

# New definition of kilogram

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**Context:** The CSIR-NPL, which is India's official reference keeper of units of measurements released a set of recommendations requiring that school textbooks, engineering-education books, and course curriculum update the definition of the kilogram

- Kilogram derived its provenance from the weight of a block of a platinum-iridium alloy housed at the International Bureau of Weights and Measures in France. All other prototypes that served as national reference standards, including the one at New Delhi's CSIR-National Physical Laboratory (NPL), were calibrated to it
- Kilogram joined other standard units of measure such as the second, metre, ampere, Kelvin, mole and candela that would no longer be defined by physical objects
- The measures are all now defined on the basis of unchanging universal, physics constants.
- The kilogram now hinges on the definition of the Planck Constant, a constant of nature that relates to how matter releases energy
- The institute is also in the process of making its own 'Kibble Balance', a device that was used to measure the Planck Constant and thereby reboot the kilogram

## CGPM

- The 26th General Conference on Weights & Measures (CGPM) last year redefined World's standard definition of Kilogram, Ampere, Kelvin, and Mole
- CGPM is the highest international body of the world for accurate and precise measurements.
- The International Bureau of Weights and Measures (BIPM),

the main executive body of CGPM has the responsibility of defining the International System of Units (SI).

