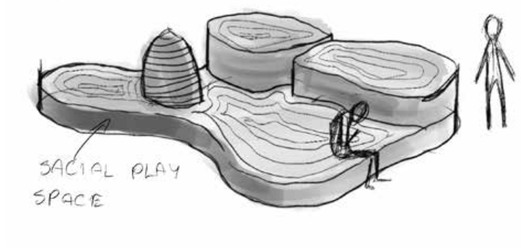
MISSING PIECES

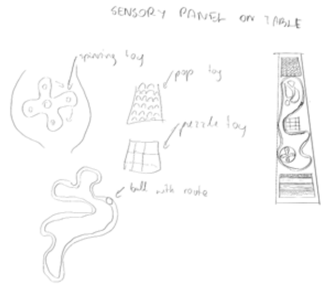
Autism in educatonal settings.

Missing Pieces is an inclusive learning space with Autism Spectrum Disorder in mind.
About 700,000 people in the UK has been diagnosed with autism, and when included their families, autism is a part of daily life for 2.8 million people. Education is a key part of every child's life but too many children with autism in England are not getting the education and support they need. Whilst there are specialist schools available, 71% of children with autism attend mainstream schools. Research has shown that mainstream schools are frequently neither fully educated nor equipped to deal with the needs of an autistic child and give them the necessary support. This is particularly alarming as such a high proportion of children with autism do attend mainstream schools, suggesting a large number of autistic children are not getting the educational experience they deserve.
The project sits in Kirkstll Forge, a 57- acre mixed use development located 3.5 miles outside of Leeds and has been master-planned to deliver 1.050 homes, 400,000 sq ft of offices, retail and leisure alongside with a primary school.

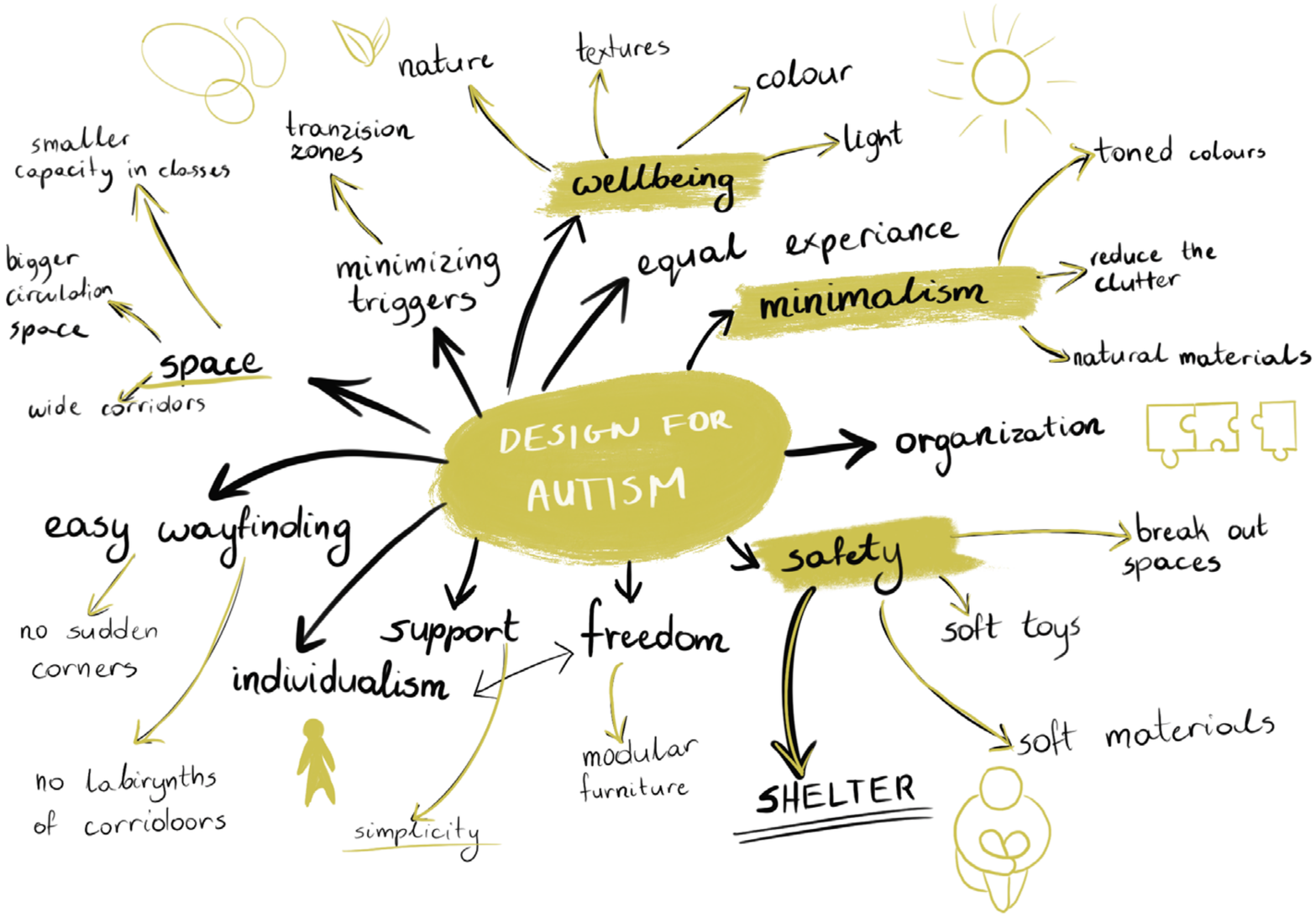
Inclusive table design.



Seating island design.



Sensory panel design.

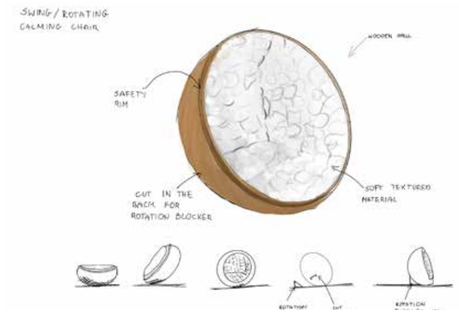


01 The concept

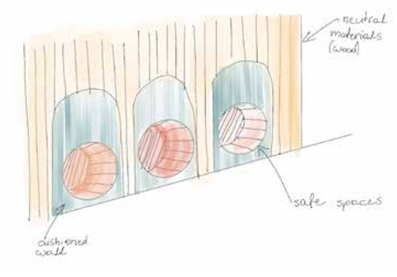
The goal of the design was to translate the philosophy of inclusive education into a physical environment that promotes joyful experiential learning. The project is focused on applying strategies that help overcome sensory challenges whilst keeping the design playful and welcoming for all kids to use.

As my design needed to feel safe I thought of the idea of a shelter from the outside world. I wanted all kids to feel safe in the educational interiors as they spent there a lot of their time and it is important to ensure the best learning settings and opportunities for all. Kids with ASD are particularly disadvantaged due to being hyper-sensitive to things that neurotypical people might don't even notice. It is extremely important to give them equal chance for education by eliminating those distractions.

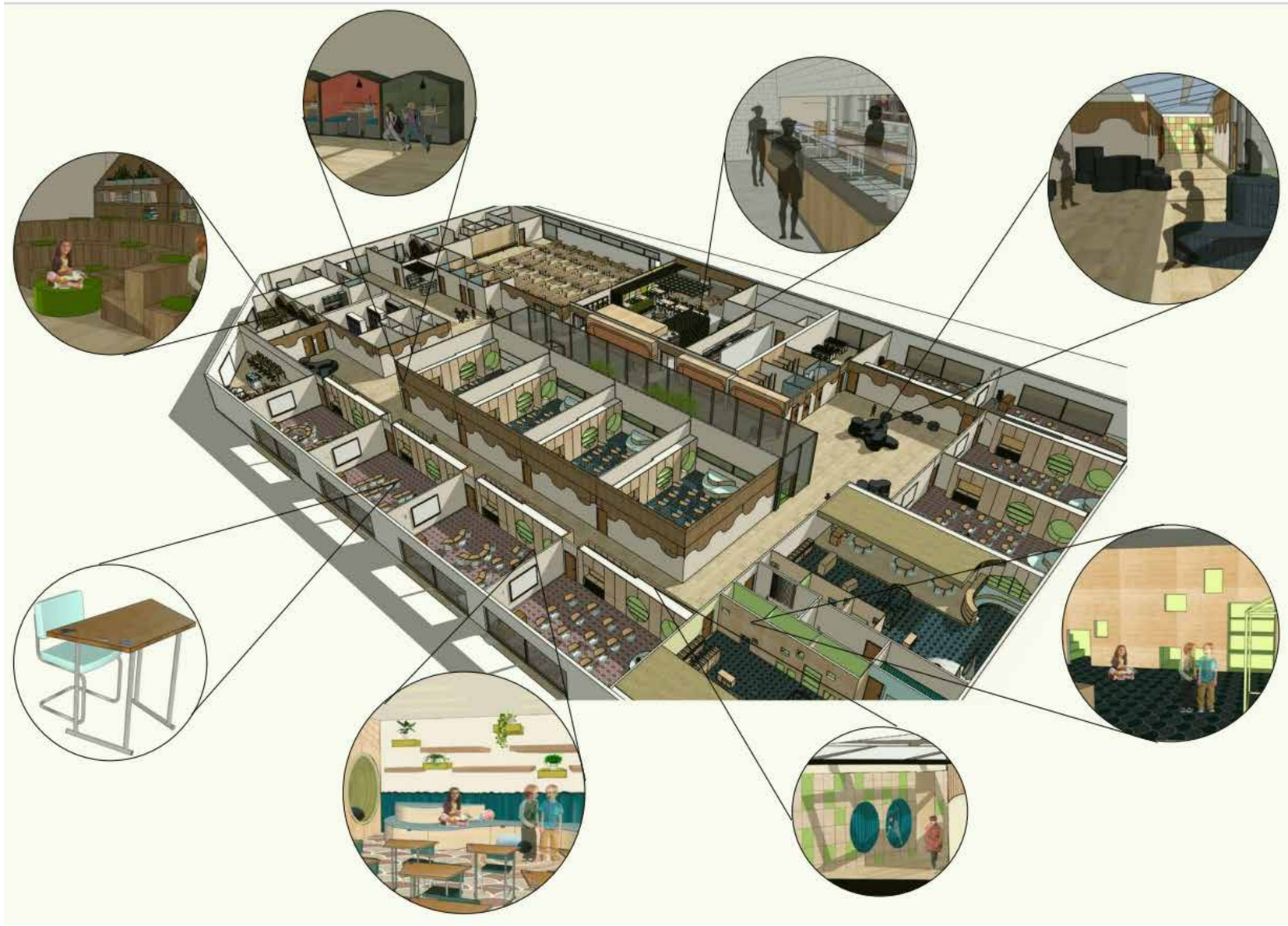
Study pods design.



Sensory chair design.



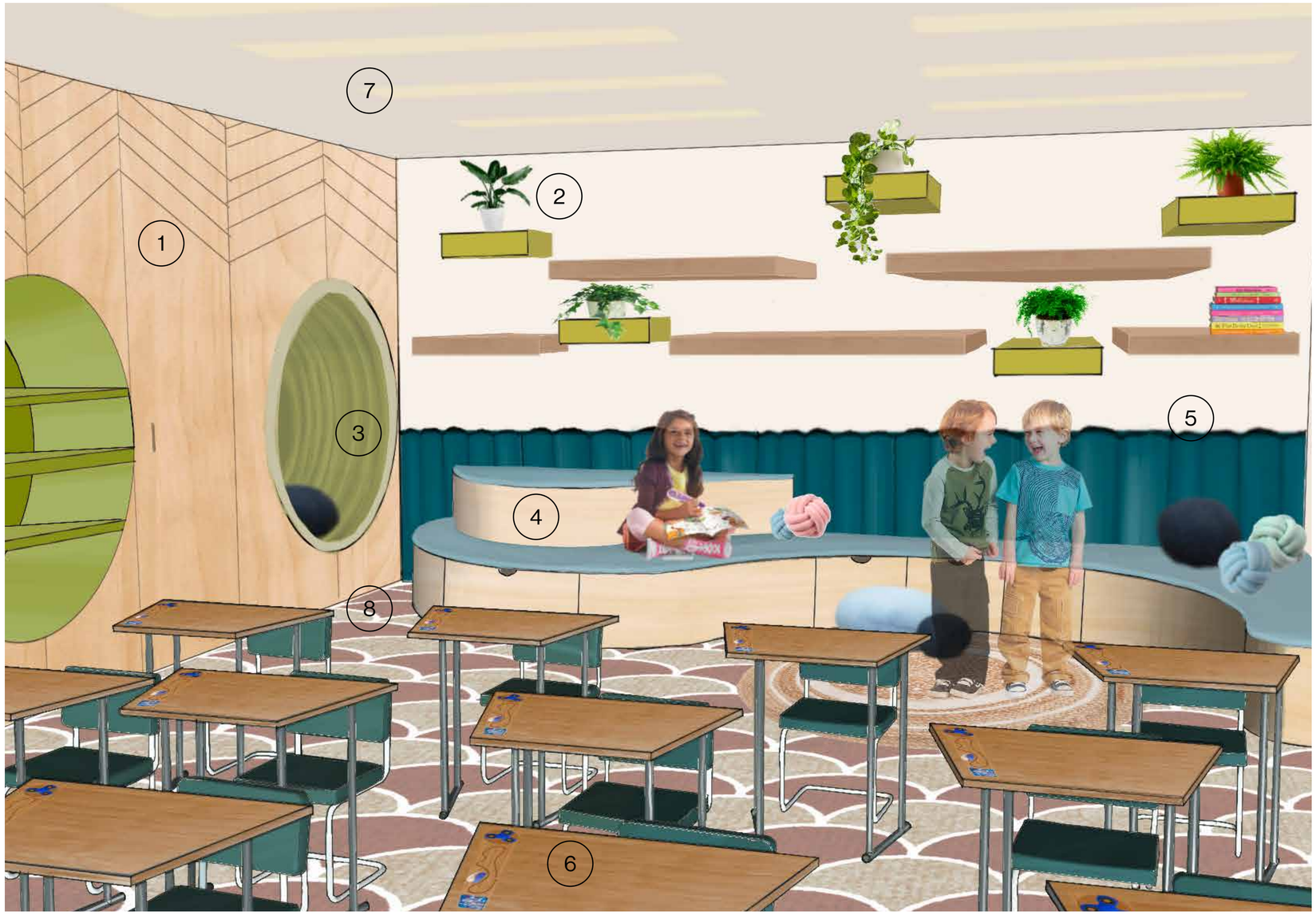
Safe zone design.



02 Applying priciples to the design.

The layout of the building has been designed as autism friendly as possible. Some of the main components being wide corridors, round circulation or safe zones around the space. There is a big amount of natural light provided through large windows and glass roofing that help in improving general wellbeing. The facility includes 14 classrooms, 2 per every year. The capacity for each class is 16 pupils which brings us to the full capacity of students of 224. The school provides students with 2 sensory rooms and a safe zone in every room and in corridors.

Autism friendly social area.



Year 3 classroom.

Reception year classroom.

Reception year classroom.

03 The improved classroom

1. Built-in storage.
A built-in storage system allow to reduce the clutter in the space as well as make it appear bigger.

2. Plants.
Bringing plants into a built environment can improve the air quality as well as general wellbeing. Maintaining a plant gives a sense of responsibility and achievement. For autistic people, gardening can help practice motor skills and can provide plenty of stimulation too.

3.Safe zone.
A round, built-in seating provides a "shelter" if kids need a break from the environment. A round shape help to calm down due to the illusion of being "hugged".

4. Curved bench.
The organically shaped bench makes provision for play and socialising as well as helps to reduce stress and enhance concentration. The bench also provides additional storage.

5. Wall padding.
Many children with autism may slam their heads on the walls as a self-harming act. Wall padding s provided to ensure extra safety. It also protects the wall from any damage around the seating area and has acoustic properties.

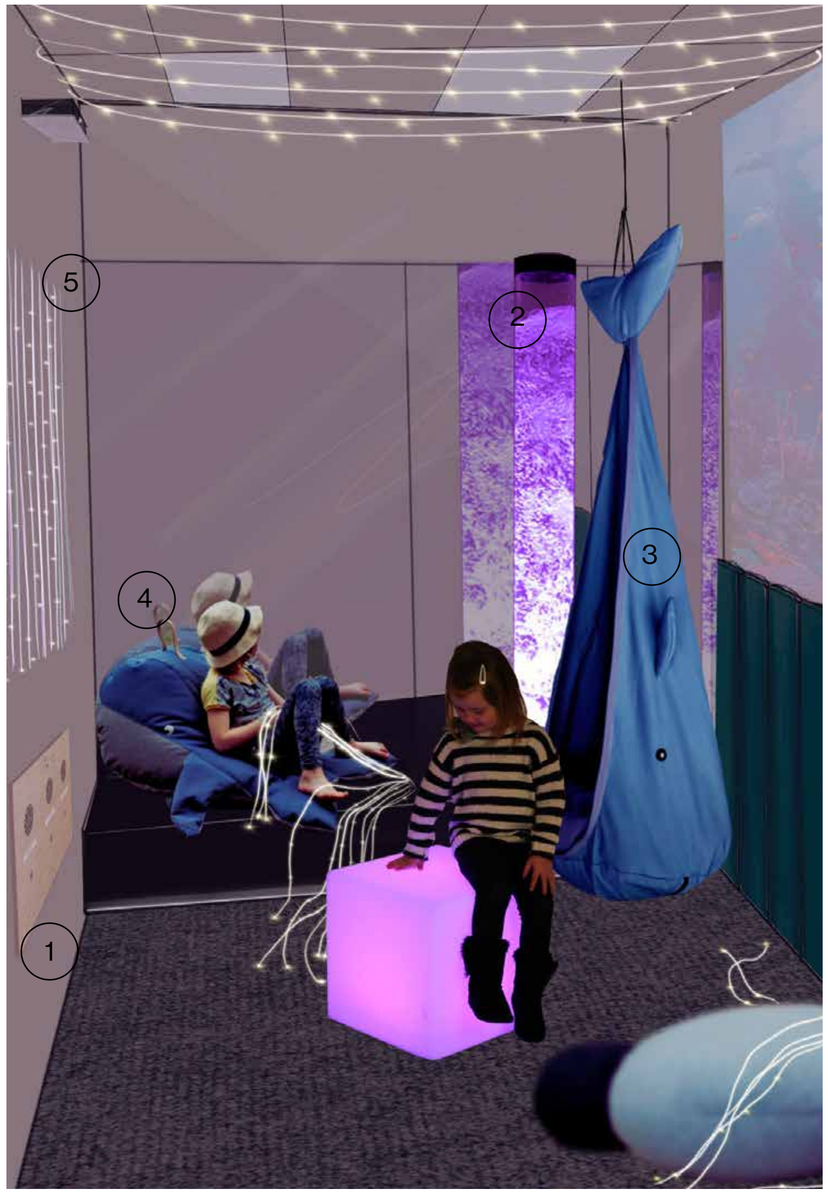
6. A school table has been designed to accommodate just one student at a time to avoid any frustrations related to table sharing. The trapeze shape can meet different needs by allowing to arrange of tables in different shapes and configurations. Every table is equipped with a small sensory panel that is not disturbing but helps to improve concentration.

7. Diffused lighting that it's also dimmable.

8. Carpet.
The carpeted floor helps with acoustic properties in a room. It also makes the space appear safer and cozier due to the soft texture of a carpet.

Sensory Regulation at School

Sensory rooms help teach children with autism and other behavioural health challenges to regulating their bodies in a way that allows them to achieve success in the classroom. For example, using a sensory "snack" of vestibular movement (linear or rotary swinging) or heavy work/deep movement (through obstacle courses or gross motor movement) can help students to achieve a calming sensory effect. Improved focus and information processing can make a significant impact on their ability not only to learn but in how they engage with their teachers and peers.



1. Aroma.
Aroma is a fragrance diffuser designed for people with sensory issues. The diffuser allows for easy scent change depending on the needs. The look of the design helps with easy use but it is not distracting.

2. Bubble tube
Bubble tubes create constantly moving colour changing sensory bubbles which can both sooth and catch the eye, developing visual skills. Bubbles tubes also softly vibrate, which invites users to explore touch too and helps them to be engaged whilst remaining relaxed.

3. Hammock.
Sensory swings challenge and develop the functional use of vision by allowing the use of vision to see while moving, or give kids the option of being completely immersed in a swing and eliminating visual feedback.

4. Bean bag.
Bean bag chairs for autism are a form of adaptive furniture. This is because their shape and density can be adjusted for maximum comfort and benefit. The even pressure on the body provides a calming sense of security, and the beanbag will adapt to the child's body as he or she grows.

5. Lighting.
Sensory light products have a range of benefits to the user, from the tactile experience with fiber optics to developing visual senses with bubble tubes. For those with autism, calming sensory lights help users interact with their environment in a safe and fun way, as lights can bring anyone joy.

Autism - friendly furniture.

A school table has been designed to accommodate just one student at a time to avoid any frustrations related to table sharing. The trapeze shape can meet different needs by allowing to arrange tables in different shapes and configurations. Every table is equipped with a small sensory panel that is not disturbing but helps to improve concentration. "U" shaped table legs allow for the ability to be easily moved around the room. A chair without back legs allows for delicate rocking which is one of the self-soothing mechanisms in autism.