**COOPERATIVE DESIGN THROUGH SHAPE & PLAY**

**Curriculum Competencies:**

**Math 1:**

* Sorting 3D object and 2D shapes using one attribute and explaining sorting rule
* Compare 2D shapes and 3D objects in the environment
* Describe relative positions using positional language
* Replicating composite 2D shapes and 3D objects

**Math 2:**

* Sorting 3D objects and 2D shapes using two attribute and explaining sorting rule
* Describe compare and construct 2D shapes, including triangles, squares, rectangles, circles
* Identify 2D shapes as part of 3D objects
* Using traditional NW coast peoples shapes, reflected in the natural environment

**ADST:**

* Identify needs and opportunities for designing, through exploration
* Generate ideas from their experiences and interests
* Choose tools and materials
* Make a product using known procedures or through modelling of others
* Decide on how and with whom to share their product
* Demonstrate their product, tell the story of designing and making their product, and explain how their product contributes to the individual, family, community, and/or environment

***Content:*** *(What will the students know? What content from the subject areas listed in the Big Ideas do students need to know? Content can change over time)*

**Math**:

- Single attributes of 2D shapes and 3D objects

**Art**:

Traditional and contemporary Aboriginal arts and arts-making processes

A variety of local works of art and artistic traditions from diverse cultures, communities, times, and places

**Core Competencies:**

Creative Thinking

Communication

**Big Ideas:** (Choose one Big Ideas from the Ministry website or choose several from more than one subject area.)

Objects and shapes have attributes that can be described, measured and compared (Math Gr 1-2)

Designs develop out of natural curiosity (ADST 1-3)

Skills can be developed through play (ADST 1-3)

**Unit Understandings:**

-There are multiple shapes

-Shapes combine together to make 3D objects

**Transfer Goals :**

-Giving to instructions

-Listening to instructions

-Directionality

**Concept:**

Shape

Directionality

*What facts, from various subject areas help to illustrate the Big Idea?*

*What skill(s) could you focus on developing while investigating this Big Idea?*

*When developing your overarching Big Idea, think about what concepts the big ideas from different content areas have in common?*

STAGE 2 – EVIDENCE OF LEARNING

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| ***ASSESSMENT*** |
| **Summative assignment:** * Create a unique design using a variety of shapes studied in class, incorporating geometric and northwest shapes
* In partners, give instructions for peers to replicate the same design
* Create a class mural/ display, using all the shapes/ designs
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| **Learning Plan**  |
| **Week**  | **Content** | **Activities** | **Essential Questions** | **Essential Understandings** | **Evaluation**  |
| **WEEK 1 – Lesson 1**  | Introduction to shapes: basic and northwest | * Hook: Read little hummingbird
* Students draw shapes they see while reading the book
* Identify shapes in the drawings
* Shapes walk : all shapes (northwest and geometric)
 | How do shapes contribute to a design?How to shapes combine to make a whole? | There are different shapes Shapes have unique features  |  |
| **WEEK 1 - Lesson 2**  | Using shapes | * Each student has the outline of a different animal taken from the book
* Uses a variety of shapes to fill/ decorate the animal
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| **WEEK 2** | Sorting shapesIdentifying shapesVocabulary of geometry  | * Identify shapes and 3D solids
* Identify curved/ straight lines
* Sort shapes based on characteristics
* Drawing shapes
* Tracing and cutting out shapes (use for sorting & in summative tasks)
* Play with shapes – what can you make?
 | What characteristics define shapes?What 2D shapes can I see on 3D objects? | There are different shapes Shapes have unique features |  |
| **WEEK 3** | Directionality  | * Directions with bodies: whole group

(Have the whole class in lines in the gym – practice moving left/ right/ forwards/ backwards)* Practice giving directions on paper (coding unplugged)
 | How do I give directions?  | There are different directions.I can express them and share them.I can give directions to someone else.  |  |
| **WEEK 4** | Design | * With a partner, design a pattern using the class shapes
* Explain (write & oral) your shape design and its significance
 | How can I use shape to design something bigger?How can shapes represent something larger? | I can create meaningful designs with shapes  |  |
| **WEEK 5**  | Replicate shape Giving instructions, identifying shapes, moving shapes  | * Have another group replicate your design
* Create a class mural
* Self-assessment on unit
 | How can I use shape to design something bigger?How can shapes represent something larger?How can I give direction? | I can create meaningful designs with shapes I can give directions to someone to replicate shape. |  |