Little Scientists

NSW FAMILY DAY CARE ASSOCIATION RESOURCE SHEET AUTUMN 2015

Scientific exploration for young children

by Heike Schneider

Summer, sand and surfing – hardly any other country on the planet is more associated with outdoor activities than Australia. Due to the climate, the Australian lifestyle is closely linked to activities under the bright sun – as well as in and underneath the surface of pools and open water. As a result, most children growing up in Australia have access to water and water-related activities. Therefore, it is not surprising that Australian athletes belong to the world's best in these disciplines.

The 'Little Scientists' – a not-for-profit initiative of FROEBEL Australia and the 'Little Scientists House Foundation' in Germany – advocate the idea that young children all over Australia have access to scientific exploration as much as they have to water-related sports. Based on the fact that children are inquisitive by nature, the organisation aims to enable children between 3–6 years of age to explore their interest in scientific subjects.

To enable these experiences on a regular basis, 'Little Scientists' offers a professional development workshop program for early childhood educators to encourage and enable an active implementation of scientific content into their work. Based on the idea of stepping into children's shoes, the educators experience STEM (Science, Technology, Engineering and Mathematics) education on an age-appropriate level and learn how to support children in finding answers themselves. All workshops are built around using existing, everyday materials, to make experimenting and exploring at the education and care services as accessible as possible.

The 'Little Scientists' workshop program includes:

- A long-term program, currently of nine different workshop topics;
- Hands-on workshops with several rounds of practical experiments, which use everyday materials and can easily be adjusted for your family day care;
- Having fun while exploring given materials in small groups. Participants experience the stages of surprise, asking questions, coming up with hypotheses, testing these in further experiments, documenting findings and discussing the outcomes, much like what the children will experience;
- Getting to know and use the 'Little Scientists' Inquiry-Based Learning Cycle, a scientific method which helps to give structure and purpose to experimenting and lays the foundation for further investigation.

After every workshop, each participating service receives a set of laminated cards with a wealth of ideas for experiments and scientific background information, as well as a booklet with the educational content addressed in the workshop.

The content can then be shared with services staff and other educators, and can be implemented step-by-step into daily activities.

Due to the 'Little Scientists' holistic approach, the program not only encourages scientific exploration, but also supports the development of a child's fine motor skills, self-confidence and social skills, as well as language development. Moreover, the concept can also be used as an excellent tool for educators to meet a range of requirements of the National Quality Framework (NQF) and the Early Years Learning

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Framework (EYLF). As addressed in both frameworks, the initiative includes principles and practices aiming at ensuring the development of basic competencies for sustained lifelong learning, with practical emphasis on scientific, mathematical and technical education content.

With this sustainable concept, the 'Little Scientists' program aims to provide a 'scientific pool' for every Australian child.

If you are interested in learning more about 'Little Scientists' or would like to find out how to register for upcoming workshops, please view the organisation's website – **www.littlescientists.org.au** – or contact the Network and Project Coordinator Heike Schneider via email: **heike@littlescientists.org.au** or by calling (02) 8080 0065.

Simple science experiments

Science experiments for children can be very simple and don't need to be complicated to offer a great level of fascination to young children.

Here are some examples you can easily and safely do in your family day care:

- Exploring shadows;
- Melting ice;
- Mixing ice and salt;
- Making playdough;
- Balking soda experiments, such as mixing baking soda and vinegar with some food colouring.

For more inspiration, you can follow the NSW Family Day Care Association on Pinterest, where we have a special board dedicated to science ideas for early childhood. Go to: **www.pinterest.com/nswfdca**

Photo source: teaching2and3yearolds.com.