

CO₂ is in almost everything... fromconcrete2cookers!



The little boy scampers around the school, eagerly searching out information that will help him achieve his goal. He is on a very important mission, one of global importance. He must find ways of combating climate change before it is too late. His friends are also at work on the very same mission, competing against each other to reduce their carbon emissions as much as possible. They know that they can make choices capable of reducing the carbon intensity of the building fabric, such as installing insulation, upgrading the boiler, or changing to low-power IT equipment. In addition, their behavioural changes, such as switching off lights and turning off taps, will increase their score and lower their carbon meter.

... but how can they find the information to assist them?

Help is at hand. The little boy soon discovers that information posters are displayed around the school. By reading the posters carefully, he learns about climate change, greenhouse gases, what they are and how to reduce them and, most importantly, how to reduce carbon dioxide (CO₂) emissions. What's more, he is in charge of a budget of tens of thousands of pounds, and the decisions as to how to spend this budget are entirely his. He can earn more cash by answering quiz questions correctly.

This is about kids cutting carbon!

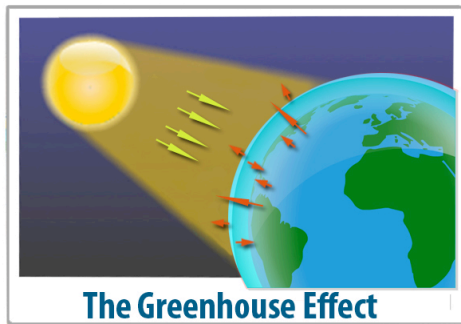


If he needs a break from this important challenge, he can always stop and have a game of football or basketball, again competing against his mates. With some practice, he can get his name on the leader board... sounds like too much fun for such an important task? Yes, it's fun, it's educational, and it's a fantastic resource for teachers to use with the Curriculum for Excellence (CfE).

fromconcrete2cookers is an exciting and timely web-based game, developed at the School of the Built Environment at Heriot-Watt University, Edinburgh. It encourages children to explore their school environment and spot ways of reducing the school's carbon emissions.

With a bit of guidance from helpful characters they meet along the way, they can make wise decisions about technological interventions which will reduce energy demand.





By playing the game successfully, the carbon cutters will reduce the school's carbon emissions by 50% and so meet the Scottish Government's emissions reduction interim target for 2030. Bonus points will earn them solar panels to give overall carbon emission reductions of 65%, helping towards the government's target reduction of 80% by 2050 (from the 1990 baseline).

The game was developed with the assistance of around 100 children from primary and secondary schools in Edinburgh. Through a series of workshops, they provided the web developers with invaluable advice throughout the exercise. The feedback from children and adults alike is extremely positive: Learning & Teaching Scotland consider it "a fantastic resource" which is currently sitting on their "to be exemplified" list; i.e. an example of good/best and innovative practice in relation to CfE.



The knowledge gained from the game-play will encourage children to adopt environmentally-beneficial behaviour and, as the building users of the future, to demand environmentally friendly construction techniques. The game-play activity provides a context for interdisciplinary learning involving curricular areas such as the sciences, social studies and the technologies.

Development of the four capacities in children and young people will be supported by this game (i.e. *successful learners, confident individuals, responsible citizens, effective contributors*). The game helps to successfully deliver, in an interdisciplinary way, the cross cutting themes of *sustainability* and *citizenship*. It can be used to support the purposes of learning in the sciences, and other curricular areas.

Educational materials will shortly be available to support the individual outcomes and experiences of Curriculum for Excellence. They are designed to stimulate further discussion in the classroom and inform planning. Teachers' packs and links to exercises are available on the website <http://www.concrete2cookers.org/>. The materials can be used to support the skilful use of varied learning and teaching strategies that are useful, for example in the sciences.

Notes to Editors:

“C2C” emerged as the public engagement element of the TARBASE project: a 4 year, £1.4M research project co-funded by EPSRC and the Carbon Trust - part of the Carbon Vision Buildings suite of projects. It investigated and costed technological solutions for reducing the CO₂ emissions of a range of candidate buildings by 50%.

Parental permission has been obtained for use of children’s photos to be used in publication.