

storybook

# STEM

DON'T LET THE PIGEON  
DRIVE THE SLEIGH

## SLEIGH RIDE

Can you create a sleigh to hold the pigeon and test it on an inclined plane?



### YOU MAY USE:

- building bricks or linking cubes
- paper pigeon and tape
- hardback books



## SLEIGH RIDE

World Examples



What is different?  
How are they Useful

Example

## SLEIGH RIDE

Name: \_\_\_\_\_

**STEM CHALLENGE**  
Can you create a sleigh to hold the pigeon and test it on an inclined plane?



## SLEIGH RIDE

### SIMPLE MACHINE



A simple device that applies force and makes work easier

### INCLINED PLANE



a simple machine that slopes at an upward angle, also called a ramp

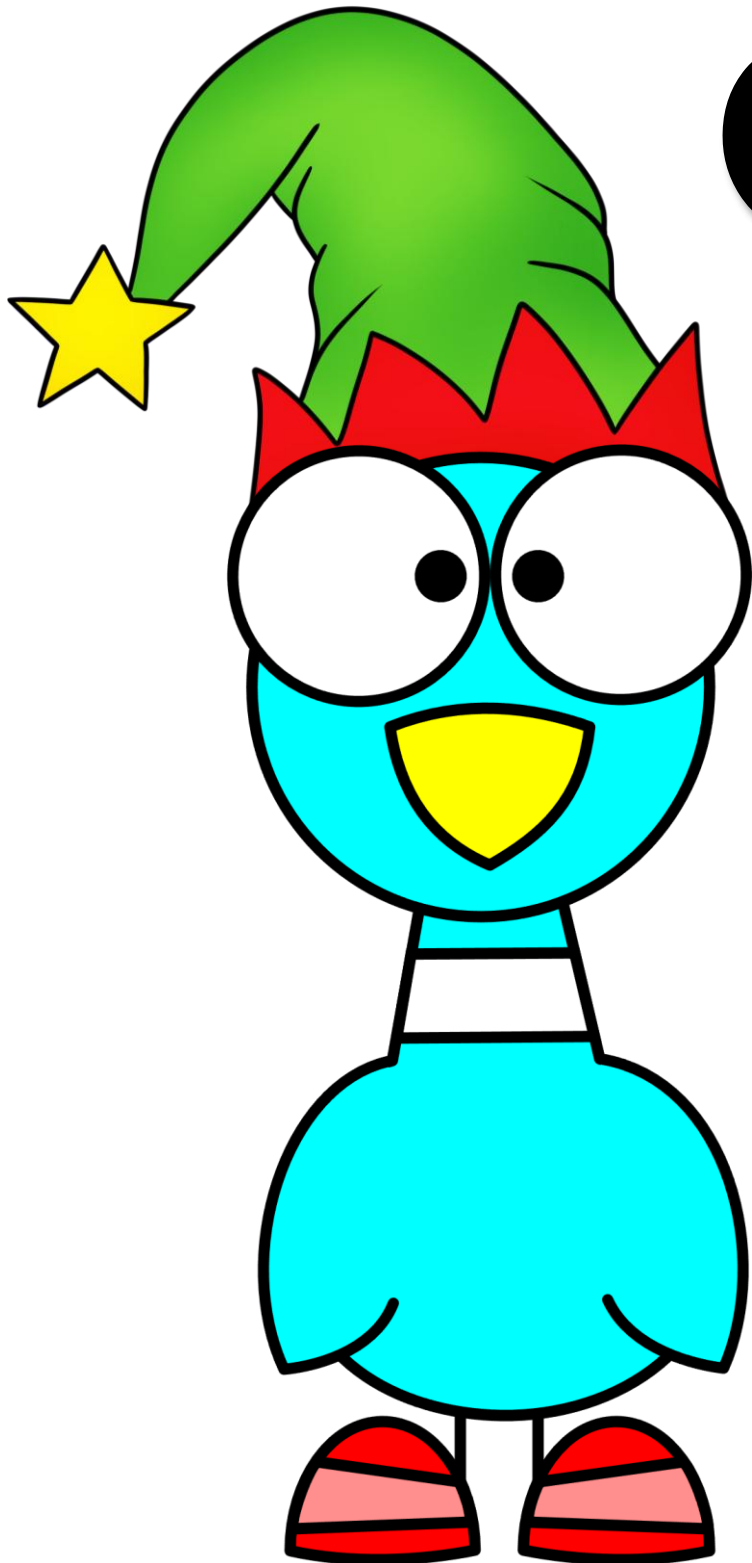
### GRAVITY



the force of attraction of objects towards the center of the Earth

CREATED BY BROOKE BROWN AND KATIE KING

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## Don't Let the Pigeon Drive the Sleigh by Mo Willems

Pages 3-5: ELA Lesson Plans

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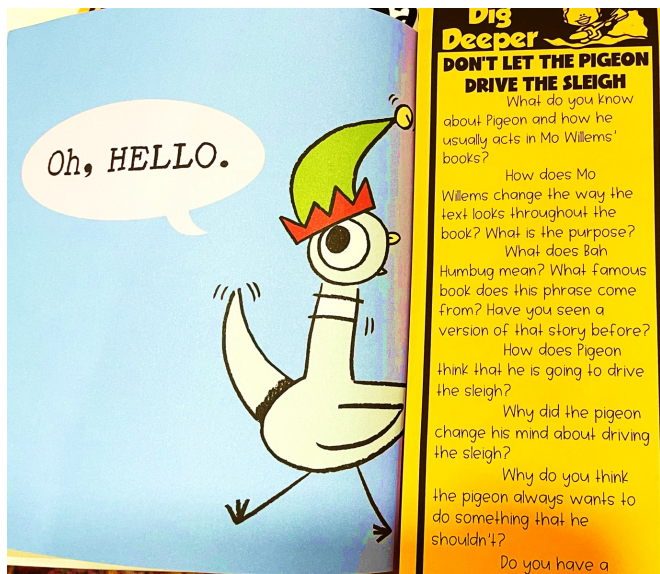
Pages 12-18: Facts and Opinions activities

Pages 19-21: Writing Templates

Pages 22-35: Vocabulary activities

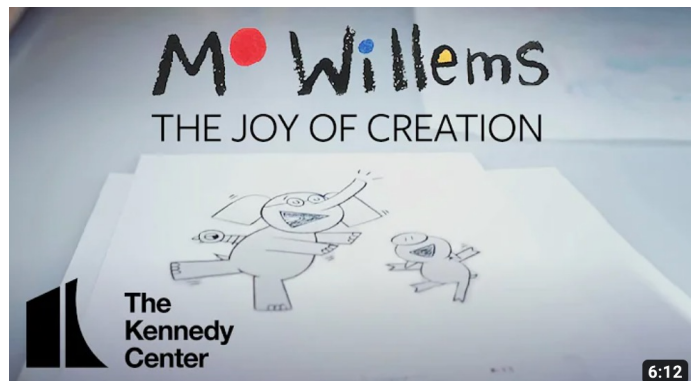
Pages 36-45: STEM Challenge: Sleigh Ride

# DON'T LET THE PIGEON DRIVE THE SLEIGH!



1. Use the comprehension bookmark before, during, and after reading to dig deeper into the text. The bookmark would also be a great question guide to use with a substitute teacher if needed! Laminate a copy on colored paper for multiple year usage!

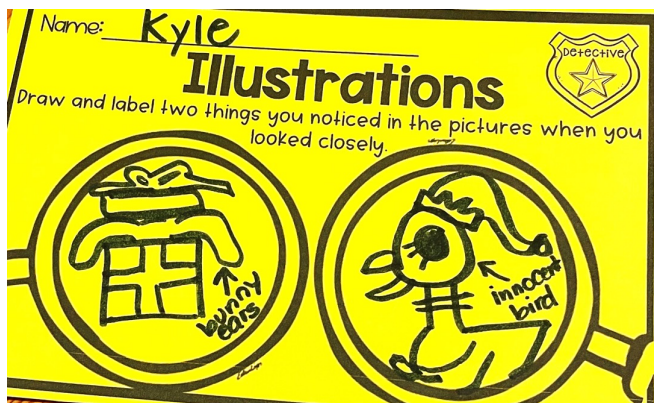
2. [The Joy of Creation](#) is a short video about how Mo Willems got started in children's books and how he hopes he inspires students!



3. Look at the poster for "Illustrations". Discuss with students that even though the text in picture books is purposely kept to minimal words, illustrators add in lots of meaning through the drawings.

# DON'T LET THE PIGEON DRIVE THE SLEIGH!

4. Make a whole class anchor chart discussing ways that the students can gather information through the illustrations.



6. Look at the poster for "In My Opinion". Discuss with students what an opinion is and how it is different from facts. \*Opinions should be based on facts, but because we all have different schemas, we will have different opinions!

## WHERE DO WE LOOK?

CHARACTER FACES



\*Pigeon tries to look sweet and innocent when asking to drive the sleigh.

SPEECH BUBBLES



\*When it is urgent, the letters get really bold and have color around them.

SMALL DETAILS



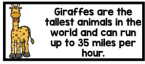
\*One of the presents is Knuffle bunny!

5. Students should complete the half sheet based on observations they made about the illustrations in the book.



# DON'T LET THE PIGEON DRIVE THE SLEIGH!

## FACTS



Giraffes are the tallest animals in the world and can run up to 35 miles per hour.



Bald eagles can fly 10,000 feet in the air, and they can dive at speeds of 100 miles an hour.



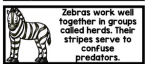
Grizzly bears are at the top of the food chain and can run at speeds of 30 mph.



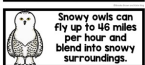
A group of lions is called a pride. They can run at speeds of 50 mph and they can jump 36 feet.



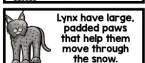
The ostrich is the fastest running bird and has a very powerful kick for protection.



Zebras work well together in groups called herds. Their stripes serve to confuse predators.



Snowy owls can fly up to 46 miles per hour and blend into snowy surroundings.



Lynx have large, padded paws that help them move through the snow.

## OPINIONS

Giraffes could help Santa reach the roof.

Eagles are so fast that they would cause a sleigh wreck!

Bears might scare Santa and they require a lot of rest!

Even though lions can jump really high, I think they would cause all the presents to fall out of the sleigh!

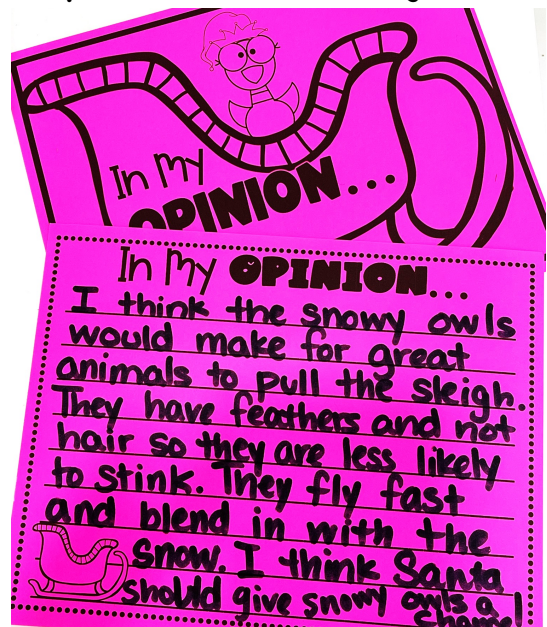
I think a flightless bird is a bad ideal.

I think zebras would be a good option because they work well in groups.

Snowy owls would camouflage well so Santa could stay hidden.

I don't know if a group of lynxes would work well together.

7. Use the anchor chart pieces to look at facts about different animals. Then add students' opinions about the animals and why they would make a good animal to pull Santa's sleigh.



8. Students should write about the animal that they want to pull Santa's sleigh instead of the reindeer.



9. Bonus: Writing pages included for different holiday prompts. Students can write about gifts that they are requesting for the holiday season, or they could write about whether they would want to drive a sleigh.

# Dig Deeper



## DON'T LET THE PIGEON DRIVE THE SLEIGH

What do you know about Pigeon and how he usually acts in Mo Willems' books?

How does Mo Willems change the way the text looks throughout the book? What is the purpose?

What does Bah Humbug mean? What famous book does this phrase come from? Have you seen a version of that story before?

How does Pigeon think that he is going to drive the sleigh?

Why did the pigeon change his mind about driving the sleigh?

Why do you think the pigeon always wants to do something that he shouldn't?

Do you have a favorite Mo Willems' character? Why this one?

# Dig Deeper



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Do you have a favorite Mo Willems' character? Why this one?

# Illustrations

In books that don't have many words, a lot of the meaning is in the **pictures.**



**WHERERE**

**DOOVE**

?

K

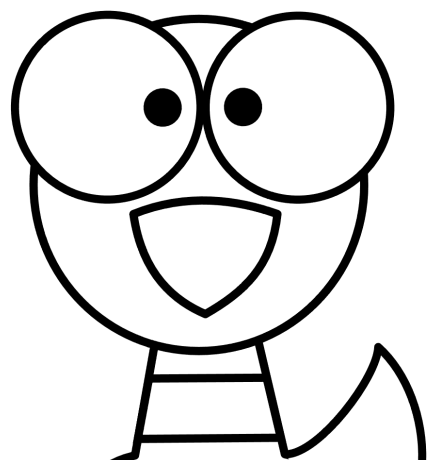
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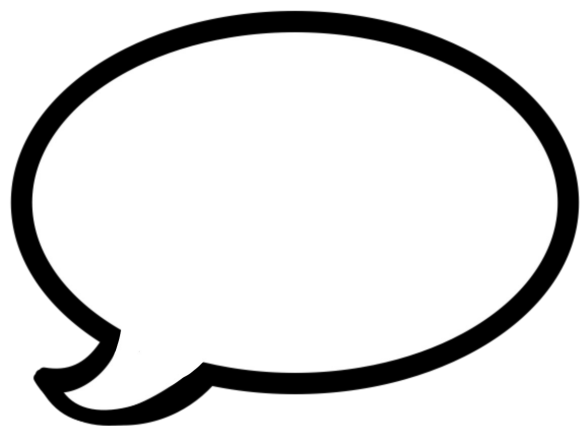
CHARACTER

FACES



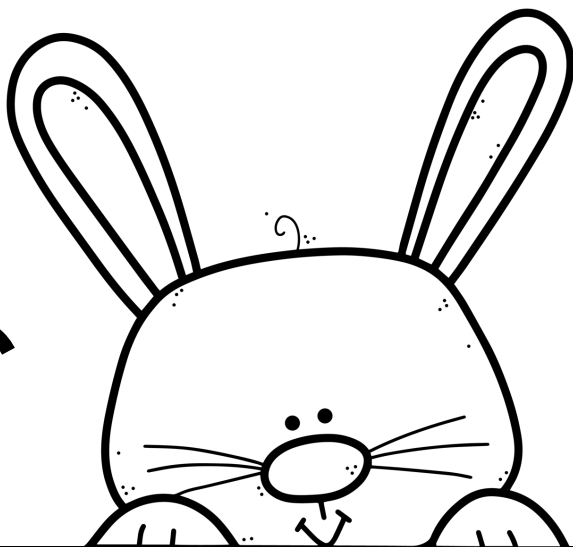
SPEECH

BUBBLES



SMALL

DETAILS

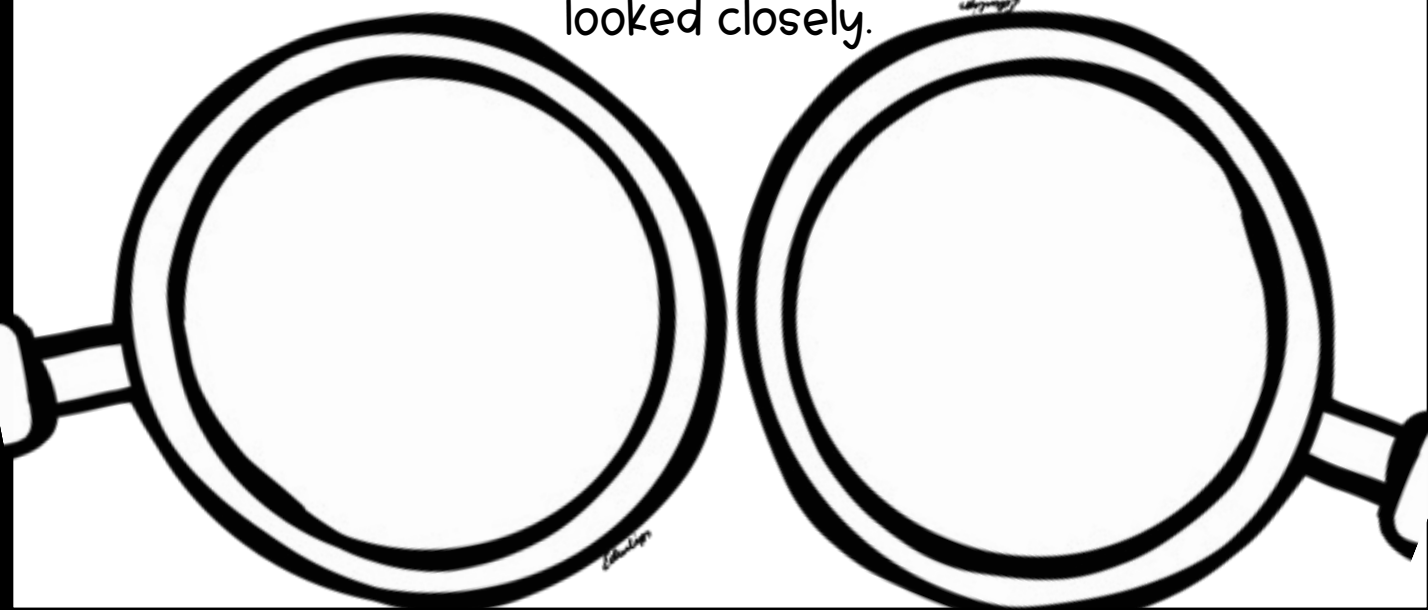


Name: \_\_\_\_\_



# Illustrations

Draw and label two things you noticed in the pictures when you looked closely.

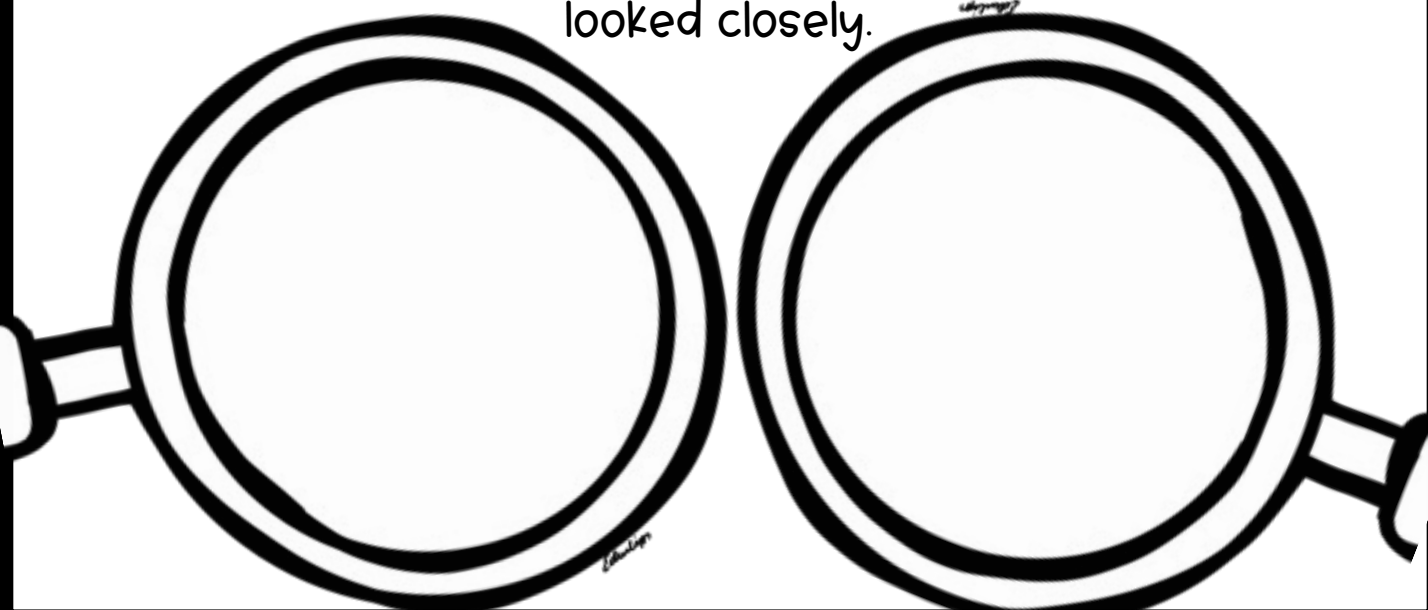


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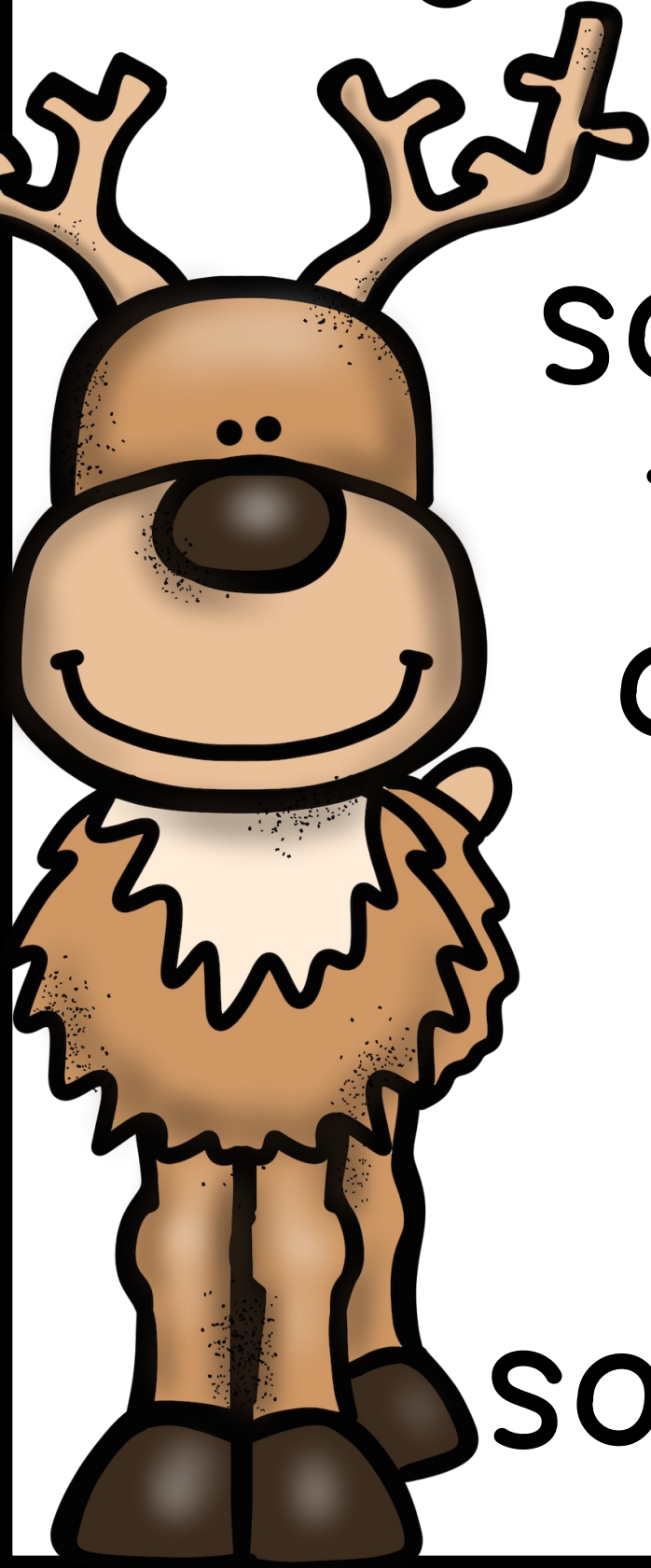


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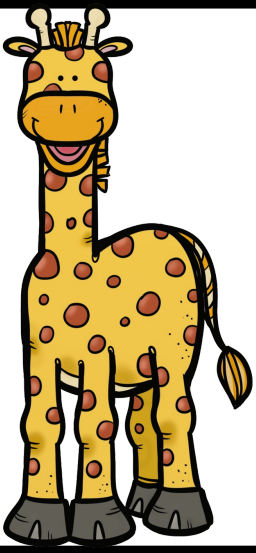
# In my Opinion...



what  
someone  
thinks  
or how  
they  
feel  
about  
something

**FACETS**

**ODINIONS**



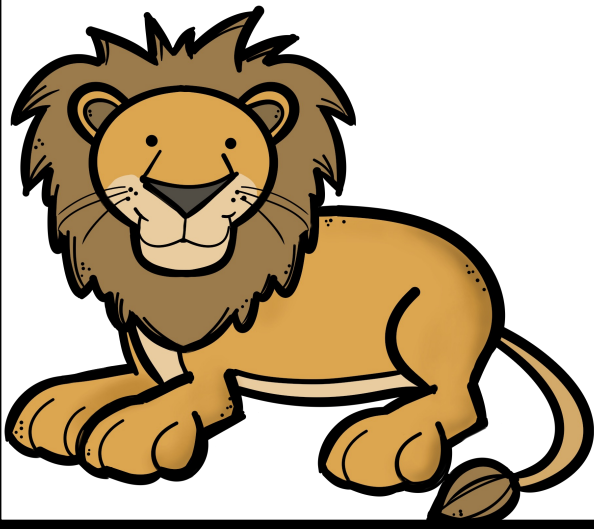
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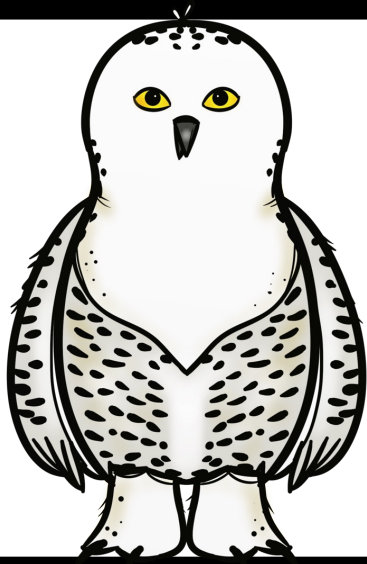
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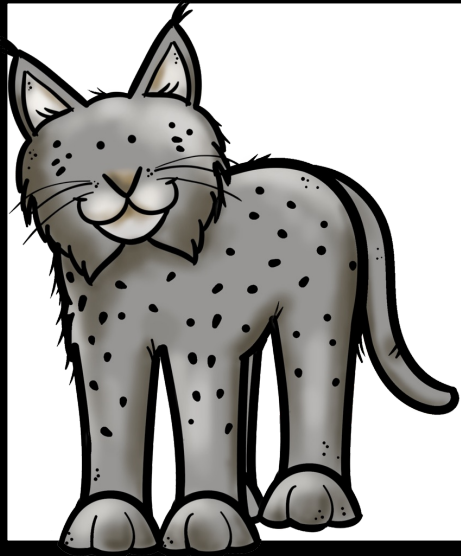
**The ostrich is the fastest running bird and has a very powerful kick for protection.**



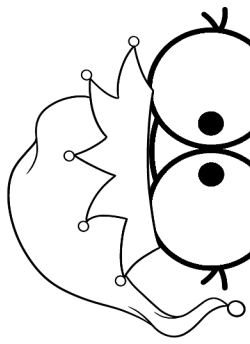
**Zebras work well together in groups called herds. Their stripes serve to confuse predators.**



**Snowy owls can fly up to 46 miles per hour and blend into snowy surroundings.**



**Lynx have large, padded paws that help them move through the snow.**



In my

**OPINION...**

# In My OPINION...

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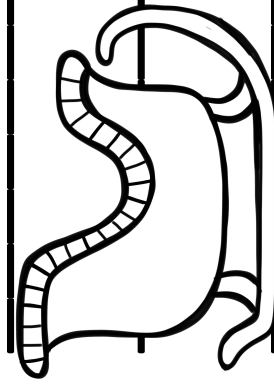
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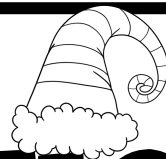
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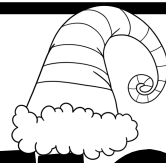


# LOADING UP THE **SLEIGH**



Four sets of primary writing lines, each consisting of a solid top line, a dashed middle line, and a solid bottom line.

Name: \_\_\_\_\_



# LOADING UP THE **SLEIGH**

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# Vocabulary CHATS

We are providing several whole group vocabulary activities and one individual activity. Pick and choose which works best for your students!



1. Print the Vocabulary Picture Cards in color. Use the color version for display in the classroom. The pages with four identical cards should be used for response cards. Give each child one of all four cards. Give examples or definitions. Students should raise the card that matches. Teachers should scan the room to check for understanding.

# Vocabulary

## ACT IT OUT



Use the vocabulary cards from Vocabulary chats. Put the cards in a bag. Call two students up to the front of the room and ask them to act out the words. Classmates should raise their hand to guess what word is being acted out.

# Vocabulary EXPLOSION



**VOCABULARY**

I don't want to be on the naughty list

naughty

Leprechauns & elves

being bad

I was naughty when I lied about breaking the chair

- Brenna

BOOM

EXPLOSION

**VOCABULARY**

in a holiday spirit!

- Mrs. J

festive

Christmas Lights

- Cory

telling someone "Happy Holidays"

Baking cookies with Nana

- Betty

BOOM

EXPLOSION

Place Vocabulary Explosion Mats around the room.

Give each student a post it note. Have them write a word, phrase or draw a picture that has to do with that word.

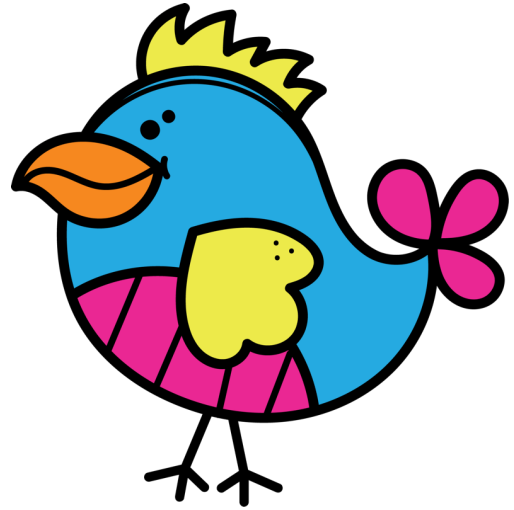
Count down from 10 and kids get to carefully "explode" by hurrying to the mat that they wrote about and putting their post it note on it.

# festive



when something is  
suitable for a  
feast or holiday

# plumage



a layer of  
feathers

# miracle



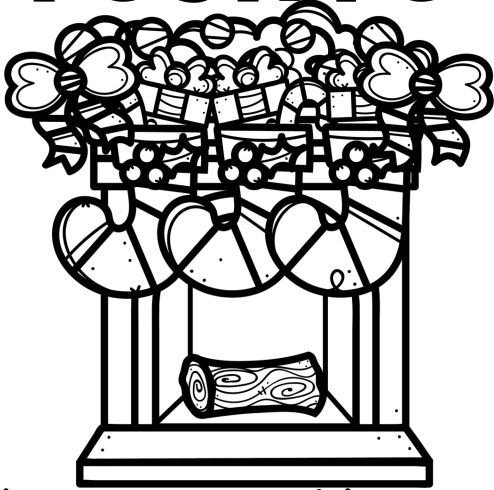
something that  
seems impossible  
happens

# naughty



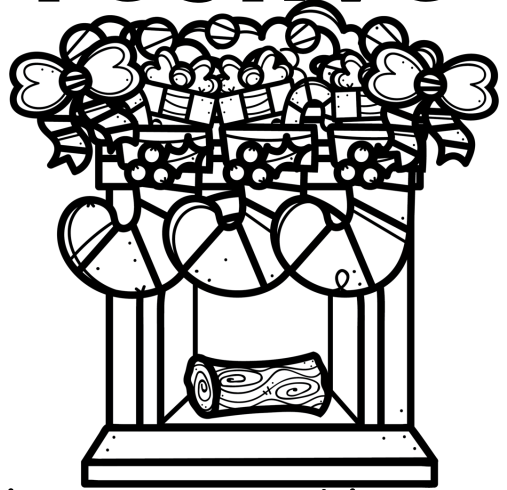
badly behaved;  
disobedient

# festive



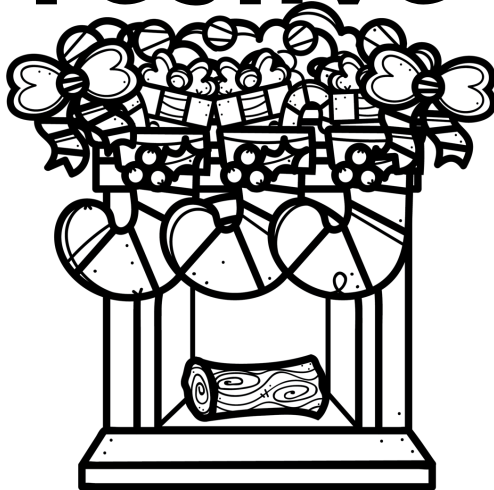
when something is  
suitable for a  
feast or a holiday

# festive



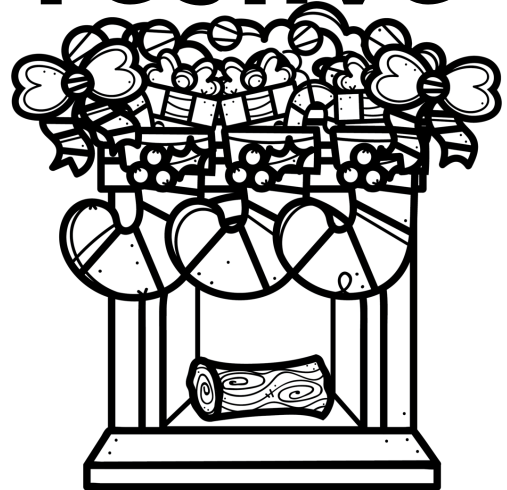
when something is  
suitable for a  
feast or a holiday

# festive



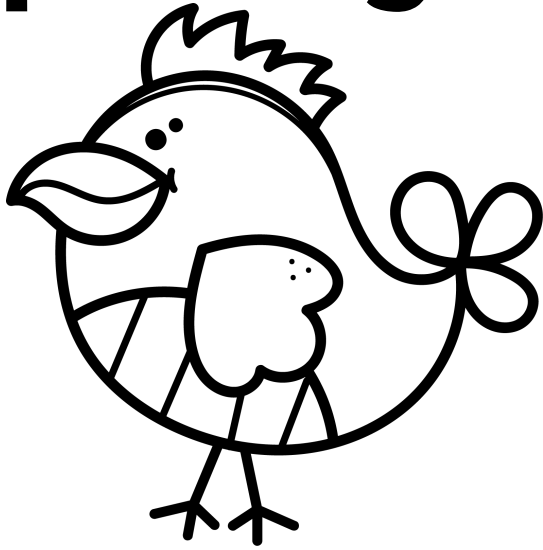
when something is  
suitable for a  
feast or a holiday

# festive



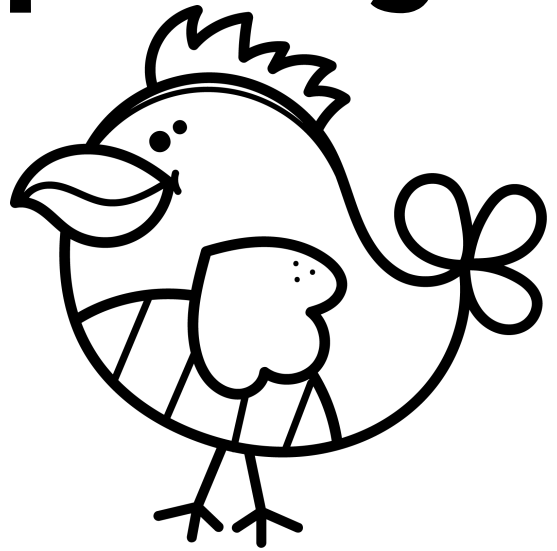
when something is  
suitable for a  
feast or a holiday

**plumage**



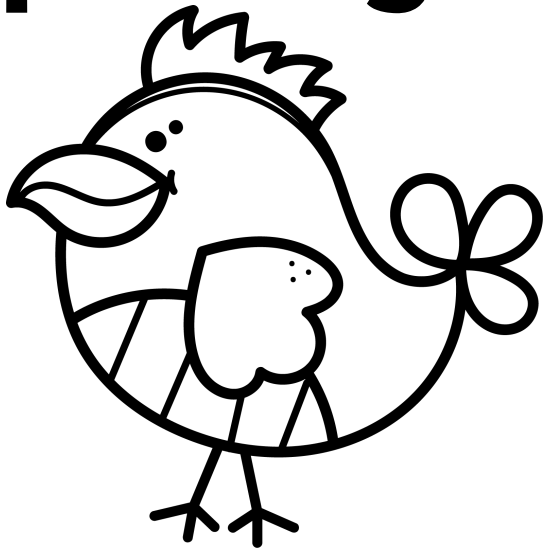
a layer of  
feathers

**plumage**



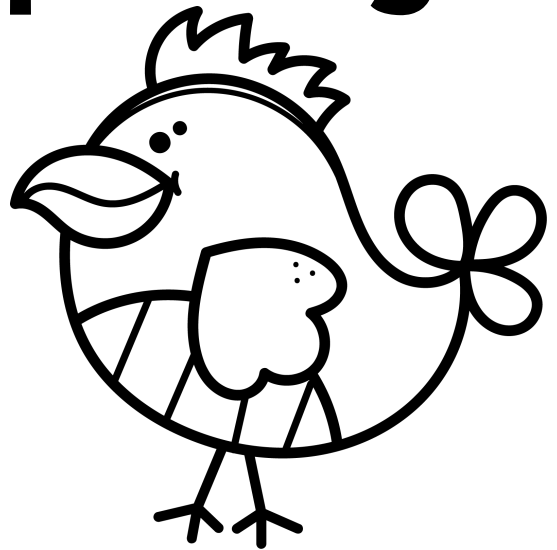
a layer of  
feathers

**plumage**



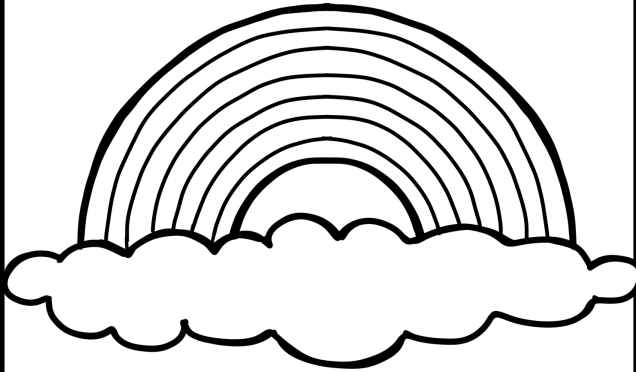
a layer of  
feathers

**plumage**



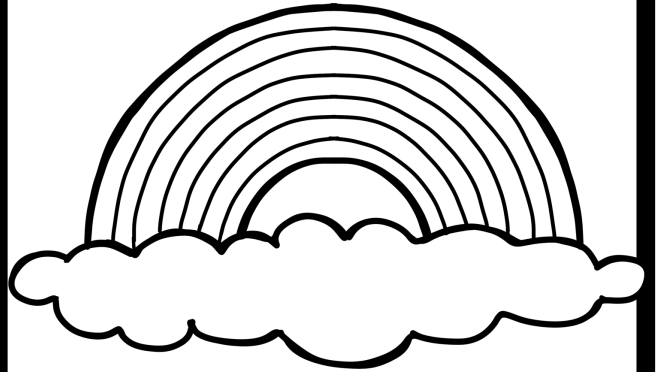
a layer of  
feathers

# miracle



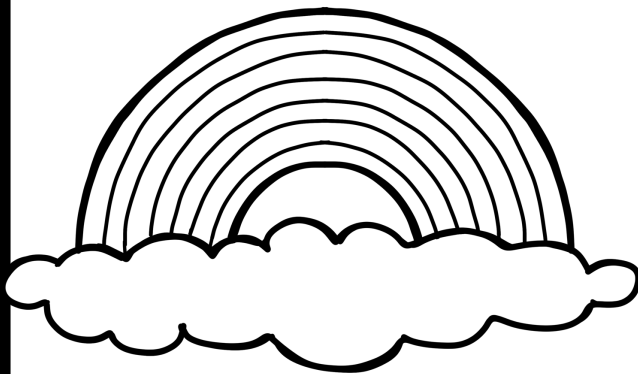
something that  
seems impossible  
happens

# miracle



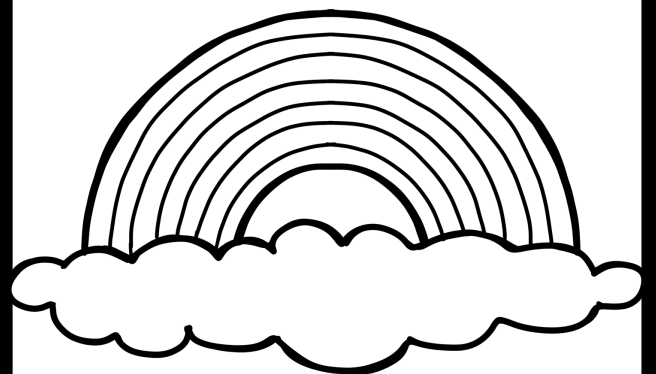
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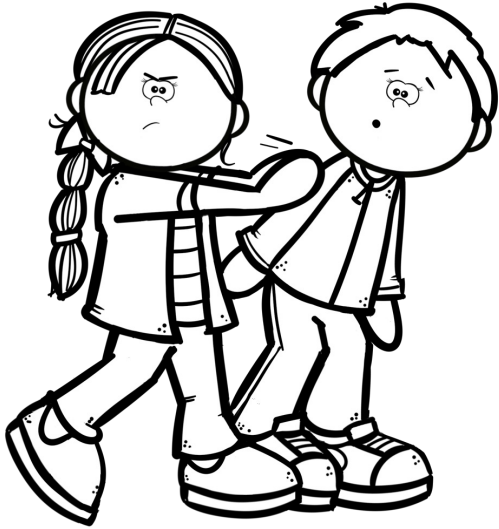
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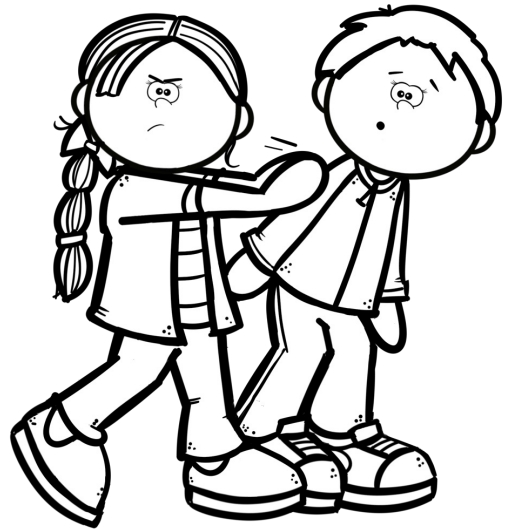
something that  
seems impossible  
happens

# naughty



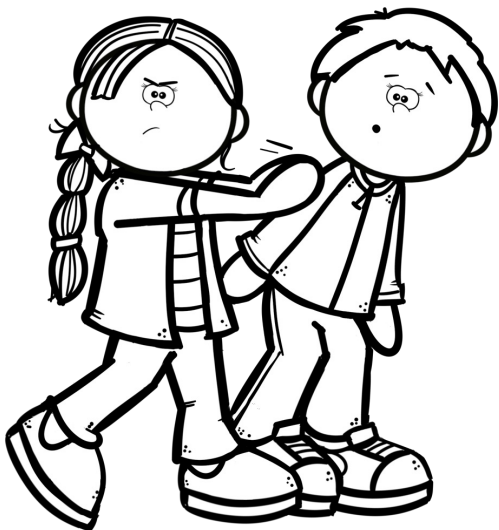
badly behaved;  
disobedient

# naughty



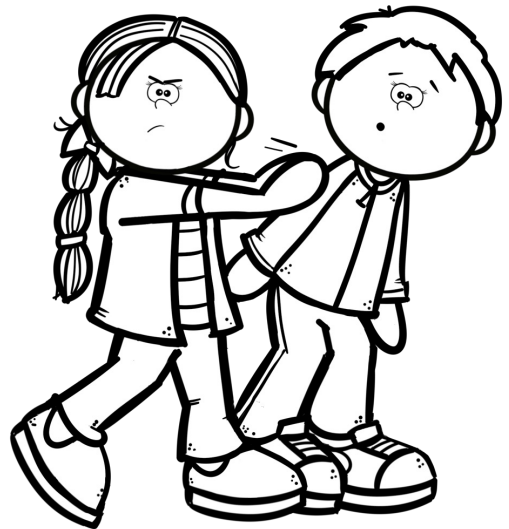
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# naughty

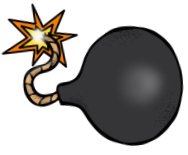


badly behaved;  
disobedient

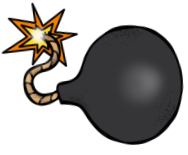
# naughty



badly behaved;  
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# VOCABULARY

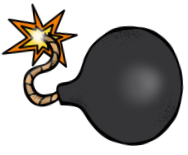


plumage

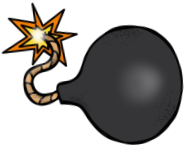


# EXPLOSION





# VOCABULARY

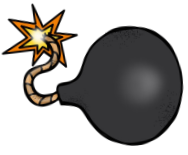


festive

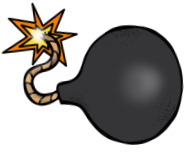


# EXPLOSION





# VOCABULARY

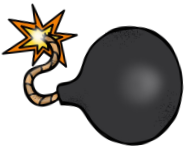


miracle

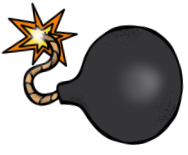


# EXPLOSION





# VOCABULARY



naughty



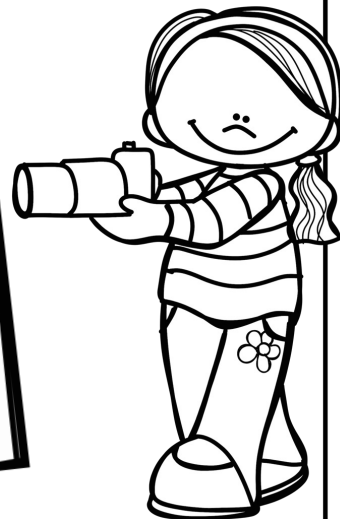
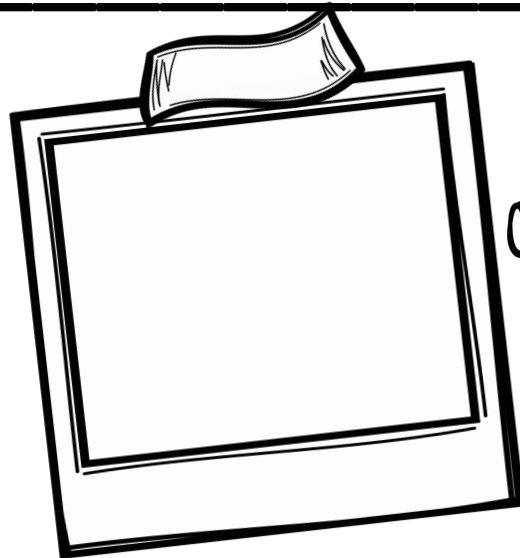
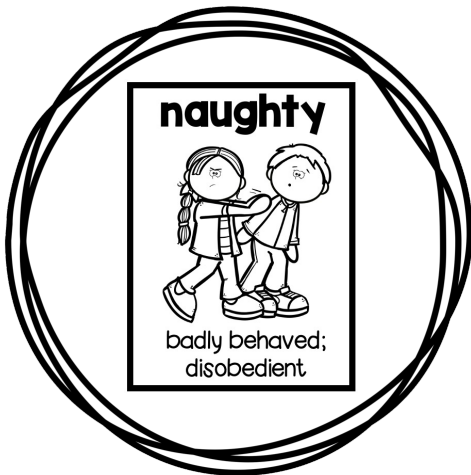
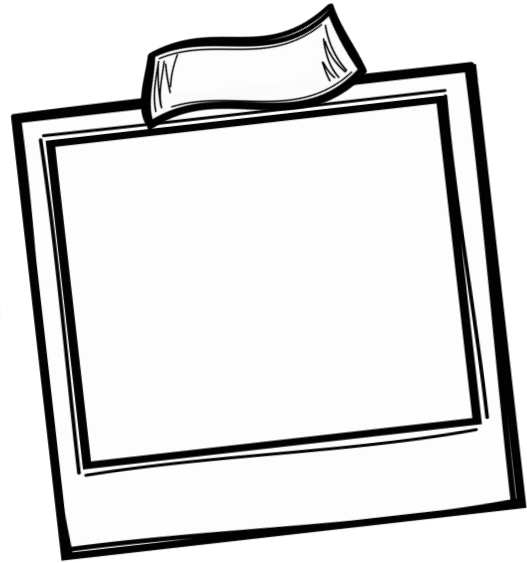
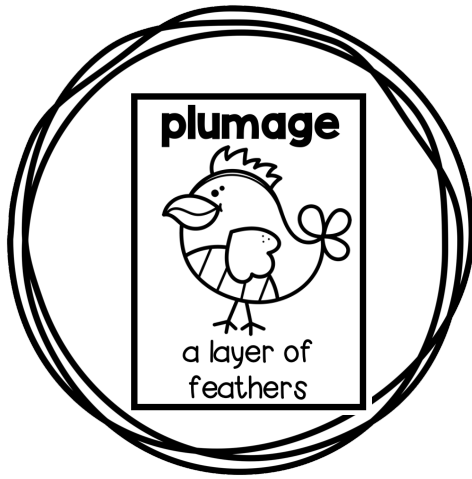
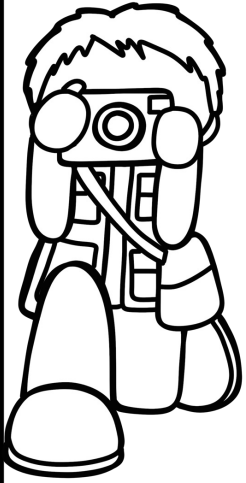
# EXPLOSION



Name: \_\_\_\_\_

# CLICK!

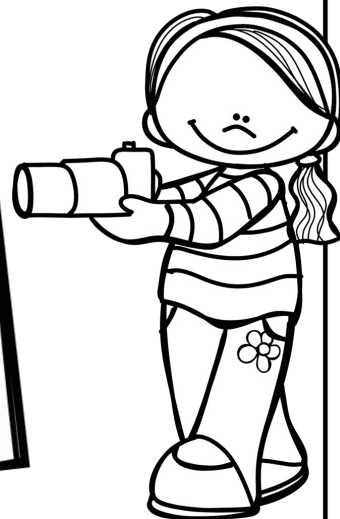
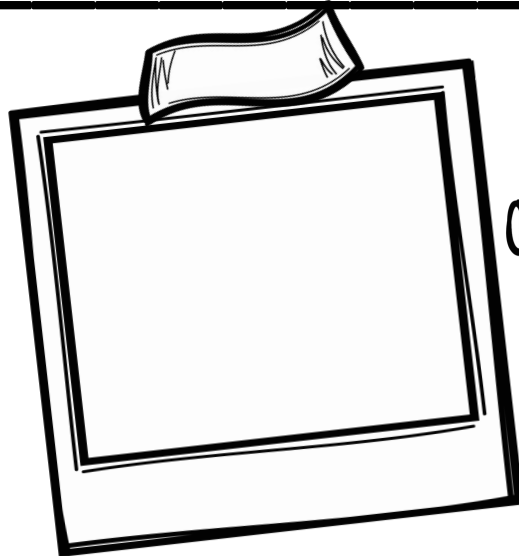
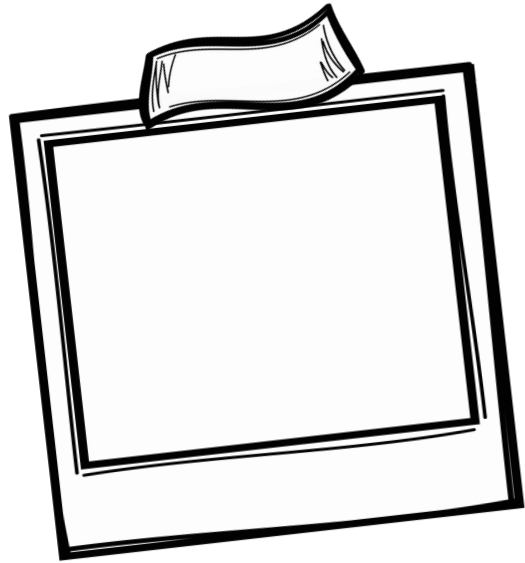
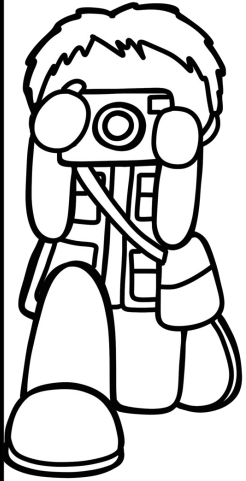
Directions: Draw and write about each word.



Name: \_\_\_\_\_

# CLICK!

Directions: Draw and write about each word.



# SLEIGH RIDE STEM CHALLENGE



**OVERVIEW:** This challenge allows students to experiment with ramps/inclined planes and how the height of a ramp affects the speed and distance of an object that slides down it. Students will also explore how friction and gravity affect the motion of an object. Hardback picture books can be propped up to create various ramp heights and students will build their sleighs out of building bricks or linking cubes. After creating their sleighs and ramps, they will test them with 3 different heights and measure the distances that their sleighs travel.

**KEY SKILLS:** Simple machines (inclined planes), Speed and Distance, Friction, Measurement

**NGSS Alignment:** K-2-ETSI Engineering Design: K-2-ETSI-1, 3-5 ETSI-2, 3-5 ETSI-3, 3-5-ETSI Engineering Design: 3-5-ETSI-1, 3-5 ETSI-2, 3-5 ETSI-3, K-PS2 Motion and Stability: Forces and Interactions, 3-PS2 Motion and Stability: Forces and Interactions, 5-PS2 Motion and Stability: Forces and Interactions

**MATERIALS PER GROUP:** small tub of building bricks or linking cubes, paper pigeons and tape, stack of hardback picture books, ruler

## LESSON PLAN

1. Activate students' prior knowledge by asking them to share what they already know about ramps/inclined planes and how they work. Discuss the different ways ramps are used and how they make work easier.
2. Share and discuss the videos on "Explore Ramps."
3. Hold a class discussion, using the teacher chart and real world examples to guide student thinking. (You can project the chart on an interactive whiteboard or document camera.) Record their ideas on the teacher chart.
4. Introduce the STEM challenge and permitted materials.
5. Introduce and discuss key vocabulary cards related to the challenge.
6. Have students sketch blueprints of their designs in their recording booklets.
7. Distribute materials and allow students 45-60 minutes with partners or small groups to construct their sleighs and ramps and test them, adjusting the height of the ramp to measure the distances their sleigh travels.
8. Hold a whole class closing discussion and reflection, allowing students to share their sleigh and ramp designs and what they learned.

# SLEIGH RIDE

Possible Product



# SLEIGH RIDE

Can you create a sleigh to hold the pigeon and test it on an inclined plane?

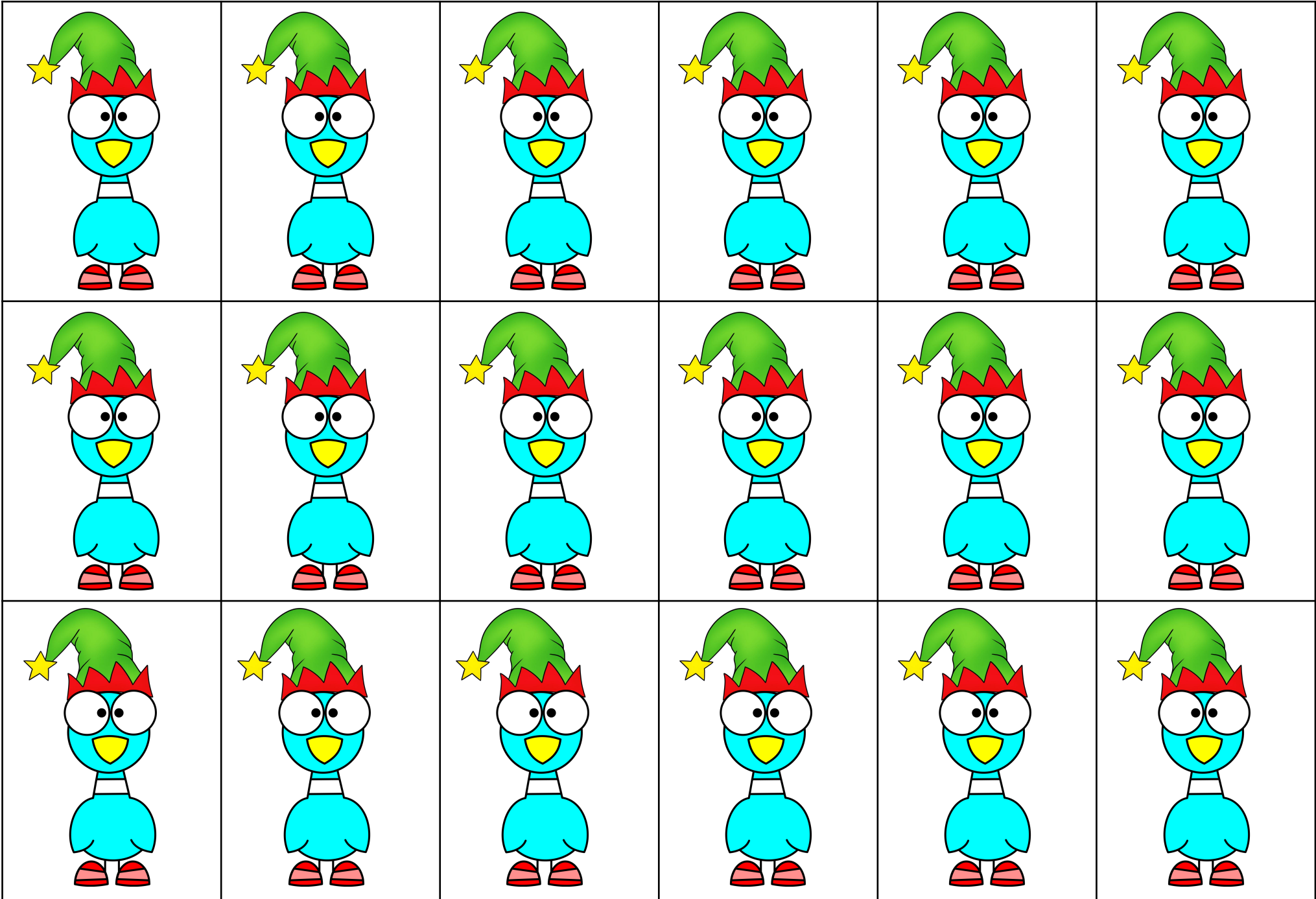


## YOU MAY USE:

- building bricks or linking cubes
- paper pigeon and tape
- hardback books

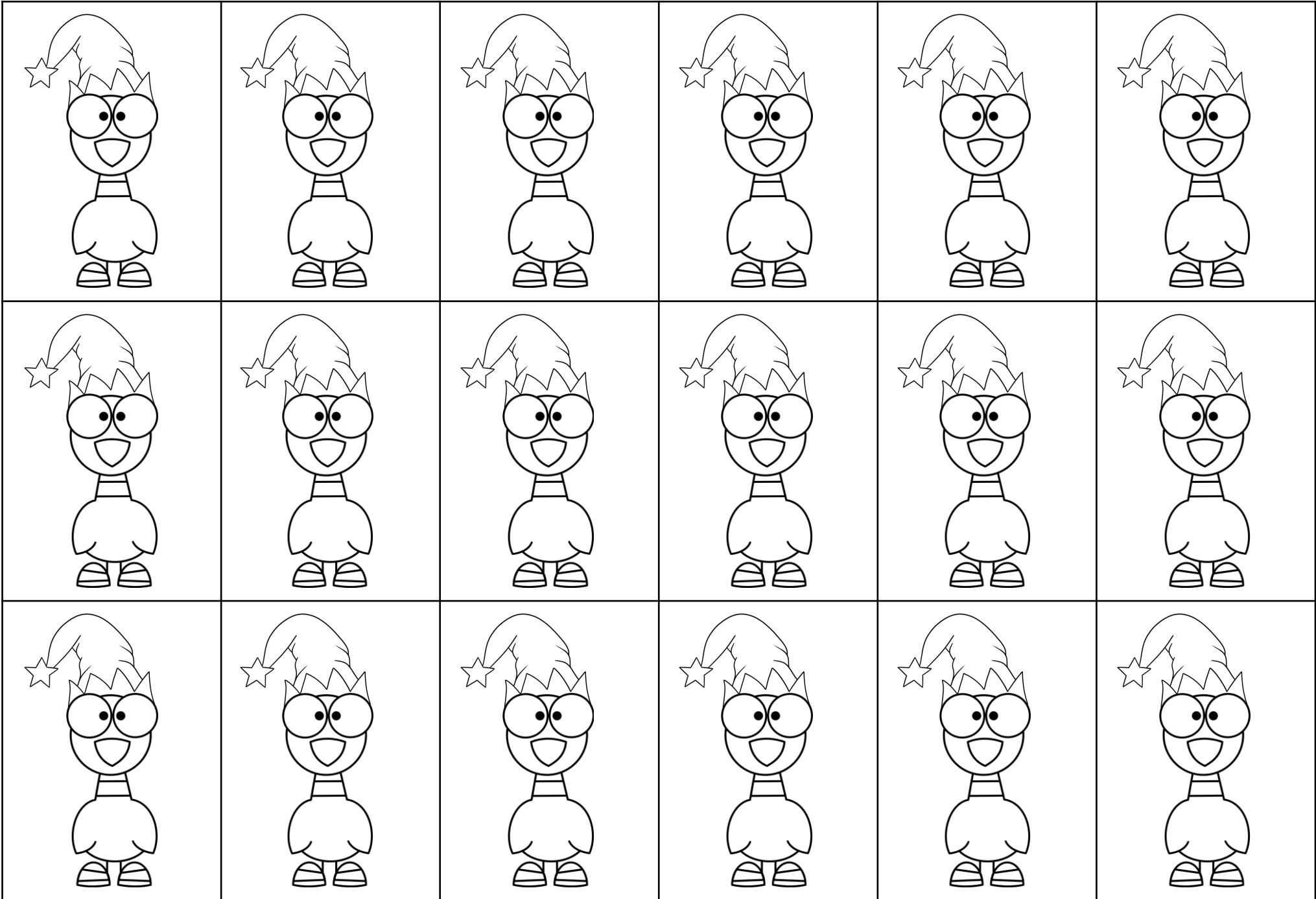
# PIGEON TEMPLATES

Students will tape one pigeon inside their sleigh.



# PIGEON TEMPLATES

Students will tape one pigeon inside their sleigh.



# SLEIGH RIDE

## Real World Examples



What is similar? What is different?

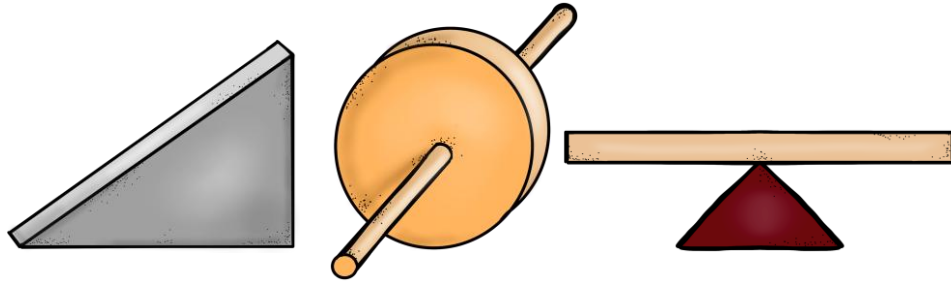
How Inclined Planes are Useful

## Examples of Inclined Planes

How Sleighs Work

# SLEIGH RIDE

## SIMPLE MACHINE



a basic device that applies force and makes work easier

## INCLINED PLANE



a simple machine that slopes at an upward angle, also called a ramp

## FRICTION

surface resistance to motion



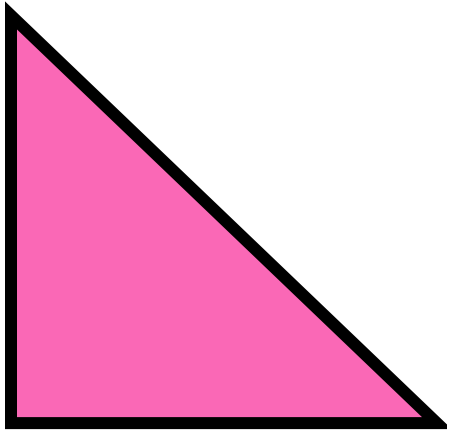
## GRAVITY

the force of attraction of objects to the center of the Earth



# SLEIGH RIDE

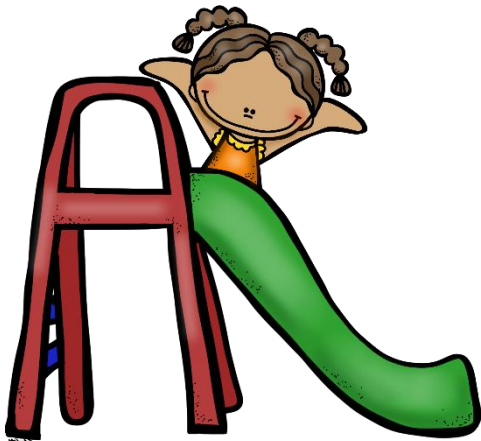
## INCLINED PLANES



## SLEDDING



## FRICITION



## SLED FACTS



What happened to the sleigh when you changed the height of the ramp or inclined plane?

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Why do you think this happened?

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## THINK ABOUT IT!

What is the force that slowed your sleigh down?

What is the force that pulled your sleigh to the table or floor?

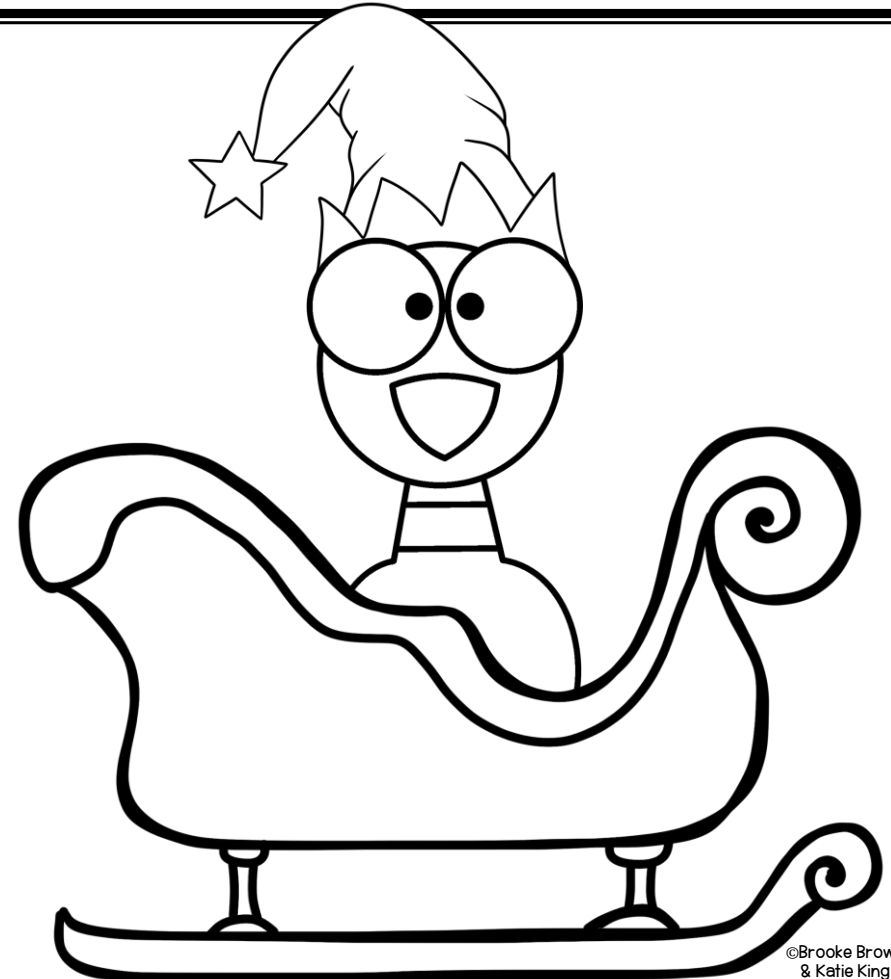
# SLEIGH RIDE

Don't Let the Pigeon Drive the Sleigh

Name: \_\_\_\_\_

## STEM CHALLENGE

Can you create a sleigh to hold the pigeon and test it on an inclined plane?





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