

Lesson Plan/ Learning Plan	
Topic- Patterns and Symmetry	Grade: V
Concept (If Applicable)	Symmetry, Pattern
<u>Mapping of skills/competencies/attitudes :</u> <i>(Skills/competencies/attitudes that a teacher plans to develop through the learning engagements)</i>	Skills: Thinking skills, Communication skills, Self-Management skill Attitudes: Cooperation, Appreciation Competencies: Communication ,Creativity and innovation
Lesson Plan Duration :	4 days
Learning Engagements for Active Learning:	Visual Artwork , Nature Walk, In the Hot seat
Questioning Technique/s to be Used :	DEAL (Describe, Explain,Analyze,Link) ,Probing questions
Learning objectives: By the end of the topic, the learners would be able to: • define symmetry as mirror image. • define pattern as a repeated decorative design. • extend the concept of pattern by explaining the rotation of objects at an angle of 45°, 90° • analyze the pattern and look for links to determine the rule. • design a wall paper by using symmetrical patterns	
Annexure 1 (Kolb's Model)	
Connecting to Prior knowledge <i>(How do you check what learners already know?)</i>	Day 1. Facilitator will show the students a graph paper and ask the following questions Q) What is this? Q) Have you ever used it? Q) What can it be used for? Etc. The facilitator will give children a graph paper having half of a shape drawn on it. She will ask the students to complete the drawing

	1. Few students will complete it by adding their own imagination 2. Few others will copy the same pattern and complete the drawing but color it differently. 3. Few others will copy the same pattern and complete the drawing with same colors.								
Resources Required:	Blackboard, pencils, erasers, scales, crayons, pen caps, few A4 sheets etc.								
Implementation of lesson plan - Stage 1									
	Day 1: (Learning engagement 1) Facilitator will ask the students to write the answers of following questions based on their drawings. (DEAL) and try to fold the drawing in such a way <table border="1"> <tr> <td>D</td><td>Describe what you see in the drawing</td></tr> <tr> <td>E</td><td>Explain how your drawing is different from others</td></tr> <tr> <td>A</td><td>Analyze and tell if you can see any pattern</td></tr> <tr> <td>L</td><td>Link the part drawn by you with the part of drawing already given.</td></tr> </table> that half your drawing overlaps the other half. (Brainstorming) Based on the activity done facilitator will help the students to reach the words like mirror image, around a common object, same colour on both sides etc. and now she introduces the term symmetry as the exact correspondence on either sides of a dividing line. Facilitator will also give few points to be	D	Describe what you see in the drawing	E	Explain how your drawing is different from others	A	Analyze and tell if you can see any pattern	L	Link the part drawn by you with the part of drawing already given.
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	remembered as: • One Half of the figure resembles the other half completely. • It is like a mirror image. • The colours used on both the side should be exactly same. • The imaginary line or axis along which you fold a figure to obtain the symmetrical halves is called the line of symmetry.
Proceeding further (What strategies will be used in the class to achieve the lesson objectives?)	Day3(Learning engagement 1) Visual representation Facilitator will give the clay to students and ask them to make anything out of it like flower, house, any animal, shape of square etc. Once done, facilitator will ask the students to give there object a 45°, 90° turns and note down the pattern in their notebooks. Ahaa moment as students enjoy working with Clay. It will be followed by the Practice questions in spiral. (Pg Pg 54 Q 2,3,4)
Learning Logs (How learners keep a track of what they are learning, includes reflections)	Day2(Learning Engagement 2) After nature walk, students will do some Guided questions on “patterns with numbers” in spiral. (Pg 54/55 Q1,6,7,8,9)
Lesson Plan : Stage 2	
Formatives/Unit test (How will the facilitator check for comprehension?) <u>*Integration of Arts/ICT</u>	Day 3:LE: In the Hot seat • Facilitator will prepare the questions related to patterns and write them on the sticky note. • She will place notes underneath the chairs so that they are hidden from view. • She will inform the students that several of them are sitting on “Hot Seats” and will ask to read the question, find the rule and complete the pattern. Facilitator will observe the students while they are

	doing this activity. This will be followed by a small worksheet of MCQ for all students.
Teacher Interventions <i>(Addressing the concerns and issues faced during the transactions)</i>	Day 2: The students may not be able to find the patterns especially while dealing with numbers so, facilitator will explain them again how to find the rule and complete the pattern
Extending the Lesson Further <i>(Creating through Active experimentation)</i>	Day 2(Learning Engagement 1) Nature walk 1. Facilitator will take the students for nature walk and ask them to observe the things around them which have an arrangement of lines or shapes, especially a design in which the same shape is repeated at regular intervals over a surface. 2. Students will analyze the examples and look for links to determine the rule. 3. Once done she will appreciate the class and make the students write the definition of patterns as a regular repeated arrangement especially made with repeated lines, shapes, colors, numbers etc. Communication(communicate clearly and Assess and Evaluate information) • Evaluate information critically • Listen effectively to decipher meaning
Summative Assessment (How will the facilitator check that learning objectives have been achieved?)	
Day 4: LE: Visual Artwork The learners will work in group of 4 and use their knowledge of rotation and pattern to create a symmetrical wall paper with help of various symmetrical objects on an A4 sheet. Once done facilitator can decorate the class by putting all of them in the Class. Teachers and students from other classes can be called to see the well decorated class. Creativity and innovation(Generates Ideas, Works creatively with others) Creativity • Use a wide range of ideas creation techniques and design a beautiful wall paper using only	

symmetrical objects

- Demonstrate originality and understand real world limits
- Open and responsive to new and diverse perspectives.