

Math and Technology

Unit of Practice

Title: **Pattern Pals** (Explore Mode)
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Subject: Math -- Patterns
Learning Level: Grade 1

SNAPSHOT: *What is a summary of this lesson/project?*

In the computer program Millie's Math House, students will choose and complete a pattern in the Bing and Boing activity.

INVITATION: *What are the questions students will answer?*

How can students predict what pattern comes next in a series?

SITUATIONS: *Where will it take place?*

Computer Lab
Classroom computer station

TASKS: *What actions will the students perform?*

1. Teachers demonstrate how to enter Millie's Math House and click on menu item in the upper right box (Bing and Boing). Students follow directions.
2. Teachers click on the button at the bottom of the screen which represents the larger number of objects presented (five).
3. Teachers choose the Explore mode by clicking on the blank box in the upper right hand corner, then demonstrate the ordering of patterns by choosing different objects from the group presented.
4. In question and answer mode, teachers elicit student responses by clicking on the object that should occur next in the series.
5. Students complete a minimum of ten such sequences on their own.
6. Using templates in the back of the Millie's Math House book (p 69) students cut out figures and create their own patterns.

INTERACTIONS: *How do students interact with others?*

Students will interact with their teacher, each other, and Lab Assistant.

STANDARDS: *Which standards are addressed in this lesson?*

Mathematics

3M Patterns, Algebra and Functions

- 3M-F1 Create, describe, and extend a variety of patterns using shapes, events, designs, and numbers.
- 3M-F2 Formulate generalizations about patterns (e.g. color, shape, size, direction, orientation)
- 3M-F4 Represent and describe patterns mathematical relationships such as

Technology

2T Technology Applications

- c. Use developmentally appropriate multimedia resources (e.g., interactive books, educational software, electronic dictionaries) to support learning.
- d. Use technology resources for problem solving, communication, reporting, and illustration of thoughts, ideas, and stories.

ASSESSMENT: *How will you evaluate student learning?*

They will correctly complete the stems presented in the Bing and Boing activity.

Students will create their own patterns with stamps or cutouts, create stems and trade with other students to test them.

TOOLS: *What materials will be needed?*

Millie's Math House Notebook binder.

Computers

Millie's Math House software

Printers

RESOURCES: *What else could you utilize in planning or expanding this lesson?*

Visit the website, www.learner.org/teacherslab/ and click on Patterns in Mathematics. Use this site as a resource for patterns and their relationship to mathematics. There are activities to do here with your kids, your classroom computer, and the TV monitor.