Developing sensory equipment for people with intellectual disabilities

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Background: Miroma provides day services for people with intellectual disabilities and is based in Vaucluse. People attend five days a week. Many still live at home with their parents and others live together in group homes. The people who attend Miroma have a range of other disabilities from vision impairment, auditory impairment, physical disabilities and behaviour that challenges.

There are a range of activities for people to take part in from artistic pursuits to involvement in the community. Therapies are also provided. Having fun is a major objective and there are a lot of ‘special’ days where there is a lot of singing and dancing.

It has been found that specialised sensory equipment can significantly increase people’s well-being as well as reducing behaviours and producing a calming and stimulating atmosphere. There could be many types of sensory equipment that can stimulate people using lights, music and moving textural surfaces.

Objective: The aim of this project is to design and build electrical equipment that provides sensory stimulation, such as lights, music and moving textural surfaces, for people with intellectual disabilities who have additional physical disabilities and people whose behaviour challenges. The sensory equipment should have the following characteristics:

1. It must be portable
2. It must be robust as the people benefitting from its use can not necessarily distinguish between soft or hard touching.
3. The equipment can vary but should include touch, sound and light, separately or all.

As part of the design stage, Miroma would welcome students to come and meet the people who attend Miroma (transport can be provided) and learn about the services Miroma offers and to recognise that people with disabilities have many abilities as well. It is also hoped that local Courier paper will be interested in publicising the students’ work.

2 students are required. The students participating in this project should have the strong enthusiasm about this project. The knowledge in microcontrollers and software programming skills may be required.

Number of students required: 2 students