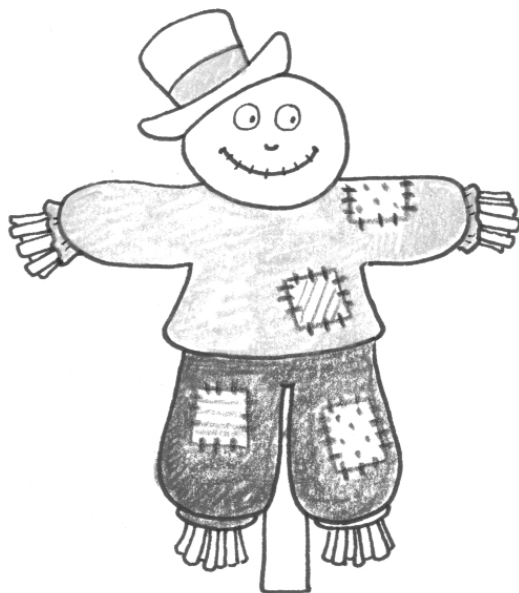


Great **GLYPHS**
Around the Year

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Introduction

In its new *Principles and Standards for School Mathematics* (released April, 2000), the National Council of Teachers of Mathematics (NCTM) identified Data Analysis, Statistics, and Probability as one of five key content area Standards. This Standard discusses the importance of having students:

- ☀ pose questions
- ☀ collect, organize, and represent data to answer questions
- ☀ interpret data using methods of exploratory data analysis
- ☀ develop and evaluate inferences, predictions, and arguments that are based on data

This and other Standards are shown in the grid (page 9), correlated to each glyph activity.

For students in Grade 1 through Grade 3, the NCTM objectives and standards can best be met by involving them in meaningful, motivating activities that give them opportunities to collect and represent data in a variety of ways. Creating *glyphs*, pictorial representations of data, provides such a mathematical learning experience.

Great Glyphs Around the Year provides ideas for making glyphs that link with seasonal events and favorite themes for each month of the school year and for some “any time” occasions as well. In this way students can see a familiar context for representing data, such as the Thanksgiving holiday in November or the blooming of spring flowers in May. You can connect various mathematics skills and concepts, and connect mathematics to other school disciplines as well. For example, September’s return to school is a perfect time for students to get acquainted by gathering and sharing information about themselves through their school bus glyph activity. In breezy March, with the end of winter approaching, reporting on favorite outdoor activities and creating kites using measurement and geometry skills, are a natural.

What Is a Glyph?

Just as a graph or a Venn diagram conveys information about data that has been collected, a glyph displays collected information in the form of a picture. Taken from the word *hieroglyphics* (picture writing), the details of a glyph describe information about the person who has created it.

Each specific detail of a glyph provides the person viewing it with information. A *legend* allows students to see each feature of the glyph and what it represents.

For example, in our September school bus glyph, the color of the bus represents how the student gets to school each day. If the student rides in a car, the bus is yellow. If the student rides the bus to school every day, the bus is orange. A blue bus indicates that the student rides his or her bike to school each day. And a green bus conveys that the student walks. Other elements, such as the number of the bus and the number of windows on the bus, convey different, specific information.

We're on Our Way to School!

Math Skills

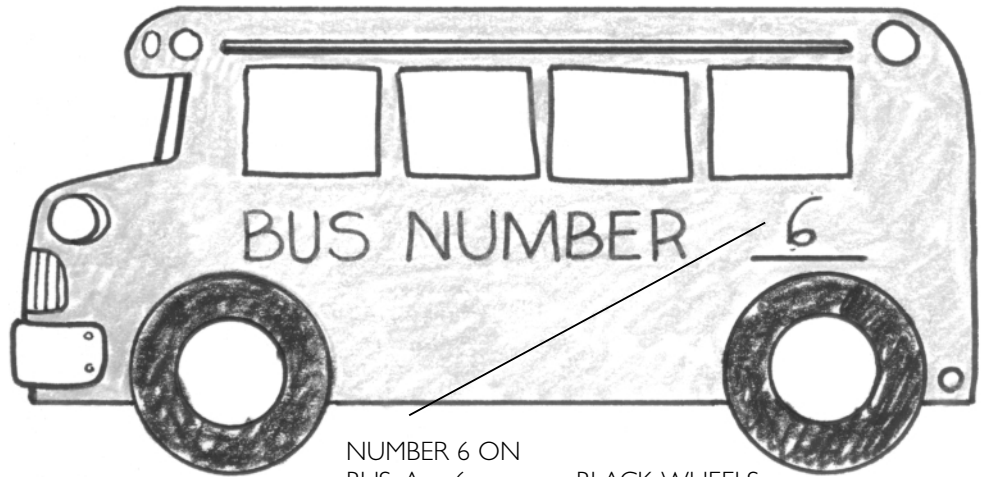
- ◆ numeration: writing numerals, counting
- ◆ time concepts: last year, this year
- ◆ geometry: shapes
- ◆ one-to-one correspondence

Materials

- ◆ reproducible glyph patterns and legend from pages 12–14
- ◆ completed school bus glyph
- ◆ scissors
- ◆ glue or paste
- ◆ crayons

ORANGE BUS:
Get to school by bus

FOUR WINDOWS:
One sister goes to this school



NUMBER 6 ON
BUS: Age 6

BLACK WHEELS:
Went to this school last year

Creating the Glyph

Distribute copies of the school bus glyph patterns and the legend to students. Review the legend, one characteristic at a time, as you display a glyph you have completed. Then distribute the other materials, and invite students to use the legend to create their own personal school bus glyph.

Critical Thinking

Display four completed school bus glyphs. The four should have the following features:

- ☀ A yellow bus with the number 6, black wheels, and one window.
- ☀ An orange bus with the number 6, black wheels, and two windows.
- ☀ An orange bus with the number 6, brown wheels, and two windows.
- ☀ A green bus with the number 6, brown wheels, and four windows.

Use the following logic problem, revealing one clue at a time. After each clue is revealed, ask students which of the school buses needs to be eliminated, based on the clue and the information from the glyph.

Which School Bus Is Mine?

- I am six years old.
- I ride on a bus to get to school each day.
- I have at least one brother or at least one sister who goes to this school.
- I did not go to this school last year.

(Answer: the third school bus displayed)

Literature LINKS

School Bus by Donald Crews. William Morrow and Company, 1984.

Students follow the path of a school bus on its daily route. Simple text and supporting illustrations help young readers interpret the text.

Explore More

- Home/School** Use this glyph activity at Back-to-School Night. Reproduce a pattern and legend for each family, explain the activity, and ask family members to symbolize information about their child, using the glyph.
- Music/Math** Teach students the words and tune to “The Wheels on the Bus” song. Write the first stanza on chart paper and have them read along with you.

The wheels on the bus go round and round,
Round and round, round and round.
The wheels on the bus go round and round,
All through the town.

The driver on the bus says, “Move on back...”
The children on the bus say, “Yak, yak, yak...”
The mommies on the bus say, “Shh, shh, shh...”

Ask students to identify and count the “objects” (wheels, people, etc.) on the bus in the complete song.