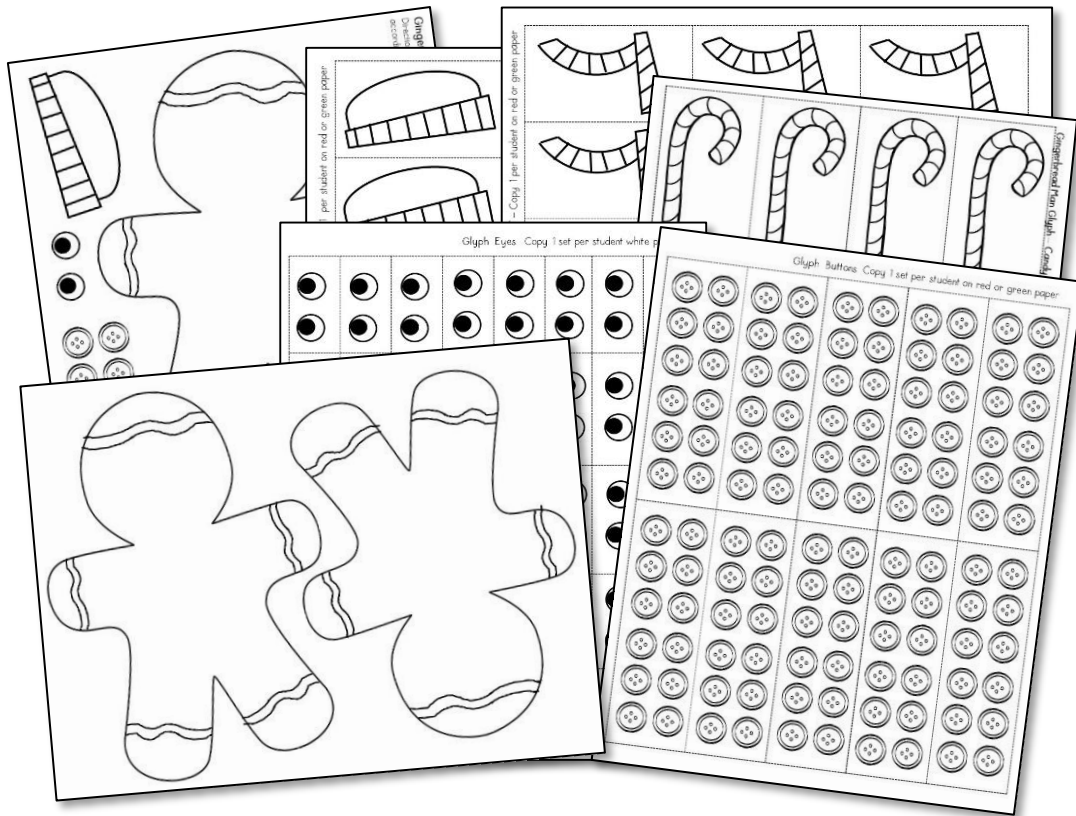# GINGERBREAD MATH
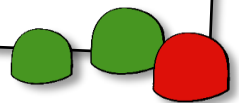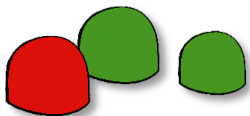## GLYPH CRAFT & GRAPHING KIT

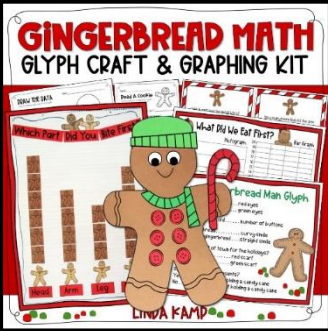LINDA KAMP

GINGERBREAD MAN GLYPH

GENERATE DATA
by making a glyph

Use the class set templates
or the 1-page color & cut

DECORATE FOR DATA

or generate data by using real cookies!

GINGERBREAD MATH
GLYPH CRAFT & GRAPHING KIT

*Glyph key
for cookies
also included

GINGERBREAD MATH
GLYPH CRAFT & GRAPHING KIT

Linda Kamp

5 GRAPHING ACTIVITIES
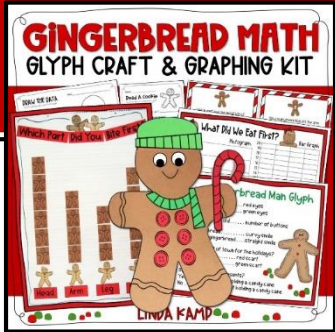
Address standards for Grades 1-2

GENERATE, ORGANIZE, REPRESENT, INTERPRET, & ANALYZE DATA

With multiple student pages to easily differentiate!

Draw the Data

Name_____

Is your friend a boy or girl?

DRAW THE DATA

Name_____

Is your friend a boy or girl? _____

Name_____

Read your friend's cookie glyph. Answer the questions below:

What did you learn?	How do you know?

Read A Cookie!

your friend a boy or a girl?

Name_____

Read A Cookie

Read the data on a classmate's glyph.

What Did We Eat First?

Pictograph   Name

Bar Graph

20
19
18
17
16

Which part had the most bites?

How many more kids bit the arm

What Did We Eat First?

Pictograph   Bar Graph

20
19
18
17
16
15
14

Which Part Did You Bite First?

*CHART PARTS INCLUDED

Head   Arm   Leg

bread Man Glyph

red eyes

green eyes

.... number of buttons

.........curvy smile

.......straight smile

town for the holidays?

...red scarf

...green scarf

...
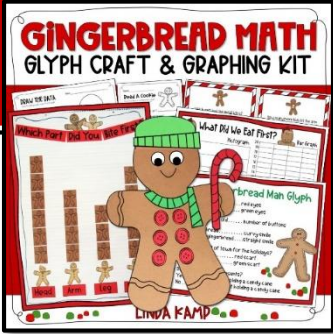
g a candy cane

olding a candy cane

GRAPH CHAT CARDS enable students to discuss the data and solve simple put-together, take apart, and compare problems using information represented in their bar graphs

GINGERBREAD MATH
GLYPH CRAFT & GRAPHING KIT

LINDA KAMP

STEP 1: DECORATING FOR DATA
Making the Glyph

OBJECTIVE: Students will generate data by representing data points on a glyph.

MATERIALS:
Use the one page color and cut version
or copy templates on construction paper.
Class set of gingerbread men on brown paper

USING REAL COOKIES

MATERIALS:
1 can white frosting per 12-14 students
1 small paper cup per student
1 plastic knife per student
1 paper plate per student
candy to decorate the cookies
CANDY DECORATION OPTIONS:
Eyes: M&M's red and green

COMMON CORE STANDARDS ALIGNMENT

GRADE 1
1. MD.C.4
Represent and interpret data
Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category and
another.

GRADE 2
2. MD.D.10
Represent
Draw a p
data set v
and comp

STEP 2: INTERPRETING THE GLYPHS

OBJECTIVE: Students will interpret the data on a glyph by answering questions.

MATERIALS:
set of student pages
ed glyphs

...URE:
...ect and redistribute each completed glyph to a
...rent student. Ask students NOT to look at the name
...he back.

...dents "read"
...explain the
...response

...erentiate f
...ion that su

Draw the Data

Read A Cookie
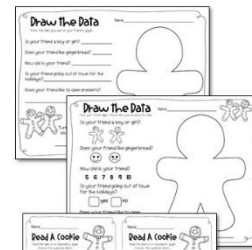
STEP 3: ORGANIZING THE DATA

OBJECTIVE:
Students will organize data to create a bar graph with a single-unit scale.

MATER...

CLASS GRAPH

Which Part Did You Bite First?

PLANNING THE PROJECT

*The activities can be spaced from 1-3 days. Adapt them to the amount of time you have to spend.

DAY 1 STEP 1: DECORATING FOR DATA–MAKING THE GLYPH
Generate data by decorating a paper gingerbread man glyph or decorat...
real gingerbread man cookies with red and green candy. Be sure student...
are on the back side of the paper glyphs before you start. You'll need th...

STEP 2: INTERPRET A FRIEND'S GLYPH
Collect and redistribute each completed glyph to another student. Ask the...
name on the back. Students "read" the glyphs then interpret and explain v...
by answering questions. Differentiate for a variety of ability levels with ...
of student pages.

DAY 2 STEP 3: TAKE ONE BITE
I've done this a couple of different ways when making paper glyphs.
Option 1. Pass out small gingerbread cookies for students to bite.
Option 2. Have students snip off a "bite" of their paper glyph with scisso...
Option 3. Have students take a "pretend bite" of their paper glyph.
If decorating an actual cookie glyph, have students take a bite.

STEP 4: GRAPHING THE DATA
Create a class graph, "What Part Did You Eat First?" Students then draw...
pictograph that match the data on the class graph.

DAY 3 LESSON 5: DISCUSSING THE DATA
Place students in small groups to compare, add and subtract the data poi...
discussion cards.

STEP 5: DISCUSSING THE DATA

GRAPH CHAT
CRITICAL THINKING DISCUSSION CARDS

OBJECTIVE:
Students will solve simple put-together, take-apart, and compare problems using information presented in a bar graph.
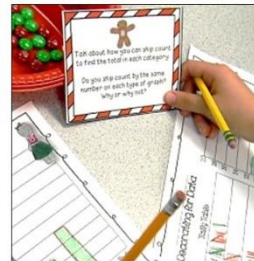
MATERIALS:
Previously completed "What Did We Eat First" student pages
Previously made class graph available for reference
1 set of Graph Chat cards for each group of 3-4 students

PROCEDURE:
1. Look at the data on the class graph and discuss what it represents. Review the differences between a pictograph and a bar graph.

2. Discuss the number of data points in each category with students. Using the projected lesson visual, model how to represent the data in the bar graph and the pictograph.

STEP 4: REPRESENTING THE DATA

OBJECTIVE:
Students will draw a picture graph and a bar graph with single-unit ...nt data

What Did We Eat First?

...on visual, "What Did We Eat First?"
...dent graphing pages
...e class graph

...the data on the class graph and discuss what it
...Review the differences between a pictograph and

...the number of data points in each category with students. Using the projected
..., model how to represent the data in the bar graph and the pictograph.

...use the class graph as a guide to draw their own graphs with matching data on

...udents answer the questions about the graphs at the bottom of the page.

GINGERBREAD MATH
GLYPH & GRAPHING ACTIVITIES

Which Part Did You Bite First?

Head   Arm   Leg   Body

DRAW THE DATA
Draw the data you see on your friend's glyph

Read A Cookie

Read the data on a classmate's glyph. Answer the questions below.

What Did We Eat First?

Pictograph   Bar Graph

Head

Arm

A Gingerbread Man Glyph

.... red eyes
.... green eyes

number of years old ...... number of buttons

I like gingerbread .... curvy smile
I do not like gingerbread .... straight smile

Will you go out of town for the holidays?
.... red scarf
.... green scarf

like to open presents?
.... holding a candy cane
.... not holding a candy cane

LINDA KAMP