In an ongoing research project since 1985, the AMSTEL Institute of the University of Amsterdam is developing Coach – a Multimedia learning environment for Science and Mathematics. This environment consists of integrated tools for data collection via interfaces and sensors, control of processes and devices, data video for measurements on digital videos and images, processing and analyzing data, modeling (system dynamics approach) and authoring of activities by teachers and students (texts, multimedia components, hyperlinks, etc.). It is meant to encourage an inquiring approach to science and facilitates authentic research activities of students. The newest tool integrated in Coach allows creating and playing Animations. These are animated graphical objects which positions and sizes are controlled by model variables or by sensor values. The workshop will give an overview of the present stage of Coach and will focus on Animations. Participants will be ‘hands-on’ introduced to these possibilities and apply them in relevant physics activities.