## Winter <br> Math Goofy Glyph

If your answers are wrong, you might make a seriously silly snowman!


Common Core aligned

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## Introduction

The Winter Math Goofy Glyph is an activity with which students can hone their abilities in mathematics while putting together a fun art project that you can display on your classroom wall. Whether your students answer the questions right or wrong will dictate the way their glyphs turn out in this potentially silly activity.

At the back of this booklet are templates that your students can use to help design their glyphs; otherwise, they can choose to create their own artwork.

Also at the back of a book is a graph that you can use to compare glyph results among the students in your class.

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## Instructions

As you answer the questions in this winter glyph, you will be instructed to build a fun winter snowman. If you get your answers right, your snowman will look like you made him in outside after a good snowfall. But if you get your answers wrong, your snowman might turn out to look very silly indeed.

Note that the first three questions in the glyph will serve as the base figure for your snowman... first you will "roll" the bottom of your snowman, then the snowman's torso, and then his or her head.

Note that in the glyph the instructions will read "snowman", but your snowman might very well be a snow woman! It's totally up to you.

Have a fun and $\mathbb{E} I I^{\circ} \dot{G} I G$ winter season!


## Common Core Standards Covered in This Booklet

3.0A.7 Fluently multiply and divide within 100 , using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5=40$, one knows $40 \div 5=8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
3.NBT. 2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Question \#1: What is your favorite part of winter?

| all of the snow, ice and <br> cold weather | $5 \times 4=$ |
| :--- | :--- |
| the holidays, of course | $3 \times 6=$ |

What is your answer? This piece will be the bottom third of your snowman.

Important note: questions in this glyph will tell you how to build your snowman, but if you like, you can make a snow woman instead! The choice is up to you.

| If your answer is $\mathbf{1 8} \boldsymbol{\rightarrow}$ | use a big, round snowball <br> and add some large blue <br> buttons |
| :--- | :--- |
| If your answer is $\mathbf{2 0} \boldsymbol{\rightarrow}$ | use a big, round snowball <br> and add some large red <br> buttons |
| If your answer is neither <br> of those $\boldsymbol{~}$ | use a big, square snow- <br> ball and decorate it with <br> bright pink stripes |

Question \#2: What is your favorite winter sport?

| skiing or snowboarding | $151+25+60=$ |
| :--- | :--- |
| ice skating, except when I <br> fall! | $161+24+70=$ |
| just running and jumping in <br> the snow | $171+26+50=$ |

What is your answer? Use this piece for the middle third of your snowman.

| If your answer is $\mathbf{2 4 7}$ <br> $\boldsymbol{- >}$ | use a medium-sized, round <br> snowball and add black buttons |
| :--- | :--- |
| If your answer is $\mathbf{2 5 5}$ <br> $\boldsymbol{- >}$ | use a medium-sized, round <br> snowball and add red buttons |
| If your answer is $\mathbf{2 3 6}$ <br> $\boldsymbol{- >}$ | use a medium-sized, round <br> snowball and add blue buttons |
| If your answer is a <br> different answer | use a medium-sized, square <br> snowball and cover it with or- <br> ange polka-dots |

Question \#3: Which month in winter is your favorite?

| the last part of December | $389-186=$ |
| :--- | :--- |
| January | $397-188=$ |
| February | $398-161=$ |
| first part of March | $396-159=$ |

What is your answer? Use this piece for the top third (the head) of your snowman.

| If your answer is $\mathbf{2 3 7}$-> | use a small, round snowball and add two pieces of black coal for eyes |
| :---: | :---: |
| If your answer is $209 \rightarrow$ | use a small, round snowball and add two grey rocks for eyes |
| If your answer is 203 -> | use a small, round snowball and add two big peppermint candies for eyes |
| If your answer is $\mathbf{2 3 7}$ —> | use a small, round snowball and add two big blue buttons for eyes |
| If your answer is a different answer $\rightarrow$ > | use a small, square snowball and add two donuts for eyes |

Question \#4: What is your favorite wintery drink?

| hot chocolate | $8 \times 2=$ |
| :--- | :--- |
| hot tea | $6 \times 4=$ |
| warm milk | $7 \times 3=$ |

What is your answer?

| If your answer is $\mathbf{2 4} \boldsymbol{\rightarrow}$ | use a long, thin carrot for <br> your snowman's nose |
| :--- | :--- |
| If your answer is $\mathbf{1 6 ~} \boldsymbol{\rightarrow}$ | use a short, thick carrot for <br> your snowman's nose |
| If your answer is $\mathbf{2 1} \boldsymbol{~} \boldsymbol{>}$ | use a medium-sized, crooked <br> carrot for your snowman's <br> nose |
| If your answer is a differ- <br> ent answer—> | use a long, green pickle for <br> your snowman's nose |



Question \#5: What is your favorite white winter item?

| snow, for sure! | $425-314=$ |
| :--- | :--- |
| icicles! | $525-413=$ |
| marshmallows! | $624-511=$ |
| all of the above! | $726-612=$ |

What is your answer?
If your answer is $\mathbf{1 1 4} \boldsymbol{\rightarrow}$ > $\begin{aligned} & \text { put a black top hat on your } \\ & \text { snowman's head }\end{aligned}$
If your answer is $\mathbf{1 1 1 ~} \boldsymbol{\rightarrow}$ p put a warm winter hat on your snowman's head

If your answer is $\mathbf{1 1 3} \boldsymbol{\rightarrow}$ put a straw farmer's hat on your snowman's head
If your answer is $\mathbf{1 1 2 ~} \boldsymbol{\rightarrow}$ put a Sherlock Holmes-style detective hat on your snowman's head

If your answer is a differ- put an upside-down bucket on ent answer—>

Question \#6: What do you like to put in your hot chocolate?

| marshmallows | $7 \times 6=$ |
| :--- | :--- |
| mint leaves or nutmeg | $4 \times 4=$ |
| nothing... I just like to <br> taste the chocolate! | $8 \times 3=$ |

What is your answer? Add this sort of mouth to your snowman.

| If your answer is $\mathbf{4 2} \boldsymbol{\rightarrow}$ | use small pieces of coal <br> to make a smiling mouth |
| :--- | :--- |
| If your answer is $\mathbf{2 4} \boldsymbol{\rightarrow >}$ | use some twigs to make a <br> smiling mouth |
| If your answer is $\mathbf{1 6 ~ \longrightarrow >}$ | use some blueberries to <br> make a smiling mouth |
| If your answer is a differ- <br> ent answer $\rightarrow>$ | mape popsicle sticks to <br> make a silly, zigzag mouth |



Question \#7: What do you like to build in the winter?

| a snow fort | $510+326+10=$ |
| :--- | :--- |
| an igloo | $511+323+11=$ |
| a snowman | $510+322+12=$ |

What is your answer?

| If your answer is $\mathbf{8 4 6} \rightarrow$ | use two long, thin branches to <br> make your snowman's arms |
| :--- | :--- |
| If your answer is $\mathbf{8 4 4} \rightarrow$ | use one long, thin branch and <br> one short, thick branch to <br> make your snowman's arms |
| If your answer is $\mathbf{8 4 5} \rightarrow>$ | use two short, thick branches <br> to make your snowman's arms |
| If your answer is a <br> different answer $\rightarrow>$ | use two toy robot arms to <br> make your snowman's arms |

Question \#8: What is your favorite piece of winter clothing?

| earmuffs are fun! | $300-189=$ |
| :--- | :--- |
| scarves are warm! | $320-188=$ |
| sweaters are cozy! | $330-185=$ |

What is your answer?

| If your answer is $\mathbf{1 4 5} \rightarrow$ | put a long, red scarf around <br> your snowman's neck |
| :--- | :--- |
| If your answer is $\mathbf{1 3 2} \rightarrow$ | put a short, green scarf around <br> your snowman's neck |
| If your answer is $\mathbf{1 1 1} \rightarrow$ | put a medium-sized, blue scarf <br> around your snowman's neck |
| If your answer is a differ- <br> ent answer | put a big purple bowtie <br> around your snowman's neck |



Question \#9: What is your favorite animal that lives in the snow?

| polar bears | $212-124=$ |
| :--- | :--- |
| penguins | $215-122=$ |
| huskies and sled dogs | $211-127=$ |
| another type of animal | $212-123=$ |

What is your answer?

| If your answer is $88 \rightarrow$ | put a broom in your snowman's hand |
| :---: | :---: |
| If your answer is $84 \rightarrow$ | put a rake in your snowman's hand |
| If your answer is $93 \rightarrow$ | put a snow shovel in your snowman's hand |
| If your answer is $89 \rightarrow$ | put a garden hoe in your snowman's hand |
| If your answer is a different answer—> | put an open umbrella in your snowman's hand |

Question \#10: The one thing I don't like about winter is...

| the weather | $356+120=$ |
| :--- | :--- |
| it gets dark really early | $372+112=$ |
| nothing... I love every- <br> thing about winter! | $368+118=$ |

What is your answer?

| If your answer is $\mathbf{4 8 4}$ <br> $\rightarrow>$ | title your glyph, "Have Fun in <br> the Snow!" |
| :--- | :--- |
| If your answer is $\mathbf{4 8 6}$ <br> $\rightarrow>$ | title your glyph, "Stay Warm <br> This Winter!" |
| If your answer is 476 <br> $\rightarrow>$ | title your glyph, "Have a <br> Wonderful Winter!" |
| If your answer is a <br> different answer $\rightarrow>$ | title your glyph, "Broccoli <br> and Ice Cream for Everyone!" |



## Finishing the Winter Glyph

You are almost finished creating your winter glyph!
Go ahead and put some finishing touches on your snowman (or snow woman), including extra articles of clothing, hair, some big, sturdy boots, and anything else you feel like adding. You can also add your name and write a short story about your snowman if you would like!



## medium, round snowball


medium, square snowball

small, round snowball

buttons

coals
donuts

long carrot

peppermint candies

rocks

crooked carrot

pickle

winter hat

detective hat

straw hat





## umbrella



## Create a Classroom Graph

## Graphing your classroom's results

Using the information that the students gave for the winter glyph, you can create a bar graph on a chalkboard or whiteboard to compare the answers of the children in your class. Use the chart on the next page as a guide, or print out the actual graph on the next page to give to the students to create their own graphs.

## Different types of graphs you can create

- What is your favorite winter sport?
- What is your favorite piece of winter clothing?
- What do you like to put in your hot chocolate?

Using these graphs you can demonstrate to your students a little bit about statistics and how scientists and other professionals track data and information in the real world.


## What is your favorite winter sport?

 Classroom Graph| 22 |  |  |  |
| :---: | :---: | :---: | :---: |
| 21 |  |  |  |
| 20 |  |  |  |
| 19 |  |  |  |
| 18 |  |  |  |
| 17 |  |  |  |
| 16 |  |  |  |
| 15 |  |  |  |
| 14 |  |  |  |
| 13 |  |  |  |
| 12 |  |  |  |
| 11 |  |  |  |
| 10 |  |  |  |
| 9 |  |  |  |
| 8 |  |  |  |
| 7 |  |  |  |
| 6 |  |  |  |
| 5 |  |  |  |
| 4 |  |  |  |
| 3 |  |  |  |
| 2 |  |  |  |
| 1 |  |  |  |
|  | skiing or snowboarding | ice skating | running and jumping in the snow |

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