

# Lab Tots Report Card



**Session Venue & Time:** Hartsfield JMI - KS1

**Lab Tots Term:** Spring Term 2019

**Instructor:** Sophia Mitchell

**Session Dates:** 26th February 2019

**What We Did & What We Learnt:**

## **Crazy Chemistry 1**

- We looked at how we can use chemistry to identify what a substance is
- We went through some good laboratory practices, including safe working, PPE and cross contamination and how not working to appropriate standards can invalidate your results
- We prepared and made our own indicator solutions for the identification of acids and alkalis
- We discussed the concept of neutral and control experiments
- We discussed water in terms of  $H^+$  &  $OH^-$  ions
- We tested some white powders to see if we could use our indicators to help identify them
- We observed colour changes and discussed and compared our results
- We started to look at fine tuning our experiment using Universal Indicator paper testing strips
- We looked at some common items found within the home and then tested these to identify them as acids or alkalis
- We tested out neutralisation and observed the results
- We looked at Laboratory safety and what clothes we needed to wear to help protect us (lab coats & goggles)
- We discuss how to stay safe in the laboratory and how we must never put anything in our mouths, including our own fingers and how we must never eat in the laboratory, as there may be things on our hands or equipment that could be dangerous
- We discussed the need to wash our hands well after doing any experiments and before eating
- We looked at how we can use chemistry to identify things that look the same but aren't
- We made our own indicator paper using red cabbage, which contains a chemical that changes colour when exposed to materials with different pH
- We made our own liquid indicator solution
- We looked at some substances in containers and predicted what these may be from looking at them - salt, sugar, water etc
- We tested several white powers and several clear colourless liquids to see whether they were the same or different and whether they were what we predicted
- We discussed acids (sour), alkalis (soapy) and neutral substances and what they were used for
- We used our indicator that we made to test the mystery materials
- We observed what happened when we added our indicator - acids turned pink, alkalis turned blue, neutral stayed purple

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- We then experimented with what happens when we added the alkali to the acid and witnessed a neutralisation reaction
- We revised the '!' warning symbol used on products and how we mustn't touch these materials.
- Proff demonstrated the indicator test with a stronger alkali (dish washer tablets). The children predicted what colour the indicator would turn.
- We used our indicator paper to test the 3 mystery, clear, colourless liquids and we drew our own 'magic' pictures
- We proved that even though things look the same, they may not be and therefore how important it is that we don't put anything in our mouths / eat / drink anything that we don't know what it is.