Oil Eliminators

AIChE Community Affiliation (Rowan University AIChE Student Chapter)

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Science and engineering projects such as the one discussed in this module titled “Oil Eliminators” are great to engage students and individuals to develop their problem-solving skills and gain practical experience in applying scientific principles to real-world challenges using cost-effective materials. The objective of this project is focused on the following main aims:

1. Sustainability and the effects of oil spills on the aquatic ecosystem, wildlife, and on human health.
2. They learn about the physical and chemical properties of mixtures, miscible and immiscible substances, and potential methods to separate them
3. Study the effect of chemical dispersants on cleaning the oil spills
4. Problem-solving techniques
5. Teamwork and collaborative engagement with a common targeted goal
6. Application of chemical engineering fundamentals to solve real-world problems

Through this project, students gain a much deeper understanding of the science behind oil spill reduction using surfactants and the importance of protecting the environment and wildlife. Students also learn about the different strategies and methods for pollution prevention, which contribute to a more sustainable future.

Interested students can explore and gain more insights into the technologies involved in oil spill pollution prevention through the following website links:

* <https://chem.libretexts.org/Ancillary_Materials/Exemplars_and_Case_Studies/Exemplars/Environmental_and_Green_chemistry/The_Use_of_Chemical_Dispersants_for_Oil_Spills>
* <https://masgc.org/oilscience/oil-spill-science-dispersant-bkgrnd.pdf>
* <https://www.itopf.org/knowledge-resources/documents-guides/response-techniques/dispersants/>