

Extend² Constructionist Authoring Systems

MaLT2 (Machine Lab Turtleworld 2)



Create and tinker with animated figural models in 3D

With MaLT2 students create and share animated 3D figural models with text-based programming and dynamic manipulation. The models can vary from simple cubes to complex DNA models, jewels and fractal trees and anything one can imagine. Ideas and concepts from mathematics, engineering, art and computer science are seamlessly combined in a creative and collaborative process of experimentation, tinkering and self-expression.

<http://etl.ppp.uoa.gr/malt2/> 

ChoiCo (Choices with Consequences)

Create or change a game about a wicked problem



With ChoiCo students can become sensitive to and grapple with wicked problems by playing, modifying, or creating choice-driven simulation games. Wicked problems are multi-faceted real-life contentious problems with no clear solution. As players students employ decision making, empathy, argumentation, and systems thinking to make choices with conflicting consequences and try to maintain balance for as long as possible. The winner is the player who survives longer. As designers they can design a map and places choices on it, define conflicting consequences and game rules, by using block-based programming, map-editing and database affordances. By switching between the roles of player and designer, they become more knowledgeable and less anxious about important socio-scientific issues of our time, such as climate change, balanced diet etc. They also develop skills such as computational thinking, creativity, communication, flexibility and critical thinking.

<http://etl.ppp.uoa.gr/choico/> 

SorBET (Sorting Based on Educational Technology)



Design or change a classification game

With SorBET students can design, modify, share and play Tetris-like classification games. Gameplay is about quick decision making for pushing the falling objects to the categories they belong to. To do that players need to identify the characteristics of each object and match them with those of the categories. SorBET allows the design and modification of the game elements such as density, speed, rules, object and category definitions, with block-based programming and database affordances. The field of objects and categories is up to the student to define, with no restriction to the topic. Through that process students develop 21st century skills such as classification skills, critical thinking, computational thinking.

<http://etl.ppp.uoa.gr/sorbet/> 



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