**Dr. Losier Middle School**

**Design Block - Menu**

What is Design Block?

Design Block will take place during the old EPOD time slot. Its different than EPOD because it is intended to team students and teachers based on their passions to create…whatever their passion is. Evidence of learning from Design Block will be on display at the DLMS Learning Showcase on June 19th.

Design Block Process

* Students and Parents can review the Design Block Menu to determine the project that best represents the student’s passion
* Student will complete a survey form outlining their top 4 choices
* Students will be placed into a Design Block based on their survey results and availability of the project’s they choose
* Design Block will begin April 29th - June 19th

Design Block Offerings

**Title: Escape Room**

**Purpose:** Students will create a theme with a narrative and carry out puzzles to lead a group to escape

**Learning Phase 1: Components of an Escape Room**

Overview – Guest speaker from Escape Miramichi will come to the group to discuss what they need to create an escape room. The students will then research different puzzles that they can use in the building of their escape room. They will trade puzzles with one another and time to make sure that their puzzles are solvable in an appropriate amount of time.

**Learning Phase 2: Building the Narrative**

Overview – Students will construct the story behind the escape room. Good escape rooms use the narrative and weave the puzzles in with it to find the solutions to escape.

**Learning Phase 3: Building Additional Components**

Overview: Students will build anything else that they need for their escape room, for example, a ‘laser alarm system’ made out of yarn.

**Final Project Building the Escape Room**

Showcase of Learning: Students will put together the room that another group will be able to escape. Ideally, looking at a room that takes approximately 30 minutes to complete escape for the showcase.

**Title: Pneumatic Competition**

**Purpose:** Students will learn the basics of how pneumatic devices work. They will work cooperatively with other group members to develop and build a pneumatic device that can pick up an object and place it on a given target repeatedly in three minutes.

**Learning Phase 1: Basic Pneumatic system**

Overview – In groups of 3, students will build a simple pneumatic device that can lift an object 30cm off a table. This simple machine will be built using popsicle sticks, straws and tape.

**Learning Phase 2: Research and Design**

Overview – Students will research how to make a pneumatic machine that can grab an object, make the machine turn and place the object down on a target. The machine must make 3 movements, where all three team members have a specific role in its operation. They will need to design the machine and gather all required materials.

**Final Project: Build Pneumatic Device**

Overview: Students will gather/request materials needed. They will use their plan to build their pneumatic device. This device will accomplish the desired goal required. They will compete as a class against other groups to see who can move the object to the target the greatest number of times in three minutes.

Showcase of Learning: Students will have their pneumatic devices on site and demonstrate how they operate. They will have their plans/design so that they can show how they planned and built their devices. At this time, they will also be able to identify what difficulties they may have encountered with building and working cooperatively with their teammates.

**Title: Grow your own food (and a few other things)**

**Purpose:** Learn a few concepts of Botany and grow your own food (and other plants such as flowers). During this project, students will make a list of materials needed, plan a budget, promote and sell materials and hopefully, make a profit.  At the end of the year showcase, students will be able to present to the public what they have grown and explain why they have chosen these particular plants. Students will also be able to sell the plants to the public.

**Learning Phase 1: Planning and research**

Overview – Students will do research on different plants and what these plants need to grow. At this stage, students will decide what plants they want to plant and why. This will allow them to prepare a proposal explaining what they will need for their project. Students will need to make a list of materials and determine the cost to purchase these materials. This proposal will be presented to the teacher and if approved, necessary materials will be purchased.

**Learning Phase 2: Planting of seeds and maintenance**

Overview – Students will use the information found during the research and the supplied materials to plant seeds. Students will be responsible to maintain and water plants to insure growth.

**Learning Phase 3: Preparing promotional material as well as presentation posters for end of the year showcase**

Overview: Students could produce poster boards with information on types of plants and growth. Students could also start working on a marketing plan for their product. This would include promotional material as well as calculating costs/prices (selling and profits). Students could also find recipes where the plants could be used.

**Final Project:** Students will present their plants to the public and give a brief overview of each plant as well as possible applications for each in the hopes of convincing the public to buy their plants.

Showcase of Learning: Students will have plants on display. These plants will be on sale and students will have a presentation for the public (poster board or other) explaining what each plant is and what it could be used for. Students could have different recipe suggestions or even have food on hand made with their own plants for the public to taste.

**Title: Stepping Stones**

**Purpose:** Students will create a stepping stone using art techniques to display at the Learning Showcase.

**Learning Phase 1: Research**

Overview – Students will research design ideas and materials required for experimenting with a variety of materials, tools and equipment

**Learning Phase 2: Plan a design**

Overview – Students will develop and create an image by applying their knowledge of the basic art skills and techniques.

**Learning Phase 3: Create**

Overview: Using their own design, students will develop the proper steps and create an image on a rock surface.

**Final Project: Display and Describe**

Overview: Students will display and describe the process of producing a stepping stone.

Showcase of Learning: These art pieces will be for sale at the Learning Showcase.

**Title: Robot Wars! and Robot Soccer**

**Purpose:** Students will build and code robots for either battling in an arena or playing soccer in a custom designed stadium.

**Learning Phase 1: Build and Design.**

Overview – Students will need to both assemble their mBot robots and design either the battle arena or soccer stadium.  For the Robot War groups, they will have to also deign the “weapon” that will be used to pop the other robots balloon.  Both groups will also have to build their arenas that will be used in their games.

**Learning Phase 2: Team Coding**

Overview – Working in small groups, each coding team will build code to control their mBots.

**Learning Phase 3: Testing**

Overview: Debug software/design through testing in live scenarios.  Teams will compete against each other to work out bugs/flaws in their software.

**Final Project**

Overview: Students will learn public speaking skills by explaining and teaching their games to members of the public.

Showcase of Learning: Students will have their stadiums built, robots coded, and will have the public lay their games.

**Title: Scow construction**

**Purpose:** build a functioning scow

**Learning Phase 1: Research and design**

Overview – create a plan with materials list, detailed diagram with dimensions, functional design (design with a purpose)

**Learning Phase 2: Gathering materials and knowledge from trades people**

Overview – Talk to fishermen who have built scows, ask them to come to the shop, Pictures of scows, secure funding for materials.

**Learning Phase 3: Purchase materials, start project**

Overview: Students learn how to build a scow

**Title: Pay It Forward**

**Purpose:** Students are going to focus on others and learn the importance of volunteering in the community.

**Learning Phase 1: Get organized. We will generate ideas.**

Overview – The rationale is to develop a Pay It Forward Club. No act of kindness, no matter how small, is ever wasted. -Aesop

Pay It Forward will allow students to feel like they belong, help local schools and local senior homes. When we focus on others, we feel better about ourselves- more confident and happier. What better gift to help ourselves and others?

**Learning Phase 2: How to interact with people**

Overview –We will help students understand the value and self-satisfaction of helping others. We will consult other groups in the Miramichi to help us identify the needs and options.

**Learning Phase 3: We will go out and help senior citizens.**

Overview: We will act. We will be reading to seniors, playing games, organizing activities and making new friends

**Final Project: We plan to create a documentary on how to start a Pay It Forward. What wasted time; what worked. Other clubs can be encouraged, too.**

Showcase of Learning: Student will share what they initially thought and how the project ended up. They will share their experiences with people in the community. There can be a photo display.

**Title: Colour Me Happy**

**Purpose:**Students will explore several water colour styles and create 2D art using signature elements from each style. Students will explore proper brush techniques and cleaning of materials.

**Learning Phase 1: Water Works**

Overview – Students will learn what the defining characteristics are of several water colour artists. They will create practice paintings, utilizing various brush strokes, colour washes, colour schemes, and styles.

Students will create a cost estimate for their practice project and develop an expected cost including profit margin to recoup costs.

**Learning Phase 2:  Make My Day**

Overview – Students will look at examples of paintings and cards. We will discuss how to create an image that is balanced and visually appealing. They will explore form, balance, symmetry, and several other design principles in art.

Students will create a cost estimate for their project and develop an expected cost including profit margin to recoup costs.

**Learning Phase 3: Finishing Touches**

Overview: Following this they will create a painting or special occasion card. Students use previously developed understanding of the style and technique to create a design for their own art work. Students then plan colour and layout of their design and meet with peers for feedback about their proposed design.

**Final Project - Gallery**

Showcase of Learning: Students will be creating and displaying their painting or special occasion card. They will set prices based on the cost of practice pieces and final products. They will present their projects (painting/ gift cards) to the public. They will create an artist display card to place with their projects explaining their choice of inspiration and any theme or message they wanted to express through their art.

**Title: Dessert/Dinner theatre presentation of the musical Grease**

**Purpose:**Production of Performing Arts

**Learning Phase 1: Script and Lighting/sound staging**

Overview – Students will audition and stage the script over the course of the first few weeks

**Learning Phase 2: Set design/costume design**

Overview – Determine and build a set that corresponds with the scenes of the play...and design costumes that go with the 1950’s era

**Learning Phase 3: Plan and prepare dinner or dessert for the audience**

Overview: Look at supply and demand costs and determine what is best suited for the production

**Final Project**- The actual production will take place with cast and crew; the intention is that the cast will serve the dessert/dinner as part of the final production similar to the Feast players group.

Showcase of Learning: The actual Grease musical production with the set and dinner/dessert at intermission of the presentation.....

**Title: Growing Empathy**

Essential Question: How can we help our school/community to grow empathy?

**Purpose:**Students will engage in a cross-curricular hands-on project focusing on the theme of empathy.  We will learn to make recycled, hand-made paper (embedded with seeds), and students will use this art medium to express the theme of growing empathy.  Students will design their own project idea, ensuring that they meet the curriculum outcomes along the way.

**Learning Phase 1: The importance of growing empathy in our school/community**

Overview – Students will learn what empathy is and why it is important to grow empathy in our school and community.  This will involve direct teaching and hands-on cooperative learning activities.

**Learning Phase 2: How to make recycled handmade paper**

Overview – Discussions regarding sustainability will take place.  Students will work in cooperative groups to experiment with creating recycled handmade paper embedded with seeds.  They will also be introduced to various end products that are possible.

**Learning Phase 3: Planning of final product**

Overview: Students will fill in their project planning journals, which will start with brainstorming project ideas.  Students will consider how they can use recycled handmade paper to grow empathy in their school/community (art work, journaling, letter writing, mural, etc.)? Students will recognize how they will meet outcomes through their project idea, they will create milestones/goals for their project with dates, and design their own assessment.

**Final Project**- Students will create a final product based on their choice.  The product must meet the theme of growing empathy.  Although students will ultimately choose their project, products might include art work, journaling, letter writing, murals, among other options.  All paper will be embedded with seeds, which ties in with the metaphor of “growing” empathy.

Showcase of Learning: We envision an artistic display of the paper projects as well as a contribution to the marketplace where students sell handmade recycled paper embedded with seeds and empathic messages that buyers can plant in their gardens.

**Title: 3D Sculpture**

**Purpose:** Students will explore several art styles from Picasso to Piet Mondrian and create 2D art using signature elements from several artists. Following this phase, we will discuss how to safely bend and shape the wire hangers to create a 3D form. This form will be secured to a wooden base or lay be created as a handing sculptural piece (artists choice). Nylons will be used to cover the wire form and students will paint the 3D object using a design of their choice based on one of their 2D examples.

**Learning Phase 1: Copy Cats**

Overview – Students will learn what the defining characteristics are of several modern artists. They will create a practice drawing/painting. Following this they will create a 5 X 7 or special occasion card inspired by the artists style.

Students will create a cost estimate for their project and develop an expected cost including profit margin to recoup costs.

**Learning Phase 2: “Form”al Occassion**

Overview – Students will look at examples of wire forms. We will discuss how to safely bend and manipulate wire hangers to create a sturdy form that is balanced so that it does not fall over or so that it is visually appealing from all angles. This explores form, balance, symmetry, and several other design principles in art.

Students will create a cost estimate for their project and develop an expected cost including profit margin to recoup costs.

**Learning Phase 3: Finishing Touches**

Overview: Students use previously developed understanding of the styles of artists to create a design for their own sculpture. Students then plan colour and layout of their design and meet with peers for feedback about their proposed design.

**Final Project - Gallery**

Showcase of Learning: Students will be creating and displaying their sculpture or mobile. They will set prices based on the cost of practice pieces and final products. They will present their projects (painting/ gift cards/ and sculpture) to the public. They will create an artist display card to place with their projects explaining their choice of inspiration and any theme or message they wanted to express through their art.

**Title: Read it, Make a Model, Explain the Model**

**Purpose:**Students will select a text to read or re-read. The goal is that they select a text that is important to them and so one they want to explore and share. The goal is to have students prepare a model (or some visual representation) that will help them present some aspect of their book to an audience.

**Learning Phase 1: Reading/Planning**

Overview – Reading with the purpose of picking out some aspect of the text to create a model that they can talk about. Students: Reading/Analyzing; Teacher Conferencing.

**Learning Phase 2: Building**

Overview – Using the design process (plan -> published) students will create their models.

**Learning Phase 3: Preparing the presentation**

Overview: Students will focus on creating and preparing an oral presentation that explains the model they have built and how it relates to the book.

**Final Project** - The students will build a model that they will present to the class. The goal is that the model encourages them to explore their text more than a traditional book report. Their exploration of the text will be demonstrated by their presentation.

Showcase of Learning: Model/presentation.