

iTEC mini-scenario, December 2010

Design for All

ASPIRATION STATEMENT

Inclusive education, developing scenarios to support learners to achieve their full potential

TECHNOLOGY AND RESOURCES – Haptic devices to assist computer aided design. Rapid prototyping and 3D printers to create prototypes. Assistive software to support students to make presentations. Collaborative software that is compatible with assistive technologies (e.g. that is not just text based). Possible AR software that is linked to prototyping

TASKS – Students design and create prototypes using software and prototyping tools. Research what the car needs to feature. Test the car with users. Present the car to experts.

AIMS OF ACTIVITY

Enabling physically impaired learning by removing barriers to participation.

SPACES

Inside schools, design and technology spaces

ROLES – Students as researchers. Specialist technology teachers. Outside experts coming into school – mechanical experts, marketing experts and enterprise experts.

TYPE OF ACTIVITY

Students are designing and creating a prototype for an environmentally friendly car that can be driven by physically impaired drivers. They present their designs, along with other schools, to industry experts who judge them.

INTERACTIONS– Students interact with teachers to inform design. Interact with experts to get special expertise. Interact with other students as part of group work, but also other users and other students working on similar projects. They also present their ideas with experts. Interaction with assistive software and hardware.

NARRATIVE OVERVIEW

Tom, who is physically impaired, uses a haptic device to create a prototype gear-changing mechanism for the car. He talks online with a government organisation that funds transport for disabled learners to share his ideas, then liaises with a member of his group who has been looking at the EU legal requirements for the car. Later he shares the designs in an online seminar with university students and other secondary students working on a similar project.

