



Simulation Explorer for Granada Learning

Exploring the real world—through simulations

Granada Learning (GL) is the UK's leading educational multimedia company, publishing innovative, curriculum-based resources in the UK and abroad. It currently supplies to more than ninety-five per cent of schools in the UK and exports to more than thirty countries internationally, with a catalog of over 800 software and hardware products.

Its extensive and impressive range of educational resources spans the syllabi of Primary and Secondary schools to meet the requirements of learners of all ages and abilities, ranging from infants through to A level and adult education. All of Granada Learning's products are developed by teachers and educationalists to ensure that it continues to publish for the needs of schools. Granada Learning is recognized throughout the education sector, by publishers and teachers alike, as the driving force in software solutions for schools.

THE NEED FOR E-LEARNING

Granada Learning commissioned Tata Interactive Systems to design and develop Simulation Explorer, a CD-ROM introducing children to computer simulations that would represent real and imaginary situations and allowed them to try things that would be difficult or impossible to do in practice. It was to be developed as a standalone application with PC and MAC compatibility. Six simulations were to be developed to support the curriculum areas specified by Granada.

HOW OUR SOLUTION HELPED

Tata Interactive Systems designed six activities to cater for the needs of upper and lower KS2 children via two differentiated levels. Children could explore the simulations, make changes to the conditions, and observe the results. Additional worksheets helped children evaluate the simulations and identify the rules and patterns on which they were based. The program was ideal for covering requirements outlined in Granada's QCA ICT Unit 3D (exploring simulations) and was especially valuable during the integrated task where children were asked to explore computer simulations as part of their work in other subjects.



The Simulations Explorer CD-ROM captured the best features of the simulations and altered them to suit the requirement of young learners. A wide array of functionalities made it easier and more fun to learn with simulations.

Specific links were made with investigative science (fair testing) as well as other science topics. Mathematical skills were also developed when children used numerical data from the simulations in order to find out rules and patterns.

- A good range of simulations was provided, both real and fantasy.
- Consistent design meant that children didn't waste time wondering what to do.
- Fair testing was at the heart of each simulation as the 'lock' feature encouraged children to change one variable at a time.
- Spoken questions and instructions guided the children allowing them to work independently.
- Predictive skills were supported, for instance the 'Results Table' showed children what they had tried before so they could decide the next course of action.
- Children were encouraged to collaborate and develop discussion skills.
- 'Worksheets' and 'Extension Sheets' helped children evaluate the simulations, identify the rules and patterns on which they were based, and extend their knowledge of the particular topic studied.

The following functionalities were incorporated in the program:

Menu Screen

The menu screen showed all the six activities available.

Worksheets and Extension sheets

PDF worksheets and extension sheets were provided with each activity for further work away from the computer. The worksheets helped children to evaluate the simulations and identify the rules and patterns on which they are based. The extension sheets were provided for the most able to extend their knowledge of the particular topic covered.

Clip art

The clipart button took the learners to a new screen where a collection of resources related to each activity was available. These resources could be saved for use in other programs on computer. The clip art could be used by the children to illustrate their work or by the teacher to make further worksheets, quizzes etc. The word banks were useful as they extended appropriate vocabulary and aided spelling.



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Activity Screen

When entering an activity, introductory audio automatically played and explained the controls and other features. This introduction was played every time the learner entered the activity but could be interrupted at any point by clicking anywhere on the screen.

Result Screen

As children continued to make changes and test different settings in the activity, the program kept track of all that they were doing and displayed it visually in the Results screen. This could be clicked on at any time to see the options tried before, and could be used effectively by the children to help them decide what to try next. It could also be printed out as a record of the children's work.

Teacher Information

Teacher Information gave a description of the activity and details of the rules and patterns on which the simulation was based. A detailed breakdown of curriculum links for the English, Irish, Scottish, and Welsh curricula was also provided.

Printing

A number of options were available upon clicking the Print button. Children could choose to print out a picture showing the whole screen from the activity for display purposes. A blank writing sheet showing the current settings could be printed out and used for independent writing to demonstrate what the children's findings were. The results table showing the children's method could also be printed and was a useful record.

TECHNOLOGY USED

The CD-ROMs were developed using Flash and Director MX, Photoshop, Illustrator, and Acrobat Reader.

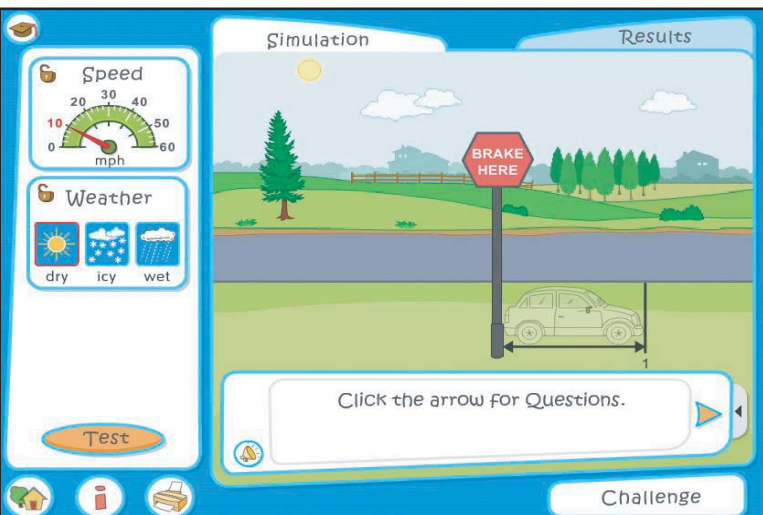
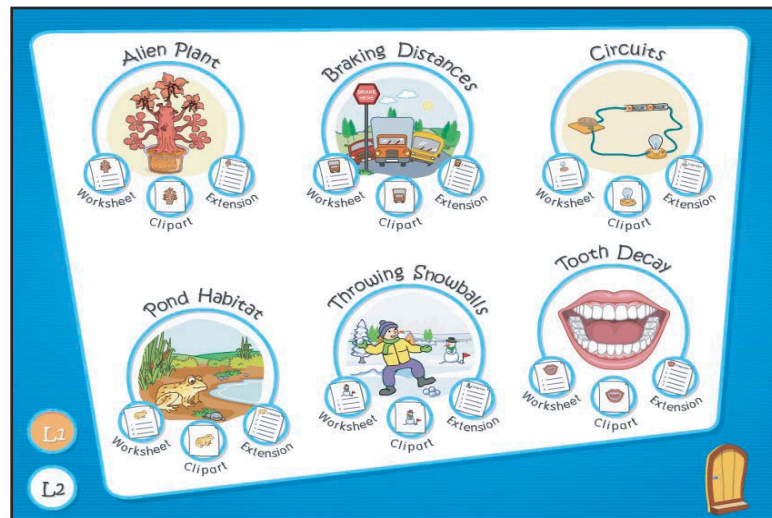
SOME SAMPLE SCREENSHOTS

The screenshots offer a brief glimpse of Simulations designed for Granada Learning. To experience our products at work, you may view our demos by registering online at www.tatainteractive.com.



The introductory screen is colorful and flashy to grab the children's attention.

The main menu uses illustrations extensively for easy navigation.



The module on 'Braking Distances'.