

# Using the Project OSCAR Repository for Math Education

C. Vijaya Lakshmi

- Introduction - Project OSCAR
- Math Applets
- Demo of Applets
- Study Conducted
- Feedback – Students, Teachers
- How can you participate in Project OSCAR
- Conclusion

# Project OSCAR - Introduction

- Goals
  - Create a repository of
    - Web based interactive animations for teaching various concepts and technologies.
    - Provide a platform for
      - Developers, Mentors, Idea Generators (Ex: Teachers, Students and experts in various domains).
    - Facilitate download of applets for academic and non-commercial use.

# Applets

- Applets are programs written in Java
- Platform independent and portable
- Interface with all media (text, graphics, animations, sound)
- User interaction available

# Applets – Four Main Types

1. Information Applets
2. Concept Illustrating Applets
3. Computational Applets
4. Assessment Applets

# Math Applets

## 1. Information Applet

- Minimal interactivity of the user
- Example: Vedic Maths - Multiplication of Two Digits

# Math Applets contd..

## 1. Concept Illustrating Applets

- illustrate concepts underlying the subject
- [Fraction Model](#)

# Math Applets contd..

## 1. Computational Applets

- Explain concepts with a GUI user interface for experimentation and viewing the phenomena
- Nishant – Please suggest something here
- like plotting a graph which you were mentioning or is the following ok?
- [Histogram Tool](#)

# Math Applets contd..

## 1. Assessment Applets

- Exploration of a topic with a questionnaire to assess the understanding.
- Applets 1, 2, and 3 can also be combined with questions and responses that would further enhance the understanding.
- Example: [Exploring Geometric Solids](#)

# Study Conducted

- Participants
  - Thirteen Students
  - Twenty Five Teachers
- Aim
  - Students – To find responses to conversant and non-conversant concepts
  - Teachers – Reflection on the usability and integration issues of the concept

# Feedback – From Students

- Advantages and Benefits
  - Concepts more clear
  - Enables Self study
  - Revision of topics of previous years
  - Will increase interest in Math
  - Exploring concepts and gaining more insight
- Unanimous – Teacher's should include these tools to enrich learning and enhance our understanding

# Feedback – From Teachers

- Motivates and attracts students
- Virtual effect through animations will help in visualizing and understanding the concepts
- Imbibe qualities of exploration and inquisitiveness
- Applets and related resources
  - Will improve the design and delivery of lessons
  - Increase student interest in Mathematics
  - Will have a positive impact on the achievements and the increase the percentage of achievers.

# How can you participate in Project OSCAR

- Mentor
- Suggest
- Develop
- Example:

# Conclusion

Project OSCAR

<http://oscar.iitb.ac.in>

Competitions and Awards planned.  
Please visit the site for more details and to  
participate.