

# STATISTICS AND INFORMATICS EDUCATION IN KOREA

---

# STATISTICS EDUCATION

---

# Goals of Statistics Education

- By making students to collect data, arrange the data and analyze the data, let them to **understand society, predict the future and to make a decision rationally** in order for them to be nurtured as democratic citizens.
- **Competence** to train in statistics: representing, collecting, arranging, making a graph and a table, analyzing, explaining, calculating, making a decision

# Arranging and analyzing data (Grade 7)

- Representing data using Stem and leaf, Frequency distribution table, Histogram, Frequency distribution diagram.
- Recognizing necessity and usefulness of Relative frequency
- Representing ordinary life data using computer software like Tongramy. (<http://tong.kostat.go.kr/front/main/main.do>)
- Correcting errors from a table and a diagram

# Representative values, Measure of dispersion, correlation (grade 9)

- Understanding of meaning of Middle value, Maximum frequent value, Average.
- Understanding Degree of dispersion and Standard deviation.
- Representing data using a scatter diagram and making a decision of its correlation.
- Choosing the proper representative values due to the characteristic of data.
- Calculating representative values by using a computer tool.

# Statistical Inference (grade 11)

- Understand the meaning of a population, a sample, and sampling.
- Understand average of samples, its relation to average of a population.
- Calculate the estimated average of a population by the average of samples

# INFORMATICS EDUCATION

---

Coding and Problem Solving by Coding

# Importance of Coding



마크 저커버그  
(페이스북 창업자)

제가 초등학교 6학년 때 프로그래밍을 처음 배우기 시작한 건 매우 단순한 이유였습니다. 여동생과 함께 즐길 수 있는 뭔가를 만들고 싶었거든요.

오늘날 컴퓨터 과학에 대한 이해는 필수가 되었습니다. 우리의 국가 경쟁력은 우리가 아이들에게 이것을 얼마나 잘 가르칠 수 있느냐에 달려있습니다.



버락 오바마  
(미국 대통령)

빌 게이츠  
(마이크로소프트웨어 창업자)



컴퓨터 프로그래밍은 사고의 범위를 넓혀주고 더 나은 생각을 할 수 있게 만들며 분야에 상관없이 모든 문제에 대해 새로운 해결책을 생각할 수 있는 힘을 길러줍니다.

이 나라에 살고 있는 모든 사람은 컴퓨터 프로그래밍을 배워야 한다. 프로그래밍은 생각하는 방법을 가르쳐주기 때문이다.

스티브 잡스  
(애플 창업자)





# Coding subject

- We teach coding from 5<sup>th</sup> grade to senior high school on the national curriculum, but not in “Mathematics” subject but in “Information” subject as an independent subject.
- It is compulsory.

# Elementary

- Grade 5-6: Each 17 hours
- Understand the role or function of a computer programming like ENTRY which is a block-based language and was developed with Government fund
- LOGO is a text-based language.
- Designing some basic tasks using ENTRY
- <https://playentry.org/> (English and Vitnam Language)

# Three Examples for elementary students

# Junior High School

- At least 34 hours for 1 year or 68 hours for 2 years (according to Principal's decision)
- High level of programming of ENTRY

# Senior High

- At least 34 hours for 1 year or 68 hours for 2 years (according to Principal's decision)
- Text based Programming language (Thison)