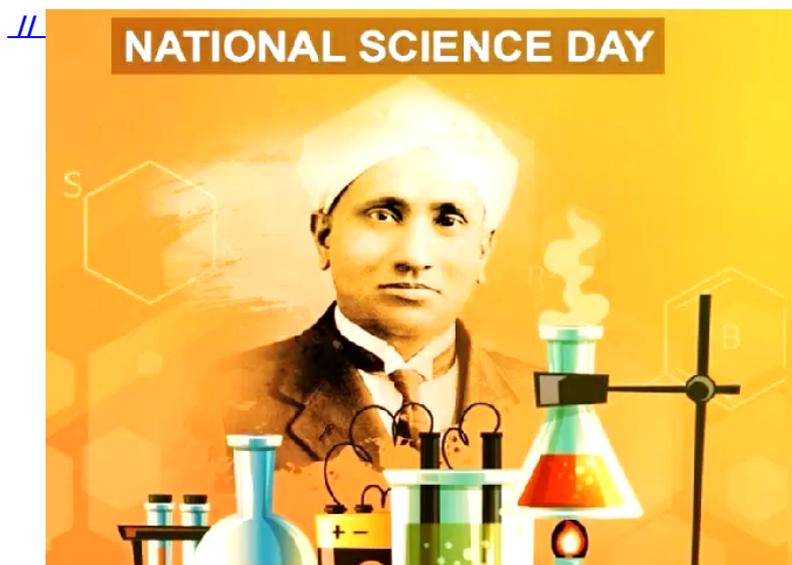




National Science Day 2022

Why in News?

Recently, the Prime Minister greeted India's scientific community on the occasion of [National Science Day \(28th February\)](#).



What are the Key Points?

- **National Science Day (NSD)** is celebrated annually on 28th February to commemorate the discovery of the [Raman Effect](#) by Nobel laureate and Physicist **CV Raman** on this day in 1928.
 - **In 1986**, the National Council for Science & Technology asked the Government of India to designate 28th February as NSD.
 - **Since 1987, the event has been celebrated all over the country** in schools, colleges, universities and other academic, scientific, technical, medical and research.
- The day aims to propagate the **message of the importance of science and its application** among the people.
- The purpose of celebrating this day is **to enhance scientific temper, popularisation of science and encourage innovative activities by infusing scientific temperament** in the masses and to create a positive scientific research culture.
- The Nodal Agency to support celebration of NSD is the **National Council for Science & Technology Communication (NCSTC)** of the **Ministry of Science and Technology**.
- **Theme 2022:** "Integrated Approach in science and technology for Sustainable Future".
 - The theme focuses on a **four-fold integrated approach for a sustainable future** which are

- **Extended scientific intervention** encompassing engineering
- **Medical** and other institutions.
- Extra scientific integration involves **identification of the needs of other ministries** like Jal Shakti, Railways, among others.
- Extended science driven all **inclusive approach integrating startups and industry**.

Who was CV Raman?

- Chandrashekhara Venkata Raman was a physicist from Tamil Nadu.
- His work in the field of light scattering earned him the **Nobel Prize** for Physics in 1930.
- This phenomenon was **named the Raman effect**.
- In 1954, he was honoured with India's **highest civilian award, the Bharat Ratna**.

What is the Raman Effect?

- Raman is the **inelastic scattering of a photon by molecules which are excited to higher vibrational or rotational energy levels**. It is also called Raman scattering.
 - In simpler words, it is **a change in the wavelength of light that occurs when a light beam is deflected by molecules**.
 - When a beam of light traverses a dust-free, transparent sample of a chemical compound, a **small fraction of the light emerges in directions other than that of the incident (incoming) beam**.
 - Most of this scattered light is of unchanged wavelength. A small part, however, has **wavelengths different from that of the incident light** and its presence is a result of the Raman Effect.
- The Raman effect **forms the basis for Raman spectroscopy which is used by chemists and physicists** to gain information about materials.
 - Spectroscopy is the **study of the interaction between matter and electromagnetic radiation**.

[Source: PIB](#)

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