

Waste Material Library – material play for a sustainable practice using waste

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Abstract

Introduction: This workshop builds on a proposed paper abstract ‘Waste Material Library – a resource for designers to encourage material play’ exploring a waste material library as a learning resource for designers. The participants will be asked to add to the library through documenting, describing, and playing with the materials they bring to the digital workshop to explore the possibilities for the use of waste materials in their own sustainable practice.

Context: Understanding material qualities and properties is imperative for designers. It is estimated that roughly 80% of the environmental impact a product will have in its life cycle is decided during the design stage (Graedel, Comrie and Sekutowski, 1995). Although the ultimate aim is to eliminate waste all together by creating a circular process which allows creations to either be re-used or return to the earth as food (Barber, 2019). As Katie Treggiden highlights ‘we need to deal with the legacy of 200 years of “take-make-waste’, ‘the resources we need are no longer in the ground, but in landfill’ (2020) and that ‘by recategorising waste as a raw material, we can slowly start to bend that straight line (of a linear economy) around into something more circular’ (ibid) changing waste from a ‘fact’ into a ‘category’ (Treggiden, 2020b)(Katie Treggiden, 2020). (Katie Treggiden, 2020b) Building on the concept of a materials library from the ‘Institute of Making’ this library will be based at Heriot-Watt University, School of Textiles and Design and will be documented online ‘enabling users to experience at first hand the relationships between materials and tools that constitute processes of making’ (The Institute of Making, 2020).

Workshop methods: Using a selection of waste materials collected by the participants the workshop will provide prompts and suggested ways of exploring the materiality of waste to help describe and categorise the materials as ‘data’. This will include gathering information on material composition, form, location (if found), where it was purchased (if from a scrap store), how it is made, information on its end of life/recyclability and any other information that the participants would like to add.

Using visual documentation, the participants will be asked to photograph and film their materials to show their qualities. Following this they will be asked to rapidly prototype through playing with the materials using stitch, cutting, gluing or other making methods they have accessible to them. After the ‘rapid prototyping’

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stage they will be asked to (quickly) visualise the materials on the body considering it's use within fashion garments or accessories. All images, videos and notes will be collected by the facilitator.

Workshop timing:

00:00 INTRODUCTION & CONTEXT - Introduction to workshop and context of the Waste Material Library – need to consider waste as a category for design not a fact (Trigedden, 2020)
00:05 INTRODUCTION & NETWORKING - Ask participants to introduce themselves and their interest in attending the workshop and what materials they have available/have brought.
00:20 EVALUATE & DESCRIBE MATERIALS - Group discussion around materials to assign 'descriptors'
00:40 MATERIAL PLAY - participants 'play with their materials to see what can be made.
00:60 VISUALISE – imagining the materials on the body.
00:80 REFLECT - Debrief and reflect on the session – go over next steps for the project/research and how participants can continue to be involved.
00:90 END

Materials required (participants to have ready):

5 or more 'waste' materials (gathered from recycling, local scrap stores or studios)
Needle and thread
Pen and Paper
Scissors
Glue
Optional:
Knitting needles
Crochet hook
Overall methodology

The waste material library project will be conducted using a Research through Design (RtD) methodology. RtD explicitly acknowledges the creative phase in research (Jonas, 2015, p. 26) where the researcher utilises their practice, in this case, material documentation (through video and photography) and material play to create a learning resource and range of prototypes as a form of material research. RtD allows prototyping and the designer's insider perspective of their practice to inform research plans, activities and outcomes (Jonas, 2015, p. 31). RtD process will be applied to this research to answer two initial research questions:

1. How can we build a learning resource of materials to inform the consideration of waste at the beginning of design projects?
2. What initial prototypes/ further materials can be created through applying making processes to the materials?

Outcomes:

1. Crowdsourced data (video, photography and descriptors) around waste materials for the waste material library
2. Examples of material play and experiments
3. Fashion visualisations imagining waste materials on the body.
4. Qualitative data from workshop recording expanding the discussion on the use of waste within a sustainable fashion practice.XXXX

Keywords: waste, materials, play, sustainability.

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