SCIENCE GRADE 2

SPRING BREAK LEARNING

MARCH 10-14

2025

The Department of Curriculum & Instruction

Hello MSCS Family,

This resource packet was designed to provide students with activities that can be completed during the Spring Break Academy independently or with the guidance and supervision of family members or other adults. The activities are aligned to the TN Academic Standards for Science and will provide additional practice opportunities for students to develop and demonstrate their knowledge and understanding. A suggested pacing guide is included. However, students can complete the activities in any order over three days. Below is a table of contents that lists each activity.

Table of Contents

Activity	Page number	Suggested pacing
Forces	3	Day 1
Forces: Friction	4	Day 2
Be Forceful	5	Day3

2nd Grade Science: Forces	
Grade Level Standard(s)	2.PS2.2: Evaluate the effects of different strengths and directions of a push or pull on the motion of an object.
Caregiver Support Option	Help your student by guiding them through the directions.
Materials Needed	Forces Handout
Essential Question	How do pushes and pulls move an object?
Learning Outcome	Students will investigate different pushes and pulls and how much force is required to move an object.

Science
Physical

Forces

Forces are everywhere! You use force to pull a door handle, park a bike,or even stir soup! When you make something move, you exert force on the object. Look at the pictures below and describe how the person is exerting force. See the example.

Blowing to make bubbles move

_____

_____

_____

Now draw three activities that you do that exert force.

2nd Grade Science: Forces: Friction	
Grade Level Standard(s)	2.PS2.2: Evaluate the effects of different strengths and directions of a push or pull on the motion of an object.
Caregiver Support Option	Help your student by guiding them through the directions.
Materials Needed	Forces: Friction Handout
Essential Question	How do pushes and pulls move an object?
Learning Outcome	Students will investigate different pushes and pulls and how much force is required to move an object.

Science
Physical

Forces: Friction

Friction is a kind of force. Friction is created when two surfaces rub together.
Too much friction can make an object difficult to move.
Read the questions and answer them.

The taxi driver has to be more careful when driving in winter because the road is more slippery than when he drives in summer.
That means the friction on the road during winter is _____ the friction during summer.

A. more than
B. less than
C. the same as

The carpenter finds maple wood easier to saw than oak. This means that

A. there is less friction on the maple wood than on the oak.
B. there is more friction on the maple wood than on the oak.
C. the carpenter was lazy.

The mover pushed his cart on the tile floor and it went fast and easy.
When he pushed his cart on the carpet, it was harder because there is more friction on the carpet.
Therefore, he must _____

A. leave the cart outside and take a nap.
B. use less force to push the cart when he's on the carpet.
C. use more force to push the cart when he's on the carpet.

Write down 3 more examples of two surfaces rubbing together.

1. Skis on the snow
2. _____
3. _____
4. _____

2nd Grade Science: Be Forceful!	
Grade Level Standard(s)	2.PS2.3: Recognize the effect of multiple pushes and pulls on an object's movement or nonmovement.
Caregiver Support Option	Help your student by guiding them through the directions.
Materials Needed	Be Forceful Handout
Essential Question	How do pushes and pulls move an object?
Learning Outcome	Students will investigate different pushes and pulls and how much force is required to move an object.

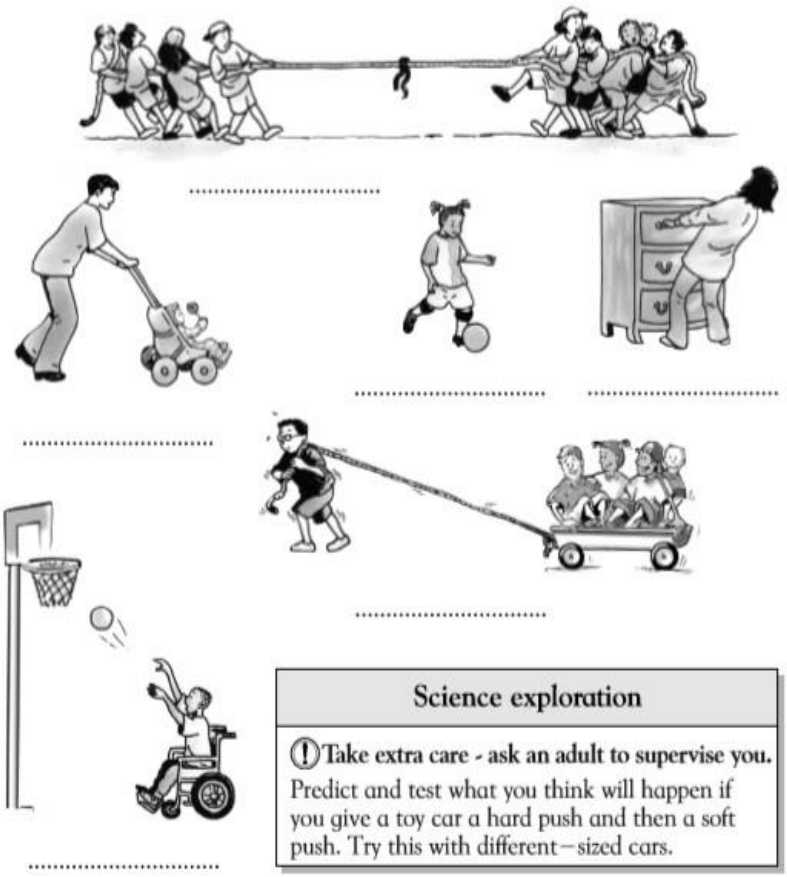
Be forceful!

Observations

Things move when you push them and pull them. A push or a pull is a *force* that causes things to go faster or slower, or to stop. When you are very forceful (you give a hard push), you can make a toy car go fast. When you are not so forceful (soft push), the car will go slowly.

Science activity

Do these things need a push or a pull to make them move? Write push or pull under each picture.



.....

.....

.....

.....

.....

.....

Science exploration

(!) Take extra care - ask an adult to supervise you.

Predict and test what you think will happen if you give a toy car a hard push and then a soft push. Try this with different–sized cars.

2nd Grade Science: Forces	
Grade Level Standard(s)	2.PS2.2: Evaluate the effects of different strengths and directions of a push or pull on the motion of an object.
Caregiver Support Option	Help your student by guiding them through the directions.
Materials Needed	Forces Handout
Essential Question	How do pushes and pulls move an object?
Learning Outcome	Students will investigate different pushes and pulls and how much force is required to move an object.

Science
Physical

Forces

Forces are everywhere! You use force to pull a door handle, park a bike,or even stir soup! When you make something move, you exert force on the object. Look at the pictures below and describe how the person is exerting force. See the example.

Blowing to make bubbles move

Pushing cart to move boxes

Pushing and pulling to move body in water

Pushing body to move swing

Now draw three activities that you do that exert force.

Drawings will vary.

2nd Grade Science: Forces: Friction	
Grade Level Standard(s)	2.PS2.2: Evaluate the effects of different strengths and directions of a push or pull on the motion of an object.
Caregiver Support Option	Help your student by guiding them through the directions.
Materials Needed	Forces: Friction Handout
Essential Question	How do pushes and pulls move an object?
Learning Outcome	Students will investigate different pushes and pulls and how much force is required to move an object.

Science
Physical

Forces: Friction

Friction is a kind of force. Friction is created when two surfaces rub together.
Too much friction can make an object difficult to move.
Read the questions and answer them.

The taxi driver has to be more careful when driving in winter because the road is more slippery than when he drives in summer.
That means the friction on the road during winter is _____ the friction during summer.

A. more than
B. less than
C. the same as

The carpenter finds maple wood easier to saw than oak. This means that

A. there is less friction on the maple wood than on the oak.
B. there is more friction on the maple wood than on the oak.
C. the carpenter was lazy.

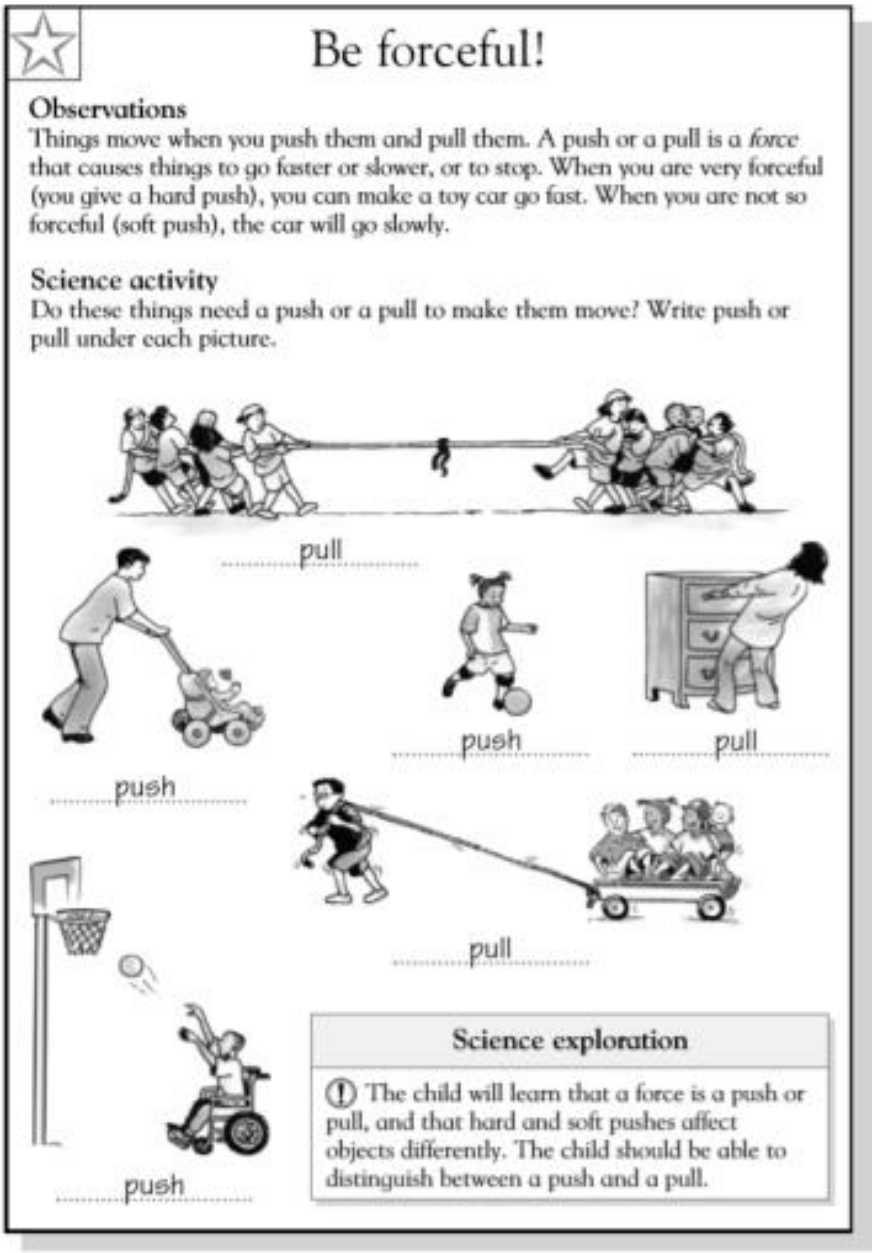
The mover pushed his cart on the tile floor and it went fast and easy.
When he pushed his cart on the carpet, it was harder because there is more friction on the carpet.
Therefore, he must _____

A. leave the cart outside and take a nap.
B. use less force to push the cart when he's on the carpet.
C. use more force to push the cart when he's on the carpet.

Write down 3 more examples of two surfaces rubbing together.

1. Skis on the snow
2. _____
3. _____
4. _____

2nd Grade Science: Be Forceful!	
Grade Level Standard(s)	2.PS2.3: Recognize the effect of multiple pushes and pulls on an object's movement or nonmovement.
Caregiver Support Option	Help your student by guiding them through the directions.
Materials Needed	Be Forceful Handout
Essential Question	How do pushes and pulls move an object?
Learning Outcome	Students will investigate different pushes and pulls and how much force is required to move an object.



Be forceful!

Observations

Things move when you push them and pull them. A push or a pull is a *force* that causes things to go faster or slower, or to stop. When you are very forceful (you give a hard push), you can make a toy car go fast. When you are not so forceful (soft push), the car will go slowly.

Science activity

Do these things need a push or a pull to make them move? Write push or pull under each picture.

pull

push

push

pull

pull

push

Science exploration

① The child will learn that a force is a push or pull, and that hard and soft pushes affect objects differently. The child should be able to distinguish between a push and a pull.