

An activity/learning center with a bright color accent will engage and excite students. Paired with neutral walls keeps them from being overly excited.

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## Strategic Use of Color and Lighting Influences Children's Ability to Learn

What we once referred to as "school libraries," media centers are moving from spaces filled with large, heavy tables and walls lined with bookshelves to flexible spaces that capitalize on color and lighting. At Clear Creek Amana's Tiffin Elementary school, the media room walls and furnishings are neutral-colored, but an accent lime green wall (one of the school's colors). The room is one of the students' favorite places to visit. As an activity/learning center, the bright color accent gets them engaged and excited; pairing it with the neutral walls keeps them from being overly excited.

The goal of all schools is to help their students learn by creating an environment in which they can thrive. Color and lighting can help support that mission.

The colors and lighting in classrooms have been shown to affect children's mental health and ability to learn:

- Certain colors can impact creativity, concentration and social interaction.
- Natural lighting can improve students' focus and health.
- Bonus: Effective use of daylighting can also reduce energy costs.

When renovating your school, there are some things to consider when choosing colors and lighting:

- Function of the room - Rooms such as the gym or cafeteria can be more colorful and bright as these areas promote social interaction and a break from the "work" spaces.


## Cafeterias: Space to Unwind

When administrators at Cedar Rapids Jefferson High School wanted to renovate the cafeteria, they wanted to create a space that was fun and trendy but also timeless.

Durable, neutral-colored materials were used on countertops and cabinetry. Curved soffits paired with pops of bright colors guide students to the different food stations.

The color accents work in this room because bright colors promote social interaction, and the cafeteria is students' chance to "leave" their workspace for a while and unwind.

## Renderings Build Confidence for Bold Choices



It is not often that a school remodels, so when it does, it can be a scary process. Did we choose the right colors? Will they still be appropriate 10-15 years from now?

Visualization tools such as color renderings can help infuse confidence by showing in a photo-type sketchup just how the colors will look in the spaces.

SCHOOLTALK


Colors and curves create a versatile gathering space for food, fun or mental breaks throughout the day.

- Ages of the students - Bright and warm colors can be overstimulating to small children, but have less effect on high school-age students.
- Designing for all abilities - With the integration of special needs students, be mindful of colors that are too stimulating and could affect students' ability to focus and thrive.
- Daylighting do's and don'ts Including natural lighting involves more thoughtful consideration than simply adding many large windows; too much light will result in shades being closed.


## CHOOSE THE BEST COLOR...FOR YOU

There are millions of colors to choose from when you consider all of the possible shades, hues, tones and variations. How can you narrow down your choices?

## Identify the Behavior You want to Promote

Colors can affect students' mood, behavior, motivation and health. To choose the right colors for a room, think of who is using the space and what they are using it for. What kind of behavior do you want to promote?

Red is an exciting, stimulating color; even for laid-back children, being in a room with red walls increases their heartbeat. The "warm colors" - red through lime green - have a stimulating effect; "cool colors" ranging from grass green through violet have a calming effect (see color wheel). Consider the impact of warm colors in a preschool or early elementary classroom, even on an accent wall.

Even different shades of the same color can have different effects. Crayon-orange is great in adolescent-age rooms; it's a lively, happy color. However, bright orange can be overstimulating, reminding people of safety warnings.

## School Colors: Moderation is Key

School colors feel "safe" because they have a feeling of timelessness, since they will always be relevant to that school. The key is to not oversaturate the school with these colors, but to use them in appropriate balance, perhaps in the furnishings or as an accent wall.

Clear Creek Amana High School uses its school color subtly around the building. The school's blue color is represented in


Intentional use of school colors in competitive areas create energy, establish school identity and branding, and build school pride.
some of the chairs throughout the building and in bands of color on ceilings. Overall, the blue color is used $20 \%$ of the time, and neutral colors the other $80 \%$. This makes it dramatic while remaining tasteful and not overwhelming. Small amounts in strategic locations will speak to users more.

At Cedar Rapids Washington High School, the new gym and pool is saturated in its school colors. This makes sense for this space because the gym and pool are places to host visitors, or hold school rallies, and it's a chance to emphasize school pride.

Schools can also use a complementary color palette to balance the use of school colors. The media center at Clear Creek Amana's Tiffin Elementary school uses pops of electric light blue and light green to complement the school's blue color.

## When to be Trendy, When to be Timeless

Colors can help define a space. However, you don't want them to define a point in time that won't be relevant 10-15 years down the road.

You also don't want to use so many colors that maintaining them becomes an issue.

Having two paint colors on hand versus 18 paint colors reduces costs and storage needs and allows staff to more easily care for the spaces and keep them looking nice over time. It also promotes standardization if the same color schemes are used throughout the school.

A high school band room utilized neutral cream and brown colors on the walls and ceilings, white floors, and black furnishings, giving the room an elegant and timeless look. Visual impact was added by using blue-colored glass - one of the school's colors -giving a play on color both inside the room and on the outside of the building. To accomplish this sort of feature, it's important to work hand-in-hand with the architect to make sure it fits the vision for the exterior of the building.

## Furnishings and Artwork

Schools can use more than just paint on the walls to add color to their spaces.

Using student artwork aids in wayfinding by visually identifying which rooms are for younger or older grades. It also helps kids feel a sense of ownership and pride in how their school looks.


At Washington High School in Cedar Rapids, lowa, an alumnus decorated an accent wall inside the cafeteria with urban art using school colors.


An elementary school used student artwork to decorate a long hallway. Children drew self-portraits in their assigned color, and then all of the faces were blended into a rainbow collage.

## SCHOOL TALK

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School Talk, a publication of Shive-Hattery, features issues, trends and innovations in K-12 education design.

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Natural lighting with shading options for days that are too bright will help decrease distraction.

## SELECT COLOR AND LIGHTING AT THE SAME TIME

Color and lighting choices need to go hand-in-hand. Should you go with natural lighting or artificial lighting? Your decision may be affected by the direction a room is facing, cost, or what the room is used for.

## Lighting Affects Color Selection \& Mood <br> If you're considering using vibrant colors, you need to also take into consideration the light source. The type of lighting you choose will affect how the color looks - what appears bright green in bright lighting might turn into a murky green in lowlighting.

Your choice of lighting can also affect the mood of the users. Natural lighting helps students concentrate, improving their academic performance, and enhances overall mental health.

If day lighting is used appropriately, schools could see up to two-thirds of its lighting from natural light, reducing operational costs from less reliance on artificial lighting.

## Offer Shading Options with Natural Light

 Having heard the benefits of natural lighting, some schools filled classroom walls with large, expensive windows. However, depending on the amount of sunlight streaming in the classroom, some teachers are closing the blinds because there's too much light.What side of the building a room is on will affect how much natural light enters the room and at what time of day. Teachers need to be able to control the light and shade it. With the amount of technology used in classrooms today, even at the younger grades, teachers need to be able to dim the lights so students can see smart boards, TVs and other electronics. Shading options include a film you can put over the glass, push-button electronic shades, shades that automatically raise and lower depending on the amount of glare, and shading in the glass itself that changes tinting based on glare.

Effective day lighting could include:

- Sloped, highly reflective ceilings that bring daylight deep into the room
- Translucent light shelves that bounce light into classrooms and provide diffuse light at windows to prevent glare
- Louvers that block high-angle summer sun but let in low-angle winter sun
- Windows positioned for soft daylight on teaching wall
- Light-colored countertops and floors that reflect light into the room

School remodels are carefully planned, often years in the making, and likely will remain in place for years to come. Color and lighting decisions may seem like simple choices, but they can have a huge impact on students' ability to thrive and learn and need to be given careful consideration. $-\Vdash$

