IGNITEMYFUTURE

A New View of Colour

Guiding Question: How does a perspective shape our understanding?

Ignite Curiosity

- What is your favorite colour?
- How does your favorite colour make you feel? Do you think your favorite colour makes others feel the same way?
- Can colours impact human behaviour?

In this lesson, students will use the computational thinking strategy of abstraction to discover how colour evokes different reactions. In **THINK**, s, students act as interior designers challenged to produce a useful and stylish interior that evokes the preferred emotional response. In **SOLVE** students abstract characteristics and design elements to use in four defined spaces: a medical facility, a law office, a restaurant, and a daycare centre. In **CREATE** students use an online gallery tool like Padlet to create a design portfolio that they can present to their client. In **CONNECT**, students explore how colour evokes different responses and connect these reactions to the purpose of a design. Students will connect this lesson to a variety of careers in art, engineering, and design.

Students will be able to:

- **Apply** the abstract concept of the psychology behind colours into an interior design that evokes the preferred emotional response within a given environment,
- **Evaluate** the abstract design for functionality and safety, and
- **Create** a model of each space that promotes their design.

SUBJECTS

English/Language Arts
Art

COMPUTATIONAL THINKING PRACTICE

Developing and Using Abstractions

COMPUTATIONAL THINKING STRATEGY

Abstract

MATERIALS

Interpreting "The Raven" student capture sheet

Design Ideas student handout

Copies of Poe's "The Raven" or sections from the poem

Video recordings of "The Raven"

Print advertisements

Markers or paints

Pens and/or pencils

Art paper

Lined index cards

Computers with access to the Internet

Students act as interior designers challenged to create a design for a functional and appropriate aesthetic environment.

1 **Read** the following scenario to students:
Imagine you are an interior designer working for a commercial architectural firm that currently has four contracts to design and build the following spaces: a medical facility, a law office, a restaurant, and a daycare centre. Interior designers are responsible for much more than decorating a space. People react to things in the environment, and interior designers have the power to create environments that shape behaviours and promote health. You have been given the task to create a digital portfolio to present to a corporate client. The portfolio will include colour, furnishings, and other materials that provide a functional and safe environment. Let's see how well you do!

2 **Ask** students if they know about how colours are used to evoke certain feelings or represent certain things. Share the following website with students to help lead the conversation about colours and the way they influence us.

3 **Activity 1:** Students will compare and contrast Edgar Allan Poe's poem "The Raven" with one or more video interpretations of the poem to analyze the effects of lighting, sound, colour, or camera focus and angles.

- **Teacher Note:** Encourage students to discuss how the way something is presented evokes a personal response. Sometimes, the response is emotional, and at other times, it can be behavioural. Oftentimes, our responses are different because of a person's individual experiences. Ensure that students use precise words and phrases, relevant descriptive details, and sensory language to inform and explain abstract interpretations. Encourage students to support their claims with logical reasoning and relevant, accurate data.

- Distribute copies of "The Raven" or excerpts from the poem and Interpreting "The Raven" student capture sheets. Ask students to read the poem to themselves and interpret what they believe the poem means. Instruct students to record their answers on their capture sheets.

- Next, allow one or two students to read the poem as a dramatic reading. Ask students if hearing the poem evokes a different meaning of the poem for them than reading it silently to themselves.

- If a classroom computer is available, allow students to watch video interpretations of the poem. You can find recorded interpretations on using an Internet search engine. Screen the recordings before class to ensure they are appropriate for students.

- Provide time for students to complete their analysis of the videos with the student worksheets. End the activity with a class discussion or small-group discussions to synthesize how the presentation of a concept is enhanced through the use of technology. Encourage students to support their claims.

4 **Discuss** the psychology of using colour in design. Challenge students to consider how the use of colour can evoke an emotional response or behaviour from people.

- Ask students to draw six circles on a piece of paper and give each circle a different colour of their choice with markers or paint. (You can use any medium that will allow students to write words in the circle later).

- Using the following resources, ask students to write descriptive words within the circles to show how the colour typically makes people respond. Remind students to evaluate any source they may find for credibility.

- Ask students to consider advertisements they have seen on television or in print, or bring in print advertisements for students to examine. Discuss as a class how colour is used to help sell things. Does it fit with what they have learned about the psychology of colour? Encourage students to support their response with credible sources.

- Summarize the activity by discussing how using colours in marketing and product design can evoke abstract concepts such as love, peacefulness, encouragement, or urgency.

- Finalize the class discussion by asking this question: How can thinking like a computer help interior designers make decisions about design?

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Students act as a team of interior designers for an architectural firm that has four current design projects: a hospital, a law office, a restaurant, and a daycare centre.

1 **Divide** students into groups of four or five and ask them to consider the following questions:

- Why are hospitals often decorated with soft colours like blues and greens?
- Why are fast-food restaurants decorated in vibrant reds and yellows?
- What thinking goes into a package's design, and how is colour used in marketing?
- What are some common features you see about how people connect to colour or are affected by colour?

2 **Allow groups to share** their thinking on these questions for 10 to 15 minutes. They can use the results of Step 3 from Think encourage discussion. Remind students to support their thinking with logical reasoning and credible sources.

3 **Next,** students will begin planning their interiors.

- Assign each group one of the four possible interiors: hospital, daycare, restaurant, or law office.
- Distribute the Design Ideas student capture sheets.
- Instruct students to brainstorm and identify the important factors they need to include for their assigned project on the side of the card with lines. For example, the daycare may need stimulating and calming areas, while the hospital would require a peaceful and health-inducing environment. Students should write abstract and descriptive words to guide what the desired emotional and behavioural response for their given space should be. Students should use precise words and phrases, relevant descriptive details, and sensory language to capture these abstract thoughts into concrete elements within their design.
- On the blank side of the card, ask students to draw the design they think will best portray the abstract characteristics and design elements for their given space. (i.e., colour, furnishings, patterns and textures, anything they can think of to include in the final presentation for their given space.)
- Remind students that the goal of each project includes the following:
  - The space must be stylish.
  - The space must be functional.
  - The space must use colour that evokes the desired emotional response for each project.
  - The space must be a safe environment.

Students will use the online gallery tool, Padlet, to create an online portfolio where they can present their designs to the clients.

Teacher Note: In advance of the lesson, you may choose to review Padlet.

1 **Preview** this short video to orient yourself with Padlet. You may also share it with your students, if you like, by quickly screening the online tutorial.

2 **Inform** students that each group will create a portfolio for its assigned project that includes colours and patterns to present to the client for the design of the space. Emphasize how the final design should portray the abstract concepts identified by the second question on their Design Ideas student capture sheets.

3 **Groups should use the information** they have from the index cards created in Solve to help complete each space. Remind students that the design must be cohesive and fitting for the establishment. Students should use precise words and phrases, relevant descriptive details, and sensory language to capture the purpose of their choices for their design. Students must include supporting claims using credible sources to provide the argument/rationale for their design choices.

4 **Provide** groups with 20-30 minutes to complete their designs. When groups are finished, ask each group to partner with the group nearest in order to explain their design.

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Select one of the strategies listed below to help students answer these questions:

- **How do this problem and solution connect to me?**
- **How do this problem and solution connect to real-world careers?**
- **How do this problem and solution connect to our world?**

1 **Write** the three questions on PPT or flip chart slides and invite students to share out responses.

2 **Hand** chart paper out around the room, each with one question written on it. Ask students to write down their ideas on each sheet.

3 **Assign** one of the questions to three different student groups to brainstorm or research, and then share out responses.

4 **Invite** students to write down responses to each question on a sticky note, and collect them to create an affinity diagram of ideas.

How does this connect to students?

Building models and working through a design process helps students think creatively, fosters their imagination, and enables them to practise problem-solving skills.

Students will explore how the colours they see every day evoke different responses and connect that to the purpose of a design, in this case, an interior space.

How does this connect to careers?

Artists and **Art Directors** deal with colour to bring about desired emotional or behavioural responses, or represent abstract thought.

Photographers use colour to enhance their subjects and evoke certain emotions.

Commercial, Industrial, and **Interior Designers** need to use colour effectively, make sure their designs are functional and safe, and provide the proper behavioural stimulation for an environment.

Packaging Designers and **Advertisers** frequently develop the abstract concept of "needs" or "desires" into the package design for marketing.

How does this connect to our world?

A collaborative design process brings incremental changes that spur growth. The ability to transfer concepts into drawings that can be shared, simulated, tested, and modified is required in many fields. This process of design allows us to choose the best initial idea, develop prototypes, and consider ideas before developing a final solution.

Design itself is important for any business as it considers the effect of branding and advertisement on potential customers and helps provide safe, comfortable conditions in which workers can be productive.

TATA Consultancy Services has many buildings around the world and uses colours intentionally. You can click here for examples.

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Curriculum Connections

UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

"For the goals to be reached, everyone needs to do their part: governments, the private sector, civil society and **people like you**." —The United Nations

"The Sustainable Development Goals are the blueprint for a better future. And together we can reach them. By following the Good Life Goals, we can all help make tomorrow better than today. Let's do this! #GoodLifeGoals"

9 MAKE SMART CHOICES

GOODLIFE GOALS

MAKE SMART CHOICES
Actions

9

1 Learn about plans for progress in your country

4 Welcome innovations that make the world a better place

2 Stay smart and kind online

5 Demand the benefits from progress are shared

3 Support construction that benefits people and protects the planet

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

SUSTAINABLE DEVELOPMENT GOALS

Source:
The Good Life Goals by Futerra Sustainability Communications Ltd and 10-Year Framework of Programmes on Sustainable Lifestyles and Education Programme is licenced under CC BY-ND 4.0.

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Global Competencies

CMEC (Council of Ministers of Education, Canada) Pan-Canadian Global Competencies Descriptions

Highlighted sections apply to this lesson

Global Competency	Definition	Student Descriptors
Collaboration	Collaboration involves the interplay of the cognitive (including thinking and reasoning), interpersonal, and intrapersonal competencies necessary to participate effectively and ethically in teams. Ever-increasing versatility and depth of skill are applied across diverse situations, roles, groups, and perspectives in order to co-construct knowledge, meaning, and content, and learn from, and with, others in physical and virtual environments.	Students participate in teams by establishing positive and respectful relationships, developing trust and acting co-operatively and with integrity. Students learn from and contribute to the learning of others by co-constructing knowledge, meaning, and content. Students assume various roles on the team, respect a diversity of perspectives, and address disagreements and manage conflict in a sensitive and constructive manner. Students network with a variety of communities/groups and use an array of technology appropriately to work with others.
Communication	Communication involves receiving and expressing meaning (e.g., reading and writing, viewing and creating, listening and speaking) in different contexts and with different audiences and purposes. Effective communication increasingly involves understanding both local and global perspectives, societal and cultural contexts, and adapting and changing using a variety of media appropriately, responsibly, safely, and with regard to one's digital footprint.	Students communicate effectively in different contexts in oral and written form in French and/or English through a variety of media. Students communicate using the appropriate digital tools and create a positive digital footprint. Students ask effective questions to acquire knowledge, listen to understand all points of view, voice their own opinions, and advocate for ideas. Students gain knowledge about a variety of languages and understand the cultural importance of language.

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Global Competencies cont.

<mark>Highlighted sections apply to this lesson</mark>

Global Competency	Definition	Student Descriptors
Global Citizenship and Sustainability	Global citizenship and sustainability involve reflecting on diverse worldviews and perspectives and understanding and addressing ecological, social, and economic issues that are crucial to living in a contemporary, connected, interdependent, and sustainable world. It also includes the acquisition of knowledge, motivation, dispositions, and skills required for an ethos of engaged citizenship, with an appreciation for the diversity of people, perspectives, and the ability to envision and work toward a better and more sustainable future for all.	Students understand the ecological, economic, and social forces, their interconnectedness, and how they affect individuals, societies, and countries. Students take actions and responsible decisions that support quality of life for all, now and in the future. Students recognize discrimination and promote principles of equity, human rights, and democratic participation. Students understand Indigenous traditions and knowledge and its place in Canada, learn from and with diverse people, develop cross-cultural understanding, and understand the forces that affect individuals, societies, and nations. Students engage in local, national, and global initiatives to make a positive difference. Students contribute to society and to the culture of local, national, global, and virtual communities in a responsible, inclusive, accountable, sustainable, and ethical manner. Students as citizens participate in networks in a safe and socially responsible manner.

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Global Competencies cont.

Highlighted sections apply to this lesson

Global Competency	Definition	Student Descriptors
Critical Thinking and Problem Solving	Critical thinking and problem solving involve addressing complex issues and problems by acquiring, processing, analysing, and interpreting information to make informed judgments and decisions. The capacity to engage in cognitive processes to understand and resolve problems includes the willingness to achieve one's potential as a constructive and reflective citizen. Learning is deepened when situated in meaningful, real-world, authentic experiences.	Students will solve meaningful, real-life, complex problems by taking concrete steps to address issues and design and manage projects. Students will engage in an inquiry process to solve problems as well as acquire, process, interpret, synthesize, and critically analyse information to make informed decisions (i.e., critical and digital literacy). Students will see patterns, make connections, and transfer what they have learned from one situation to another, including in real world applications. Students will construct, relate, and apply knowledge to all domains of life such as school, home, work, friends, and community. Students will analyze the functions and interconnections of social, economic, and ecological systems.
Innovation, Creativity and Entrepreneurship	Innovation, creativity, and entrepreneurship involve the ability to turn ideas into action to meet the needs of a community. The capacity to enhance concepts, ideas, or products to contribute new-to- the-world solutions to complex economic, social, and environmental problems involves leadership, taking risks, independent/unconventional thinking and experimenting with new strategies, techniques, or perspectives, through inquiry research. Entrepreneurial mindsets and skills involve a focus on building and scaling an idea sustainably.	Students formulate and express insightful questions and opinions to generate novel ideas. Students contribute solutions to complex economic, social, and environmental problems or to meet a need in a community in a number of ways including; enhancing concepts, ideas, or products through a creative process, taking risks in their thinking and creating, making discoveries through inquiry research, and by hypothesizing and experimenting with new strategies or techniques. Students demonstrate leadership, initiative, imagination, creativity, spontaneity, and ingenuity in a range of creative processes and motivate others with an ethical entrepreneurial spirit.

Global Competencies cont.

Highlighted sections apply to this lesson

Global Competency	Definition	Student Descriptors
Learning to learn and to be self-directed and self-aware	Learning to learn and to be self-directed and self-aware, means: becoming aware and demonstrating agency in one's process of learning, including the development of dispositions that support motivation, perseverance, resilience, and self-regulation. Belief in one's ability to learn (growth mindset), combined with strategies for planning, monitoring and reflecting on one's past, present, and future goals, potential actions and strategies, and results. Self-reflection and thinking about thinking (metacognition) promote lifelong learning, adaptive capacity, well-being, and transfer of learning in an ever-changing world.	Students learn the process of learning (metacognition) (e.g., independence, goal-setting, motivation) and believe in their ability to learn and grow (growth mindset). Students self-regulate in order to become lifelong learners and reflect on their thinking, experience, values, and critical feedback to enhance their learning. They also monitor the progress of their own learning. Students develop their identity in the Canadian context (e.g., origin and diversity) and consider their connection to the environment. They cultivate emotional intelligence to understand themselves and others. They take the past into account to understand the present and approach the future. Students develop personal, educational, and career goals and persevere to overcome challenges to reach these goals. They adapt to change and show resilience to adversity. Students manage various aspects of their lives: physical, emotional (relationships, self-awareness), spiritual, and mental well-being.

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Interpreting "The Raven"

What is your interpretation of the meaning of this poem?

Watch the videos interpreting the poem. Does everyone interpret the videos in the same way?

Did one video help you discover a deeper meaning for the poem? If so, which one? Why do you think it helped you interpret the poem?

What similarities do you see among the techniques used to present this poem?

What differences do you see among the techniques used to present this poem?

In your opinion, which technique worked best to portray this poem?

Design Ideas

Which space are you designing?

What emotions or behaviours do you want the design to bring out in people?

What colours will you need to include in your design?

What furnishings will you need to include in your design?

What type of storage will you need to include in your design?

What decorative items will you need to include in your design?

Will your design need to include different areas within the same space?

Use the back of this page to draw a design for your group's project.