



PHYSICS TOYS USED FOR EFFICIENT LEARNING IN PHYSICS

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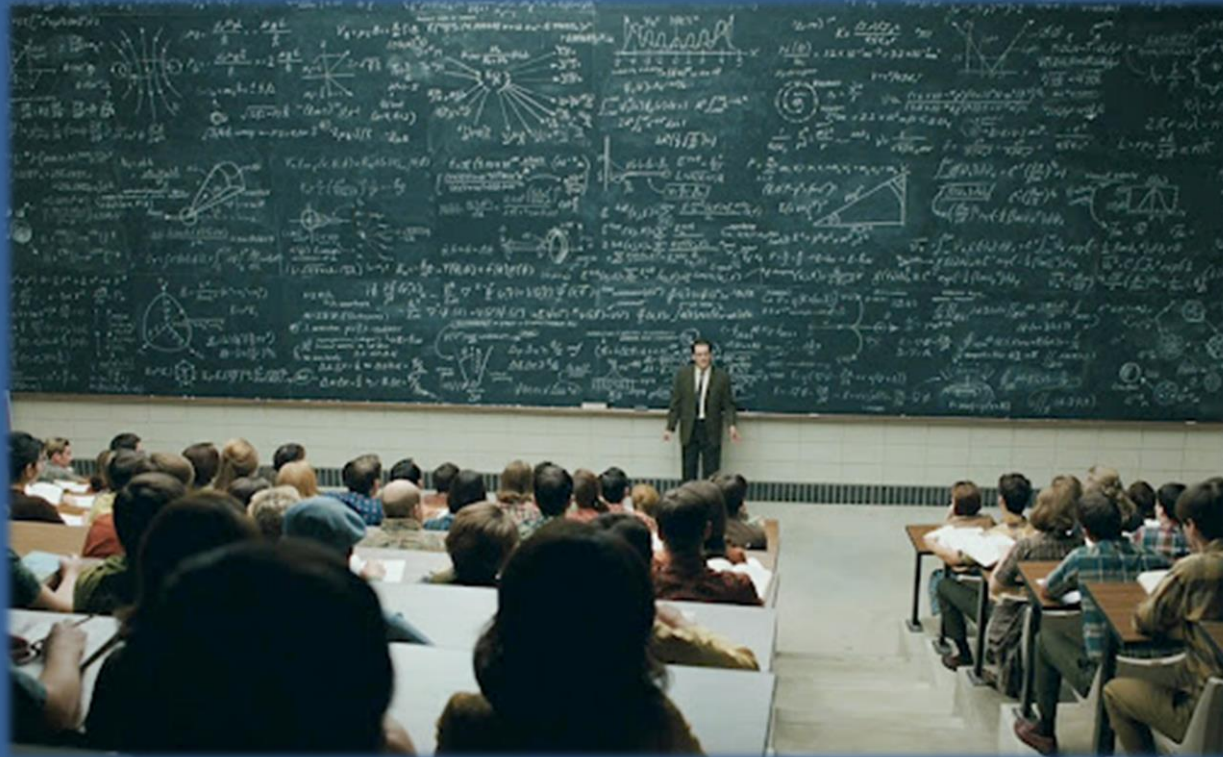
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PHYSICS is difficult according to many students



Many numbers,
graphs, formulas

PHYSICS
is difficult

Boring & routine lecture

Abstract



Different
learning style

To overcome these difficulties

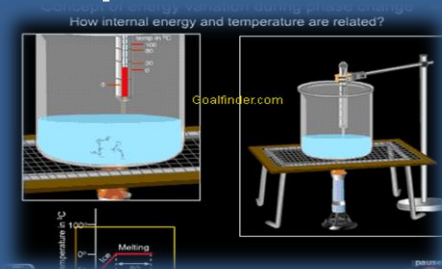
Experiments



Presentations &
Activities



Animations &
Computer software



Despite our efforts to make the physics class more attractive

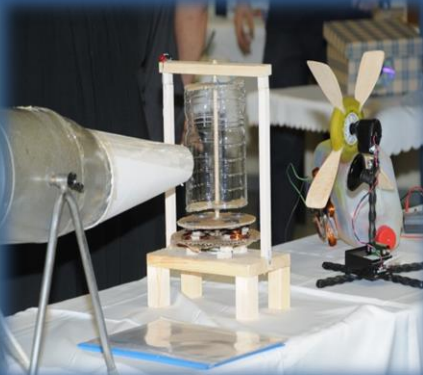


It was not enough to catch all students' attention.

There were still students who did not participate in the class actively



Teaching Physics with Toys



Process of Our Model

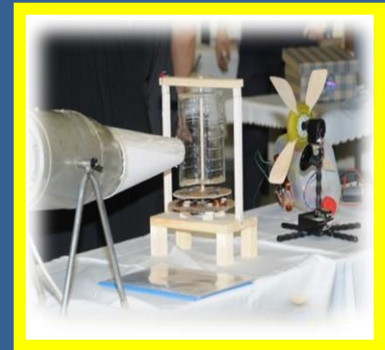
Question & Answer



Assessment & Evaluation



Physics Toys



Presentation and Computer Animation

After this presentation,

- **Students did the activity which is designed beforehand by the teacher**



- **Practice their theoretical knowledge in the laboratory.**

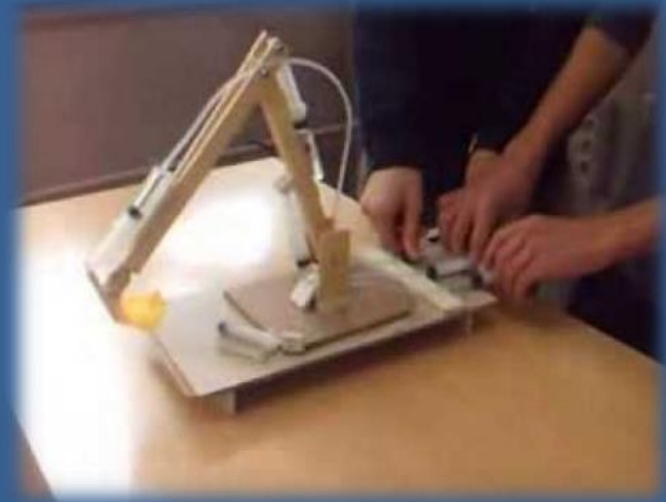
At the beginning of the activity,

- **Students were divided into groups**
- **A sheet was given to each group.**



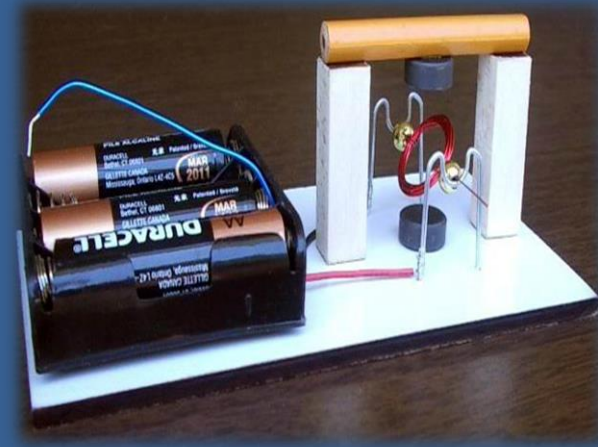
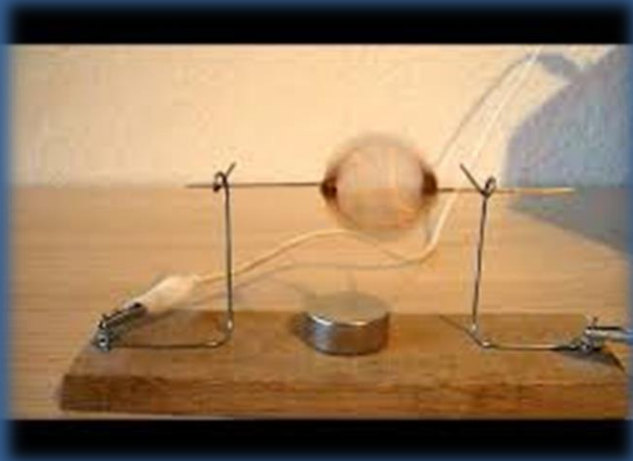
They started to make Physics Toys?

- **Hydraulic Shovels:**



to learn about hydraulics,
levers and simple machines

- Electric Motor:



To learn how an electric motor works

- **Floating Ball :**

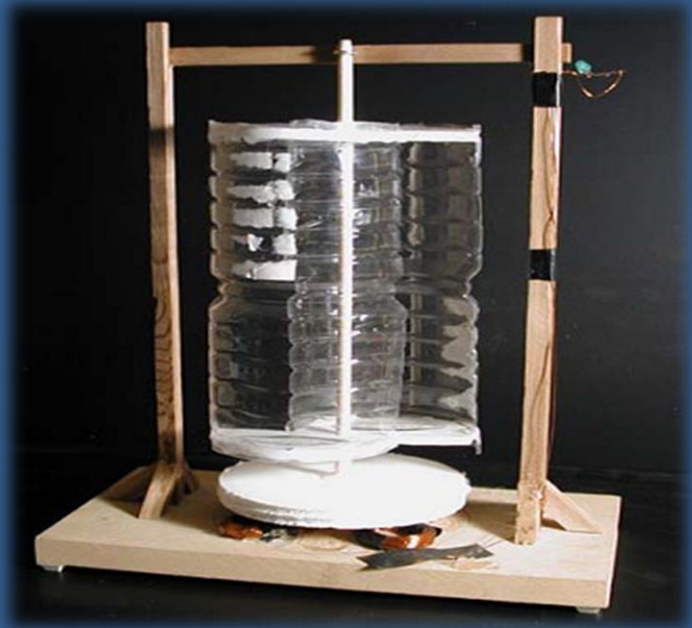


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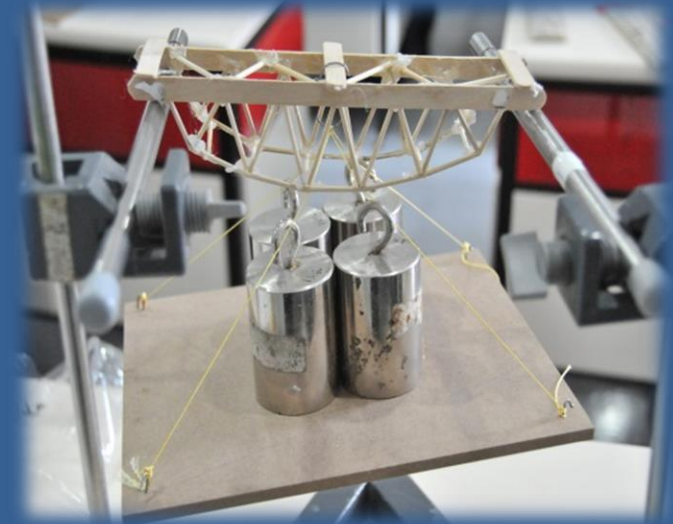
To explain Bernoulli Principle

- **Wind Turbine :**



To generate electricity from wind turbines is converted from alternating current to direct current.

- The Bridge Building :



To understand equilibrium

- Electric motorboat :



To understand gravity, buoyancy and balance



Each group tried to finish the physics toys which are related any subject





What did we observe?

- Students not only participated in the learning process but also enjoyed the class .
- They were highly motivated
- Their interest in Physics increased
- Their perspectives about Physics changed



How did we assess and evaluate?

- We evaluated the lab reports that students filled out during the experiments.
- We assessed the students' knowledge through exam.

As a result, through the activities, the students were able to overcome their lack of knowledge about subjects.



Conclusion & Discussion

- Knowledge is more lasting when it is learned through hands on experiments.
- The laboratory must be given a distinct and significant role when teaching physics.
- Students with different learning styles benefit from these kind of learning experiences.



The topics became more meaningful.

Teachers should not forget that their own motivation to learn science is likely not shared by many of the students.

Students' motivation is more likely to be activated by connecting science to things that are already familiar and important to them.



Thank You

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