Educational system of Ethiopia (Mathematics and Science)

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'Atbarah R.
Nile R.
Khartoum
Sudan
Eritrea
Red Sea
Asmara
Sanaa
Yemen
Adwa
Mek'ele
Gonder
12°
Djibouti
Djibouti
Gulf of Aden
Dese
Awash R.
Debre Mark'os
Dire Dawa
Addis Ababa
Nek'emte
Harer
Jijiga
Somalia
Nazret
Baro R.
Gore
Jima
Asela
Yirga 'Alem
Bonga
Omo R.
Goba
Ethiopia
Arba Minch'
Kibre Mengist
Dawa R.
Webi Shabeelle R.
4°
Lake Turkana
Dolo Bay
Uganda
Jubba R.
Kenya
Indian Ocean
36°
Mogadishu
44°
0 200 km
0 150 mi
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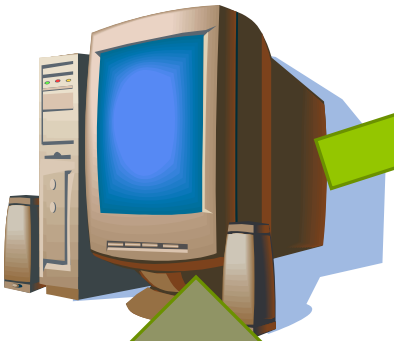
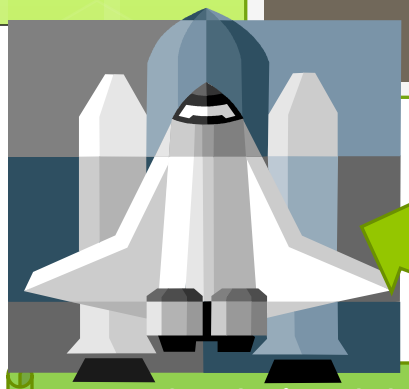
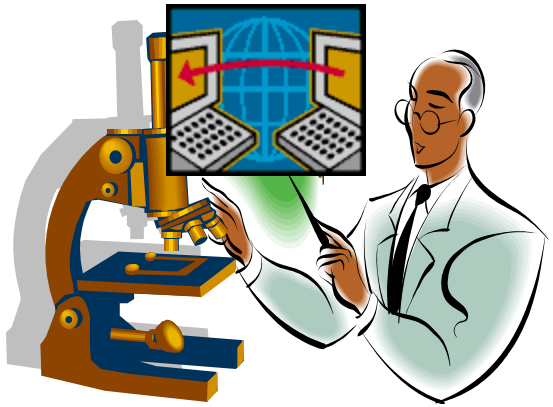
- POPULATION -ABOUT 85 MILLION
- ECONOMY-BASED ON AGRICULTURE
  -about 85% of the population lived in rural areas
- SPOKEN LANGUAGE---ABOUT 80
  -primary education is given by local language





Sustainable Development

Technology



Industry

Science & Mathematics

INTRODUCTION

- Modern education
- Education is a process, which consists in training a person to face the political, economical and social life. The system of education contributes to the harmonious and integral training of the man.
- The quality of mathematics and science education is critical for technological and industrial development of any country, particularly for Ethiopia. However there are many challenges in the pursuit of quality mathematics and science education in our country.
- Improvement of mathematics and science education is a significant need that has received considerable attention throughout the country.

The Education system of Ethiopia

- The Ethiopian Education system is partitioned in to three major programs. These are.

- General education
- Technical and vocational education
- Higher education

Cont…

- **The general education program**
  - Pre-primary education
  - Primary education
  - Secondary education

Pre-primary education

- It takes 2 up to 3 years. (Nursery,KG1,and KG2)

Primary Education

- It lasts for up to 8 years- organized into 2 cycles

- Self-contained class room

Linear

Allocation of curriculum times (**Periods**) of subjects per week at primary

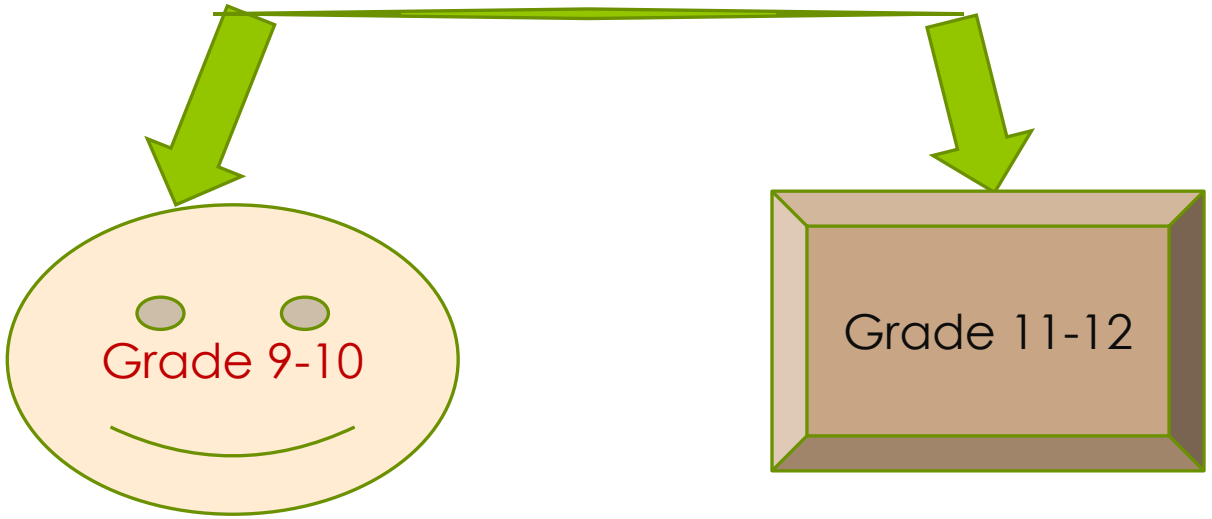
- English 5
- Mother tongue 5
- Mathematics 5
- Science 9
- Aesthetics 6

- ***One period is 40 minutes***
- ***Mathematics is compulsory subject at primary***

SYLLABUS

- Mathematics of (1-4)
- Mathematics of (5-8)

Secondary education program



- First cycle of secondary education

Mandatory to take national examination #**Entrance exam**

- Preparatory

Allocation of curriculum times of subjects per week at Secondary

- English 5
- Mother tongue 3
- Mathematics 5
- Science(Phisics,Chem,Bio.) 9
- History 2
- Geography 2
- Civic and ethical education 2
- Amharic(Federal language) 2
- Others (ICT) 3

- *One period is 40 minutes*
- *Mathematics is compulsory subject at secondary level also*

SYLLABUS

- Mathematics (9-10)
- Mathematics (11-12)

ConT....

- On completion of grade 10, students are able to take further education programs:
  - preparatory program
  - Technical and vocational programs
  - Teacher education programs(***Diploma***)
  - Higher education at diploma, first degree, and graduate levels is research oriented enabling students become problem solving professional leaders in their fields of study in overall societal needs.

Pre-service Teacher Education Program:

- Teachers are certified at least with a minimum of diploma level to teach at primary school.
- Special attention is given to the participation of **women** in the recruitment and training of teachers, especially for the primary schools.

Teacher Education Institutes (TEIs) are responsible for the provision of two levels of courses for pre- service

- - **Diploma** - 3 years training with entry after completion of grade 10.
  - Cluster
  - Linear
- Qualifies to serve in primary schools.
- **Degree** /bachelor - 3 years training with entry after grade 12 and one year Add-on training program
  - Qualifies to teach in secondary schools.

Assessment

- Using continuous Assessment
  - -Formative assessment
  - -Summative assessment

Some Challenges/Constraints

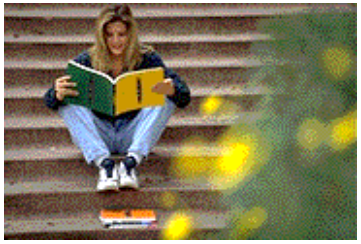
- **Large class size**, which is usually range from 60 to 70 learners in some schools
- *Lack of motivation* and initiative on the part of teachers to produce teaching aids from locally available resources and teach actively.
- **Students negative attitude towards mathematics**
- **Shortage of qualified teachers** especially at secondary schools and higher institutions
- **Inability of teachers to use the modern methods** (actual active learning) methods of teaching mathematics. Inadequate in-service program,
- Most learners lack basic school needs
- due to poverty of the parents

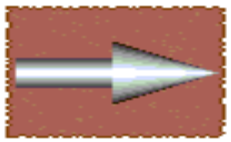
Cont…

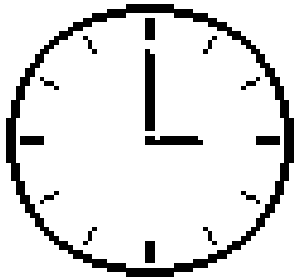
- However,
- ✓ The government is making huge efforts to improve the teaching and learning mathematics in schools, through measures such, as, to improve the quality of science and mathematics instruction by realizing the fact that the challenge requires a new methodology of teaching-learning like the active learning approach. For this, Some practical actions and government initiatives have been taken to alleviate the existing problems in mathematics education.

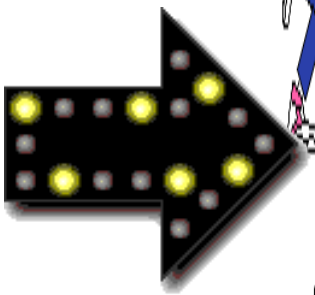
- These include:
- Formulating new policies and strategies;
- Development of new curriculum framework and respective revision of curriculum materials;
- Development of new mathematics strategy document;
- Membership in the regional association SMASE-WECSA (Strengthening Mathematics and Science Education – Western, Eastern, Central and Southern Africa); and
- Proposing SMASEE –type project to improve mathematics education
- In addition to these,

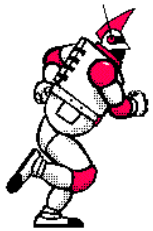
Education For All: By 2015

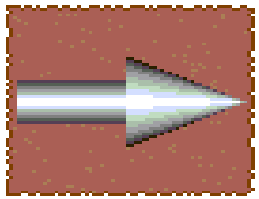












MDG(2015)

Cont..

- There are,
- -creation of more schools, colleges and universities,
- -Recruiting and training of more teachers
- -Offering in-service training program/up-dating and up-grading teachers at all levels


13/12/2012 16:03

Thank you for your attention!