


S.T.E.A.M. Children Engineer Academy-Greek lesson plans

LESSON PLAN: 2nd year – 14th lesson, Jan'19

TITLE	Fan Robot creation with a motion sensor 
THEME	Science/Technology/Art/Engineering
GRADES	5 th Grades
DURATION	90'(2X45 minutes)
REALIA-MATERIAS	<ul style="list-style-type: none">• 8 Lego WeDo 2.0 Robot Kits• 8 Tablets• Interactive Whiteboard• P.C.
OBJECTIVES	Through the lesson, pupils will be able to: <ol style="list-style-type: none">1. Become familiar with the concept of temperature and the need to deal with it.2. Become familiar with the notion of wind energy3. Create a fan using Lego blocks step by step4. Program a series of commands on the tablet5. Try to change the fan power6. Understand the concept of the sensor
DESCRIPTION	During the course, pupils will be given a problematic situation to find a solution and implement it. The problem-situation is the high temperature and the solution of creating a fan. Step by step students, divided into groups of two or three, will create a fan with Lego Blocks and then with the help of tablets will try to program commands in order to turn the fan on. Then they will test changes in

	<p>the fan power while they incorporate a sensor that will command a start or pause depending on whether it detects motion or not.</p>
EVALUATION	<p>Evaluation indicators:</p> <p>At the end of this two-hour course pupils will have faced and resolved a problematic situation with the help of technology, IT and robotics.</p> <p>They will experience the concept of wind energy and some forms of use.</p> <p>They will be familiar with the Lego WeDo 2.0 environment as well as with the command blocks.</p> <p>They will create a program (algorithm) to solve a real problem.</p> <p>They will combine some STEM concepts into a two-hour teaching - science - technology - etc.</p> <p>They will work in teams and will experience the benefits of group co-operation.</p>