

Butterflies and Plants- Grades: K and up

Purpose:

To focus exploration on the butterfly life cycle and how that life cycle is related to plants in the garden. Students should be exposed to the 4 stages of the butterfly life cycle and to what types and parts of plant are important in each stage of the life cycle.

Indoor 4-H Children's Garden

1. Brief tour of the indoor garden (5 minutes)
2. Explore, observe, and interact with the butterflies through a scavenger hunt
3. The children will make sketches and observations of each part of the life cycle, emphasizing relationship to plants. For example, a student should not only draw the adult butterfly, but as it sips nectar from a flower, etc. Students will use clipboards, worksheets/and or blank drawing paper. Groups will have magnifying glasses to aid in their explorations.
4. There can be opportunities to take digital pictures if needed.
5. Time permitting: Reflection/ conversations with the students, parents, and teachers. Inquire as to what they saw, what was cool, what was interesting, what was new or surprising, and what they learned.
6. Write Wonder Questions

Curiosity Classroom

1. Introduction to the relationship of the different life cycle stages to the garden. Docent lead conversation with students about why the garden is important to a butterfly when it is an egg, larva, pupa and adult. Use interactive skits and props.
2. Students will further examine life cycle examples by looking at specimens under the dissecting microscopes and examining butterfly collection. Students may sketch and color their drawings
- 3.
4. If time: Review what the kids created
 - a. Have each group show their drawings - Egg, Larvae, Chrysalis, Adult
 - b. Review information about butterflies

- c. Suggest that they take these back to their room and put them up so they remember all about butterflies
5. Let kids ask questions – put these on the Wonder Wall

Other Activities/Topics

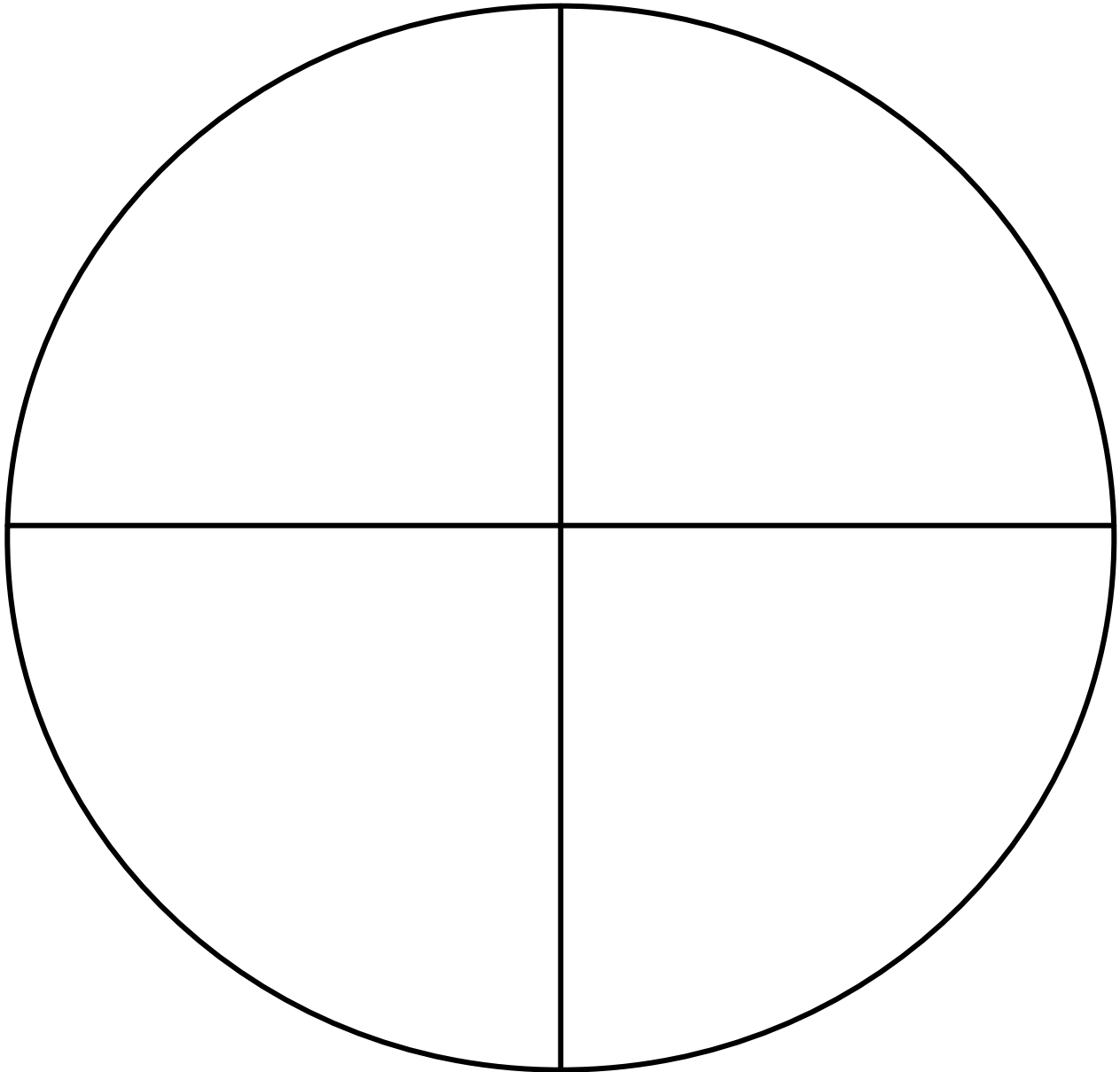
1. Listen to a butterfly story in reading grove
2. Butterfly song and dance
3. Children will create a timeline that compares the life cycle lengths of different butterflies found in Michigan and the indoor garden. Sparks an interesting conversation because there is a visual representation of how long the butterflies live and we can ask questions like, why is the adult of the Monarch so long or why is the pupa stage so long for the Sulphur, what is happening during that stage of the life cycle?
4. They will fill out a work sheet about butterfly facts using “Shakey the Caterpillar” and the computers.
5. Make butterfly handprints to leave in the garden

Name: _____

Date: _____

Butterfly Life Cycle

Sketch and label each step of the butterfly life cycle. Be sure to include drawings of plants in each stage.

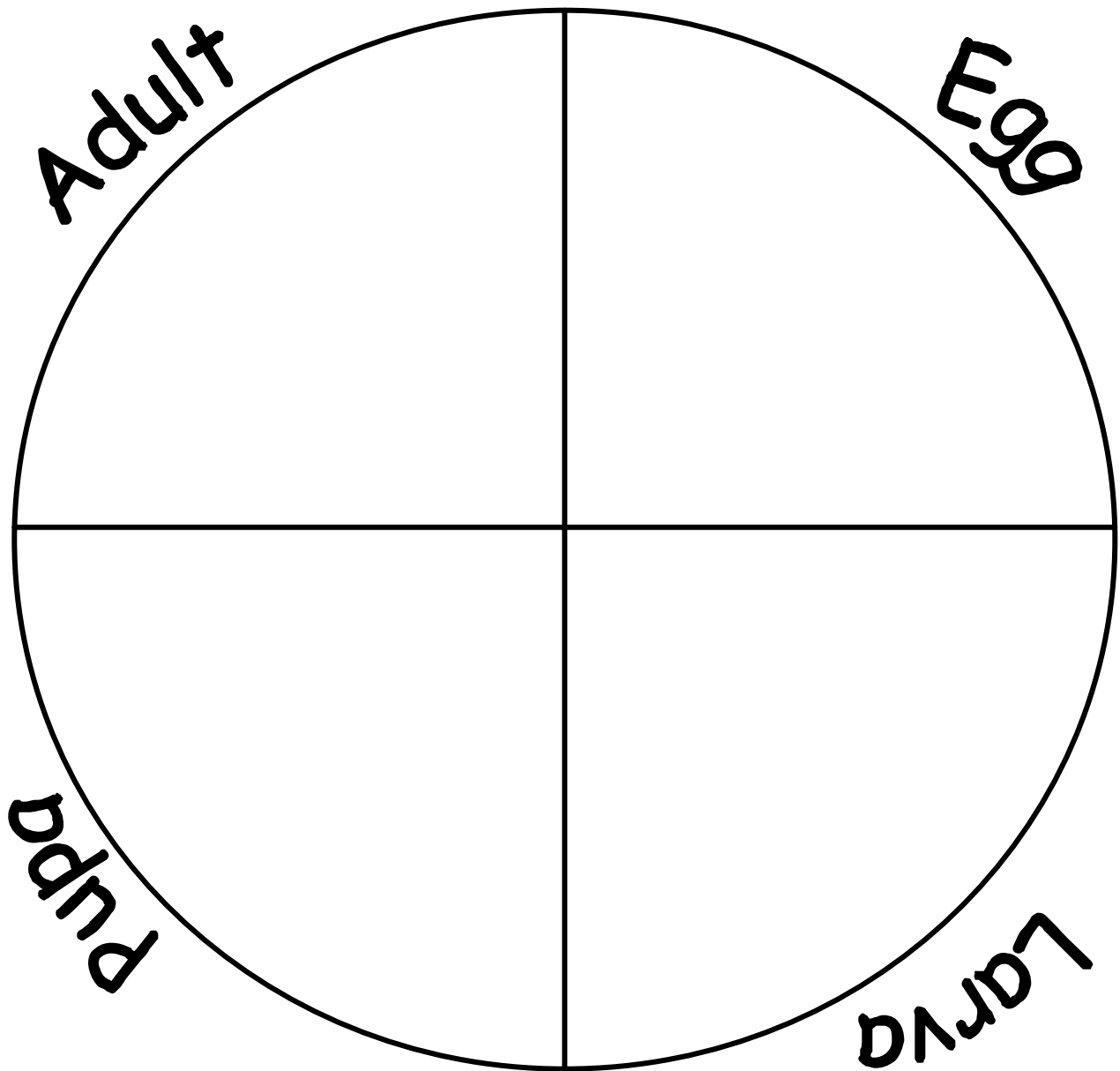


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Curriculum Standards and Benchmarks:

Butterflies and Plants

Science

Strand I. Constructing New Scientific Knowledge

Elementary:

1. Generate questions about the world based on observation.
Key Concepts: Questions lead to action, including careful observation and testing.
3. Manipulate simple devices that aid observation and data collection.
Tools: Various data collection tools suitable for this level, such as hand lenses, wind direction indicators...

Strand II. Reflecting on Scientific Knowledge

Elementary:

2. Show how science concepts can be illustrated through creative expression such as language art and fine arts.
Key Concepts: poetry, expository work, painting, drawing, music, diagrams, graphs, charts.
4. Develop an awareness of and sensitivity to the natural world.
Key Concepts: Appreciation of the balance of nature and the effects organisms have on each other, including the effects humans have on the natural world.

Strand III. 2—Organization of Living Things

Elementary:

1. Explain characteristics and functions of observable body parts in a variety of animals.
Key Concepts: Observable characteristics- fur, scales, feathers, horns, claws, eyes, quills, beaks, teeth, skeleton, muscles, exoskeleton; functions- insulation, support, movement, food-getting, protection.

2. Compare and contrast (K-2) or classify (3-5) familiar organisms on the basis of observable physical characteristics.
Key Concepts: Plant and animal parts- backbone, skin, shell, limbs, roots, leaves, stems, flowers, feathers, scales.
1. Describe life cycles of familiar organisms.
Key Concepts: Life cycle stages- egg, young, adult; seed, plant, flower, fruit; larva, pupa.
2. Compare and contrast food, energy, and environmental needs of selected organisms.
Key Concepts: Life requirements- food, air, water, minerals, sunlight, minerals, space, habitat.
3. Explain functions of selected seed plant parts.
Key Concepts: Plant parts- roots, stems, leaves, flowers, fruits, seeds.

Strand III.5—Ecosystems

Elementary:

1. Identify familiar organisms as part of a food chain or food web and Describe their feeding relationships within the web.
Key Concepts: Producer, consumer, predator, prey, decomposer, habitat, community.
2. Describe the basic requirements for all living things to maintain their existence.
Key Concepts: Needs of life- food, habitat, water, shelter, air, light, minerals.
3. Design systems that encourage growing of particular plants or animals.
Key Concepts: Needs of life- food, habitat, water, shelter, air, light, minerals.