: What's your favorite perfume?

Student: Tommy Girl and Elizabeth Arden.

Teacher: Okay and where do we go for coffee these days?

Student: Espresso and Starbucks

Teacher: Which shampoos do we prefer to buy?

Student: Sunsilk, Pantene, Garnier.

Teacher: Okay. Which pen is the best?

Student: Parker

Why is it, that all our perceived best things in life as well as good quality stuff we use are the brands that are imported from the non-Muslim world? Something to consider.

Slide10:

Do you know where coffee came from? Once, an Arab called Khalid was tending to some goats somewhere in Ethiopia. He observed that his goats would become livelier after they had some berries from a particular kind of a plant. He took those berries, boiled them and made the first cup of coffee ever!

Later, it was introduced in Turkey where Sufis used to drink it so they could stay up the whole night on special occasions to worship¹.

Are you familiar with the Arabic word for coffee: *kahwa*?

When it came to Turkey, it became *kahve* and when it reached Italy, it became *caffé* and in England it was called coffee. So an Arab Muslim discovered coffee.

Slide 11:

Similarly, shampoos and soaps were invented by Muslims because they needed to keep themselves clean and tidy². Cleanliness is part of our faith; that is why invented the first soap.

The first shampoo was introduced to England by a Muslim who opened a place called Mahomed's Indian Vapor bath in Brighton. Westerners had no concept of bathing.

In fact, I've heard that there was once a European queen who bathed only twice in her life, the day she was born and the day she got married.

When the Crusaders attacked the Arabs, the Arabs were repelled by the smell emitting from the Crusaders because they never took baths or cleaned themselves.

¹ The first record of the drink is of beans exported from Ethiopia to Yemen where Sufis drank it to stay awake all night to pray on special occasions. By late 15th century it arrived in Mecca and Turkey from where it made its way to Venice in 1645. Then brought to England in 1650 by a Turk named Pasqua Rosee who opened the first coffee house in Lombard Street in the City of London

² Washing and bathing are religious requirements for Muslims, which is perhaps why they perfected the recipe for soap which we still use today. The ancient Egyptians had soap of a kind, as did the Romans who used it more as a pomade. But it was the Arabs who combined vegetable oils with sodium hydroxide and aromatics such as thyme oil.

One of the Crusaders' most striking characteristics, to Arab nostrils, was that they did not wash. Shampoo was introduced to England by a Muslim who opened Mahomed's Indian Vapour Baths on Brighton seafront in 1759 and was appointed Shampooing Surgeon to Kings George IV and William IV.

Slide 12:

Who invented pens? It was invented for the Sultan of Egypt named Ma'ad al-Mu'izz in 953. He demanded a pen which would not stain his hands and clothes, so the pen was invented for him. It held ink in a reservoir and fed ink to the nib by a combination of gravity and capillary action.

Slide 13:

Which country comes to your mind when you think of windmills?

Students: Holland

Teacher: But the first windmills were actually made in the Arabian deserts.

Deserts are very dry and the streams would dry up so the windmill was invented in 634 for a Persian Caliph maybe the second Caliph Umar (according to a 10th-century document) which would draw up water for irrigation by using wind power; the wind was the only source of power in the middle of the desert. The wind would blow in one direction for months and months. So they utilized this wind power. Corn was also grinded with these windmills. This was 500 years before the first windmill was seen in Europe.

Slide 14:

Vaccination was devised in the Muslim world and brought to Europe from Turkey in 1724. Children in Turkey were vaccinated with cowpox to fight the deadly smallpox at least 50 years before any other part of the world "discovered" it.

Slide 15:

The first carpets were also made in Persia; while the Muslims used carpets, Europe's floors were covered with rushes, a kind of dry plant, and these rushes would be left undisturbed for up to twenty years at times. People would just change the top layer whereas the bottom layer would be filthy with animal excretion, saliva, vomit, bones, leftover food and all kinds of other filth. So the Europeans were using filthy rushes, while Muslims were sitting on beautiful carpets. It is said that there were carpets in Baghdad which were actually studded with precious gems.

Slide 16:

Cheques were also first used by Muslims. Travelling was very difficult in those times so, instead of carrying money from one place to another over vast distances on camel back or horseback, written vows were used by people, promising the handing over of money when goods or services had been delivered. These first cheques were called '*saqq*s'.

A Muslim businessman could cash a cheque in China drawn on his bank in Baghdad.

Slide 17:

Europe had kitchen gardens or herb gardens but they didn't have gardens for leisure and beauty. Tulips and carnations also remind us of places like Holland but Muslims were the ones who developed the first tulips and carnations, using various seeds and soils.

Arabs developed the idea of the garden as a place of beauty and meditation.
The first royal pleasure gardens in Europe were opened in 11th-century Muslim Spain.

Slide 18:

What is happening to the Muslim world today? Why are Muslims facing disgrace?

Student: We're getting distracted with all the glitz and glitter of this world.

Student: We have started imitating non-Muslim culture.

Teacher: Why?

Student: Because we have lost pride in our own heritage.

Teacher: I feel that one of the reasons that the youth has started imitating other cultures is because, today, people who are not Muslim are considered to be the most successful people whereas, in those times, people used to imitate the Muslims because they were the ones who had success. We try to imitate whoever we feel is more successful, right?

Slide 19:

This is what is happening to the Muslims today, all over the world. They are being humiliated; they are being treated badly; they are being accused and tortured.

Slide 20:

Another reason is that, after Islam reached the height of its glory and became an empire, its successors failed to maintain that glory and, thus, the empire began to decline and crumble. Many people were called Muslims, but they were not actually following the teachings of Islam. Islam had become diluted.

For example, if I take three or four tablespoons of orange squash and I put it in a glass of water, it'll taste fine but if I keep adding water to it, it would start losing its flavor and become tasteless.

That is what has happened to us. We kept adding the wrong ingredients to Islam and we started indulging in luxury and vices.

That's what happened to the Mughal Empire and that's what happened in Baghdad. It

was the epitome of knowledge and the seat of science in those days. Why did it fall? Why did it start declining?

Slide 21:

One of the basic reasons was that they stopped giving rights to non-Muslims and were cruel and oppressive towards them. Also, the disease of arrogance entered their hearts. Can you, in some ways, compare it to what is happening now in our society?

Slides 22 and 23:

Have you heard stories about how the Mughals used to punish people? At times they would go to the extent of throwing their own family members mercilessly from great heights. These things are not allowed in Islam and if you look into the *Qur'an* and *sunnah*, there are no such forms of punishment. Our Prophet (pbuh) was never cruel to people.

The emperor Akbar actually created his own religion which he called *Deen-e-Ilahi*. It was an amalgamation of several religions, including Hinduism and Christianity; he tried to consolidate them all into one religion. In other words, he tried to compromise on Islam for his own popularity

Slide 24:

I'm going to tell you a story about two kings, but I don't know how much of it is true. These two kings, King Edward and King Shah Jahan lost their wives to a disease called Polycystic Ovary Syndrome. Both kings loved their wives immensely and were bereaved at their deaths. Shah Jahan had the famous Taj Mahal made in memory of his wife while King Edward established a university for research, so that no one else would die of the same disease that his wife had died of. See the difference in their approaches?

Slides 25 - 30:

Teacher: What are we worried about these days?

Student: Fashion, jewelry, clothes. Better, bigger and beautiful homes.

Student: Music, gadgets, silly friendship bands, our phones.

Teacher: Actually we never have enough of anything, right? Not even television, not enough relaxation, not enough partying. Another thing we are worried about is where we can go out to eat. We can't seem to give up comfort, luxury or laziness. The very idea of getting up early on Sunday mornings is revolting.

There is nothing wrong in having fun – halal fun! Nothing wrong in having luxuries as

long we do not forget Allah (swt), His Prophet (pbuh)'s sunnah. Unfortunately, that is what us Muslims have done today – forgotten our Creator.

These very victors of mighty empires, when they succumbed to comforts and luxuries, discarded the Quran and Hadith, resorted to oppression and cruelty of their subjugates, became power-drunk and arrogant and indulged openly in wine and women; fell from the glorious pinnacles of civilization and progress to the abyss of disgrace and stagnation. . When this injustice reached an unbearable stage, Allah turned the tables, and granted victory to the down trodden nation of the oppressed, for verily, He is Rabbul Aalemeen, The Lord of the Universe – not only of the Muslims. The non-muslims are also His creation and subjects.

Slide 31:

Another thing we need to discuss is how we treat others who are less privileged than us. How do we treat our servants or beggars?

Student: We're rude and unkind to them. We're selfish and only think about ourselves.

Teacher: If they make a mistake what do we tend to do?

Student: We tend to shout at them

Teacher: What about the beggars on the road? We curse them? Ridicule them? We must always remember to be kind and gentle with beggars, instead of getting mad at them. Just think about why they are in the position that they are in and thank Allah (swt) that we are not in their position We are the ones who give, not the ones who receive and we should be grateful for that.

Allah (swt) is the Creator of the whole universe, even the non-Muslims who live in this world. Allah (swt) has created them too and if we don't take care of what we are responsible for, then He will give our power to someone else. That is what is happening today; the tables have turned. Power, glory and success belong to them and not us.

Slide 32:

Allah (swt) says in the *Qur'an*, "If you turn away, He will replace you with another nation. They will not be (disobedient) like you." (Surah Muhammad 47: Verse 38)

Slide 33:

Only when we study the *Qur'an* will we know what Allah (swt) is saying.

We need to get out of this zombie-like state and start doing things for ourselves. Sometimes we need to be taught what to do and when we are being taught we need to retain the lesson. We also need to learn to explore because nobody taught the scientists

about whom we talked; no one taught them what a decimal point is, or how to invent perfume or the concept of algebra etc. They pondered over things and tried to search for answers even though they did not have the facilities that we have been blessed with today.

What don't we have? We have air conditioners, computers, iPods, iPads, mobile phones etc. We have everything. Knowledge is on our fingertips, but if we still don't use it, who is to blame? Us.

Slide 34:

There is still hope for us. There is still time for us to control the situation. It is going downward right now but we can still control it and if we do it and teach others as well, we will have a lot of people following us in the right direction. We need to look at our amazing predecessors and learn lessons from them. Remember in the last class we discussed that the Muslim scientists of the past had certain qualities. Anyone remember what those qualities were?

Slide 35:

Yes, they had firm belief. They turned to Allah (swt) for help and were never too busy to worship. They also followed the sunnah of the Prophet (pbuh). In addition to this they were extremely hard working and also humble in their attitude.

Slide 36:

So what can you do? First and foremost, work on making your faith strong, along with gaining worldly knowledge. Because you see that is the basis for the success of a Muslim – strong faith, reliance on Allah (swt), following the teachings of our Prophet (pbuh).

Then, you can try to be more responsible, manage your time more effectively and not waste it. We have to realize that time doesn't stand still for anyone.

Start helping others, in any little way. Give a glass of water to someone; help someone who trips and falls, because no act of kindness is mundane. Perform at least one good deed each day. It's a tick on your account, not a cross.

Be humble. If somebody is working in your house, don't show them attitude. They're not our slaves. Even slaves don't deserve bad treatment. They are servants, we're paying them and they are working for us. You should not be rude to servants and they also have a moral and social responsibility. If they don't want to work for you, they can leave and if you can't stand them then look for somebody else to hire but you can't humiliate them, disgrace them or be cruel to them.

It is our responsibility to gain knowledge. It's not somebody else's responsibility to give it to us.

Slide 37:

Why were we learning about Muslim scientists?

We should know the splendid past of our Islamic civilization and honor the responsibility that comes with it. Let's not forget that Muslims are the representatives of a sacred, glorious, and honorable heritage that built one of the greatest civilizations on Earth.

Moreover, they have always been envied and admired in equal measure by the representatives of other civilizations or religious denominations.

Student: We were learning about the scientists because we should know that if people from India, China, Turkey and Europe can rise up, we can as well.

Teacher: Yes, why can't we? We have access to the same universities that they have. We have access to the same kind of knowledge that they have so why can't we? It is not impossible but we have to worry less about luxuries and comforts and worry more about what we are learning. We are more concerned about buying the technology and using it rather than being the ones who are creating that technology. Why don't we think about becoming one of those people who are making technological advancements? You are young, you have the energy, you're studying and you can still change the world, *inshaAllah*.

Slide 38:

And do not forget - "Verily Allah does not change the condition of a people unless they change it themselves." (Surah Ar R'ad 13: Verse 11)

Du'a for end of a gathering) *Subhana Rabbika Rabbul Izzati 'amma yasifun wa salamun 'alal mursaleen, walhamdulillahi Rabbil 'alameen*
(Parting salutation to students) *Assalam alaikum wa rahmatullahi wa Barakatuh*

References:

- <http://www.scribd.com/doc/522630/Muslim-Scientists>
- <http://www.ummah.com/history/scholars/BIRUNI.html>
- <http://www.islamicity.com/Science/scientists>
- <http://www.youtube.com/watch?v=JZDe9DCx7Wk&feature=related>
- <http://www.allabouthistory.org/the-dark-ages.htm>
- <http://www.britannica.com/EBchecked/topic/151663/Dark-Ages>