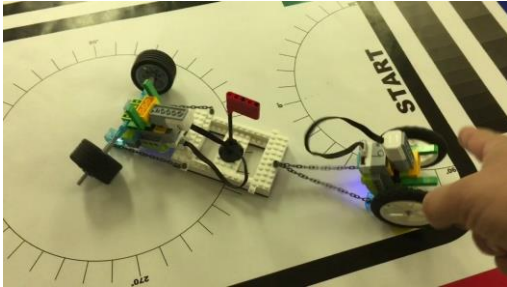


S.T.E.A.M. Children Engineer Academy-Greek lesson plans

LESSON PLAN: 2nd year – 17th lesson, Apr'19

TITLE	<p>Pull Motion Robot equipped with container for transferring objects - Tugs</p> 
THEME	Science/Technology/Art/Engineering
GRADES	5 th Grades
DURATION	45'(1X45 minutes)
REALIA-MATERIAS	<ul style="list-style-type: none">● 8 Lego WeDo 2.0 Robot Kits● 8 Tablets● Interactive Whiteboard● P.C.
OBJECTIVES	<p>Through the lesson, pupils will be able to:</p> <ol style="list-style-type: none">1. Understand the concept of forces as well as the concept of opposing forces.2. Become familiar with the need and way of transporting heavy objects.3. Create a step-by-step pulling robot using Lego blocks4. Make commands on the tablet5. Try to change the speed and power of the robot6. Experiment with the transfer of objects with different weights and observe and notice the differences

	<p>7. Play with each other and create Taglines experiencing the concept of Powers.</p>
<p>DESCRIPTION</p>	<p>During the course, pupils will be given a problematic situation to find a solution and implement it. They will think that they will carry very heavy objects and will find cases from their daily routine of such needs.</p> <p>Step by step pupils, divided into groups of two or three will create a pulling robot using Lego Blocks and then will try using tablets and programming commands to put it into operation. They will place different weight objects within the transport frame and note the different function of the robot. With the help of their teacher, they will conclude why the robot reacts differently but will also identify the need to increase the power of the robot through engine commands. As a result of the previous lesson, pupils will join their robotics and play Tugs and see who and why wins.</p>
<p>EVALUATION</p>	<p>Evaluation indicators:</p> <p>At the end of the course pupils will have faced and solved a problematic situation with the help of technology, informatics and robotics. They will enter into the spirit of forces, opposing forces and the way of transporting very heavy objects.</p> <p>They will experience the need to change the power that each time needs to be exercised in some objects.</p> <p>They will play, entertain and through Gamification will learn who and why wins in Taglines. (Powers - Science).</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>The pupils will work in teams and will experience the benefits of group co-operation.</p>

