

SCIENCE
TECHNOLOGY
ENGINEERING
MATHEMATICS

TEACHER EDUCATION IN INDONESIA

AT A GLANCE

POP. TOTAL
266,910,000

POP. CHILDREN
0-14 YEARS
66,170,000

2015 PISA RANK
FOR SCIENCE
62
Indonesia

THE CURRICULUM (AGES 13-15 YEARS)

REVISIONS IN THE LAST 25 YEARS:

- Curriculum 2013
- Curriculum 2013 Rev. 2016
- Curriculum 2013 Rev. 2017
- Implementation of Curriculum 2013 Rev. 2017 for all schools in year 2018

IMPLEMENTATION OF THE CURRICULUM

- Ministry of Education and Culture of Republic of Indonesia

FRAMING OF SCIENCE – WHY IS IT IMPORTANT?

“Materials of science such as, physics, biology, and chemistry to develop students' knowledge, understanding and analytical skills towards the natural environment and its surroundings” (Republic of Indonesia, 2003)

APPROACHES TO TEACHING

- The main approach is Scientific Approach: Observing, Questioning, Associating, Experimenting, Communicating (Can be arranged)

TEACHING LEARNING OUTCOMES

Spiritual Attitude Competence
Social Attitudes Competence
Knowledge Competence
Skills Competence

Note: For Spiritual Attitude Competence (1), Social Attitudes Competence (2) achieved by indirect teaching such as; exemplary, Habits, School Culture.

TEACHER RESOURCES FOR ASSESSMENT

- Technical Guidelines for Assessment of Learning Outcomes Based on Curriculum 2013 (Ministry of Education and Culture of Republic of Indonesia) pages 65
- Silabus Model of the Junior High School/Madrasah Tsanawiyah (Ministry of Education and Culture of Republic of Indonesia) pages 78

SCIENTIFIC PRACTICES

1. Live life with a positive, honest and open attitude; with the power of thought critical, creative and innovative; and collaborating, based on the nature of science
2. Understanding natural phenomena around it, based on the results of learning science nature in an integrated manner through its specific fields ; Physics, Chemistry and Biology
3. Evaluate existing thinking products in the community based on principles of natural science and ethics
4. Solve problems and make decisions in life based on scientific and ethical principles
5. Recognize and play a role in efforts to solve human problems, such as the problems of food availability, health, energy crisis, and living environment .
6. Understand the impact of the development of natural science in an integrated manner technological developments and human life in the past, present and potential future impacts on himself, others, and the environment.

STEM/SCIENCE TEACHER EDUCATION

YEARS REQUIRED PRE
UNIVERSITY

12

REQUIREMENTS TO
BECOME A SCIENCE
TEACHER

- A 4 years degree in science education/physics education/chemistry education/biology education/physics/chemistry/ biology plus 1 year Professional Teacher Education (PPG)

EDUCATION LENGTH
(YEARS)

4+1

EXAMPLE COURSE

Year 1; Basic of Science Subject (Chemistry, Biology, Physics, Environmental Science) + Basic of Mathematics and Statistics + Religious and Culture Education + Basic of Education
Year 2-3; Application of Science and Education Subject
Year 4; science teacher education program practice + Thesis Plus 1 year (PPG); Workshop in designing the Lesson plan of subject matter + Implementation in the school

GOV'T PROMOTION OF STEM

MINISTRY OF EDUCATION AND CULTURE

Ministry of Education and Culture of Republic of Indonesia
(<http://kemdikbud.go.id>)

1. Education and Training STEM Integrated in Implementation Curriculum 2013 on 24 May 2018
<https://p4tkipa.kemdikbud.go.id/berita/detail/diklat-integrasi-stem-dalam-implementasi-k13>

