



The Birdies are Angry!

**Taking advantage of a popular game in order to investigate
projectile motion
(Angry Birds), Gravitational Pull (Angry Birds Space)**

**Christodoulos Tasouris,
Cyprus**

Why? Goals of this scenario

- to demonstrate the link between the popular commercial game 'Angry Birds' and Physics, in order to convince students regarding the real value of scientific reasoning.
- to allow students to analyse the projectile motion in different cases so as to conceptualise the Physics of projectile motion.
- to allow students (group-work) to experiment using the games and later to help them to capture different frames of the motions.
- to engage students in video analysis for further understanding.
- to enable students to think critical through the preparation of a detailed report of their analysis
- to create a learning community where students share ideas, data and conclusions

Educational context

- * Time frame: 12 x 40mins
- * Setting: Classroom and the school yard, Home
- * School resources: Computers, Games, Video Analysis Software, Camcorders, Wooden Catapult, Balloons, Water

Curriculum area(s) addressed

Cross-curricular approach

Physics

Language (mother tongue)

Other Language

Mathematics (Parabola)

Science and/or technology

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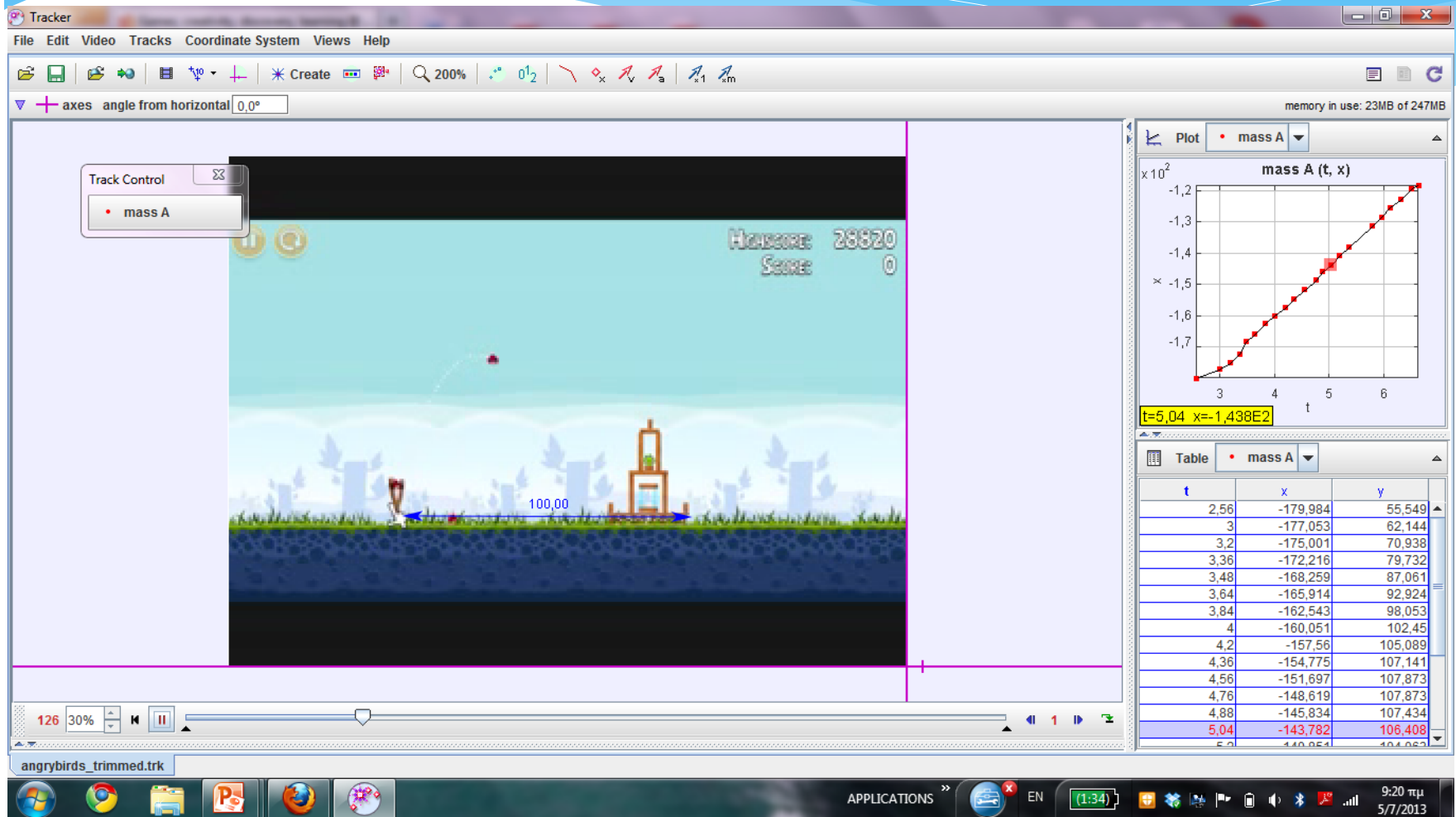
The starting point

- * **Situation:** The birdies are angry and students need to discipline them. Students conquered birdies' kingdom and they have the catapult under their control. Prince student (there is one in each team) launches birdies showing who is the actual boss!!!
- * **Goal definition:** Students have to launch birds in different ways (changing angle of the launch, stretching catapult rubber differently) so as to knock down the wooden picks.
- * **Minimal set of initial knowledge:** Students are expected to have understanding of the Physics chapters: Forces and Motions

How?

- * Students interact with the game and work collaboratively (using video analysis software, preparing report analysis, sharing)
- * Computers, Software
- * Horizontal Throw (projectile motion)

Screenshot of Video Analysis Software



What?.....Learning Product

- Communication in the mother tongue
- Communication in foreign languages
- Mathematical, science and technology competences
- Digital competence
- Learning to learn
- Sense of initiative and entrepreneurship

What? Learning Product..... 21ST Century Skills

- * critical thinking
- * problem solving
- * initiative taking
- * decision making