

TWENTIETH CONGRESS OF THE)
REPUBLIC OF THE PHILIPPINES)
First Regular Session)



HOUSE OF REPRESENTATIVES

House Bill No. 2331

**Introduced by REPRESENTATIVES LANI MERCADO-REVILLA,
BRYAN B. REVILLA AND RAMON JOLO REVILLA III**

**AN ACT
SEEKING TO INSTITUTIONALIZE “UNANG AGHAM”, PROMOTING SCIENCE
EDUCATION IN EARLY CHILDHOOD**

EXPLANATORY NOTE

The Philippines’ recent performance in the 2022 Programme for International Student Assessment (PISA) placed the country third to the last among 81 countries in science.¹ Despite efforts, educational outcomes have shown little improvement since 2018.

In response, President Ferdinand Marcos Jr. has directed the Department of Education (DepEd) to redouble its efforts not only to enhance PISA scores but also to elevate overall student achievement nationwide.²

This proposed “Unang Agham Act” represents a concerted effort, led by the DepEd, to establish a strong foundation for future generations by enhancing early science education.³ This measure aims to equip Filipino children with essential skills and knowledge vital for their holistic development and future success.

¹ Bautista, J. (2023, December 6). PH students still among lowest scorers in reading, math, science – pisa . *Inquirer.Net*. Retrieved 2024, from <https://newsinfo.inquirer.net/1871182/ph-students-still-among-lowest-scorers-in-reading-math-science-pisa#:~:text=In%20the%202018%20Pisa%2C%20the%20country%20scored%20the,ranked%20third%20to%20the%20last%20among%2081%20countries>.

² Servillos, N. J. (2024, January 12). Marcos wants deped to raise philippine students’ pisa ranking. *Philstar Global*. Retrieved 2024, from <https://www.philstar.com/headlines/2024/01/12/2325183/marcos-wants-deped-raise-philippine-students-pisa-ranking>.

³ HB 3688, introduced by Reps. Villafuerte, et al. during the First Regular Session of the 19th Congress has laid a valuable framework for the current proposed bill.

Research in child development underscores the significance of early learning, revealing that children possess greater learning capacity than previously understood.⁴ Science, especially during childhood, not only establishes the foundation for future scientific knowledge but also nurtures essential skills and attitudes towards learning.⁵ Early science education fosters hands-on exploration, encourages inquiry, promotes keen observation, and nurtures curiosity about the natural world.⁶

Currently, societal changes have reduced opportunities for children to directly engage with objects, materials, and natural phenomena in their homes.⁷ Factors such as rising child poverty rates, dual-working households, and increased media consumption and screen time among children have contributed to this trend. As a result, early childhood classrooms have become crucial settings for fostering experiential learning opportunities.

Early childhood education, spanning from birth to kindergarten years, has evolved to encompass the critical period until the third grade, reflecting a deeper understanding of developmentally appropriate practices advocated by leading educational bodies.⁸

Advancing early science education does not aim solely to produce future scientists but seeks to nurture all children into individuals poised to contribute meaningfully to society. By investing in our children's futures, we affirm our commitment to national progress.

Given these considerations, we urge the swift passage of this bill.

⁴ Kuhl, P. K. (2012). *Early Language Learning and Literacy: Neuroscience Implications for Education*. National Library of Medicine - National Center for Biotechnology Information. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3164118/>

⁵ Prachagool, V. (2021). Scientific Attitude of Young Children through Literature and Project-Based Learning Organization. *Journal of Educational Issues*, 7(2). <https://files.eric.ed.gov/fulltext/EJ1324765.pdf>

⁶ Campbell, C., Jobling, W. M., & Howitt, C. (2015). *Science in Early Childhood* (Second). Cambridge University Press. 2024, https://www.researchgate.net/publication/278412724_Science_in_early_childhood

⁷ Worth, K. (2010). *SEED Paper: Science in Early Childhood Classrooms: Content and Process*. Early Childhood Research and Practice. <https://ecrp.illinois.edu/beyond/seed/worth.html>

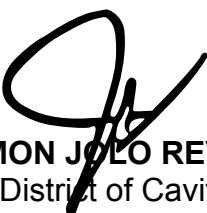
⁸ Keily, T., Evans, A., & Atchison, B. (2019, April). *Policy Guide: Strengthening the Early Childhood Education Continuum*. Education Commission of the United States. <https://files.eric.ed.gov/fulltext/ED594403.pdf>



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TWENTIETH CONGRESS OF THE)
REPUBLIC OF THE PHILIPPINES)
First Regular Session)

HOUSE OF REPRESENTATIVES

House Bill No. **2331**

Introduced by REPRESENTATIVES LANI MERCADO-REVILLA,
BRYAN B. REVILLA AND RAMON JOLO REVILLA III

AN ACT SEEKING TO INSTITUTIONALIZE “UNANG AGHAM”, PROMOTING SCIENCE EDUCATION IN EARLY CHILDHOOD

*Be it enacted by the Senate and House of Representatives of the Philippines in
Congress assembled:*

SECTION 1. *Short Title.* – This Act shall be known as the “Unang Agham
Act”.

SEC 2. *Declaration of Policy.* – It is the declared policy of the State to
recognize the importance of early childhood science education in advancing the right
of all citizens to quality education. Towards this end, the State shall develop
programs that nurture scientific curiosity and literacy among young learners,
particularly those in underserved and public school settings. These programs shall
foster an early understanding of the world through experiential, inquiry-based, and
play-centered learning approaches.

SEC 3. *Promotion of Early Science Education.* – To ensure the meaningful
integration of science in early childhood education, the Department of Education
(DepEd) shall adopt and implement the following strategies:

(a) Unang Agham Grants. – The DepEd Secretary shall award “Unang Agham
Grants” to eligible institutions that design and deliver science education programs for
children in pre-school and Grades 1 to 3. Priority shall be given to applicant
institutions that:

- (1) Demonstrate innovative and inclusive approaches to teaching science
through play-based, hands-on, and inquiry-driven strategies;
- (2) Encourage broad teacher and community engagement;

(3) Utilize experienced educators as program facilitators or mentors; and

(4) Conduct sustained follow-up activities for a period of at least six (6) months to reinforce learning and implementation.

(b) Unang Agham Learning Corners. – The DepEd shall establish regional or mobile “Unang Agham Learning Corners”, equipped with rotating science kits, interactive tools, and age appropriate resources. These flexible learning hubs shall prioritize deployment in under-resourced, remote, or geographically isolated schools and be regularly updated through regional DepEd offices.

(c) Mandatory Teacher Training. – The DepEd shall institutionalize a mandatory, nationwide teacher training program in early childhood science education. This training shall emphasize child-centered pedagogies, including play-based, hands-on, and inquiry-driven strategies. It shall form part of the continuous professional development of all educators teaching science in pre-school to Grade 3.

(b) Other Incentives and Interventions. – The DepEd may provide additional support to further strengthen early science education, including:

(1) Science Resource Centers: Establish and equip dedicated spaces in schools with science materials and tools not commonly available in classrooms.

(2) Recognition and Awards: Implement an annual recognition system to honor schools, teachers, and administrators demonstrating exemplary efforts in advancing early science education.

(4) Community Partnerships: Promote collaboration with local communities, government agencies, non-government organizations, or private entities to enhance science education.

SEC 4. Inter-Agency and Stakeholder Collaboration. – In addition to the DepEd’s responsibility for overall program implementation, the following agencies shall provide complementary support within their respective mandates:

(a) Department of Science and Technology (DOST): Provide technical expertise and resources which may help in the development of age-appropriate science learning materials, and facilitate opportunities for young learners to interact with Filipino scientists.

(b) Department of Health (DOH): Promote the health benefits of early science education, and contribute guidance on child development and wellness integration in learning environments.

(c) Philippine Science High School (PSHS): Support the development of model early science programs and facilitate mentorship and school partnerships.

(d) Department of Environment and Natural Resources (DENR): Promote environmental awareness and science learning through age-appropriate activities and materials on topics such as climate change, biodiversity, waste management, and sustainability.

(e) Department of Trade and Industry (DTI): Foster innovation and creativity among young learners by integrating basic entrepreneurship and design thinking into early science activities.

(f) Local Government Units (LGUs): Assist in the local implementation of the program, including support for Unang Agham Learning Corners, partnerships, and logistical assistance.

(g) National Museum: Offer interdisciplinary science learning that connects science with Filipino cultural heritage, artifacts, and natural history.

(h) Philippine Information Agency (PIA): Disseminate information on the goals, activities, and achievements of the program to generate public awareness and support.

Other government agencies and non-government organizations may also be engaged by the DepEd as necessary to support and sustain the implementation of this Act.

SEC 5. *Evaluation and Report.* – The DepEd Secretary shall submit a report to Congress every two (2) years, beginning two (2) years after the enactment of this Act. The report shall include progress updates, challenges, and impacts measured through science literacy indicators and relevant international benchmarks such as the Programme for International Student Assessment (PISA).

SEC 6. *Implementing Rules and Regulations.* – Within sixty (60) days from the effectivity of this Act, the DepEd, in coordination with the DOST, DOH, PSHS, DENR, DTI, LGUs, NM, and PIA, and other relevant stakeholders, shall formulate and issue the necessary rules and regulations for the effective implementation of this Act.

SEC 7. *Appropriations.* – The amount necessary to implement the provisions of this Act shall be charged against the current appropriations of the DepEd, and the participating government agencies, as may be applicable. Thereafter, the amounts necessary for the continued implementation of the program shall be included in the General Appropriations Act under the budgets of the DepEd and all other implementing agencies, in accordance with their respective mandates and responsibilities under this Act.

SEC 8. *Separability Clause.* – If for any reason, any provision is declared unconstitutional, the other sections or provisions hereof which are not hereby affected shall continue to be in full force and effect.

SEC 9. *Repealing Clause.* – All law, decrees, orders, rules and regulations or portions thereof inconsistent with this Act are hereby repealed or modified accordingly.

SEC 10. *Effectivity Clause.* – This Act shall take effect fifteen (15) days after its complete publication in the Official Gazette or in two (2) newspapers of general circulation, whichever comes earlier.

Approved,