Working to strengthen the secondary school system within the public university. 

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People should be aware of the **importance of science and technology**; both for its cultural implications and for its **economical impact**.

Strong international leadership that provides sustained intellectual and financial support for strengthening the scientific capacity of developing countries is also urgently needed.

"The current economic crisis makes the link between education and employment very clear," says Steven Newton of the National Center for Science Education in Oakland. 2010.
This study case describes the **importance of supporting teaching science** in a developing country as Costa Rica, at the same time the aim is to explain the **main objectives** of the scientific secondary schools. It also shows some of the main characteristics of the system including the **admission process**, description of the **curriculum** and discuss the **impact of the different generations** of students and the role they are playing in the Costarican society.
Indicators of Mathematical Giftedness

- Unusual curiosity about numbers and mathematical information
- Ability to understand and apply ideas quickly
- High ability to see patterns and think abstractly
- Use of flexible and creative strategies and solutions
- Ability to transfer a mathematical concept to an unfamiliar situation
- Use of analytical, deductive, and inductive reasoning
- Persistence in solving difficult and complex problems

(Holton & Gaffney, 1994; Miller, 1990)

Indicators of Scientific Giftedness

- Strong curiosity about objects and environments
- High interest in investigating scientific phenomena
- Tendency to make observations and ask questions
- Ability to make connections between scientific concepts and observed phenomena
- Unusual ability to generate creative and valid explanations
- Interest in collecting, sorting, and classifying objects

(Yager, 1989)
We are not all the same; we do not all have the same kinds of minds; education works most effectively for most individuals if these differences ... are taken into account rather than denied or ignored.

“Reflections on Multiple Intelligences”
(Gardner, 1995)
THE CONCEPT BEHIND

High school system within the university system
“Ley de Promoción del Desarrollo Científico y Tecnológico. (Law 7169)”

LAW FOR THE PROMOTION OF SCIENCE AND TECHNOLOGY DEVELOPMENT
1990

STRATEGIES

SCIENTIFIC SECONDARY SCHOOLS
SCIENTIFIC SECONDARY SCHOOLS

Ministry of Education

Ministry of Science and Technology

Public University
SCIENTIFIC SECONDARY SCHOOLS IN COSTA RICA
The general aim of the Scientific Colleges is the integral formation of his students, considering the highest Costa Rican values, in the frame of an educational process and giving more attention on the *acquisition of solid knowledge and skills in the foundations of the mathematics, physics, chemistry, biology and the computer science*
General objective: to **develop and improve the scientific education** en Costa Rica

1. To give to the students a solid knowledge and abilities in the basics of science and technology, emphasizing the subjects of mathematics, physics, chemistry, biology and computer sciences.

2. To develop the maximum student potential in science and technology to the students with abilities in sciences.
3. To educate young people as **responsible citizens with a special aim to involved them in the Costa Rican development** process through a productive work in science and technological areas.

4. **to develop creativity** in the young people and to be **able to communicate** in the language of mathematics and science
ADMISSION PROCESS

First there is a **national call** to participate to those students in the **ninth grade in the high school system** whose meet the following requirements:

A grade point average of 85 (100 scale) in the subjects of mathematics and science through the 7th, 8th, and 9th grades.

Official inscription.

Application of a standardized test, which is based in the knowledge of 7, 8, and 9th grades. (mathematics and science)

Test includes logical reasoning test and a language test

Interview if it is needed more information to make a final decision.

30 new students are admitted each year
Mathematics, physics, chemistry, biology and computer sciences.

OFFICIAL CURRICULUM

Scientific curriculum

+ English
SOME RELEVANT RESULTS

• 100% of the students get access to the universities

• 100% approves the National Standardized test.

• Participation in national science fairs and international science fairs with great success.

• Around 95% of the students choose a science and technology careers

• Graduates working in leading technology companies in Costa Rica and overseas.
FRANKLIN CHANG DIAZ

Jorge Oguilve
First generation of the Scientific Secondary School from Perez Zeledon. National University.

AD ASTRA ROCKET
Thank you