NIHERST ISTEM CLUB

ACADEMIC YEAR 2020-2021 || TERM 2: JAN – MARCH 2021

LEARNING OBJECTIVES AND REQUIRED MATERIALS/SUPPLIES

10 – 13 YEARS

The following table details the intended learning outcomes for the term. Recommended materials and supplies are also listed.
In the event that you are not able to provide all the materials, the member can still follow along during the session. Each member will be provided with a booklet containing instructions for each activity and supplemental information. This resource can be used to do or repeat activities independently at a later date.

THIS TERM, BEAUTY IS IN THE EYE OF THE BEHOLDER…
COME JOIN US WHERE ART MEETS STEM SCIENCE ALLOWS US TO SEE ART IN VARIOUS FORMS, FROM OUR COLOURFUL CULTURE AND DIVERSITY IN NATURE, TO DESIGNS IN MATHEMATICS, CHEMISTRY AND ENGINEERING.
THERE'S ART ALL AROUND US, THAT'S A FACT!
GET READY FOR A FUN FILLED TERM…
WELCOME TO *ART ATTACK!*

10 - 13 YEARS		
SESSION	**OBJECTIVES** At the end of this session, members should be able to:	**GENERAL MATERIALS**
Art in Nature Jan 23rd	• Explain the light spectrum • Understand how different colours are created and seen in sunsets, rainbows, water, etc. • Explain the Golden Ratio and Fibonacci Numbers • Recognise and appreciate geometry in nature	A blank CD, flashlight, scissors, tape, cellophane sheets (red, blue, green & yellow), rubber bands, black Bristol board, acrylic paint (red, orange, yellow, green, blue, purple), a paper plate, yarn, pallet stick, graph paper, pipe cleaners, beads, coloured pencils, card stock/hard paper, ruler, Sharpie marker
Art in Math Jan 30th	• Understand number patterns • Identify occurrences of the Fibonacci sequence • Collect, organize, and graph data • Measure angles and apply its use to art • Identify and use colour schemes and angles to produce artwork • Understand fraction equivalence and ordering and use visual models to explain equivalent fractions	Writing paper, a pencil, a calculator (can be phone/computer calculator), graph paper, coloured pencils, a ruler, a geometry set, coloured paper, a black marker, crayons, paint, coloured markers, printable templates and web-based resources provided by NIHERST
Art in Culture Feb 13th	• Differentiate between various methods of wire-bending and their applications to costume creation • Apply art techniques to create elements of Trinidad and Tobago's culture • Discuss adhesive and cohesive forces • Validate the contribution that art has had on Carnival	Pliers, nippers, feathers, hot glue gun and glue sticks, wire, newspapers, glue/flour, Play-Doh, decorative plastic beads and pearls, a plastic fork, small LED candle lights, dry-erase markers (red and black), a plate (glass/ ceramic/plastic), a towel, paper, markers, tape, string or twine, small beads, scissors
Art in Engineering Feb 27th	• Understand how art has inspired architecture and engineering • Design and build a stable structure, including a pendulum and hydraulic bridge	Craft sticks, coloured paper, Bristol board, pencils, ruler, scissors, hot glue gun and glue sticks, white glue, craft sticks, plastic bags, craft cubes, dowels, clear vinyl tubing, small syringes, syringe adapters, tie straps, water
Art in Chemistry March 6th	• Understand and apply the use of chromatography • Understand the creation of paint emulsions, colloids, suspensions, solutions, etc. • Examine how paints and pigments were produced/extracted for art in earlier centuries • Understand the process of saponification	Large filter paper, scissors, pencil, ruler, small plastic cups, water, sugar, salt, corn starch, food colouring, water, small containers with lids, shea butter soap base (or any soap base of your choice), coconut milk powder, coconut oil, essential oil (of your choice), large mixing bowl, pot spoon, whisk, small pot, stove, silicone mold tray
Final Session March 20th	• Recall all explored concepts and activities during the previous meetings	n/a