the Naledi3d Factory

A teacher's math and science companion - analogies from HIV/AIDS (2005)

Purpose: Because child education tends to be passive, pupils often experience difficulties in understanding the essence of abstract concepts. Ideally, they should be able to use knowledge to make informed decisions in everyday life. One way to address this challenge is to teach theoretical subjects through analogies drawn from everyday life – in this case, HIV/AIDS. The aim of the project is to help empower and train teachers in this approach.

Partner:
UNESCO - IICBA

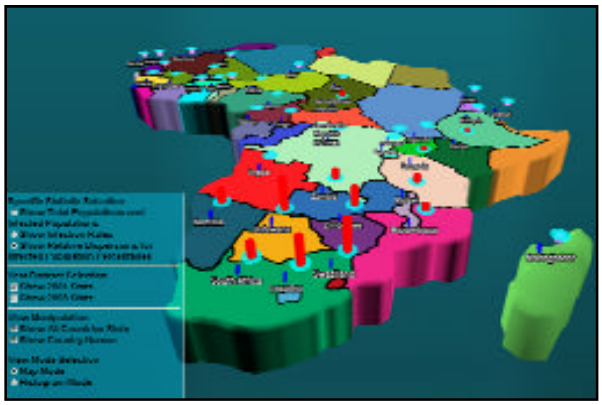
In a Nutshell:
Awareness through education is the best way to fight HIV transmission – which must begin before young people initiate sexual activity. This project provides a tool for primarily pre-service teachers, showing them how to integrate HIV/AIDS into the teaching of maths and science. This also makes teachers more knowledgeable about HIV/AIDS while making these subjects more interesting.

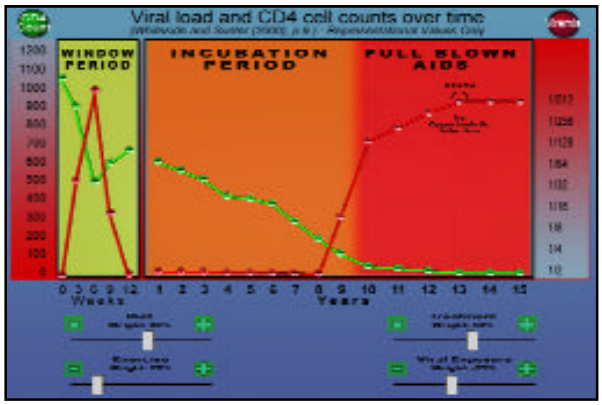
Helping educators to sensitise children to HIV/AIDS - analogies in math and science:

Principles of charting and weighting of data are shown using life expectancy data, and the relationship between CD4 cell count, viral load, the impact of exercise, diet etc. Histograms, statistics and percentages are illustrated by African infection data; pie-charts by a soccer stadium; nutrition and vitamins using a food pyramid; weights, volumes, SI-units and circumference using tablets. The visual material is supported by additional information as well as teacher's notes and learner assignments and is also supported by audio.

Interactive 3d Learning Objects:

The modules presented use VR (Virtual Reality) models in the form of *Interactive 3D Learning Objects*. These provide an engaging, interactive learning experience that can also be incorporated with audio, video and text to suit the learners' linguistic requirements. *Interactive 3D Learning Objects* are designed for re-usability in the teaching of several different subjects. The basic building block of an *Interactive 3D Learning Object* is the visualisation component - an interactive 3D simulation that describes a single phenomenon, concept or process in a way that results in a rich and rewarding learning experience.





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