EDUCATION DESIGN GUIDE

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Designing flexible learning spaces

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Interactive pdf Start

DESIGNING FLEXIBLE LEARNING SPACES TO PROMOTE STUDENT ENGAGEMENT

This guide is for architects, interior designers, estate managers and everyone involved in building the schools of tomorrow. Versatile, modular and dynamic, these places of learning will promote well-being and sustainability. They will be more inclusive, better connected and outward-looking.

Intended primarily to offer inspiration and explore the role of colour in enhancing the academic experience, the guide reflects our thoughts on how the built environment can support new learning strategies.

It also addresses some important questions around the school of the future:

- How to empower students and involve them in the learning process?
- How to develop a flourishing school culture that recognises the importance of individual needs and life outside the classroom?
- How to give students a great place to learn and teachers a great place to work?

We hope this guide will provide some helpful ideas in the search for answers.

Tarkett, Supporting the Education Community





SUMMARY



INSPIRATION GUIDE

INFORMAL LEARNING SPACES

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- LIBRARY
- HALLWAYS

FORMAL LEARNING SPACES

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- SPORTS HALL
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- STUDENT ACCOMODATIONS
- WETROOM

USING COLOUR IN EDUCATIONAL SPACES

ESSENTIAL POINTS

THE ROLE OF COLOUR FOR DIFFERENT AGE GROUPS

INFORMAL LEARNING SPACES

In informal learning environments, ownership lies with the individual to design their own experience, create their learning outcomes and assess their own capabilities.

This informality means formal spaces must adapt and evolve to meet new learning needs.

These spaces can then foster connection, invention and discovery that both enhance formal learning discussions and encourage independent exploration and collaboration.



TRANSITION AREAS

"Where we feel welcomed and part of a community." – Emily M.

TRANSITION AREAS

DESIGN OBJECTIVE

Create easy-to-use spaces that help students feel emotionally safe, meet their individual needs and boost their sense of belonging.

DESIGN RECOMMANDATIONS

CREATE AN INVITING ENVIRONMENT

- Provide unobstructed sightlines of the space and adjacent areas.
- Use materials and colours to help orientation and wayfinding.
- Create areas on a human scale: divide large spaces into small zones or produce a range of work areas designated by textures and shades.
- Develop different types of work area according to needs and preferences: solo-study spaces, classic group-study spaces (with tables) or flexible spaces, such as steps.
- Allow room for social interaction and informal learning.

FORGE A STRONG IDENTITY

✓ Promote a sense of belonging through designs and colours that reflect the identity of the school or university.



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TRANSITION AREAS

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"Places where we can get together or work with friends." – Daniel P.

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TRANSITION AREAS

DESIGN OBJECTIVE

- Create welcoming spaces that encourage social interaction and informal learning.
- Help students learn from others.
- Interest and engage students.
- Make learning fun.

DESIGN RECOMMANDATIONS

STRUCTURE SPACE

- ✓ Divide large spaces into smaller zones or create a range of work areas: solo-study spaces, socialinteraction and informal-learning spaces, spaces for group-working.
- Use contrasting colours to denote social spaces (bright hues to drive interaction) vs circulation areas (natural colours to generate calm when students are on the move).
- Provide modular furniture to promote flexible use of the space.
- ✓ Harness a variety of lighting designs to create different zones within the space.

CREATE STRONG IDENTITY

- Mark out social spaces in different colours, encouraging groups of students to adopt their favourite shade.
- ✓ Give students a sense of shared identity and belonging through imaginative design.
- ✓ Generate a dynamic, uplifting feel with bright, intense or pastel shades.



TRANSITION AREAS

This contemporary design scheme with natural, soft colours brings warmth and authenticity.

✓ The sequence of colours with shades from the same chromatic group produces a dynamic effect that doesn't tire the eyes.



NCS S 2010-G





TRANSITION AREAS

This design scheme evokes calm and relaxation through its neutral, muted colours juxtaposed with intense tones.



NCS S 2005-R90B





LIBRARY

"Our quiet space for studying or reading." – Anna D.

A HER WARREN

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LIBRARY

DESIGN OBJECTIVE

Create a quiet space offering a range of configurations for student study: individual, surrounded by others, working in small groups.

DESIGN RECOMMANDATIONS

CREATE A QUIET & COMFORTABLE ATMOSPHERE

- ✓ Use textiles on floors and/or furniture to absorb sound and generate warm surroundings.
- ✓ Aim for a calming, harmonious effect by creating soft transitions in neutral or muted colours.
- Introduce some colour-saturated elements to raise attention levels in a place where students tend to be static and may lose focus: provide warm zones, such as alcoves in warm materials (carpet or wood design) and natural, matt colours.

ENCOURAGE CONCENTRATION

- Use neutral colours in circulation areas and more saturated shades in working spaces to promote group study.
- Create different zones and layouts for solo-learning or reading by providing corners and tables of different sizes.



LIBRARY

An airy, natural decor to inspire reflection



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LIBRARY

Strong design statement in contemporary, minimalist style to maximise effective working.

> ✓ Intense colours create a distinctive effect, which is balanced by natural tones.





FOCUS ON COLOUR

HALLWAYS

DESIGN OBJECTIVE

Promote orientation: Help students understand where to go and where they are.

DESIGN RECOMMANDATIONS

PROMOTE ORIENTATION AND ENSURE SMOOTH TRAFFIC FLOW

- ✓ Use colour-coding to signal and differentiate spaces.
- ✓ Utilise floors and walls for signage to orientate and guide students.
- Harness wall coverings to help protect walls from impacts and scratches.

ENHANCE VISUAL PERCEPTION

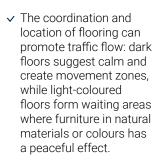
- ✓ Remember that colour contrasts can help visually impaired students. An LRV difference of 30 points will generate sufficient contrast for signage.
- ✓ Integrate warning tiles to indicate changes in floor level.



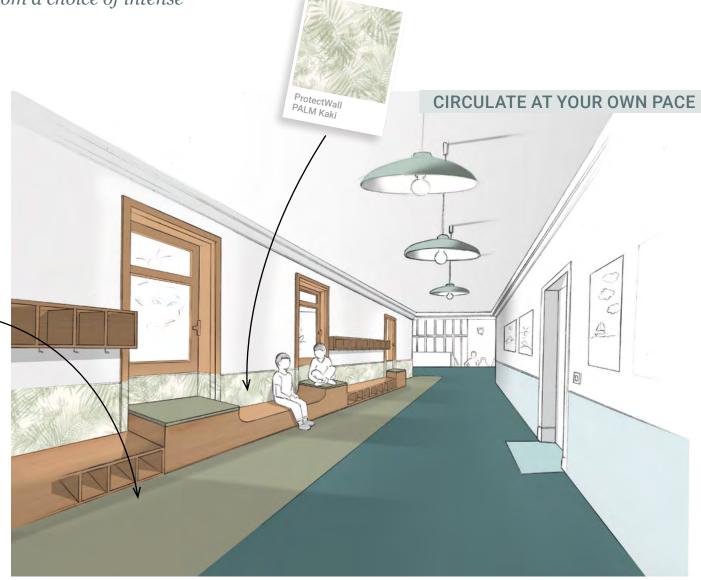
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HALLWAYS

Calm, flowing feel from a choice of intense and vivid colours.







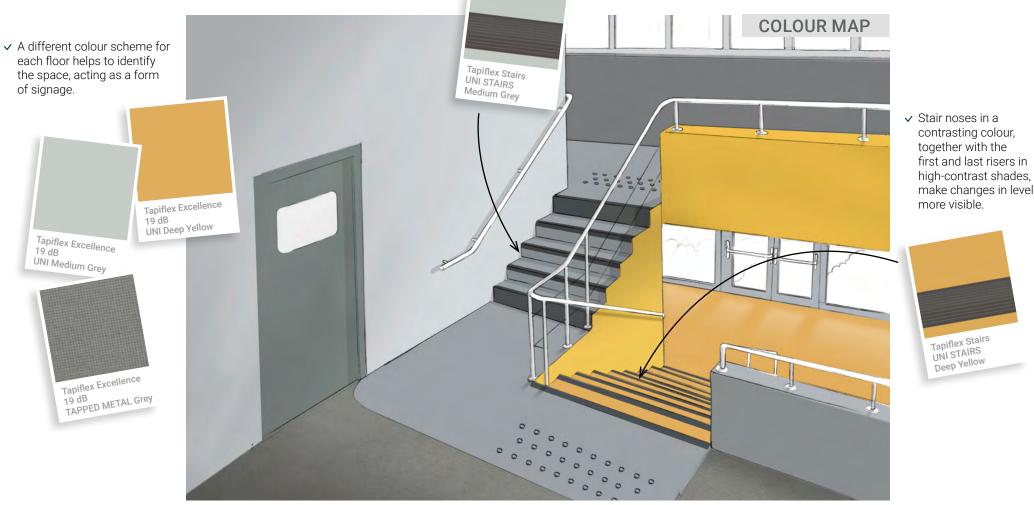
 Highlighting the entrance to a classroom signals the transition from corridor to learning space.

> ProtectWall UNI White Blue

FURNITURE

HALLWAYS

As stairways are a common location for falls, particular attention should be paid to these areas. In addition to anti-slip surfaces, visibility is key to help prevent falls.



FORMAL LEARNING SPACES

Learning environments should support the shift from passive to active and collaborative learning.

Spatial flexibility encourages group-based projects, collaboration and creativity.

Spaces that are versatile and easily adaptable form key components of new learning strategies.



STUDENT LIFE I FOC

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CLASSROOMS >

"Where we can learn in a more proactive way." – Enrique V.



CLASSROOMS

DESIGN OBJECTIVE

Promote active learning, allow quick reconfiguration for different learning modes: solo, collaborative, remote, etc.

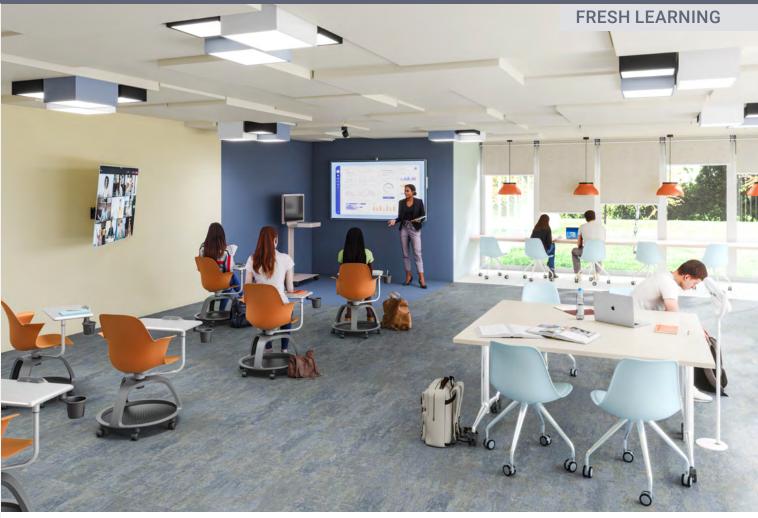
DESIGN RECOMMANDATIONS

CREATE FLEXIBLE LEARNING SPACES

- Design flexible classroom layouts featuring mobile furniture to enable quick reconfiguration of the space.
- ✓ Allow for multiple layouts in the same room; zoning can help create different areas without the need for physical divisions.
- $\checkmark\,$ Use zoning to indicate functions and activities, too.

ENHANCE WELL-BEING AND CONCENTRATION

- Aim for bright classrooms full of natural light (without glare) opening on to the surrounding natural environment.
- ✓ Choose muted, natural colours that encourage concentration, especially around the board / screen.
- Bright and saturated colours should be used in a supporting role to inject dynamism without distracting.



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CLASSROOMS

Warm colour scheme that promotes a sense of protection and support, encouraging and inspiring confidence, through natural pink shades.

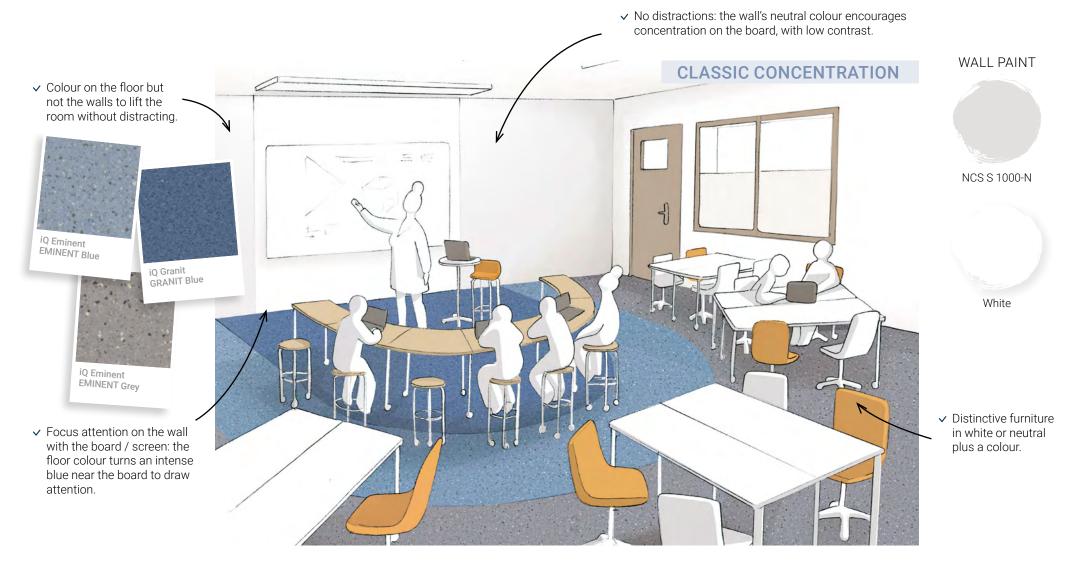
✓ No distractions: the wall's neutral colour encourages concentration on the board, with low contrast.



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CLASSROOMS

A timeless design in blue tones that combine with grey to promote concentration.



STUDENT LIFE

Educational buildings also convey a school's identity and values, helping to create a sense of community.

That's why campus life is becoming increasingly important, as it can support both the recruitment and retention of high-calibre students and teachers.



CANTEEN

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"Where we can rebuild our strength, have a break, socialise." – Sophia B.

CANTEEN

DESIGN OBJECTIVE

Create an atmosphere suitable for eating and socialising. Allow for a variety of dining configurations: big groups, small groups, pairs or alone, with varying levels of intimacy.

DESIGN RECOMMANDATIONS

ENCOURAGE SOCIALISING AND ENSURE SMOOTH TRAFFIC FLOW

- ✓ Use colour to mark out circulation zones and eating spaces, or to create intimate areas for small groups.
- ✓ Offer a variety of seating arrangements to meet individual preferences.

CREATE AN OPEN, BRIGHT ATMOSPHERE

- Aim for an environment open to nature and offering natural light.
- ✓ Vary the depth and intensity of decor colour to give all students the chance to feel comfortable.
- Stimulate the appetite with flashes of brighter colours and yellow-based tones.



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CANTEEN

Dynamic, graphic effect through zoning in bright colours, echoed by vivid touches in the architecture.



NCS S 4020-Y90R



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CANTEEN

Timeless design scheme in softly matching shades that reassure.





RESPITE ROOM

"A refuge to disconnect from the frenetic school life." – Alex G.

RESPITE ROOM

DESIGN OBJECTIVE

Create a cocoon where students can take refuge from busy and noisy spaces, reset and reconnect with their emotions.

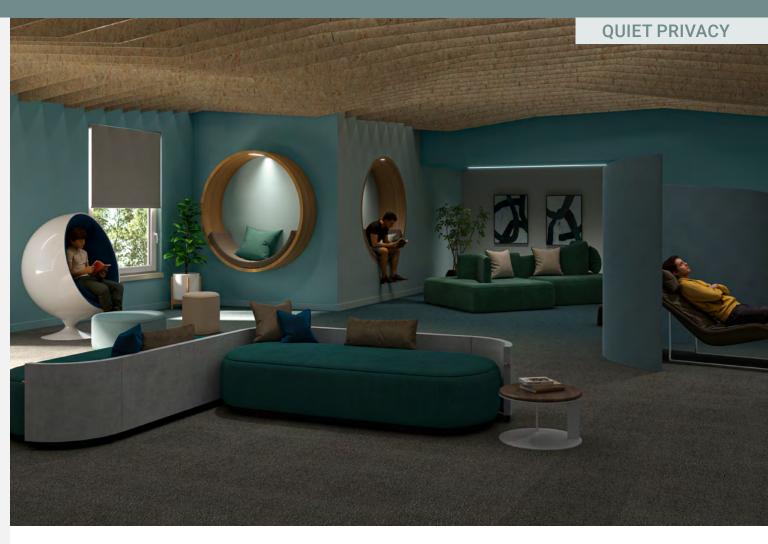
DESIGN RECOMMANDATIONS

CREATE A LOW-STIMULUS ATMOSPHERE

- ✓ Provide good soundproofing, soft lighting and comfortable furniture in a space away from crowds and intrusions.
- Choose natural and neutral colours as well as homely patterns to create a warm atmosphere (wood, carpet etc.)
- Design as a specific room or as a space in a library, classroom or common room.

ADOPT AN AUTISM-FRIENDLY APPROACH

- ✓ Calm zones are even more important for young people with autism, who may be overstimulated or seen as oddities. These areas could be in a common room or a quiet corner. People with ASD need their own personal space.
- Create a range of rest areas: private, open (with egg chairs, alcoves, sofas etc.).
- ✓ Prioritise pastel shades, natural and grey colours with blue and green tones predominating.



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RESPITE ROOM



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RESPITE ROOM

The juxtaposition of warm and natural shades along with wooden design elements generates an immersive, enveloping impression.



SPORTS HALL

"Sport and training are key for our development." – Oliver L.

SPORTS HALL

DESIGN OBJECTIVE

Design a place for sport, sometimes high-level, that can be also used to host non-sporting events such as exhibitions, chess tournaments, ceremonies or social gatherings.

DESIGN RECOMMANDATIONS

CREATE AN IDEAL ENVIRONMENT FOR SPORT

- Select the floor to match the types of activity, athlete profile and level of proficiency.
- ✓ The EN14904 standard guarantees a safe, suitable surface for sport.
- Create strong contrast between the flooring and court markings to enhance visual perception (LRV difference >30 pts).

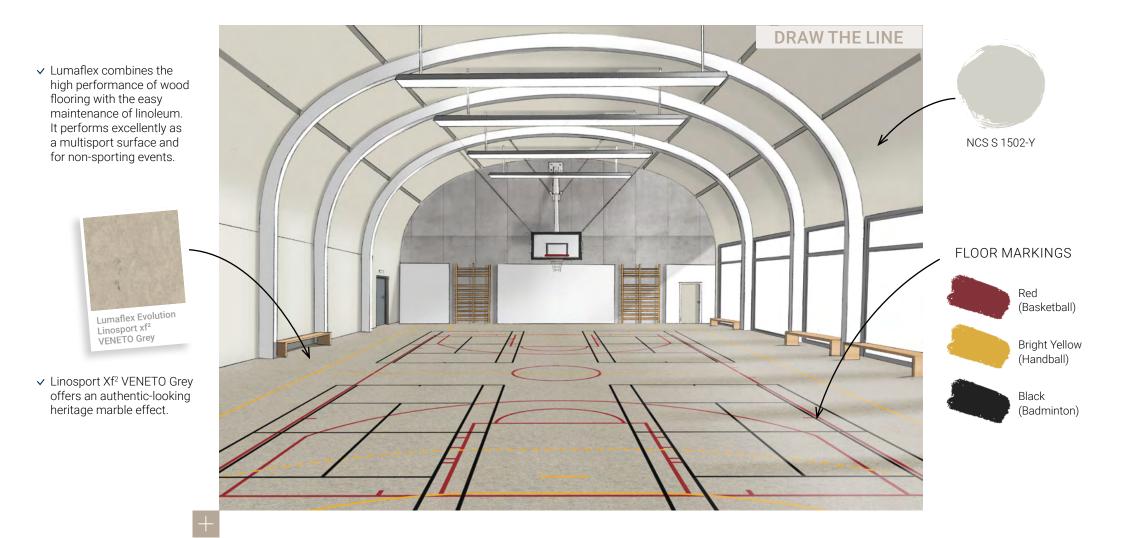
BUILD IN FLEXIBILITY FOR NON-SPORTING EVENTS

 Choose a floor that won't be damaged by static loads (chairs or tables) and yet still perform well as a surface for sport.



SPORTS HALL

In a neutral environment, use bold coloured lines to create visual interest through graphical patterns.



SPORTS HALL

Wood flooring's aesthetics engender a competitive, corporate feeling.





STAFF-ROOM

"Our own space to chat, have a break, prepare for lessons." – Laura P.

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STAFF-ROOM

DESIGN OBJECTIVE

Create a space where staff can disconnect from class hours, work, and/or relax. Address diverse needs, such as peace and quiet, social interaction, solo-working and collaboration.

DESIGN RECOMMANDATIONS

ALLOW TEACHERS TO DISCONNECT FROM CLASSES

- Create a relaxing atmosphere with soft materials, such as carpet, or homely wood-based design.
- ✓ Use soft colours to promote relaxation.
- Choose furniture and materials to create a distinctive space that reflects teachers' leadership role.

ADDRESS DIVERSE NEEDS: SOCIALISING, REST, SOLO-WORKING & COLLABORATION

- Create multi-use spaces in different configurations for individuals and groups, rest or work, with the floors to provide zoning.
- ✓ Specify sound-absorbent materials.



STAFF-ROOM

Classically-inspired design using multiple materials for a comfortable feel.



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STAFF-ROOM

A dynamic composition created with pastel or natural colours in contrasting tones.



NCS S 2010-B50G



STUDENT LIFE



STUDENT ACCOMODATION



STUDENT ACCOMODATION

DESIGN OBJECTIVE

Create a welcoming environment that feels comfortable even if far from home, but also a space that students can personalise and make their own.

DESIGN RECOMMANDATIONS

CREATE A HOMELY ATMOSPHERE

- ✓ Promote rest and concentration.
- ✓ Create a warm, homely feeling.
- Use light colours for a sense of space in what are often small rooms.

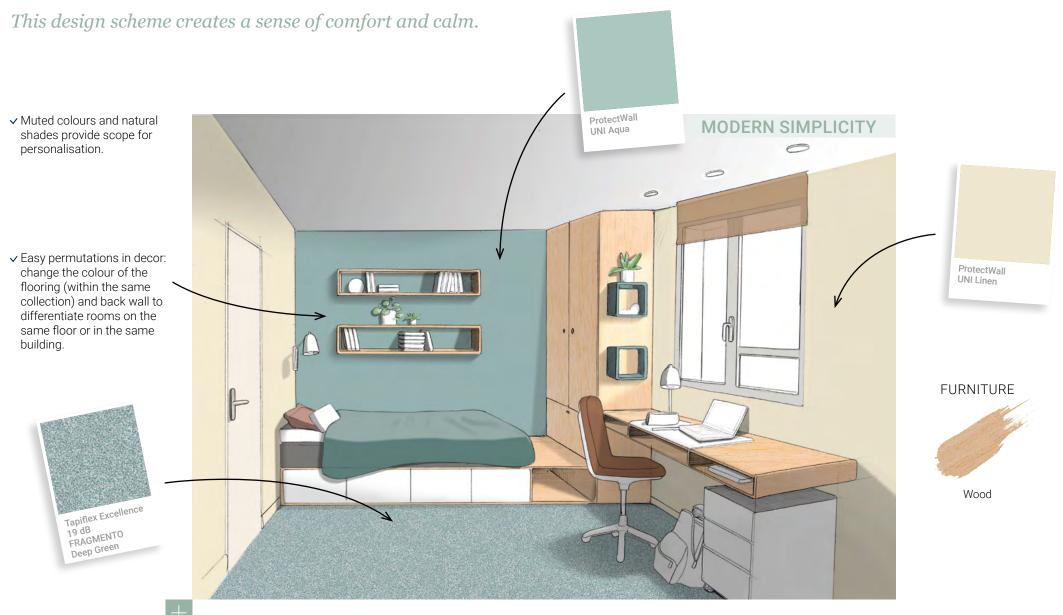
ALLOW PERSONALISATION

- Design a pleasant but neutral environment that students can personalise and make their own.
- Vary the room decors by floor or building to provide some variety for students.



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STUDENT ACCOMODATION



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STUDENT ACCOMODATION

The colour scheme in warm grey to natural shades creates a gently enfolding, welcoming feel.



STUDENT LIFE

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WETROOMS

"A good, cleansing shower helps us re-energise after a busy day." – Steve F.

CITERICIES CONTRACTOR

WETROOMS

DESIGN OBJECTIVE

Create a pleasant, hygienic, safe space in which to shower and re-energise through the power of water. Design for inclusivity with disability-friendly facilities.

DESIGN RECOMMANDATIONS

CREATE AN UPBEAT FEEL

- ✓ Re-energise through the force of nature with design that evokes natural materials.
- ✓ Use warm wood and bare stone to revitalise and connect with the environment.
- ✓ Juxtapose contrasting textures to give the room an enduring structure.

FOCUS ON HYGIENE AND SAFETY

- ✓ Ensure accessibility for all with a level floor.
- Achieve a perfect, waterproof, hygienic finish with our wetroom system—a sealed shower or bathroom with integrated flooring, wall coverings, borders and a full range of accessories including drains, threshold strips, sleeves etc.



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WETROOMS

The use of blue colours in intense and natural tones suggests peace and tranquillity.



STUDENT LIFE

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WETROOMS

Modern design with intense green to stimulate and evoke nature.



THE ROLE OF **COLOUR** IN EDUCATION

The coloured appearance of an environment is a stimulus, a message that carries meaning, arouses sensations and provokes emotions. Colour influences our behaviour and decisions.

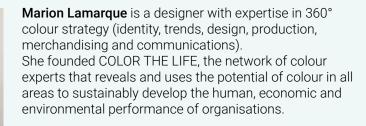
In schools and universities, colour can play several roles beyond the purely decorative. It can act as a signpost, providing clear guidance to users as they move between different areas.

The colour schemes in educational environments can also boost the sense of well-being among pupils, students and teachers, whether they need peace and focus for learning or, by contrast, energy and enthusiasm for socialising or working collaboratively.

Depending on their shade and positioning, the colours on walls, woodwork, floor and furniture can enfold those using the space, directing their gaze or opening up the area and distracting their attention.

by Marion Lamarque Colour expert Founder and President of COLOR THE LIFE.

Because of colour's importance to the education sector's built environment, we have produced a special study of the subject in collaboration with designer and colour expert Marion Lamarque.









www.colorthelife.org





HOW DOES COLOUR WORK?

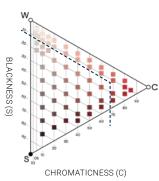
DEFINING A COLOUR USING THE NATURAL COLOUR SYSTEM ('NCS') A pragmatic, tridimensional

NCS is a universal colour language based on science. It identifies a colour in 2 steps using 6 basic shades that the human eye perceives as pure: white (W), black (S), yellow(Y), red (R), blue (B) and green (G).



1. HU

The hue is the relationship to 1 or 2 of the 4 chromatic elementary colours in the colour circle.



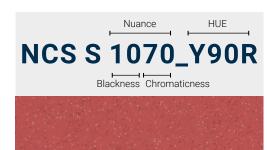
2. NUANCE

Nuance is defined by the quantity of black (S), white (W) and chromaticness (C) or purity of hue. THE COMPLETE NCS COLOUR NOTATION

Example: Platinium 100 Candy Coral NCS S 1070-Y90R

DEFINING THE COLOUR FAMILIES

A colour family is a set of colours with the same Nuance (Tone).

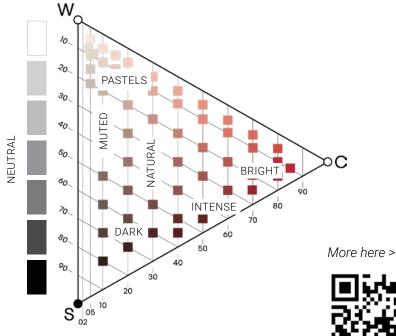


HUE:

Y90R = mix of 10% of yellow, 90% of red

NUANCE:

S1070 = 10% black 70% chromaticness





COLOURS AND SHADES FAMILIES

COLOURS

MUTED

Muted colours are discreet and provide calm and reassurance.

PASTEL

Pastel colours are soft and cheerful. They enlarge and open up the space.

BRIGHT

Bright colours create a cheerful and uplifting atmosphere. They encourage creativity and teamwork and are also indicative.

NATURAL

Natural colours create authentic and cosy atmospheres.

INTENSE

Intense colours dramatise the space and inspire confidence, thanks to their prestigious status.

DARK

Dark colours highlight architectural elements and calm over-lit atmospheres.



BLUE Pale blues give a feeling

of lightness. Bright blues bring freshness and encourage creativity. Darker blues bring peace and tranquillity, especially in reference to the night.

GREEN

Evoking nature, green creates healthy and balanced atmospheres that relax and promote concentration.

YELLOW

& OCHRE Symbol of the sun, yellow brings optimism and cheerfulness. The ochres reassure and encourage sociability.

BEIGE

& BROWN They evoke natural materials and offer warm, calm and reassuring atmospheres.

ORANGE

Orange subtly stimulates while maintaining concentration. Dark, it evokes the reassuring colours of the earth and autumn, and encourages social interaction.

PINK & RED

Light pink calms and encourages empathy and learning. Bright pink encourages exchange and sharing with others. Bright red excites and provokes intense emotions.

NEUTRALS

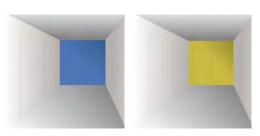
d Blacks and whites y create striking settings. Greys bring depth and calm a colorful ed atmosphere.

HOW TO USE COLOUR?

Today's schools and universities welcome a wide range of people, from students of all ages to teaching, administrative and maintenance staff. Furthermore, efforts to make education more inclusive mean provision must be made for students with disabilities, such as impaired vision or reduced mobility. Difficulty in finding one's way often leads to a loss of confidence and can be unsettling. With so many users, these spaces must be easy to navigate, utilising colours and daylight to promote traffic flow and help guide people around the building.

HOW TO INFLUENCE SPATIAL PERCEPTION

Warm colours



Cold colours

DISTANCE AND DEPTH PERCEPTION

A warm colour (yellow, orange, red, pink) seems closer than a cold one (purple, blue, turquoise, green). It can be used to make corridors seem shorter or longer, for example.



SPACE SIZE PERCEPTION

Light, cool colours evoke air and water, two elements that people associate with light and peace. In architecture, they enlarge and open up areas. Dark, warm colours envelop us and reduce the feeling of space, creating a sense of intimacy.

HOW TO ENHANCE VISUAL PERCEPTION

Colour contrast is central to providing visual clues for doors, handles, handrails and signage, enabling people with diminished sight to better make sense of their surroundings.

HUE CONSTRAST

CHROMATIC CONTRAST



LIGHT / DARK CONTRAST LRV difference >30



As the Light Reflection Value of a colour is linked to its blackness, this measure can help create the right level of contrast. An LRV difference of 30 points is required to generate sufficient contrast.



FOCUS BY AGE

A colour harmony is composed of colours that are linked to each other (same hue or same nuance), and must be given rhythm by a play of proportions: the dominant colours give the atmosphere of the place, a contrasting colour in a touch attracts the eye (signage), and the transition colours allow you to move from one atmosphere to another.

Depending of the functional or emotional needs of users, it is recommended to design a specific harmony, based on the psychology of colours by hue, by color family and contrasts.



Among other things, colour acts on the development of the psychomotor skills of children and contributes to their personal development. The perception of colour and space is built up and develops with age. Irrespective of the child's age, the environment, and in particular the chromatic atmosphere, contributes to the moulding and development of that child to a greater degree than other functions. In order for the visual system to develop smoothly, it has to be stimulated by light and colour adapted to each age.

Tarkett Color Study



The main purpose of colour harmonies in spaces for children aged **6 to 12** is to **encourage their intellectual and emotional development**. By offering very different choices of harmonies between spaces, we shape their taste and **encourage the expression of their personality**.

DOMINANT COLOURS FAMILIES FOR FLOORS:



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Vary the coloured spaces, saturations and luminosities in order to give all children the chance to feel comfortable in a given space. The question of preferred colours is central. What is the environment in which children want to be? It must be possible to give them the chance to choose; this encourages them to discover their preferences, to mould their tastes..."

Prof. Daniel Oberfeld-Twistel, Department of Experimental Psychology, Johannes Gutenberg University Mainz, DE



***6**-12 ***12**-18 ***12**-18 ***12**-18 ***12**-18 ***12**-18 ***12**-18 ***12**-18 ***1**-18 * **1**-18 * ***1**-18 * **1**-18 *

12-18 YEARS COLOUR TO SUIT TEENAGE DEVELOPMENTS

A **teenager's environment** plays a huge role in the **development of his or her identity**, and this process can be facilitated by making that environment as comfortable as possible.

Different colour schemes should be mixed to suit the needs of both younger and **more mature teenagers**.

DOMINANT COLOURS FAMILIES FOR FLOORS:

NEUTRAL
MUTED
INTENSE
NATURAL
BRIGHT

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Neutral colours are preferred by teenagers. Bright colours that are reminiscent of childhood should be used as minor accents, whereas black is a possible colour option that reflects the teenager's mood."

Marie-Claude Mauchamp, Teacher of applied arts, FR





In the first grades (12-16 years old) the preference is different from that of the 16-18 age group. The younger kids are more likely to prefer more colours. The older ones are more mature and don't like it too childish."

Ann Huybrechts, Head of the Royal College of Antwerp, BE

+18YEARS COLOUR TO PERSONIFY IDENTITY

Young adults need to be singular.

Their environment must take on some of the **codes** of the taught **disciplines** in terms of **colours and materials**.

Depending on the space, the decoration must provide **concentration**, **relaxation**, **motivation or creativity**.

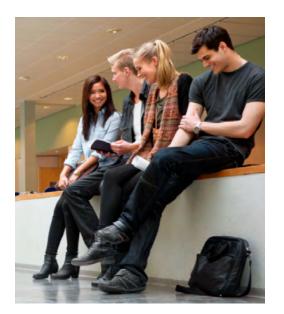
DOMINANT COLOURS FAMILIES FOR FLOORS:



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Nowadays it's unthinkable to have classrooms and halls that don't have natural daylight. On the other hand, don't go for overkill. Too much light can have a negative effect on the concentration of students."

Jan Thomaes, Architect at DMT architects, Professor of Architecture at the Academy of Antwerp, BE



2 *** * 12-18 * 18 age group**

Human-Conscious Design™

Tarkett Human-Conscious Design[™] is our pledge to stand with present and future generations.

To create flooring and sports surfaces that are good for people and for the planet. And to do it every day.

We deliver on this through the synergy of three commitments:

1. Deep human understanding

2. Conscious choices. For people and planet

3. With you. Every step of the way

