

Silly Snakes

Grades: K-2

Duration: 30 Minutes

Program Description

Identify patterns we see in everyday life including those in nature. We'll take a look at our Milk Snake and discover the pattern of colors. Students will assemble their own snake using a variety of colors and shapes. (Hands-on interaction with the animals will depend upon their health and availability)

Louisiana GLE::

Kindergarden

Science:

1. Ask questions about objects and events in the environment
2. Pose questions that can be answered by using students' own observations and scientific knowledge
4. Use the five senses to describe observations

Math

1. Count by ones to twenty
2. Count a set of 20 or fewer objects by establishing a 1 to 1 correspondence between number names and objects
3. Use ordinal numbers 1st through 10th to discuss position in ordered lists
8. Use the words same, different, equal, not equal, greater than, and less than while using concrete objects for comparative
17. Compare, contrast, and sort objects or shapes according to two attributes
18. Use words that indicate direction and position of objects and arrange an object in a specified position and orientation
24. Recognize, copy, name, create, and extend repeating patterns using concrete objects, shapes, pictures, name and sounds

English Language Arts

Speaking and Listening

Standard 4

33. Initiate and sustain normal conversation on a specific topic
35. Give and follow one- and two-step verbal and nonverbal directions without interrupting
41. Participate in designated roles within activities

1st Grade

1. Ask questions about objects and events in the environment
2. Pose questions that can be answered by using students' own observations and scientific knowledge
5. Use the five senses to describe observations

Math

35. Identify, describe, and explain the patterns in repeating situations (have students tell you what the pattern is of the milk snake)
36. Explain patterns created with concrete objects, numbers, shapes and color (have students create and then explain the pattern that they made)

English Language Arts

Reading and responding

Standard 7

25. Apply basic reasoning skill

Speaking and Listening

Standard 4

45. Speak clearly at a speed and volume appropriate for purpose and setting

46. Follow classroom procedures and teacher directions

48. Ask questions to clarify directions

52. Use active listening strategies

54. Listen and orally respond to information presented in a variety of media

2nd Grade

Science

1. Ask questions about objects and events in the environment

2. Pose questions that can be answered by using students' own observations and scientific knowledge

6. Use the five senses to describe observations

Math

30. Recognize, extend, create, and explain patterns of addition and subtraction as represented in charts and tables and in varied forms of skip-counting

31. Recognize, extend, create, and explain patterns that involve simple rotations or size changes with geometric objects

32. Recognize and apply patterns in problem-solving in other content areas and real-life situations.

English Language Arts

Reading and Responding

Standard 7

20. Apply basic reasoning skills

Writing

Standard 2

21. Use a greater variety of action and descriptive words

Speaking and Listening

Standard 4

38. Adjust speaking tone and volume to suit purpose and audience

42. Deliver informal presentations that demonstrate an understanding of a topic

44. Use active listening strategies, including asking for clarification and explanations

Web Resources:

Pearson Education

www.internet4classrooms.com/skills_1st.htm - 58k

This is a grade and skill specific site that is interactive and student centered

Family Education

<http://school.familyeducation.com/math/printable/35944.html?detoured=1>

Printable math activities for grades K-8

Pre-Visit Activities

Patterns in Music and Math

Grade Levels: **K - 4**

Students learn how to solve music and math problems by finding patterns.

Objectives

- Students will identify patterns in notation and number sequences as ways to solve musical and mathematical problems.

Materials

- "Billy Boy," *The Music Connection*, Grade 3 (Parsippany, NJ: Silver Burdett Ginn, 1995); or *World of Music*, Grade 3 (Parsippany, NJ: Silver Burdett Ginn, 1991)

- Chalkboard

Prior Knowledge and Experiences

- Students know the pattern sequence of odd and even in the number sequence.
- Students can identify eighth and quarter notes.

Procedure

1. Write the pattern "ti-ti tat" on the chalkboard. Ask the students to "pat-pat snap" this pattern several times.
2. Ask the students to examine the song "Billy Boy" and count the number of times the "ti-ti ta" pattern is repeated at the beginning of the song (six times). Write the pattern six times in a horizontal sequence. Have the students perform the song by saying "ti-ti ta" and using the "pat-pat snap" movement.
3. Ask students to use lower-case letters – *a* for "ti-ti" and *b* for "ta" – to describe this pattern (ab ab ab ab ab ab). Ask students how many items are in each of the six sets on the board (two).
4. Ask students to look for other places in the notation where the two eighth notes/quarter note pattern appears. Sing the song while following the notation and looking at the rhythmic patterns. (A small ensemble of rhythm instruments could play an ostinato while others sing.)
5. Tell students that mathematics is also filled with interesting patterns, and that they can solve problems with numbers and with musical notation by looking for patterns. Ask students to think of a place in the number line where this same "ab" pattern occurs (odd and even numbers). Ask students to determine whether the math pattern ends after six repetitions. (No, it continues to infinity.)
6. Invite students to recite the series of numbers from one to ten. Snap on the odd numbers and pat on the even numbers. Ask how this is similar to the notation pattern at the beginning of "Billy Boy" (both have every other item the same: "ti-ti ta" and "odd/even").
7. Ask students to illustrate this pattern sequence using objects, lines, or shapes. Then ask them to create and perform another rhythm that shows the "ab" pattern.

Indicators of Success

- Students locate or create, label, and move to simple "ab" rhythm patterns. Students identify other "ab" patterns in mathematics. For example, when counting by fives, every other number ends in a five.

Extensions

- Have students look at the notation of familiar songs in their student texts. Ask them to find, identify, and perform any repeated rhythm or melody patterns they find (some may be longer than two beats).
- Have students look for and describe repeated patterns in visual art works or posters in the music room or throughout the school.

Post-Visit Activities

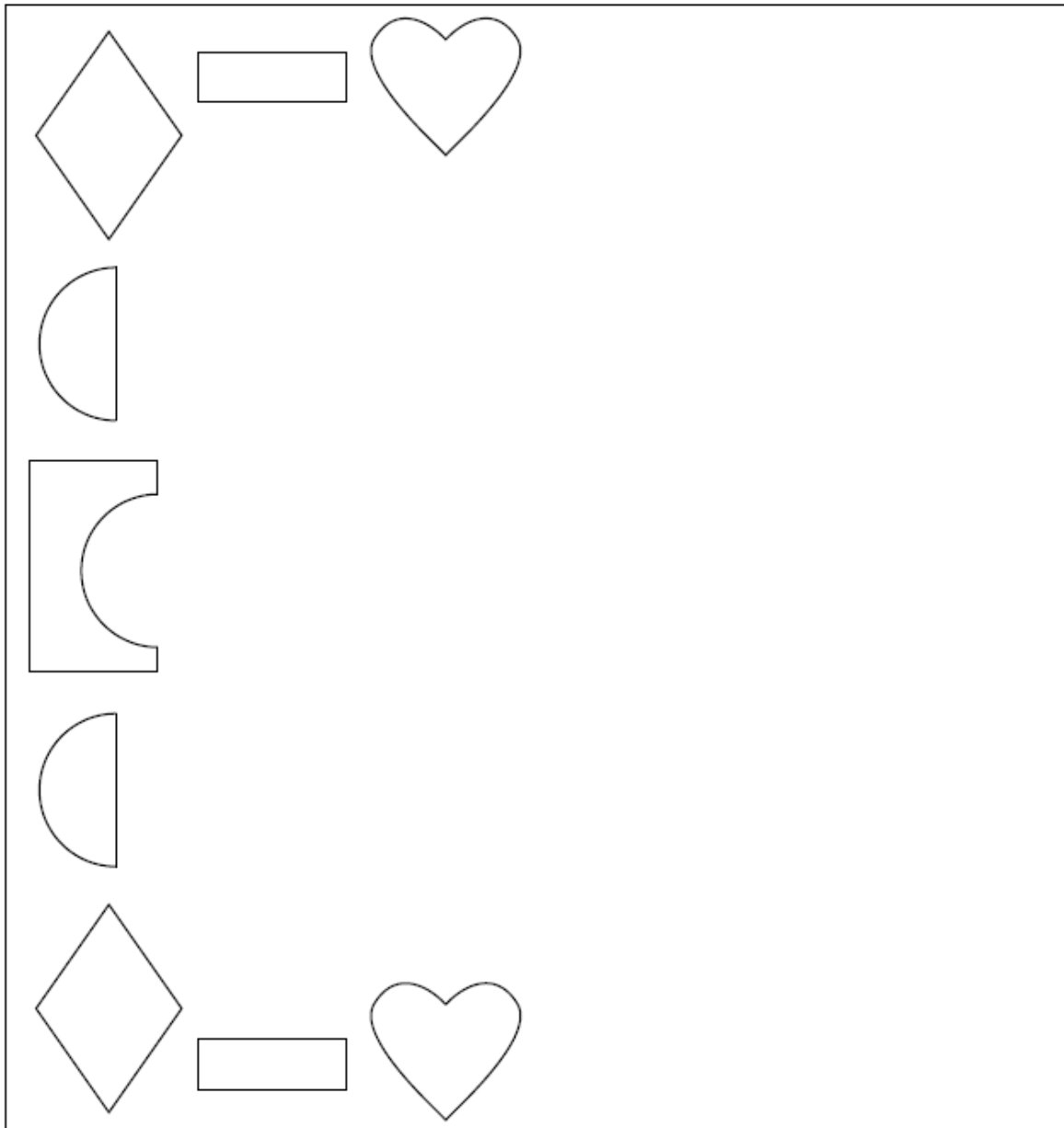
Name _____

Patterns in Geometry

Here is half of the border for a party invitation.

Complete the border.

Make the right half look like the mirror image of the left half.



Notes for Home Your child created a symmetrical pattern by drawing the missing shapes on the right-hand side of an invitation. *Home Activity:* Ask your child to add a shape on the left and draw its matching shape on the right.

Name _____



Patterns in Numbers

A zookeeper bought food for four kinds of zoo animals on May 1.

At the end of each week, she weighs the food that is left.

This chart shows what she found at the end of three weeks.

How much will be left at the end of the fourth week?

Write the amounts you think will be left.

Animal	Pounds of Food Left at the End of			
	Week 1	Week 2	Week 3	Week 4
monkeys	30	20	10	
lions	200	150	100	
elephants	400	300	200	
birds	16	12	8	

How much food did the zookeeper have at the beginning of Week 1?

She had _____ pounds for the monkeys.

She had _____ pounds for the lions.

She had _____ pounds for the elephants.

She had _____ pounds for the birds.

Notes for Home Your child found number patterns and used them to identify the numbers missing from the chart. Then he or she used the numbers to complete the statements. *Home Activity:* Ask your child to explain each of the number patterns to you.

Name _____

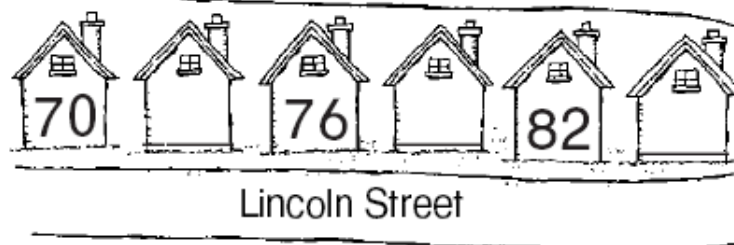
Look for a Pattern

Help the mail carrier deliver the mail.

Write the house numbers that continue the pattern on each street.



What patterns do you see?

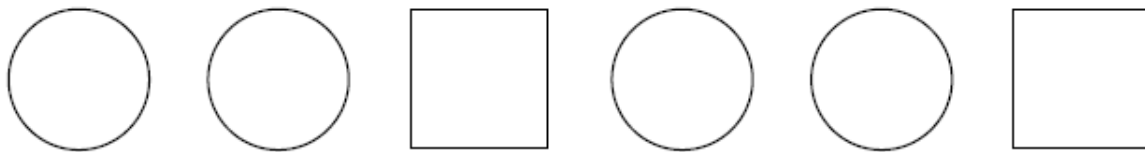
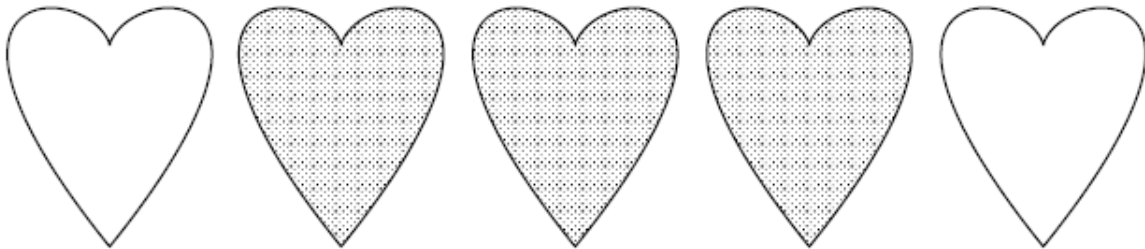
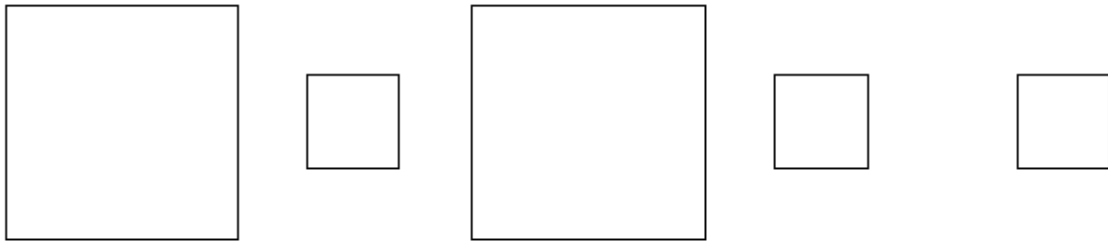
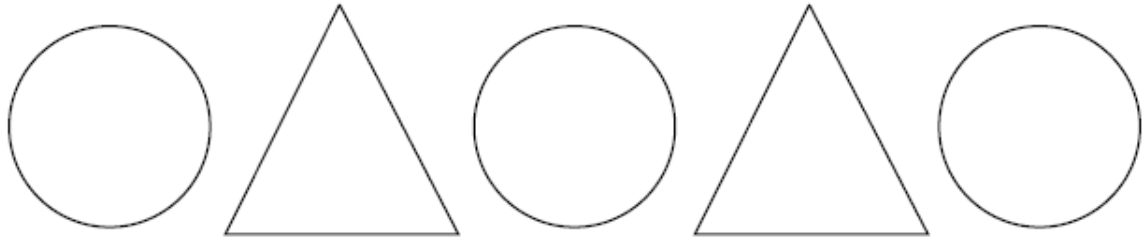


Using the Page Ask children to *look back* at their answers and identify the pattern used on each street. (Counting by 2s, 1s, 5s, and 3s.) **Notes for Home** Your child wrote the missing numbers to complete patterns. **Home Activity:** Ask your child what number he or she would write to extend the pattern used on each street. (66; 33; 70; 88)

Name _____

Patterns

Circle the patterns.

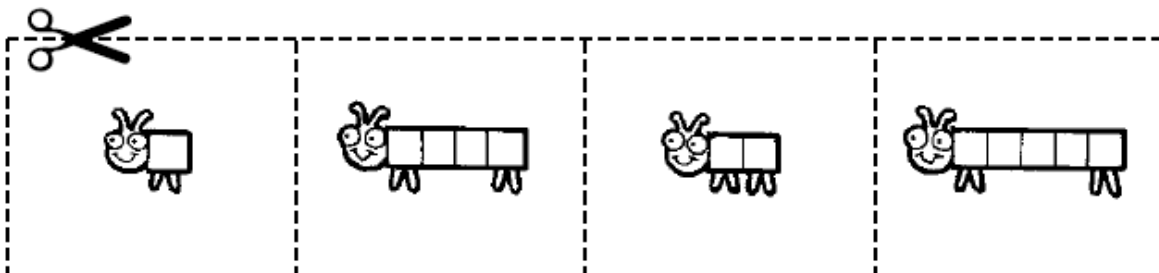
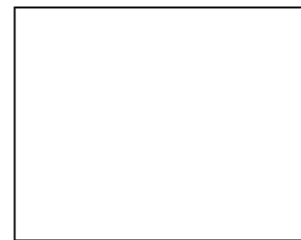
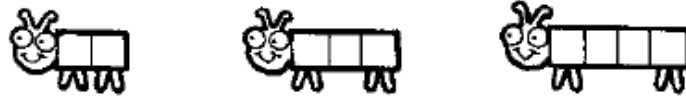


Notes for Home Your child identified and circled patterns involving shapes. *Home Activity:* Ask your child what he or she would change in the second row of shapes to make a pattern. (Possible answer: change the last small square into a large square.)

Name _____

Patterns

Finish each pattern.



Notes for Home Your child cut and pasted the next item in each pattern. *Home Activity:* Ask your child to draw a picture to extend one of the first three patterns.