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## Standupable Desks - Ergonomic furniture for Primary Schools

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## PROJECT OVERVIEW

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Numerous studies have shown how prolonged sitting at school can have a negative effect on the physical health and is linked with obesity in primary school students. More physically active approaches to learning have been shown to not only improve physical wellbeing but increase attention and improve learning outcomes. There is also an increasing movement to sit/ stand desking for office worker for ergonomic reasons.

The aim of this project was to design a prototype for research and development purposes, of a sit stand desk aimed at the primary school sector. The work was undertaken by a Research Intern supported by the Academic/ Project Coordinator.

The requirements of the project were the following:

1. The desk surface should be able to be adjust from sitting to standing height
2. The desk should be suitable for primary students
3. The desk should be adjustable by the user (student)
4. The desk surface may be adjustable to different angles

The following work was completed as part of the project:

### 01. Research and Brief Definition

The purpose of this phase was to establish the exact technical requirements of the project and would be undertaken in conjunction with the client. Work included:

- Exact height range and size requirements defined following research into relevant ergonomic standards
- Research into relevant safety standards
- Research into the market, competing products and companies

### 02. Concept Generation Phase

The purpose of this phase was to generate potential product concepts. Work included:

- Concept generation, sketching, drawing, rendering visuals
- Presentation of concepts to the company through sketches, detailed drawings, renderings, showing general product concepts and functionality

### 03. Concept Development Phase

The purpose of this phase was to further develop a chosen concept refine the product. Work included:

- Development single concept showing different options/ variations following phase 02
- Renderings of the "finished" product.
- Initial visuals showing product story i.e. benefits, features, selling points
- Overview of agreed dimensions, components, functionality
- Initial drawings for discussion

### 04. Prototype Development Phase

The purpose of this phase was to finalise the initial design making it ready for production of a prototype suitable for initial testing. Work included:

- Refinement/ changes to the chosen design
- Finalisation of detailing
- Final technical drawings for production of prototype

- Liaising with manufacturers/ factory.
- Coordination of Prototyping
- Prototype review and analysis and amendments

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Concept Renders



Prototype Images