

- **Emphasis on the critical importance of Mangroves in maintaining the ecological balance of coastal regions.** They highlighted how mangrove ecosystems serve as natural shields against coastal erosion and protect communities from the devastating impacts of storm surges and extreme weather events. The audience was informed about the alarming rate at which mangroves have been lost globally due to urbanization, industrialization and deforestation.
- They pointed out that these unique ecosystems support a plethora of marine and terrestrial species, playing a vital role in the life cycles of numerous fish, crustaceans, birds and mammals. The audience was encouraged to comprehend the delicate balance of these ecosystems and the irreplaceable loss that results from their degradation.
- The speech highlighted the socio-economic significance of mangroves for coastal communities. Mangroves provide valuable resources such as fish, timber and medicinal plants, supporting the livelihoods of millions of people worldwide.
- Dr. M. Ravichandran, addressed the various threats faced by mangroves, including unsustainable development, pollution, overexploitation and climate change impacts. They emphasized the need for collaborative efforts from Governments, NGOs and the public to address these challenges effectively.
- Dr. M. Ravichandran, concluded the speech with a passionate call to action, urging everyone present to become proactive stewards of Mangrove Ecosystems. They encouraged individuals to engage in tree planting drives, participate in clean-up campaigns, support Mangrove Conservation initiatives and raise awareness within their communities.



- The Session on Question and Answer was a much awaited one as it was an interactive session with the experts in Ocean Research. These great intellectuals were Dr. M. Ravichandran, Dr. Sampath, Mr. David-Australian Consulate, Dr. P.S. Goel, a Padma Shri Awardee and Prof. T Balasubramanian, Former VC, CARE.
- They had taken time out of their busy schedule to meet the students to have an interactive session and also motivated the students by telling, 'EACH ONE OF YOU HAS THE POWER TO MAKE A DIFFERENCE', 'SMALL ACTIONS, WHEN MULTIPLIED, CAN CREATE SUBSTANTIAL CHANGE". Also, they shared practical tips on how students can contribute to Ocean Conservation in their daily lives like reducing single-use plastics, participating in beach clean-ups and spreading awareness about the Challenges faced in the oceans.
- Our school initiated the proceedings with the first question, talking about acidification of sea water and its impact on the coral reefs and that set the base for things to come.
- The Students had the opportunity to do what most people wouldn't be able to, as they had a very interesting session talking and discussing about various pressing issues ranging from Deep Sea Mining, measures to reduce the effects of plastic on water bodies, the implosion of Titan Submersible and many other issues related to the Oceans across the World. With the session coming to end, all of us had asked everything that we wanted to and were taken aback by the amount of knowledge that the Scientists possessed.



- On the way out, met Mr. David and students had a great conversation with him and that marked the end of this wonderful day.



Pranav Anandan - XII C and Bhaarath Putran – XI C along with the Guest Mr. David

STUDENT'S FEEDBACK:

- As Students, they had gotten the wonderful chance to talk to top Scientists, who continuously inspire people, make major decisions, and work with Prime Ministers. It is indeed a great honour to have been part of this experience and also enjoyed every second of it.

QUESTIONS PREPARED BY THE STUDENTS FOR THE SESSION:

- Is tidal energy generation efficient and viable in India?
- How is Ocean Mining different from that of Land Mining?
- What is the scope for development in future Ocean Technology?
- What are the career options available in the stream of Ocean Technology?
- Recently, IIT Kanpur successfully developed artificial rain and demonstrated cloud seeding. I was in the UAE for 10 years, and I noticed that children always felt sick when they implemented cloud seeding. Isn't it better to deal with climate change through natural means like afforestation rather than spending lakhs of rupees to meddle with nature?
- Oil spills are common in our oceans and are said to be quite dangerous for aquatic life. How does the ocean recover from so much petroleum in its waters, how long does it take? And how can we prevent it from happening?
- Underwater exploration is a field as wondrous as it is dangerous. They include high pressure, low oxygen, dangerous aquatic animals etc. What are the new technologies being developed for preventing these problems, from scuba diving to submarines?

- Recently, scientists have discovered new species of bacteria like *Idonella sakaeensis* which decomposes the plastic polyethylene. Is it safe to release huge numbers of this bacteria into the oceans with the hope of cleaning up the plastic, will overpopulation of this bacteria prove harmful for the aquatic flora and fauna?
- How do certain marine creatures appear to have ageless features, such as the lifespan of certain deep-sea corals or the "immortality" of jellyfish, and how can we use these traits to better understand ageing and longevity in other organisms, including humans?
- How can marine animals navigate and move across huge distances in the open ocean. Can we learn about the techniques they use, perhaps leading to advances in human navigation and communication technologies?
- What are the impacts of disposing of human waste in water bodies such as oceans with special regard to marine life? Could the unsanitary conditions created in the oceans become a breeding spot for the creation of new pathogenic bacteria and viruses?
- In view of the depleting natural resources on the land, deep sea mining can be considered as an alternate source to minerals and metals, but the extreme conditions in the sea especially high pressure make this a daunting task, what is NCCR's view on this matter, and if NCCR has already started to pioneer in this field, what is NCCR's progress?
- Global warming has led to the melting of ice caps which in turn has led to the increase in sea levels. Many sources claim that Chennai may get entirely submerged in the future. Is this true, if so would it be possible to prevent this by perhaps changing the sea terrain near Chennai.
- It is known that water has a high specific heat capacity, and therefore can act as a reservoir of heat. How can this heat energy be harnessed. Can we potentially use the ocean as a huge reservoir of energy?

STUDENTS WHO HAD THE OPPORTUNITY TO INTERACT WITH THE RENOWNED SCIENTISTS:

S.NO	NAME OF THE STUDENT	CLASS & SEC
1	S P ANVITA	XII A
2	THUSHYANTH	XII B
3	PRANAV ANANDAN	XII C
4	KARTIK SURANA	XII D
5	ADVAITH RAMESH	XII E
6	MIRRALINI SENTHIL	XI A
7	AASHIKA K	XI B
8	VARSHA B	XI B
9	BHAARATH PUTRAN	XI C
10	SHREYA V PAI	XI D

