



Patterns of Nature: Draw, Discover & Imagine

1 hour · K – 5th · After School · Teacher: Chigusa Kanzan

Instructions: This lesson plan is your starting point — feel free to edit, rearrange, or customize it to fit your teaching style and your students' needs! These notes are yours. They will not be published anywhere.

Topics Covered

Natural patterns · Observational drawing · Scientific inquiry · Pattern recognition · Creative art techniques · Nature appreciation

Lesson Plan

1. Welcome Circle & Pattern Hunt (10 min)

- Gather students in a circle and pass around the week's nature specimens (real or photos) for students to touch and observe
- Ask: 'What patterns do you notice? What shapes repeat?' and chart student observations on poster board
- Show 2–3 stunning nature photos highlighting the weekly theme and have students point out patterns they see
- Explain the day's drawing focus and demonstrate one key observation technique (looking closely, counting petals, tracing spirals, etc.)

2. Magnified Discovery Station (12 min)

- Divide students into 3 small groups rotating through stations: magnifying glass station, microscope station (if available), and sketching station
- At each station, students spend 4 minutes observing specimens and drawing quick sketches of details they notice
- Teacher circulates asking: 'What tiny details can you see? How many lines/dots/shapes? What surprises you?'

- Students share one discovery with the group after rotations

3. Guided Drawing Session (25 min)

- Teacher demonstrates step-by-step how to draw the weekly subject on large paper, emphasizing pattern elements (spirals, symmetry, radiating lines, etc.)
- Students follow along with pencils first, adding their own creative details and variations
- Pause halfway to have 3–4 students show their work and point out one pattern they included
- Students add color with crayons/markers, focusing on creating patterns through color repetition, gradients, or designs
- Encourage students to add backgrounds, multiple specimens, or imaginative elements while maintaining pattern focus

4. Movement Break: Nature Pattern Dance (5 min)

- Lead students in the weekly movement break activity that mimics natural patterns

5. Gallery Walk & Reflection (8 min)

- Students display artwork on desks or floor and do a silent gallery walk with sticky notes
- Students place sticky notes on 2–3 artworks they admire, writing one pattern they notice
- Gather in circle and invite 4–5 students to share their artwork and explain one pattern they discovered or created
- Teacher highlights diverse approaches and connects art to real science (Fibonacci sequences, symmetry in nature, fractals, etc.)

Materials Checklist

- ☐ White drawing paper (8.5×11 or 9×12)
- ☐ Pencils and erasers
- ☐ Crayons and markers (variety of colors)
- ☐ Magnifying glasses (3–5 for group use)
- ☐ Nature specimens for the week (real items like pinecones, flowers, shells, leaves, or printed photos)
- ☐ Poster board for charting observations
- ☐ Sticky notes for gallery walk
- ☐ Reference images of the weekly nature theme (printed or on tablet)

Age Adaptations

Younger Kids: For K-1st graders: Use simpler subjects (single flower, basic leaf shapes), provide traceable templates as options, focus on large motor skills with chunky crayons, shorten magnification time to 8 minutes total, use more teacher demonstration and less independent work, emphasize counting patterns (count petals together) and basic shapes rather than complex terminology

Older Kids: For 4th-5th graders: Introduce scientific vocabulary (symmetry, fractals, Fibonacci, tessellation), challenge them to combine multiple patterns in one artwork, add shading and texture techniques, extend microscope observation with detailed scientific sketching, incorporate research element where students identify pattern types and explain the evolutionary purpose, offer choice of media including colored pencils for finer detail

Movement Break

Nature Pattern Dance: Students spiral inward and outward like a snail shell or sunflower, then open and close arms in symmetrical patterns like butterfly wings, wave arms in repeating ripple patterns, and end by growing from tiny seed to branching tree with arms spreading in fractal-like patterns

Bonus Activities

- Create a 'Pattern Detective Journal' where students sketch 3 patterns they notice at home or on the playground before next week
- Start a collaborative class mural where each student adds one pattern-based nature element each week
- Play 'Pattern Scavenger Hunt' where students find and photograph patterns around the classroom or school
- Advanced students create repeating border patterns inspired by the week's theme to frame their artwork

Series Outline (11 Weeks)

Week	Theme	Key Activities
1	Spiral Magic: Shells & Sunflowers	Observe and draw spiral patterns in seashells and sunflower seed heads, Introduce Fibonacci spirals and count spiral arms, Create artwork featuring spirals in multiple sizes and directions
2	Symmetry Spectacular: Butterfly Wings	Explore bilateral symmetry through butterfly wing patterns, Use folding technique to create symmetrical designs, Draw and color butterflies with matching left/right wing patterns
3	Petal Power: Flower Patterns	Count and arrange petals in different flower types (daisy, rose, tulip), Examine flower centers under magnification for tiny pattern details,

Week	Theme	Key Activities
		Draw flowers emphasizing radiating petal patterns and center designs
4	Leaf Lines: Veins & Edges	Study vein patterns in different leaf types (parallel, branching, palmate), Create leaf rubbings to reveal hidden vein patterns, Draw detailed leaves with accurate vein structures and serrated edges
5	Honeycomb Hexagons: Bees & Geometry	Discover hexagonal patterns in honeycombs and why bees use this shape, Practice drawing connected hexagons and tessellating patterns, Create bee-themed artwork incorporating honeycomb geometry
6	Tree Rings & Branching: Fractal Forests	Examine tree ring patterns and what they tell us about tree age and growth, Explore fractal branching in trees, ferns, and river systems, Draw trees emphasizing repeating branch patterns at different scales
7	Crystal Kingdom: Geometric Gems	Observe crystal structures and geometric patterns in rocks and minerals, Learn basic crystal shapes (cube, pyramid, prism), Draw and color crystals with faceted patterns and light reflections
8	Feather Fantastic: Barbs & Shafts	Magnify feather structures to see tiny interlocking barbs, Study stripe and spot patterns on different bird feathers, Draw detailed feathers with texture patterns and color variations
9	Mushroom Magic: Gills & Spots	Examine gill patterns underneath mushroom caps, Observe polka dots, scales, and ring patterns on mushroom surfaces, Create whimsical mushroom drawings with detailed pattern work
10	Insect Armor: Wings & Exoskeletons	Study wing vein patterns in dragonflies and beetles, Observe segment patterns in caterpillars, beetles, and ants, Draw insects emphasizing repeating body segments and wing patterns
11	Pattern Celebration: Create Your Creature	Students design an imaginary creature combining their favorite natural patterns from the series, Include at least 3 different pattern types (spirals, symmetry, stripes, etc.), Present creations explaining which real nature patterns inspired their design



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