

Scottish Continuing International Professional Development Study visit 's-Hertogenbosch.

7th -9th of March 2012

0.Intro

A team of Scottish teachers visited KPC Group, Koning Willem 1 College, Huygens College, Rotunde school, Desso Company and Van Gansewinkel Company.

- Grove Academy Dundee
- Harris Academy Dundee
- Strathaven Academy Dundee
- Hutchesons Grammar School

This report focuses on purpose, personal experiences of the participants and their dissemination activities after the study visit.

After the more general overview the individual reports are attached.

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1.Purpose:

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To investigate how cradle to cradle technologies and how circular economy can be used as a rich and stimulating context for interdisciplinary learning relating to sustainable development education and global citizenship.

2,Dissemination activity from the C2C Leonardo project "Working and learning in the world of Cradle to Cradle...."

The Leonardo partners KPC Group (Peter van der Baan), Koning Willem 1 College (Rob de Vrind), Desso (Rudi Daelmans) and the Ellen MacArthur Foundation (Kathie Steiness, organiser) contributed to this visit which was meant to disseminate their ideas on C2C and Circular Economy in such a way that they experienced the possibilities of using the awareness in the practice of Scottish schools.

Also with the help of Douwe Jan Joustra, Dutch educational consultant.

The Study Visit to the Netherlands was particularly enlightening because real practical examples of careful energy and resource management, based on the Cradle to Cradle and Circular Economy principles, could be experienced firsthand and in depth. Additionally, some insight was gained regarding how wider environmental awareness and in particular the Cradle to Cradle and Circular Economy principles are being integrated into the curricula of schools in the Netherlands. This has contributed significantly to personal Continuing Professional Development by providing further knowledge and experience in the fields of energy and resource use, and by stimulating ideas for the introduction of related issues into Scottish education.

Personally, the highlights of the time in the Netherlands were visits to the Desso carpet factory; the Materials

3.Experiences from the participants

3.1.impact on the practitioners

- Have learned about the concepts and issues and about the desirability of C2C promotion in the educational sector;
- The way forward is to get the message across to young people that is their future world that we are potentially destroying by putting our vast amounts of waste to landfill and losing important sources;
- I hope to develop a project that involves all pupils;
- It was enlightening for me because real practical examples of careful energy and resource management based on Cradle to Cradle and Circular economy principles could be experienced firsthand and in depth;
- "As in life, any system should ultimately aim to run on 'current sunshine' and generate energy through renewable sources." This was a concept I was naturally aware of but if I'm honest, had never really thought about how it could be put into practise. The realisation about the implications of a cradle to cradle approach have really made me want to push this concept and it's issues more into my teaching and education.
- I believe that the way forward is to get the message across to young people that it is their future world that we are potentially destroying by putting our vast amounts of waste to landfill and losing important resources. This will influence my approach to teaching the subject matter

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3.2 Impact on the school

- We have developed a renewable project as part of our course.And it should be integrated in other courses as well;
 - Support other colleagues within 6 schools in East Kilbride and Rutherglen;
 - Integration in the new National 4 and 5 curriculum and the integration of Cradle to Cradle thinking;
- . I have used the set of "project re design" cards with my pupils. I gave them an everyday "costa" coffee cup and asked them to think about how and where that cup came from? This game allows them to appreciate how much energy and waste (a linear approach) goes into making such a simple everyday product. The pupils actually really enjoyed doing this task. I then ask them to think about the other set of cards which are more nature based (circular economy) and arrange them into an order. They soon realise that the industry based set of cards; form a line and the natural based cards form a circle, hence "circular economy. Such a simple yet effective task!

Since returning to school I informed my colleagues who found the concept of cradle to cradle fascinating. Currently in our department within Harris Academy we have developed a renewables

project as part of our S1 course. As the Curriculum for Excellence evolves over the next few years I believe it could be integrated into our other courses.

3.3 Dissimination in the curriculum

I believe that the greatest opportunity for this is in the preparation of the new National 4 and 5 curriculum and the integration of 'Cradle to Cradle' thinking

POSSIBLE DEPARTMENTS TO TRIAL

GT1

Fast Track Introduction to the Circular Economy

3 hours

14 - 16 (S3-S4)

Economics & Business Studies; Art (Design)

G2T

Investigating Linear and Closed Systems

50 minutes

14 - 16 (S3-S4)

Chemistry; Biology, Economics & Business Studies

G3T

Systems Thinking (Coffee)

60 minutes+

14 - 16 (S3-S4)

Biology; Economics & Business Studies

G4T

Circular Economy - Systems Thinking Activity

Open

14 - 16 (S3-S4)

Art (Design); Modern Studies

G5T

The Need for Infrastructure Change

30 minutes

14 – 16

(S3-S4)

Art (Design); Geography

G6T

Circular Economy – Project Checklist

Open

14 – 16

(S3-S4)

Art (Design)

An Analysis for the Possible Trialling of the Teaching Materials