

FORCE AND MOTION SCIENCE MYSTERY

FORCE AND MOTION

HELP YOUR UPPER
ELEMENTARY STUDENTS
REVIEW IMPORTANT
FORCE AND MOTION
CONCEPTS WHILE BEING
HIGHLY ENGAGED
SOLVING A MYSTERY!

SCIENCE MYSTERIES



CONCEPTS COVERED

- ✓ PUSH AND PULL CONCEPTS
- ✓ BALANCED AND UNBALANCED FORCES
- ✓ TYPES OF FORCES
- ✓ PATTERNS OF MOTION

CLUE #1








Find the path through the maze by coloring in the boxes that describe balanced forces. The path will reveal the hair color of the suspect.

Two dogs pulling on a toy and one dog winning.	A book sitting on a table.	Grandma rocking in a rocking chair.	A hammer coming down on a nail.
A ball bouncing around.	Blocks being knocked over.	Two dogs pulling on a toy and it's a tie.	A moving car slowing down for a red light.
An apple falls to the ground off a tree.	A man hits a ball with a baseball bat.	A child knocks a cup of milk over.	A person leaning against a wall.
The child slams the door shut.	A boy pushes his sister on the swing.	You can't lift a rock.	A girl dumps her toybox upside down.
A man slips on ice and falls.	Leaves falling to the ground as the wind blows.	A parachuter falling at a constant speed.	A woman drags her dog out of the park.
Blonde	Black	Brown	Red

Clue:
The suspect's hair color is brown.

CLUE #2

Determine if the image given is a push or a pull. Place an x in the appropriate box across from the motion. When finished, count the number of X's in each column to determine the answer to the clue.

	Push	Pull
 A girl moving a sock up the leg.		X
 A girl moving a stroller forward.	X	
 A dog moving shoestring toward him.		X
 Apple moving toward the ground.		X
 A boy moving the ball toward the basket.	X	
 A boy moving the girl forward on the swing.	X	
 A girl moving a weed toward her.		X

Clue:
If there are more push answers, the suspect is male.
If there are more pull answers, the suspect is female.

WHY YOU AND YOUR STUDENTS WILL LOVE THIS RESOURCE

CLUE #3

Sort each description into the appropriate type of force box. Whichever box has the most descriptions in it will reveal the suspect's favorite sport.

- a contact force
- slows or stops motion
- acts from a distance
- pulls toward center of Earth
- has electric charges
- has magnetic field
- Newton discovered this force

MAGNETIC FORCE

acts from a distance
has a magnetic field

STATIC FORCE

acts from a distance
has electric charges

GRAVITATIONAL FORCE

acts from a distance
pulls toward center of Earth
Newton discovered this force

FRICTIONAL FORCE

a contact force
slows or stops motion

Clue:
The suspect's favorite sport is Soccer.

CLUE #4

Read each statement below and determine if it is true or false. Then place an x in the correct column. Then determine the answer to the clue using the number of x's placed.

	T	F
Objects with more mass are harder to stop.	X	
The greater the mass, the greater the force of gravity.	X	
A force cannot slow or stop an object, only speed it up.		X
It takes more force to stop objects with more mass.	X	
The force of gravity is down, so that is always south.		X
Objects push on each other when they collide	X	
A push cannot change the motion, direction, or shape of an object.		X
We can use observations and measurements to predict patterns of motion.	X	
If an object is sitting still there are no forces acting on it.		X

Clue:
If there are more true answers, the suspect is on a team.
If there are more false answers, the suspect is not on a team

- ✓ STUDENTS CANNOT SOLVE THE MYSTERY WITHOUT SOLVING THE CLUES RELATED TO FORCE AND MOTION CONCEPTS
- ✓ A FUN INTERACTIVE WAY TO REVIEW IMPORTANT CONCEPTS

WHAT'S INCLUDED

SHEETS TO MAKE A BOOKLET

SUSPECT LIST

ANSWER KEYS

REVIEW CONCEPTS

DIRECTIONS

