Conceptual Sequence for *Organisms: From Macro to Micro*

(to be published early 2003)

Part I
The Beginning

What are Organisms?
Introduction to organisms and their characteristics.

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The WOWBug: Getting a Closer Look
Learn and practice microscope skills in context with inquiries involving a tiny insect called the WOWBug.

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Investigating *Lumbriculus*
Explore the structure and function of an invertebrate, segmented worm.

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Creating Your Own Pond
Create a pond ecosystem to study the microorganisms and macroorganisms within it.

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Wisconsin Fast Plants: Beginning the Cycle
Prepare equipment and sow F_1-generation Fast Plant seeds; compare development of monocot and dicot plants from seed.

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The Cabbage White: From Egg to Butterfly
Make observations of a Cabbage White Butterfly egg and larva at the beginning of its life cycle.

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Exploring Cells
Investigate the form and function of various cells: plant, animal, and algal.

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Assessment—Part I

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Part II
Continuing the Cycle

Cell Division: Multiplying by Dividing
Explore cell division through manipulation of materials and preparation of a model.

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Sexual Reproduction in Flowering Plants
Examine flowers to learn about structures and functions. Cross-pollinate Fast Plant flowers.

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The Cabbage White: From Egg to Butterfly
Make observations of a Cabbage White Butterfly larva.

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Leaf Structure and Transpiration
Explore how the structure of Fast Plants facilitates transpiration and photosynthesis.

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Observing Microorganisms
Observe and identify four protists; identify animal- and plant-like characteristics.

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Revisiting Your Pond
Make new observations of your pond and its organisms.

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The Cabbage White: From Egg to Butterfly
Make observations of an adult Cabbage White Butterfly.

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Anchor Activity
Research a vertebrate to discover how form and function interact.

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Assessment—Part II

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Part III
Completing the Cycle

Investigating Fungi I—The Molds
Observe mushroom spores and grow bread mold under different conditions. Construct a mold garden.

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Investigating Fungi II—Yeast
Explore yeast and yeast cell activity.

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The Crusty Water Flea
Observe, identify, and sketch *Daphnia* and its major structures.

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Exploring the *Hydra*
Observe a *Hydra* and its methods for obtaining food, reacting to touch, and reproducing asexually.

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Harvesting and Replanting the Fast Plant F_1-Generation Seeds
Harvest Fast Plant seeds; set up F_1 seeds for germination.

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Anchor Activity Preparation

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Heredity in Plants and Animals
Determine ratio of purple-pigmented to green-pigmented Fast Plants in F_1 generation.

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The Key to Organisms—Final Assessment: Part I
Create a dichotomous key of the organisms in the module.

Final Assessment: Part II

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Anchor Activity Presentations

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