Moovl

Moovl is a digital online drawing tool for use on a Tablet PC and interactive whiteboard. It allows children to create drawings that move according to simple rules of science. Initially designed for the Key Stage 1 science classroom, it has potential across the curriculum.

Outline

Moovl is an online freeform drawing tool with lifelike dynamic properties, designed for young children to explore and experiment with simple science principles and concepts. The idea is that children can draw pictures on a Tablet PC or an interactive whiteboard using a digital stylus, making a mouse or graphics hardware unnecessary and keeping the experience as similar as possible to drawing on paper. The Moovl animating environment simulates gravity, collision, and tension so that children’s pictures move as if they were in the real world. The software is intended to allow children in Key Stage 1 to make predictions and hypotheses about how things in the world work, to visualise their ideas, and to test them out in a trial-and-error approach.

An online ‘scrapbook’ function accompanies the drawing environment, where children can save their own simulations and access resources created by other children over the web. Utilising the wireless online connectivity of Tablet PCs, they are able to share simulations with each other from their desks, even working in different locations. The ‘scrapbook’ feature aims to help children to think together about science, and enable them to share and solve problems together.

Teachers are also able to choose simulations from the scrapbook to demonstrate to larger groups on an interactive whiteboard, and to stimulate whole-class discussion before and after drawing activities.

Moovl also has significant potential to impact on cross-curricular work in the primary school, where it may, for example, be used to illustrate stories, explore science in visual narrative form, or to demonstrate geographical phenomena. The outcomes of the research on the prototype project are example lesson plans for teachers to try out in their own classrooms. A basic working demo of the Moovl drawing tool is available at www.moovl.com.
Learning and Research Objectives

NESTA Futurelab’s key aims in supporting the development of a prototype of Moovl are to investigate:

1. How a freeform drawing and simulation tool can support children’s visualisation of science concepts, and their understanding of how simple science principles work in the real world.

2. The potential for drawing and simulation to be used as a practical tool for cross-curricular work, such as exploring science through storytelling.

As with all Futurelab projects we are also interested in:

1. What this project tells us about the best ways of designing educational digital resources.

2. What this project tells us about how learning processes can be transformed through use of these tools.

3. How this project helps us understand the potential of next generation technologies to create intrinsically motivating and engaging learning experiences.

Research and Development Process

The developers of Moovl, Soda Creative, are working with NESTA Futurelab on developing the full prototype and researching it with children in school. In the early stages of development, a workshop between Futurelab, Soda, primary school teachers, and two experts in science in primary schools, identified potential uses for the tool in the classroom, along with ideas for its practical use by teachers.

Soda and Futurelab have also been working closely with Key Stage 1 children and teachers in schools in Bristol and South London to develop the prototype. An early working demo of Moovl was used for whole-class activities with Key Stage 1 children in natural classroom settings. These initial activities informed the subsequent design of the full prototype.

At the end of the project, the children and teachers are involved in a full evaluation of the prototype. The evaluation phase will investigate children’s development of science understanding through the visualisation and representation of problems and concepts, with the children using Moovl in their own classrooms as well as with other children in different classrooms and even in different schools.

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