

IICT – Indian Institute of Chemical Technology

Chemistry plays an important role in many aspects of our daily lives – from medicines and fuels to plastics, fertilisers, and clean energy technologies. Scientists at the **CSIR - Indian Institute of Chemical Technology (IICT)** work to develop new chemical processes and technologies that support industries and improve everyday life.

Located in **Hyderabad**, IICT is one of the major laboratories of the **Council of Scientific and Industrial Research (CSIR)**. The institute focuses on **chemical technology, industrial chemistry, and process development**, helping transform scientific discoveries into practical solutions that industries can use.

One of the key areas of research at IICT is **drug and pharmaceutical technology**. Scientists work on developing efficient methods to produce medicines, ensuring they are safe, affordable, and accessible. IICT has contributed to improving processes for manufacturing several important drugs used in healthcare.

The institute is also involved in research related to **energy and environmental sustainability**. Scientists explore ways to produce **clean fuels, better catalysts, and greener chemical processes** that reduce pollution and energy consumption. These innovations help industries operate more sustainably while protecting the environment.

Another important contribution of IICT is in **chemical process engineering**. Researchers design and test technologies in pilot plants before they are used at large industrial scales.

This helps ensure that new technologies are efficient, safe, and economically viable.



Activity Idea for Teachers

Teachers can introduce the concept of **chemical reactions and industrial chemistry** through a simple classroom activity. Students can observe a basic reaction, such as **mixing vinegar and baking soda** and watch how carbon dioxide gas is produced.

Teachers can ask students to think about:

- What new substances are formed during a reaction?
- Why do chemical reactions release gas or heat?
- How might industries use controlled chemical reactions to produce useful products?

This activity helps students understand that **chemical reactions are the foundation of many industrial processes**, connecting classroom chemistry to real – world research conducted at institutes like IICT.