

THAT'S A  
SOUND IDEA!



STUDENT WORKBOOK



ACTIVITY

1

# ON THE BALL

If you want to make a ball move, you have to hit it hard, right? Maybe not! There might be another way. You can do this tuning fork experiment to find out more.

## USE THE FORK

### WHAT YOU NEED:

### FROM THE KIT:

- Pin
- String
- Table tennis ball
- Tuning fork

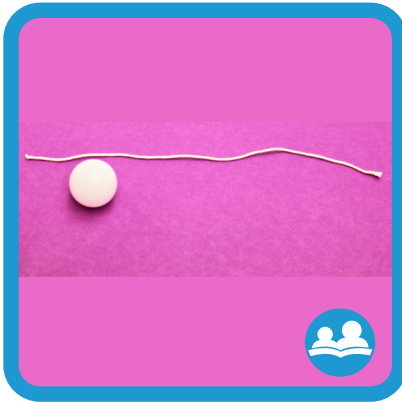
### OTHER ITEMS:

- Scissors

**WARNING:** **WARNING!** Be careful with a tuning fork. Never touch it to teeth, glasses, or windows.

**WARNING!** Sharp objects can cause injury. Don't cut or poke yourself. Get an adult to help!





## WHAT TO DO:

### STEP 1

Cut off a piece of string about the length of your arm.



### STEP 2

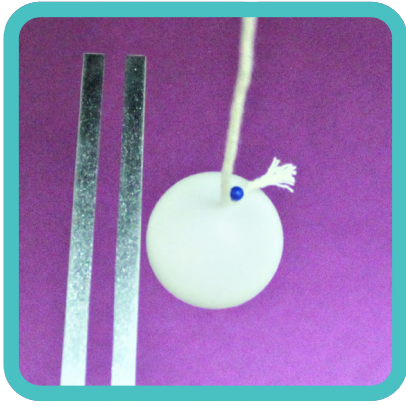
Push the pin through the string into the table tennis ball.

**STEP 3** Hold the string with the table tennis ball hanging down and wait for it to stop moving.

**STEP 4** Strike (hit gently but firmly) the tuning fork on a book or rubber-sole shoe. You should be able to hear it.

**Note:** DO NOT strike the tuning fork on a very hard surface like a table. It could break.

**STEP 5** After hitting the tuning fork on a book or shoe, quickly bring the middle of the tuning fork next to the hanging table tennis ball, but don't let them touch right away.



### STEP 6

Let the tuning fork *lightly and softly* touch the table tennis ball and watch what happens.

### STEP 7

Repeat Steps 3–5 until you have a good way of making the ball move without hitting it hard.

### STEP 8

What can you change to make the ball move more? How about less? Try it out and write what happens in this table.

What did you try?	What happened?

## GLOSSARY

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**Energy** - ability to make something move or change.

**Frequency** - how fast waves are moving.

**Loudness** - the power or energy carried in a sound wave.

**Pitch** - how high or low a sound is.

**Sound** - energy that moves using vibration.

**Vibration** - quick back and forth movement.

**Wave** - a pattern of moving energy.

SAMPLE

WONDER



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Kit	SU-SDIDEA
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