

Visit to the Castle Peak Power Station

Student: Justin Keung 1A(13)

Last week, under the leading of our teacher, we went to the Castle Peak Power Station by a coach. The Castle Peak Power Station is the largest coal-fired power station in Hong Kong. It is located at Tuen Mun. It supplies a large number of electricity to the whole of Hong Kong, except the Hong Kong Island. We learnt a lot and we had a wonderful experience there which is hard to forget.



After we arrived, our teacher brought us to the visitors' centre called "ElectriCity". It provides information and displays the ways of generating electricity and how electricity is transmitted to our homes. We listened to a talk about Smart Grid. Smart Grid is an automated fashion to improve the efficiency, reliability, economics, and sustainability of the production and distribution of electricity using information and communications technology. All of us then realized the importance of the invention of the Smart Grid had improved the electricity transmission and had maintained the high quality of electricity.

After the talk, we continued to learn more about electricity. We were all very interested to know how electricity is generated, and also how it is brought to our homes through hundreds of kilometers via the thick bold electricity wire that we had never thought of. We did a lot of experiment relating to electricity. We were all filled with amusement.

After that, we got back onto our coach and went around the power station and had a tour. The reason why we had to get back to the coach is because the power station is too big. The length of the power station is already more than 3.3 km. It is not reasonable for us to walk inside the power station on foot.

During the tour, we saw a large building which we learnt housed a lot of turbine engines - the starting point of electricity generation. Then we saw the coal mountain. It impressed me the most as it was so huge. We were told that the amount of coal that is stored could be used by the power station for more than four weeks. We were so amazed as we had not seen such a huge



heap of coal before. We all used our phones and took photos of the mountain.

At the end of the visit, we entered the large building and saw the turbine engine. We saw there were many workers working hard. We also all learnt a lot about other power stations of CLP in Hong Kong. They are run by other fuel such as nuclear power and natural gas.

During this visit, we learnt a lot about electricity. We are thankful to have such reliable electricity supply for us to use in our daily lives.

Visit to Castle Peak Power Station 10th April, 2013

Student: Lan Chee Yueng (1A)

This trip was definitely something special that will hold a place in my heart. Not everyone in our form had the chance to go to this trip and I would say that they really missed out on a lot. The tourist area was really a sight to behold, even if I wasn't there to see it be built I know that there were a lot of effort put into it and it really brought out how and what made the factory tick but with a fun and easy to understand manner. The Tour guide was what really made this trip for me, no matter the subject and how complex the subject got he could still make us understand every single bit of it, I was actually wanting to listen and concentrate on what he was saying and this is coming from a person who has ADD. It was great of them to let us roam around the working grounds of the factory in our tour bus, they didn't seem to mind much but I know it was hindering their work a lot. It is amazing how the whole HK is mostly fueled by the one facility. And these people really planned out for the future they have back-up facilities to generate electricity if there was a block now that is true dedication. I visited 2 other power plants in my days and I got to say this is the most memorable one I have went to.

Because this reflection was really delayed so I wanted to compensate for it by channeling my inner Shakespeare (not really)

 this trip to the electrical factory
I could say without a doubt it was satisfactory

 the sheer amount of things prepared for us was a fright
 it was truly a beautiful sight
 and even the quantity
 they were still able to keep the quality

 to say I learnt a lot is an understatement
 the designer really deserves greater payment

 this day will always hold a place in my heart
 ...i got nothing<3

IS Outing Reflection

Student: Cyrus Lee (1A)

Last Wednesday was a really special day for me because I went to Castle Peak Power Station for an Integrated Science's outing with my classmates and my IS teacher, Mr. Wong.

When we arrived, we went into the main tower of the power station. I saw an introduction of the Castle Peak Power Station. Besides, there was also another introduction of the Black Point Power Station, which is very near to it. In the talk that held by Mr. Kwan, a doctor of CLP, told us more information about the power station. The power station is so big that it takes us 3.3km to walk through it. Mr. Kwan told us that the target of CLP is to reduce the pollution of the coal when it's burning. They also promise to give their customers a more stable electric grid. Besides, they will add some electronic device to fix the bugs when there is a problem of supplying the electricity to customers' home. I think these improvements of the CLP are useful and customers will be more convenient.

After the talk, we went to the 2nd floor to visit the museum of the power station. In the museum, I knew more about the operation of a power station. There were some mini-games about electricity too. For example, we turn the handle to supply electricity to a light bulb, this is like a turbine providing the electricity. I also saw an experiment about the difference between LED light bulb and a non-LED light bulb, the energy consumption of the LED light bulb is 0.08/hr, while the other one is 0.39/hr. Through the experiment, it told us that we should LED light bulb instead of the traditional one because we can save many electricity if we are using the LED light bulb.

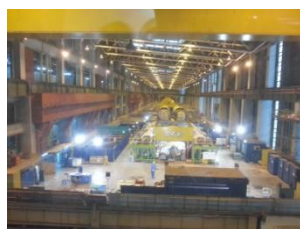
Then, we got back to the coach and then we had a ride around the power station. I saw different power stations and a big amount of coals. I was shocked when I saw the coals because it's like a hill and it's the amount of one month.

After the ride, we visited the real generators. The generators are really huge.

After this visit to Castle Peak Power Station, I learnt more about the electricity grid and the procedures to produce electricity. This visit will be very useful to our daily life and our knowledge of electricity.



Mini-game



Generators



Turbine



Coals that need to use for a month

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10th April, 2013

Student: Fung Kei (1A)

Last week, there was a Integrated Science field trip to Castle Peak Power Station. This is a rare chance for us to visit a power station and we all enjoyed this field trip.

Once we get into the area of the power station, we listened to a talk. The talk was about the Smart Electric Grid system that the China Light and Power Company uses. This system help to fix and detect problems of the electricity network by having a server and check the machines regularly. There is also a system which helps to fix the electricity supply when there are problems with the electric cable. There are different sets of cable throughout the city and if one set is detected with problems and is out of order, another set of cable will replace it. They also introduced the project of using renewable energy in Hong Kong to us. They also talked about new ways to use less electricity, such as monitoring your usage of electricity by applications on mobile phones or computers.

After the talk, we went to a small exhibition that showed us knowledge related to electricity, for example, how electricity is produced and how is it transmitted. There are some experiments that demonstrated how electricity are made. The exhibition also showed how we can produce electricity more effectively and with less pollution. We all enjoyed those experiments and videos.

The most exciting part of the field trip is seeing the power plant in person. We took a ride on a tour bus around the power plant. We saw a bunch of coal ready to be burned for two weeks. I was surprised that the coal is needed to be sprayed with water to prevent the wind from blowing the coal away. Then, we went a building where we can see the interior of one of the power plant. One of the staff told us about the power plants in Hong Kong. There are 6 power plants that can provide us electricity but only 3 of them are running. Other power plants are prepared for accidents and act as backup electric generator.

I think this is a place that you can only visit once in your life. This is a great opportunity for me to gain new knowledge and I enjoy this trip very much.

Visit to Castle Peak Power Station

10th April, 2013

Student: Desmond Yeung (1A)

Castle Peak Power Station is located in Tuen Mun (NT) and is one of the largest coal fired power stations in the world. It is owned by the Castle Peak Power Company Limited (CAPCO), and is operated by China Light & Power Company (CLP).

Castle Peak Power Station was constructed in the 1980s, in order to meet the high growth in Hong Kong's electricity demand. Moreover, CLP has to change its primary fuel from oil to coal, because using coal can provide their customers with reliable and affordable electricity. However, its back-up fuels are still oil and gas.

Castle Peak Power Station includes a visitors' centre called "ElectriCity", which provides information and displays on how electricity is generated and transmitted to people's homes. "ElectriCity" attracts over 15,000 visitors every year.