

Topics in Middle School Mathematics: workshop in activity based learning

Introduction

Unlike other subjects mathematics involves a much higher level of abstraction. A number of concepts are abstract in nature and it is necessary to introduce them in a step by step manner. Further each new concept typically ends in telling students a new set of rules often without the student understanding how and from where the rules have come.

This workshop takes a few examples based on topics in middle school mathematics and develops an activity based step by step teaching technique.

Topics

- Geometry : triangles
- Co-ordinate geometry
- Fractions
- Signed numbers

Organization of the workshop

This workshop takes different forms based on the needs and priorities of the audience.

Typically a two day workshop starts with a discussion about issues in mathematics learning and pedagogy to remedy the situation and continues in a systematic study of two or three chosen topics.

Typical sessions:

- Session I: Issues in Mathematics and discussion on pedagogy
- Session II: Example of how to approach a topic
- Session III: History of mathematics and looking at mathematics in everyday life
- Session IV: Demo and ideas for teaching a selected topic 1
- Session V: Demo and ideas for teaching a selected topic 2
- Session VI: Concluding remarks and Q & A; discussion about other topics of interest

Who should attend?

Teachers teaching middle school classes and parents.

Participation

Considering this is a workshop where the participants will do a number of activities it is necessary to restrict the maximum number of participants to 25.

Logistics

A hall where the participants can sit in groups and work on the tables.