

# Kumari Arivial Peravai

## YOUNG SCIENTIST PROGRAMME 2014-2015

### COMMON TEAM MEET

At Hindu Vidyalaya School, Marthandam.  
On 04/01/2015

### Report: 1

**Gby Atee,  
Green Team**

The first meet, the introductory meet of selected Young Scientists 2014-15 of Kumari Arivial Peravai (KAP) which was held on 26/10/14 at LMS Boys Higher Secondary School and it was a meet of guidance, then was the two days Scientific Awareness Camp on 8/11/14-9/11/14 at CSI Institute of Technology, Thovalai which was exemplary, and the next meet at MACET on 22/11/14 which was the Management Concept in Thirukkural and the fourth meet at Govt. Medical College, Asaripallam on 29/11/2014. It trained us to become doctors and the next camp was a Study on Sustainable Environment on 6<sup>th</sup> and 7<sup>th</sup> of December. It was a two days camp which was held at various places starting from the Thirukurumkudi Nambikovil then PSN College and then finally at Vivasaya Seva Sangam, Puliyankudi. With so much of eagerness I was ready for the next camp. The Coastal Environmental Study Camp was one of the best. After these hard training we planned for the team meet on 04/01/2015 at Hindu Vidhyalaya School, Marthandam. As this was our first team meet, I was very much excited about it. During all the other sessions we learnt something new and different and with this anticipation I was ready for our first team meet.



*“Individually we are a drop but when in team we are the Ocean”.*

*"The strength of the team is each individual member. The strength of each member is the team." - Phil Jackson.*

It was a flawless day and with so much of fervent I geared up myself for the team meet. To prove that these quotes are true I whole heartedly outfitted myself for the team meet. The meet was said to commence at 1:30 pm and well before that most were there. We, all young scientists were directed to produce a report on 04.01.2015 about the individual topics specified to everyone, earlier by the organizer of KAP. When I entered the spot for our discussion I could see my equals, Mr. Thiruvengadam and Mr. John Rabi Kumar seated there and were conversing with my fellow mates. I then joined them and Dr. Sobanaraj joined us a while later on. Mr. John Rabi Kumar went through each one of our report and inquired in order to check whether it was our work or not. He gave us some guiding principle moreover, which would advance our research work.

After a few minutes of discussion with Mr. John Rabi Kumar, he moved on to Red team and we continued our session with green team guides. Dr. Sobanaraj subsequently gave a general talk. He stated that Kumari Arivial Peravai select students the best from the student community of grade VIII and widen their knowledge, outline and mold them into an even enhanced civilian who excels in all fields. The best human resources are we the students and as the nations are looking for first-rate civilian like us and we are being trained for this reason by the KAP, who motivate and support us in becoming an excellent person in command besides.

Life sustains only on earth as it is in the right distance from the Sun. The base or the fundamental unit of all energy is the Sun. Its' energy is convert by the plants to make its food. The animals have it and we the human eat it further. In this way the human use the converted energy of the sun in an indirect way. The best proof for this is that in the past and in the present people worship சூரியபகவான், who itself is the sun. There can be no other better evidence than this, he added.

The fossil fuels are dead remains of plants and animal, which have been formed millions and millions of years ago. At present the fossil fuels are being depleted. Whenever a problem occurs we must think first of its past, present and the future conditions. We must

analyze how was it in the past and why has it turned so in the present. The basis that each would be revealed is the misuse of the resources. So when it comes to the future analysis we must take into concern about how would it affect the future generation and what are the steps that we can take forth to thwart this or conserve this resources. In the future the population will be the double of today so we must think about when we face any crisis of any system.

He then recounted his days in the past that he took pleasure in by playing in the river, but was really disheartened when he thought of the future generation who would rarely get chances to enjoy on the banks of rivers. We must assume that, we are something special and are the future leaders, so what are the proposals we are to do for our future. For bringing this awareness within our mind, the KAP is functioning and doing all these. The initial thing that we must consider when given a topic is to make a sketch of what we are to do.

He then quoted that his father gave him a small place and asked him to develop a micro farm there. Instead of a micro farm he developed an **Integrated Micro Farm** which is more creative. There won't be any waste from this farm and everything is being harvested including the rain water. He has also cultured ornamental fish which is exported to other countries (by India only 1%) and edible fishes. Once his uncle visited the farm and went to the nearby river and asked some lads to catch some fishes. The lads grasped nearly 21 different species of fishes. When fishes are being cultured, along with this azolla is also grown. This azolla is a food for the fishes. The waste water gained from the fishery is irrigated to the plants of the form. The hard waste of plants like leaves and stem and the animal waste are sent to the biogas store. The gas released can be used as kitchen fuel. The earthworms developed from the runny essence which popes out from the biogas store. This earthworm is fed to fishes. 1Kg of earthworm is nearly Rs.500/- and is regarded as the **Farmer's Friend**.

Bees visit nearly 4 lack flowers for producing 1 Kg of honey which cost Rs.125/-. He also asserted that we must '**Be Like a Bee**'. He recovered a famous quote "**Nature has everything for man's need, but not for his greed.**"- Mahatma Gandhi. So the nature is proving us with everything and we must use it without blemishing the resources, and this is what we call **Sustainable Environment**.

Here in India we pay Rs.20/- for water, whilst in Cairo it cost \$1 which Rs.60/- and somewhere else it cost \$2 which is nearly Rs.120/-. When it comes to petrol, 1 liter of petrol was

only 56 paise in the past, when it is Rs.64/- at present. So from this we must analyze that if this is the condition of the present age bracket, what will be the future. At present we are in the losing side. We must be watchful and marmalade them for our future generation. When we become the leaders of tomorrow there will be a crunch for all resources.

During the Aadi and Amavasai his father took him to his farm and there were plenty of coconuts on the trees. He even found 110 coconuts on one tree and the cost of 100 coconuts was only Rs.10. Now one 1 Kg of mango cost Rs.100, whereas during his childhood in his farm there was nearly 35 varieties of mangoes which fruited all throughout the year. If it goes in this condition soon in this future there will be a time when there is crisis for everything. So the fundamental of everything is energy. He requested us to submit a copy of our reports to him, which he would make more accurate. He also insisted us to include the past, present and future circumstance of our theme. In his farm there is no waste, all things are being used and it increases the food production as well. It is called **Anducode Integrated Micro Farm Innovative Technologies.**

“Sampathu Kalathu Thy Pathu Vachal Apathu Kalathu Kai Pathu Thinnam” is a famous Malayalam saying. “If you want to be happy for a day get drunk. If you want to be happy for a week get a pig. If you want to be happy for a month get married. **And finally if you want to be happy lifelong plant a tree.**” is a Chinese saying. We must keep in mind the last thing and act accordingly. We are really powerful and the world is expecting someone like us to bring a great revolution. He pointed us a tree and stated that it is 25 years old and worth’s Rs.25000. And this was the seedling that he gave to the villager’s to be grown. He concluded by saying that we must be privileged to be a member of the KAP and must do something good for our nation and future generation. I then gave the feedback and followed by the vote of thanks, sir left us.

Followed by that Dr. Sajeev stated that this generation kids are losing our memory power. When we were in the womb of our mother our memory developed upto 5%. The next development of memory takes place during the first 10 years of our life. Throughout the remaining of our life we are to use it and develop it but we are not using it aptly. This is because of the invention of phone, computers and the calculator. We are wholly depending on them.

He quoted what his professor said for not having a pen in his pocket. He used to say that if we have a pen in our pocket, we will be tempted to write and take notes. If we don't have a pen we won't write and will attempt keeping all the data in our mind. The people of China are developing in a fast rate and they have more power excessively. He also insisted that '**Plant a Tree for Lifelong Happiness**'. When we say a feedback we must include everything, but must be expressed in our own style.

When Dr A. P.J. Abdul Kalam was our president though he was a Muslim he insisted all in the parliament to avoid eating non-vegetarian. He is the one who realized the true power of the children. He met 200 student of a school in Andhra Pradesh and asked them all to have an aim. He then asked all the students about what was their aim. A boy named Srikanth stated that he wants to become the first blind president. Dr. A. P. J. Abdul Kalam was greatly touched by what he said and asked him to follow 4 rules, which are:

- Aim high!
- Go in search of all the resources for reaching your goal!
- Work devotedly!
- Hard work and never give up!

Keeping this in mind he worked hard and scored 95% in 10<sup>th</sup> and in 12<sup>th</sup> 92%. Dr. A. P. J. Kalam was kept informed about this and Srikanth wanted to do his higher studies in abroad. According to the law of the foreign institute, a blind person can't be educated in the institute. Dr. A. P. J. Kalam assured them that he will answer the same paper which is given for others. He wrote it and stood in the 4<sup>th</sup> position. In this way he was able to fulfill a part of his dream by joining MIT (Massachusetts Institute of Technology which is like the IIT of India).

Internet is regarded as the network of networks and using search engine we can get so much of information. But when it comes to library, it is like a supermarket in which we should go in search of what we want which is a waste of time. If there is only one dress we will opt for it, but when we have more choice we choose one. Similarly the internet has a variety of links from which we can choose any.

As we are one, we have only our ideas. Using the internet we must gather more ideas. We shouldn't copy the ideas of others as it is, instead we must read understand and write again

what we comprehend in our own manner. One of the former young scientists included the article that he practically tried and insisted us to include practical exposure and expert's analysis as well. The research work must have an introduction, researched article, practical work and conclusion. Before in the past the students listen to what is taught and later on write it but we now keep listening and writing which is not something good.

Plagiarism is software using which we can find from where was our article, if it was copied from some websites. After reading an article using our effort we must come up with a new one. Capt. Bennet Singh joined us at 3.00 pm. He went through my report and asked me to include some more analysis of this. The nuclear fission is uncontrollable and what is that we can do to control the fission. He also quoted that coal dust is very fine and causes respiratory problems excessively.

Then he went through Miss. Jisfia's report and Capt. Bennet Singh gave us a clear idea about **Sustainable Environment**. Maintaining of the resources for the next generation and maintaining stability in the resource is sustainable environment. Fossil fuels are remains of plants, animals which



takes millions of years to form due to high pressure and temperature. Renewable energy and energy efficiency is considered to be the two pillars of energy. Their aim is to limit the CO<sub>2</sub> emission.

**Green Energy** is the energy that is utterly environmental based and it has less negative impact and it can be harnessed with very less pollution. He then stated about the **Sustainable Fuel** doesn't harm the environment. **Bio-ethanol**; the word bio deals with animals and plants and this source of fuel are less harmful and poisons. **Bio-diesel** is a diesel; which is an extract from the plant. An alga is eukaryotic and it contains chlorophyll. It is mainly aquatic and they have no real stem. Their types include yellow algae, brown algae, red algae and many more.

Then we had a discussion about the Arivial Tamil Muzhakam. He asks us to prepare for a 5 minutes talk. He suggested the following topics;

**தமிழக பாரம்பரிய விவசாயம் -Ashwin**

- the diet
- what the kings did
- pluses grown
- how is it differing from today's system

**கங்கை நதி –Ageesha**

- the water never dries up; flows all throughout the year
- origination – draining point
- how is it polluted

**சிந்து நதி –Kaviya**

- originates in Punjab (appears in the National Anthem as '**Punjab pas Sind**')
- its specialty must be included
- The rocks engraved have Tamil letters written in it. So it has a close relation with Tamilians.
- Harappa

**இமயமலை –Soorya**

- plates tectonics
- continental drift

**ஹூக்ளி முகத்துவாரம் -Srinidi**

- its origination
- specialty

**அரபிக்கடல் - Shruthikrishna**

- extension
- specialty

**வங்காள விரிகுடா -Sree Ram**

- extension
- specialty

#### இந்து மகா சமுத்திரம் -Jisfia

- specialty

#### இந்திய சதுப்பு நிலங்கள் -Ayana

- What is it
- its features
- specialty
- locations

#### இந்திய நீர்நிலைகள் -Gby

- summary of all the major rivers
- include statics
- its present condition

All the team members gathered for a common meet. First the organizer and the nucleus of KAP, Mr. Velaian conversed. He stated that many students wrote their report well but it wasn't relevant to their theme and some didn't bring their reports. He insisted we must send our research works through mail to the compiling team. Now some students are losing their



interest, he cited. They don't attend the entire programme. If it continues more than two meets the person will be sent home, he highlighted. He insisted us to search again on our theme and make the work even better. We must read everything and select the appropriate points. We can refer from Wikipedia, NCRT, News paper, books and any websites and it is a must for us to include the reference. He preferred me and Srinidi as the compiling team for my team and we must sent the compiled report to him before 26/1/15. He said us to prepare for the Arivial Tamil

Muzhakam and we must ask doubts but not on the previous night. With this he concluded and then it was the turn of others.

Dr. James Wilson asserted that we mustn't go out of our subject and this is something in fact significant. He underlined the need for the attendance as well. This is a crash course that we can attend only this year. So we must steer clear of all the rest and shouldn't miss any of these programs. During a 2 day program missing a day or even an hour will make us lose curiosity and there won't be continuity. He insisted us to read lot of useful books to improve our self and halted by wishing us all the best.



Mr. Edwin Sam gave an imperative piece of advice. He stated that we should seek help of the people but the people must be linked in our fields. Only that kind of a person will be able to give us appropriate data. If we want to talk with him it is better that we fix an appointment with him earlier. There must also be continuity when compiling every ones data, so we must be watchful about it. He also mentioned that in every meet there must be a session on theme topic discussion, which is a must for enhanced upshot.

Then Mr. Sajeeve asserted that we must go through all the articles from the internet. We must scrutinize it and come out with something of our own ones. This was one of the really prized guidance that we got. Mr. John Rabi Kumar stated that the students work was not enough and was losing behind, but all will indisputably lend a hand to us if we really want it. First we must collect data synchronize it and then bring it as a research article. He insisted us to include reference and use appropriate people for getting data.

Then Mr. Gopalan told in his talk about 2 kinds of students. One kind makes use of all the opportunities, involve in everything and change in accordance to the advice given. In them, we can find tremendous improvement. The other set is the students who follow the policy of coming, sitting and then moving away. For them this will be futile and there won't be any progress in them. He appreciated the award achievement of Mr. Jefin and Mr. Edlin Jijo who won in a quiz competition. He was apologetic for the students who just downloaded their work and bought it. He also was saddened because the subtopics weren't enlightened to the students. With this he halted and it was over to Dr. Sugin Herbet.



Dr. Sugin Herbet highlighted that we must know the meaning of each and every words that we have written. We must be cautious about the usage of words besides. One chief thing that he cited was that one person shouldn't cover everything. Only then the book reader will have continuity in what they are reading.



Followed by that Mr. Thiruvengadam quoted that KAP is creating young scientists in this very young age and we must use our opportunities aptly. We download articles and even without understanding the meaning of it we write it. This is useless, and we must shun this tendency. He then alluded to the 2 types of teachers. Hard teacher is like Mr. John Rabi Kumar and he says, **“You didn't do well, so change then it will be better”**. Many won't be able to accept this but they will work even harder with a fire in their heart and achieve what they want to. A soft teacher is like Mr. Gopalan and he says, **“This is good but do even better”**. This in a way motivates the child. How a teacher is doesn't matters, all that matters are, they doing what they must do. And in this case both the examples are doing what they must do in a different way but are guiding the student towards the trial of success.

Then Mr. Shibin Tad explained in detail about the difference between a normal article and a research article. When it comes to our research article we must include introduction, research, findings, solution and conclusion. Subsequently Mr. Sahajan highlighted the importance of books. I remembered the famous saying, **“If we encounter a man of rare intellect, we should ask him what books he reads”- Ralph Waldo Emerson**. He insisted us not to depend wholly on internet. School books and library books are really useful and we must make use of it industriously.

Mrs. Rathika asserted that we must read the newspaper and we must make use of it. We should not only cut article for name sake but must also read it which will be very obliging. Capt. Bennet Singh quoted that all members in a team must have a clear picture on the subject of others and we must be very cautious about the changing rhythm of alls articles. The rhythm must ally with all articles.

Finally Mr. Velaian stated that we must fix time with some because they will be busy in their works as well. He appreciated as Miss. Surya Vijay spoke about Jansy Rani for nearly 20 minutes to him over telephone. We must also talk with eminent personalities and ask doubts which are one of the best approaches.

At the end of this session I came to know the real power of a tea. During this team meet we felt liberated and enjoyed being with our team members and sharing each ones views.

**“The way a team plays as a whole determines its success. You may have the greatest bunch of individual stars in the world, but if they don't play together, the club won't be worth a dime”**,-Babe Ruth.

**“What is the recipe for successful achievement? To my mind there are just four essential ingredients: Choose a career you love, give it the best there is in you, seize your opportunities, and be a member of the team”**,-Benjamin Franklin Fairless.

I being the member of a team, I defer to it and sacrifice for it, because the team, not the individual, is the ultimate champion. I came to know that all these sayings were true and I express my deep sense of gratitude to KAP, organizer, Mr. Mullanchery M. Velaian for giving us such a great opportunity. I would like to express my thanks and appreciation to KAP, it's members (like Dr. Sobanaraj, Mr. John Rabi Kumar, Mr. Gopalan, Mr. Thiruvengadam, Capt. Bennet Singh, Mrs. Rathika, Mrs. Babitha, Dr. Sugin Herbet, Mr. Sajeeve, Mr. Edwin Sam, Dr. James Wilson and Mr. Sahajan) and the management of Hindu Vidhyalaya Matriculation Higher Secondary School for providing us with this great opportunity. I thank all once again including the Almighty for all the good things and giving us this kind of a atypical opportunity.

## Report: 2

### DANI ROVAS MAROON TEAM

It is always good to start a New Year with change as every year is the **Year for Change**. To change for the better the guidance of great people is very important as they have the ability to identify the problems and they can give the solutions to rectify them. The seventh meeting of Young Scientists Program after the selection process was the Study on Research Topic held at Hindu Vidyalaya Matriculation Higher Secondary School, Marthandam on 4<sup>th</sup> January, 2015. This meeting was specially meant to correct the mistakes we had made in our preparation on the sub-topics.

The meeting sharply began at 1:30 pm, when we were sent to the allotted classrooms according to the team. Our team had the presence of Miss.Lekshmi, Mrs. Babitha and Dr.Sugin Herbert (who joined us later on) to put right the mistakes made. All the members in our team were ready with the written report on research topic. The research topic given to Maroion Team is **AGRICULTURE** which includes the sub-topics of:

- ♣ What is Sustainable Agriculture?
- ♣ Need for Sustainable agriculture
- ♣ Ancient agricultural practices - Farming methods - Crop rotation and inter crops – fertilizers
- ♣ Modern agricultural practices -Farming methods -Crop rotation –Fertilizers -Genetically modified crops
- ♣ Latest innovation in agriculture
- ♣ Difference between ancient and modern agriculture (Pro & cons)
- ♣ How the sustainability is affected due to modern agricultural practices?
- ♣ Remedies for bringing sustainability in agriculture
- ♣ Sustainable agriculture practices
- ♣ Sustainable initiatives by India
- ♣ Green revolution an overview

First Abila was called to read out her report on ‘What is Sustainable Agriculture?’ She explained the definition of Sustainable Agriculture and gave some information on her topic. Miss.Lekshmi suggested that the definition should be in more detailed way and should focus more on the topic.

Next Jenisha read on 'Need for Sustainable agriculture'. She prepared on the necessary items for Sustainable agriculture instead of the importance of Sustainable agriculture. Miss.Lekshmi gave her some tips on the needs.

Shifi read aloud the sub-heading on research topic 'Ancient agricultural practices-Farming methods-Crop rotation and inter crops-fertilizers'. She explained all the headings in her topic. Miss.Lekshmi recommended her to state some importance of Ancient agricultural practices.

Kowshanth Kalidas was called to read out next. The topic given to him was 'Modern agricultural practices-Farming methods-Crop rotation-Fertilizers-Genetically modified crops'. He said clearly about the benefits, need and effects of Modern agricultural practices. Dr.Sugin Herbert questioned him regarding bt brinjal, which he mentioned during his talk and finally gave more propositions to improve his report.

Next was our time to lend our ears to the 'Latest innovation in agriculture' said by Mary Sushmija. She mentioned the innovations of high roof green house, farm management, urban agriculture and even stated a methodology of a company in making agriculture sustainable. She said that the latest innovation in agriculture increases yield and absorbs the costs caused by rectifying them. Dr.Sugin Herbert said her meaning of methodology and gave more implications to improve the report after viewing it.

Sanjana accounted on 'Difference between ancient and modern agriculture (Pro & cons)' She gave the differences in terms of advantages and disadvantages. She had more differences in the report but it was not explained in detail. Dr.Sugin Herbert said that the format of writing should be different.

Next was my chance to present on 'How the sustainability is affected due to modern agricultural practices?' I said the ill-effects of modern agriculture that affects sustainability which in turn destroys sustainable environment. Dr.Sugin Herbert and Miss.Lekshmi gave some tips to improve my report by collecting more data regarding how sustainability is affected in various regions.

'Remedies for bringing sustainability in agriculture' was said by Prabin Kumar. He said many solutions for the problems faced in modern agriculture. The one which amazed me was the method to prevent soil erosion. Root holds the soil firm in place, controlling soil erosion. So while harvesting the crops only the hoot part will be harvested leaving behind the root part. Thus soil erosion can be prevented. Dr.Sugin Herbert gave some more suggestions to improve the writing.

Aruna read the report prepared on the sub-topic ‘Sustainable agriculture practices’. She said about the methods to be followed to make agriculture sustainable. Miss.Lekshmi said her to include some more information on her topic.

It is always good to know our country’s involvement in agriculture. Jereshea gave us ideas on ‘Sustainable initiatives by India’. She said about the steps taken in our country to increase sustainability in agriculture. Miss.Lekshmi said her to include about Green Revolution.

Last was Reshma’s chance. She read out on ‘Green revolution an overview’. She said about the impacts of Green Revolution. I came to know that Dr. Norman E Borlaug is the father of Green Revolution. She also mentioned the highly affected regions in India due to the revolution. Miss.Lekshmi advised her to include some more benefits of Green Revolution.

During suggestion session after each student’s performance I came to know that we should refer various sources and write the quintessence out of the contents referred. The references should be from the net, books, newspapers and articles. These suggestions had given Reshma, Jereshea and me ideas for compiling.

We had the discussion on mwptpay; jkpo; Kof;fk; in our team. We said the areas we are going to cover in our talk. The team discussion came to an end at 3:45pm. Next we assembled for the meet at 4:00 pm.

The general meet began with the address of Mr.Mullanchery M.Velaian, the founder, patron and lifeblood of KAP. He first acknowledged the presence of many personalities which made the program a unique one. He said that this meet had given us more ideas on how to prepare the report on research topic. The sub-topics prepared by each student should be compiled by the students allotted for it. The references must be included in our report. Do not refer only from the net; refer books and newspapers for the preparation. The newspaper documentation can help a lot in the preparation for research topic. He mentioned that the compiled report should be of maximum 35 pages and the soft copy must be send on or before 26 of January. Prepare well for the அறிவியல் தமிழ் முழக்கம்.

Dr.T.James Wilson, Chairman, Sigma College of Architecture, shared his views next. He said that the students’ are going off-track from the topic. The attendance matters a lot in this program as this is a **short-time cash course**. We can enjoy the fruitfulness of this course only if the attendance is perfect because irregular attendance means discontinuity of the program. He gave u more pieces of advices. We should improve our comprehension skills by reading more books. The preparation of the report should only be the essence of the information read. Thus he concluded his talk.

Shri.L.Edwin Sam, Social scientist, addressed us. The preparation of the report should be our own effort but with the help of people who understood the thematic idea of KAP. Each student is given with one sub-topic for the ease of preparing the compiled one under one theme. The points that are relevant included only if the point are internalized and written. He terminated hi talk saying this.

Shri.G.Sajeev, said that we should not copy the information as such from the net but read the contents of many authors, understand it and come out of new content in your report. This talk was short but informative.

Shri.M.John Rabikumar, ISRO Propulsion Complex Mahendragiri, shared his views on the report prepared for the research topic. He said that the structure of the sentences in writing, matters a lot. **Hard work is the driving force behind success.** We need to work hard and should get guidance from the right sources to prepare the research topic in high standard. He kept full stop to his talk by quoting the importance of team resource.

Shri.P.Gopalan, Headmaster Rtd, said that the young scientists are of two types:

1. Involve in all the activities whole-heartedly, seek the advices of people to correct their mistakes and analyze the words said. They find a tremendous improvement in themselves.
2. Attend the meetings for name sake, listen all the words said by eminent people but they don't analyze them. These students find no improvement in them.

He advised us to follow the 1<sup>st</sup> group. He said that we should have the confidence to explain what we prepared and we will be able to do so only if we read and understand the content prepared.

Dr.Sugin Herbert, Medical officer Govt. Hospital Thuckalay, stated that each team member should know the meaning of each and every word in their report. The compiled report should have continuity between each sub-topic.

Shri.S.Thiruvengadam, Employment officer Rtd, said that many students haven't even read the content in their report and were struggling to read it. We should clarify our doubt with the team resources.

Shri. M.C.Shibin Tad, NI University Kumarakovil, gave a short address. A research topic report must have some findings along with the essence of the gathered information. The compiled report should be in a systematic manner with continuity.

Shri.T.M.Sahajan, ISRO Propulsion Complex, gave us a piece of advice next. We should not only gather information from net but also library books, school books and

newspapers. We should not always depend on net always because all the data in it are not accurate but we can afford it to get details on current affairs and trends.

Mrs.Rathika advised that we should read more books and take some information from the newspaper articles documented related to our topic. Her talk really gave tips to do our compiling in a successful manner.

Capt.P.Bennet Singh, Pilot Tuticorin port, gave away the address next. The meaning of the report prepared should be known clearly. The compiled report must be of high quality and of standard rhythm.

Mr.Mullanchery M.Velaian gave the final talk. He said that that we should spend more time for the compiling process. **The more you learn, the more you realize.** Learning is so important as it is an important quality of leader. He informed u about the next meet. The meeting came to an end with the feedback and vote of thanks by Abhirami.

**Mistakes are meant for learning.** This meet enabled me analyze my mistakes with the guidance of dignitaries. I was able to understand the places I committed mistakes and in what way the research topic report must be prepared. So I thank the school management for facilitating the meeting to be held their and Mr.Mullanchery M.Velaian, Capt.P.Bennet Singh, Mrs.Rathika , Shri.T.M.Sahajan, Shri. M.C.Shibin Tad, Shri.S.Thiruvengadam, Dr.Sugin Herbert, Shri.P.Gopalan, Shri.M.John Rabikumar, Shri.G.Sajeev, Shri.L.Edwin Sam, Dr.T.James Wilson, Miss.Lekshmi and Mrs.Banitha for gathering in the meet in spite of their busy schedule for the benefit of us. I extend my deep sense of gratitude to one and all.



## Report: 3

### J.M.JERESHEA MAROON TEAM

“Unity is strength... when there is teamwork and collaboration, wonderful things can be achieved.”

- Mattie Stepanek

This was the first KAP meet of our team (the team meet was common for all the teams) which was held at **Marthandam Hindu Vidyalaya School** on 4<sup>th</sup> January and the programme started sharply at 1:30 p.m. And firstly we moved to the hall allotted to each team. Since I was in the Maroon team, Miss. Babitha, guide teacher of maroon team, Miss. Lekshmi, team supporter of maroon team and finally Mr. Sugin Herbert, Doctor-consultant of blue team gathered along with us to our allotted hall. And there we discussed about our Research topics. First **Miss. Abila**, member of maroon team started her speech regarding the topic “What is sustainable agriculture?” she told that,

- **Sustainable agriculture** is the production of food, fiber, or other plant or animal products using **farming** techniques that protect the environment, public health, human communities, and animal welfare.
- **Sustainable agriculture** is the act of **farming** using principles of ecology, the study of relationships between organisms and their environment.

Then she concluded her speech. Secondly, **Miss. Jenisha**, member of maroon team started her speech regarding the topic “**Need for sustainable agriculture**”. She added that,

- **Sustainable agriculture** is the act of farming using principles of ecology.
- It is the study of relationships between organisms and their environment.

By saying this she concluded her speech. Thirdly, **Miss. Shifi**, member of maroon team gave a talk regarding the topic “**Ancient agricultural practices**”. Then she described that

- **Agriculture** is the cultivation of animals, plants, fungi, and other life forms for food, fiber, medicinal and other products.
- It is used to sustain and enhance human life. Then she concluded her speech.

Following her **Mr. Kalidas**, member of maroon team started his talk regarding the topic “**Modern agricultural practices**”. Then he said that,

- It is a form of agriculture that relies on techniques such as crop rotation, green manure, compost, and biological pest control.
- Modern farming methods increase the production in almost every sector. Then he concluded her speech.

Then **Miss. Susmija**, member of maroon team gave a talk regarding the topic “**Latest innovation in agriculture**”.

- ✓ Sustained investment in agricultural science, technology, and innovation is critical to increasing agricultural productivity
- ✓ Reducing poverty, and fostering economy-wide growth in many developing countries.

By saying this she concluded her speech. Then **Miss. Sanjana**, member of maroon team gave a talk regarding “**Difference between ancient and modern agriculture**”.

- Decreasing water, farmland and fossil-based fertilizers are making it increasingly difficult to feed people today, let alone all those expected in the future.

After concluding her speech **Miss. Dani Rovas**, Co-Leader of maroon team spoke about the topic “**How the sustainability is affected due to modern agricultural practices**”.

- ✓ **Chemical fertilizers** can also become air pollutants, and have recently been implicated in the destruction of the ozone layer and in global warming.
- ✓ **Modern agriculturists** have selected crops for high yields and high palatability, making them more susceptible to pests by sacrificing natural resistance for productivity.

Then she concluded her speech. And **Mr. Prabin Kumar**, member of maroon team spoke about the topic “**Remedies for bringing sustainability in agriculture**”. He told that,

- ✓ Agricultural yields were modest, but stable.
- ✓ Growing number of people have become concerned about the long-term sustainability of existing food production systems

After concluding his speech **Miss. Aruna** explained us about the topic “**Sustainable Agriculture Practices**”. Meanwhile **Mullanchery M Velaian**, KAP Organizer announced the committee members of our team. Then she concluded her speech. Then **Miss. Jereshea**, member of maroon team spoke about the topic “**Sustainable Initiatives by India**”. She explained,

- ✓ Multiple Cropping:
- ✓ Use of High Yielding Variety (HYV) Seeds
- ✓ Expansion of Irrigation Facilities
- ✓ Plant Protection
- ✓ Use of Mechanization

- ✓ More Use of Chemical Fertilizers
- ✓ Development of Agricultural Land
- ✓ Animal Husbandry
- ✓ Land Reforms

Then she concluded her speech. And finally **Miss. Reshma**, maroon team leader explained us about the topic “**Green Revolution an overview**”.

- ❖ The **Green Revolution** refers to a series of research, and development.
- ❖ A large increase in crop production in developing countries achieved by the use of artificial fertilizers, pesticides, and high-yield crop varieties.

Then she concluded her speech. Then we discussed about the topics which was given to us to explain everybody in following meeting which was going to be held at 17<sup>th</sup> of January and the title of the meeting “**ARIVIAL TAMIL MULLAKAM**”.

Then around 4 p.m. all team gathered together in a hall. And there we had a small meeting. There to start with **Mullanchery M Velaian**, KAP Organizer started the meeting with his speech. First, he welcomed everybody. And he gave some suggestions such as:-

- The information we took is not related to our topics.
- If a topic is given we should we should gather the information immediately. But we are gathering the information in the last minute, he noted.
- Then he said that we don't know “How to prepare?”
- So he mentioned that here after we will be having the combining system. Then he allotted the student's for it.

Also he gave information regarding “**How to gather information**”.

- He firstly mentioned that we should not gather information only from Wikipedia.
- Next he mentioned that if we gathering information from a web. We should take the entire information. Instead of that we should select t he information which are only related to our topic.
- Then we should give reference to it.
- But even though, he mentioned that we should give reference from more from books.
- Then he noted about the book publishment regarding.
- Each team will be allotted only 35 pages. Hence with 35 pages all the members in a team consisting of 11 member's research topic should be entered.
- Then he not attendance of a student is very important.
- Hence, he concluded by saying that the preparation of the next meeting which is going to be falls on 17<sup>th</sup> January (ARIVIAL TAMIL MULLAAM) should be earlier.

And he concluded his speech.

**Mr. James Wilson**, Chairman, Sigma College of Architecture said “Attendance is very important. If we are not attending the class, then we can’t prepare the report. So we must give full priority to attend the class”. He also said “**Reading is very important**”.

**Mullanchery M Velaian**, KAP Organizer said “When we are doing our work, we are doing it correct. But when we give our work to others, then we are doing a mistake”.

**Mr. Edwin Sam**, Social Scientist said “one team is having one theme. So in order to make the work easier, it is divided equally to all the team members”. And he said “Therefore one team must have totally one introduction and one conclusion only”.

**Shri.C.Sajeev** said “we should not copy any materials from the internet as it is, but we should prepare the report from the notes we take in class”.

**Mr. John Rabi Kumar** said “we should follow what **Shri.C.Sajeev** said during his speech. We should write reference from the notes”. He also said “The effort which we are giving is not enough”.

**Mr. Gopalan**, Headmaster Rtd said “There are two types of students; the first type of students engages themselves in all activities, and the second type of students remains idle”. He added “The first category students will get tremendous information, for example; in Quiz programs, they are winning because of KAP”. He also said “The KAP team is very happy”. He said “Until we feel that all the students belong to the first category students, we will train and mould you”. He also said there are many references in the internet, therefore we should collect information regarding our topic which is not on the net”. He also told a story related to the class.

**Mr. Shri. M.C.Shibin Tad**, NI University said “First of all, we don’t have any idea about what we write in the report. Agriculture doesn’t mean mango or fruit; it is about farming, planting new variety of seedlings, bringing good quality crops with minimum effort”. He also said “first we should understand the meaning, and then we should write the report”. He also said “The meaning of one word may change according to the sentence, so the students should be clear in their ideas and use appropriate words”. He added “it is the job of the team leader to correct the meaning of the sentence according to the topic”.

Next **Shri.S.Thiruvengadam**, Employment officer Rtd started his speech. He said “Even we can’t read what we have written. So the reports must be clear enough for the reader to read and understand”.

**Mr. Shibin**, NI University said “There is a difference between Simple article and Research article”. He added “Simple article contains only general information, but Research article contains introduction, methodology and related findings”.

**Mr. Sahajan**, ISRO Propulsion Complex Mahendragiri said “Many people are depending only on the information from the internet, so we can collect more information from the local libraries”. He also added “The current generation won’t gain information from the books, so this time we can collect information from books”.

**Mrs. Rathika**, Guide teacher of green team said “First we should take hints, and then we should gain basic information”.

**Mr. Captain Bennet Singh**, Pilot Tuticorin Port said “we should also know the topics given to others. We are writing in different manner, therefore when we are combining it, it is not rhythmic”. He also added “we should allot time for research topics. So we could be able to gain information from other members of KAP”. He also said “we can also tell them the information we have taken so far”.

**Miss. Abhirami**, Yellow team Leader, gave the feedback. She gave an introductory address.

She stated that “**Mr. James Wilson**, Chairman, Sigma College of Architecture talked about the importance of attendance. **Mullanchery M Velaian**, KAP Organizer asked us to do our work ourselves. Mr. Sanjeev said that we should not copy materials from the net. **Shri. M.C. Shibin Tad**, NI University said that we must have clear idea of what we are writing. **Shri.S.Thiruvengadam**, Employment officer Rtd said that we must write and express our ideas clearly enough for the readers to understand. **Shri.T.M.Sahajan**, ISRO Propulsion Complex asked us to collect information from books in local libraries. She also said “We should take bibliography information. We should only take the information regarding our topic”. She also said “While preparing the research topic, we should prepare it in order”.

In this team meet, we understood the importance of attendance. We got idea about, how to write a report in a clear and understandable manner. We got knowledge of how to prepare a report on our research topics. We understood that it is important to read and collect more information from books and libraries rather than from internet.

“We are confident that you will make all of us proud in our future role. Thank you KAP”

## Report: 4

### J.M.MERESHIYA YELLOW TEAM

“Team work: Simply Stated, It is less me and more We” -John

The first team meet of **Kumari Ariviyal Peravai (KAP)** was held at **Marthandam Hindu Vidyalaya School** on 4<sup>th</sup> January 2014. The team meet started at 01:30 pm. Each team has allotted a class room to discuss their research topics with the KAP advisers and guide teachers. As I belong to Yellow team **Mr. Edwin Sam**, Talent Motivator of Yellow team and **Mr. Gopalan**, Team Coordinator were the advisors who were present with our team to discuss the research topics of our team members. Each team member of Yellow team was called separately by them to explain about how the research topic is being prepared by each student. So the other students were not able to listen to the conversation between the students and the advisors.

Followed by the discussion of our research topics with the advisors, we were all gathered together in a hall. Initially **Mullanchery M. Velaian**, Organizer of KAP gave away an introductory speech. He gave us directions regarding the preparation of research topics provided to the members of each teams. He told us to collect information from internet, newspapers and other sources. He advised us not to take information from Wikipedia since it is an editable encyclopedia that allows users to edit its contents. So its contents are not fully trustable. He suggested us to add a list of references at the end of our research document. Before concluding he informed us about the meeting on **Arivial Tamil Mullakam** which is about to be held on 17<sup>th</sup> Jan 2014.

Then **Dr. James Wilson**, Chairman, Sigma College of Architecture started his speech. He said “Attendance is very important. If we are not attending a class on a particular day, then we can’t be able to prepare report on that particular meet. So we must give full precedence to attend every class that KAP conducts”. He concluded by giving some informative guidance regarding the preparation of our research topics.

Following him **Mr. Edwin Sam**, Social Scientist began to talk. He said, “Each team has given a research topic based on a unique theme. Based on that theme selected topics are given to the members of the team. Therefore all the team members should work hard to prepare their research topic”. He concluded by saying more points about how to prepare our research topics and about the references we refer to prepare our research topics.

Subsequently **Shri.C.Sajeev**, Talent Motivator of green team started his talk. He said “We can refer various topics from internet. But we should understand the contents before preparing our speech or thesis.” He advised us to prepare our reports on by our own from the notes that we take from class and not to copy and paste contents from somewhere else.

Next **Mr. John Rabi Kumar**, ISRO Propulsion Complex Mahendragiri began to talk. He said about the reference sources where we could get materials for preparing our research topics. He said, “We can take references from Internet, Newspapers and Books and so on”. He said we can also get guidance from our KAP members and guide teachers.

Followed by him **Mr. Gopalan** started his talk. He said, “There are two categories of students. One category of students makes themselves get involved in all the activities. So that they could get vast amount of information being active. Unlike them the other category of students remains idle and would never make themselves get involved in all the activities. He quoted that many former KAP students had won Quiz competitions because of their active participation in all the events conducted by KAP. KAP will work hard to take all the students to first category by training and moulding them. He concluded by saying a story regarding this and said about the references that are required to prepare our research topics.

Then Shri. **M.C.Shibin Tad**, NI University started to talk. He said that we should understand the topics given to us before creating our research topics.

Next **Shri. S. Thiruvengadam**, Employment officer (Rtd) started his speech. He said “Each point in the report should be clearly written so that readers can easily understand the theme of the report”. He concluded by saying remarks of our topics.

Then **Mr. Shibin**, NI University began to talk. He said, “There are differences between an ordinary article and a research article. An ordinary article contains only common information, but a research article contains various findings, statistics and unknown facts related to the topic”. He advised us to create a report in such a way in order to make it better.

Following him, **Mr. Sahajan**, ISRO Propulsion Complex Mahendragiri started his speech. He said, “Students can not only acquire information and data from internet but also can refer books, magazines to collect contents regarding the preparation of their research topics”. He advised us to go to library to refer related books. Finally he concluded by suggesting us to refer more books in the field of Environment Science.

After his talk **Mrs. Rathika**, Guide teacher of green team began her talk. She said, “We should refer newspapers, magazines, internet references in order to gather information to prepare

our research topics. She advised us to take hints before referring the sources and then to prepare the document work.

Followed by her **Mr. Captain Bennet Singh**, Pilot Tuticorin Port started to speak. He said, “Each team member should keep track of the topics given to others because the final thesis will be prepared by combining the contents of all the members of each team.” He concluded by saying that every student can ask the doubts regarding the topics given to them. At last **Miss. Abhirami**, Yellow team Leader, gave the feedback of the team meet.

Through this team meet I got ideas to prepare the research topics from various sources other than internet such as books, magazines, newspapers and so on. I understood about the importance of being active and attentive in the class. I offer my gratitude towards all the members of KAP, my guide teachers and advisors who shared their valuable thoughts and ideas with us to prepare our research topics.



## Report: 5

### **R.J.RESHMA, MAROON TEAM.**

The first team meet of young scientists programme 2014-15 was conducted on 4th January, 2015 at Hindu Vidyalaya School, Marthandam at 1:30 pm. We assembled at the school and five classrooms were allotted for five teams. First we had a glance over our research topic and then began to present our topics. We shared the information about our research topics which we had collected. The members of maroon team gathered in a class room. We began the presentation by seeing the topics in the selection list.

First, it was the turn of Abila to speak on the topic 'What is sustainable agriculture?' She first gave a clear cut definition of sustainable agriculture. "Sustainable agriculture is the efficient production of safe, high quality agricultural products, in a way that protects and improves the natural environment, the social and economic conditions of farmers, their employees and local communities, and safeguards the health and welfare of all farmed species." Sustainable agriculture integrates three main goals--environmental health, economic profitability, and social and economic equity. Then she gave few explanations and description about it and finally concluded her talk.

Next R.J.Jenisha came forward to share her views on the topic 'Need for sustainable agriculture'. She said the main things about why do we need sustainable agriculture. Her main points included about degradation of environment, bad human health and the poor condition of the soil.

Then S.J.Shifi came forward to share the information on the topic 'Ancient agricultural practices- Farming methods- Crop rotation and intercrops- fertilizers'. She explained the methods used in ancient times for agriculture. In olden days, they used to plough the field by using the cows. The wastes of the cows were used as manure for the crops in ancient times. They used broadcasting methods to sow seeds. This means that they used hand to sow seeds. They plucked the weeds which grow along with the crops by using their hands. Then she concluded it.

R.Kowshanth Kalidas presented on the topic 'Modern agricultural practices- Farming methods- Crop rotation – fertilizers- genetically modified crops'. As the technology has increased, people prefer farming method by using different machines. They use tractors to plough the fields. Seed drill machines are used for sowing the seeds. Fertilizers are used for higher yield of the crops. Pesticides and insecticide are used to protect the crops from insects and pests but they have some side effects to the crops. For controlling the growth of weeds, weedicides are being used.

It was the turn of X.M.Mary Sushmija to present her information on the topic 'Latest innovation in agriculture'. She explained the latest techniques used to promote sustainability in agriculture. New feeding systems for animals are being implemented now. She told about the farm management and milking system. City farmers grow crops in communities in urban areas. She said a methodology of a company who did research on this. She shared some ideas about roof top farming also. Dr. Sujin Herbert, Govt.Hospital, Thuckalay gave the remarks and he asked some questions to us. He also cleared our doubts.

Then S.Sanjana came forward and told about the topic 'Difference between ancient and modern agriculture (pros & cons)'. She said that in olden days farming had more labour use. But now everything is done using machines. In olden days, manures and dried leaves were put to plants. Nowadays, pesticides and fertilizers are used. People watered the plants from rivers, wells and canals in ancient times. But now the irrigation facilities have developed. She shared some

more differences and then concluded. Dr. Sujin Herbert gave the remarks and cleared some points.

S.Dani Rovas, the co-leader of maroon team told about 'How the sustainability is affected due to modern agricultural practices?' some of her sub topic include infertility of soil, lack of bio-diversity, contamination of water, groundwater leakage, lack of water management, energy is depleted and lack of waste management.

'Remedies for bring sustainability in agriculture' was presented by K.K.Prabin Kumar. The roots of the plants should be left in the field and only the portion of the plant above to ground should be cut, so that soil erosion can be prevented. Some leguminous plants can be planted to fix more amount of nitrogen in the soil. The crops planted after the plantation of leguminous crop will give more yields. He then shared few ideas to maintain sustainability in agriculture.

K.R.Aruna told about 'Sustainable agricultural practices'. She said about the sustainable agricultural practices done by the government of India. The agricultural practices, its cause and its impacts and effects in our society was also said by her.

J.M.Jereshea told about 'Sustainable initiatives by India'. She shared the steps taken by India to promote sustainability in the field of agriculture. Last but not the least, R.J.Reshma, the leader of maroon team shared her ideas on the topic 'Green revolution an overview'. She said about the beginning of the green revolution in 1960. She said that history of green revolution in India. The positive and negative points of green revolution were also told. She said that issues taken along with the green revolution too. The green revolution, new pesticides and weedicides were created. High yield crops were grown by the usage of multiple cropping methods. High yield, disease resistant crops were grown. Dr. Norman E.Borlaug is considered to be the 'Father of green revolution'. After this session, we discussed about the topics of Arivial Tamil Muzhakkam.

Then all the students assembled in one classroom. We heard some suggestions from the members of KAP. Mr.Mullanchery M. Velaian said that we should study our research topic and collect information about our topic and not out of it. We can clear our doubts by contacting our coordinators and guides. Before preparing a research report, we should first think about the sources from which we have to collect the information and also how to prepare it. He said that the members of each team should send the soft copy of their collected information to the members allotted through e-mails. The compiling system is done based on this only, he added. Reference or bibliography should be given in our report. He told us again to research more about the topic and add information from various websites and other sources. We should use books as a source. Newspaper cuttings can help us to find more current affairs regarding our project. There should be maximum 35 pages after compiling all the information of the team members, he said. He then informed us about the Arivial Tamil Muzhakkam. He advised us to ask doubts whenever required but we shouldn't raise doubts on the day before the meeting.

Dr. James Wilson, Chairman, Marthandam College of Engineering, Kuttakuzhi, then gave a talk. He said that the students are diverting from the topic. Attendance is very important, he said. We should try to avoid other programmes for this one year and should engage fully in the young scientists programme. If we are absent for one meeting, there will be discontinuity. So it's better not to take leaves. He instructed us to read and understand the material which we have collected.

Shri.C.Sajeev came forward to give a short talk. He said that most of the students are copying the same content from the internet and are preparing without understanding it. Collecting information from different articles written by different authors are also very important. But collecting information from different sources without a link will mismatch other information, he added. We should apply our own ideas and should frame sentences, he concluded.

Shri.M.John Rabikumar, ISRO Propulsion Complex, Mahendragiri, said us to understand the topics first and then collect information from different sources. Paper cutting which we have can also be used as a reference. He stressed the point that hardworking is very important. We should ask ideas from the persons who knows about the particular topic very well. He then concluded.

Shri.P.Gopalan, Headmaster Rtd, told us that there are two set of students in KAP. The first set of students is those who write the reports regularly and include themselves in all the activities. They get tremendous improvement, he said. The second set of people is those who come to the meeting and see here and there and go. They will not get any development, he said. The young scientist programmes nurture more thing sin students. He said that all the students are expected to be in the first set of students. We may face some obstacle while reaching our goal but we should be ready to face them. He then said that if the members of KAP would have explained the sub- topics well to the students, then they may have did it better. He shared an incident from his life and then concluded his talk.

Dr. Sujin Herbert, Govt.Hospital, Thuckalay, said that we students didn't understand the concept clearly. We have not yet understood the meaning of sustainability. He told us that we must know the meaning of each and every word we include in our report. He told an example for that by taking the word 'resistance'. There should be continuation in the content of each and every page. There should be links between each and every words, he ended.

Shri.S.Thiruvengadam, Employment officer Rtd, gave us a talk. He told that KAP nurtures young scientists and that is the motto of KAP. He instructed us to read and understand the materials and to clear all our doubts based on it. There are two types of staffs, he said. One is harsh type and other is soft type. Each and everyone may have different opinions bout our research work. We should do our duties with interests, he said.

Shri.M.C.Shibin Tad, NI University, Kumarakovil came forward to speak. He said that there will be difference between research article and a simple article. The research article will be written in a systematic manner. It will contain an introduction, conclusion, bibliography, review of literature, methodology, findings and others. We should include our solutions in our research report, he said.

Shri.T.M.Sahajan, ISRO Propulsion Complex, Mahendragiri, said that we are only depending upon the internet to collect the information. We can also refer the book and make use of school and public libraries. The information in internet is not correct and they can only be used to gather current data. In books, the current data will not be available but we can get accurate information about the topics. In books, we read and collect the information and also it enriches our reading and vocabulary skills. But in net, we just copy and paste and we do not read the information properly. He gave his suggestion to us, that is, to read books related to environment (Environmental studies). He told us to gather some illustrations from net and use other sources of information to collect more data about our topic.

All are busy nowadays but we should allot some time to do our research topic. We should contact the [persons at high positions and communicate with them to clear our doubts. Money and time is not a matter but we should study something. He then concluded his talk.

B.Abhirami, the leader of yellow team gave the feedback and conveyed thanks. The meeting ended at 04:40 pm. I gathered more knowledge from this meeting. The questions asked by the judges made me to think out of the box. I came to know more about my topic and other topic of my team members. I came to know many scientific explanations behind each process. So I thank KAP fro giving me such a wonderful opportunity to involve myself in a team meet and increase my questioning and answering skills. I express my deep sense of gratitude to Mr.Mullanchery M.Velaian, the organizer of KAP.