**Setting A, Monday 4th December 2017, Fieldnotes of Researcher 1**

***Light boxes***

Today we introduced a range of materials for making light boxes, including bulbs, batteries, crocodile clips, leads, and small cardboard boxes with clear acetate lids. In the pop-up black-out tent, the children have used the Pablo App on phones/iPad to make light shows from their light boxes. JM has helped the children to make photo stickers of their lightshows using a Sprocket printer. Some children also explored light and colour using coloured transparent shapes on the OHP, and made stop-motion films using the iMotion App.

In room one, the making table was set up within the main nursery space. I noticed that several children watched from a distance before coming to join in. In particular, M observed for several minutes. When he joined Amy at the table, he picked up a coloured lead and explored its bendiness. He took another lead from Amy, moving it slowly around and making a hissing noise. Meanwhile D held coloured cellophane shapes in her hands, crinkling them up as she contained them within her fingers, holding them up to the light and placing them over objects. She watched her peers making their light boxes and observed the effect that the cellophane overlays had upon the colour of the bulbs inside the box, commenting quietly, ‘it’s changing’. These examples indicate that the circuit making aspects of today’s session were not of particular significance for all children; the materials spoke to, and connected with, the children in different ways. As adults we were drawn to the novelty of the digital and the excitement of the electrical, but this was not the case for all of the children – this made me think of ‘flattened ontologies’ and the ways in which different combinations of materials, children and adults generated a wide range of different experiences, interactions, intra-actions and learning.

It appeared to be difficult for some of the children to squeeze the crocodile clips in order to attach the leads to the bulbs and complete a circuit. I don’t think their fingers had the physical strength to apply enough strength to the clip and they often required some help from stronger adult hands. A couple of children left the table whilst they were awaiting help. On the other hand, D repeatedly squeezed the clip with her fingers and persisted until it finally opened and attached around the bulb holder.

H attached the lightshow sticker he’d printed to his light box. He crawled out of the tent and came over to tell me that ‘We’ve been making water!’ as he ran his finger back and forth over the lines of light captured on the sticker. I watched him move to the drawing table. He put his box on the table, took a red pencil and made a series of zigzag marks on paper before joining a group of children who were singing with one of the teachers.

Meanwhile, in room 2, A was waiting for us to arrive. Her teacher said ‘she’s been so excited after last week when we were making circuits. She remembered that she needed batteries to light the bulbs.’ J, the teacher in room two, had set aside a small side room for making the light boxes. We worked with small groups of children whilst others watched through the window. Reflecting on the two sessions, I find it interesting to think about how the physical space contributed to the children’s participation in the sessions. In room 1, children moved fluidly between different parts of the nursery, joining in with the maker activities for a minute, or for more extended periods of time. Some children stood at a distance, watching what was happening. Resources from our maker trolley were sometimes moved to other parts of the nursery and acquired new purposes in the children’s playful encounters: leads became snakes, a box was filled with plastic animal figures, cellophane shapes were glued to collages. In room 2, the separation of the maker session from other aspects of nursery provision created a rather different experience – it felt to me to be less chaotic, but I wondered whether there was a greater focus upon the product of making a light box, rather than the process of exploring different possibilities.