



Hellenic American Educational Foundation Psychico College, Athens, Greece

**Let's go to the Movies! Learning Math
through Creativity and Role Playing.**

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The Hypothesis

Our project aimed at making a journey with the children through which they would apply Math to everyday situations, such as going to the movies, solve actual everyday math problems and eventually love it by expressing themselves psychomotorly through role plays, while in the meantime gain knowledge in problem solving.





Main objective **Basic Skills**

A Case Study in which students will

- practice in calculations, creativity,
- develop a critical way of thinking and learn how to deal with real situations enhancing their judgment, logical reasoning, and imagination. • *imagination.*
- work on specific patterns that reflect real challenging situations.

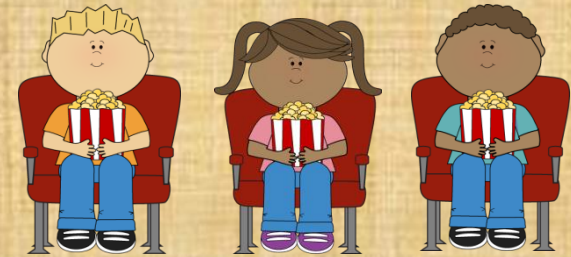


Cognitive Goals

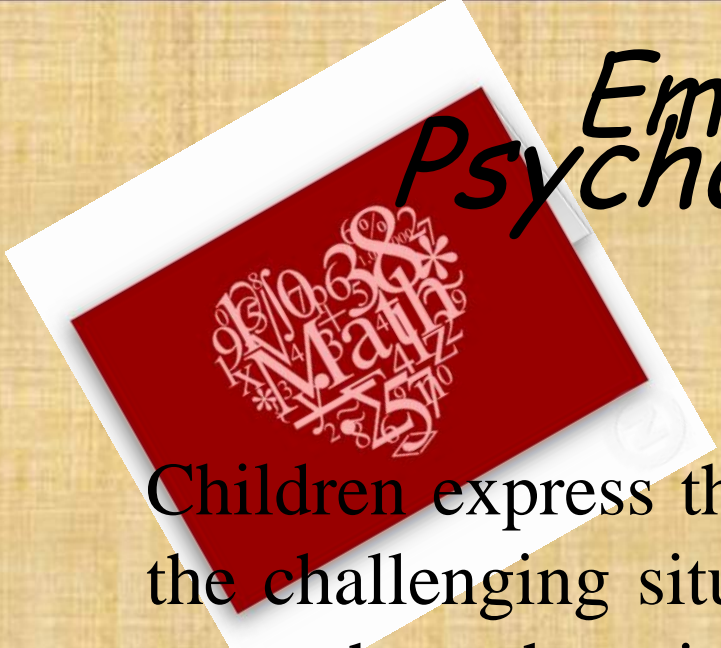


Students should

- design formulations of cubes, parallelepiped and cylinders.
- make calculations using fractions and decimals.
- formulate and solve mathematical problems while visiting a cinema.
- evaluates offers and calculate discounts.
- make bar charts.
- place the audience of a movie theatre into their seats given some restrictions.

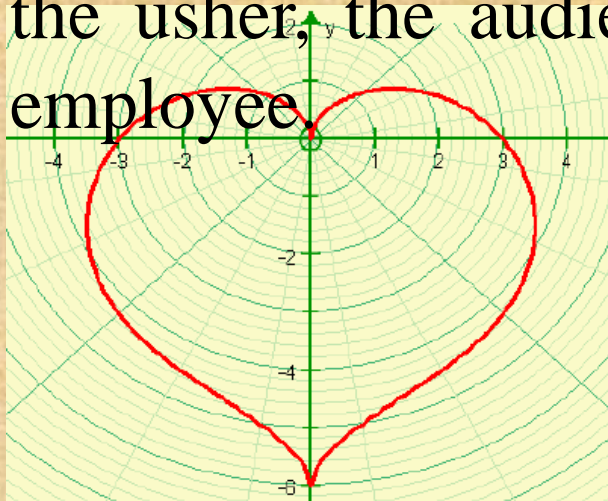


Emotional Goals Psychomotorily Goals



Students will

- experience and puzzle themselves over the reasons why they are taught Math at school.
- verbally and depict themselves over the reasons why they are taught Math at school.
- acting as the clerk, the salesmen, the usher, the audience, the employee, the statistical services' understand how Math applies to simple, everyday situations, such as going to the movies.





Grade Level

6th grade

Subject

Math - Decimal numbers, Fractions, Percentage-Discounts, Statistics, Statistic Charts, Plane shapes, Parallelepiped, Solids.

Educational software and links to educational websites:

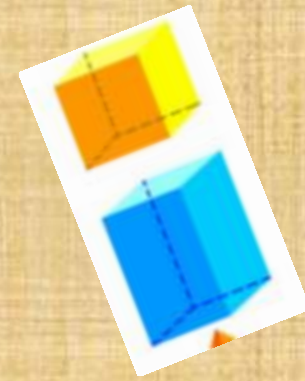
Educational software DALEST, enroll an educational math-related website www.brainpop.com

Generative topics

- **students split in groups,**
- **based in role – playing**
- **focused on challenging situations such as going to the movies (Realistic Mathematics)**

Role Playing

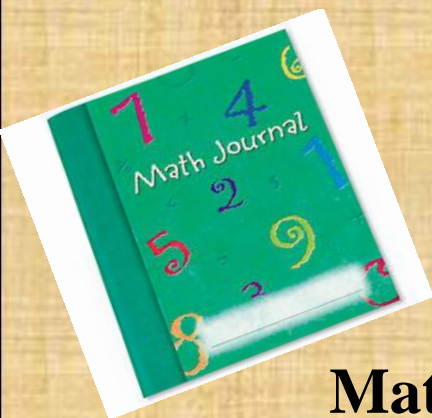
- Students split in groups. Some of them play the clerk and the salesmen, others the usher, some the statistical services' employee and others the audience.



Designs

- They design formulations (cubes, parallelepiped and cylinders) to create the appropriate solid geometric shapes that they could use as candy boxes, pop corn tubes and cans for soft drinks.





The ushers

Math Journal

They have to find out the strategies that will lead them mathematically to placing the audience correctly given the restrictions mentioned on the spreadsheets. What they are asked to do is to put people to their seats without changing places (without replacement).

Every teaching hour concludes with filling the Math Journal where students explain in words what they have learned and solve mathematics problems that they could encounter while purchasing things at the concession stand of a movie theatre or the cashier depending on their role.





The Statistical Service

- They write down the products that the audience has bought before the film to consume during the screening and perform a brief statistics research on the percentage of students that have purchased various products using bar charts as described in the spreadsheets.

The audience

- They calculate tickets prices, percentage discounts on various products and find value-for-money offers.



Clerks and Salesmen

- They display the price that they have already as well as the offers'
- All the students are given paper money that they use during the activities.



Thank you!
**We are glad to answer any
of your questions!**

Watching a Film

- Students are going to entertain themselves with a movie strongly math-related, '*Alice in Wonderland*'.