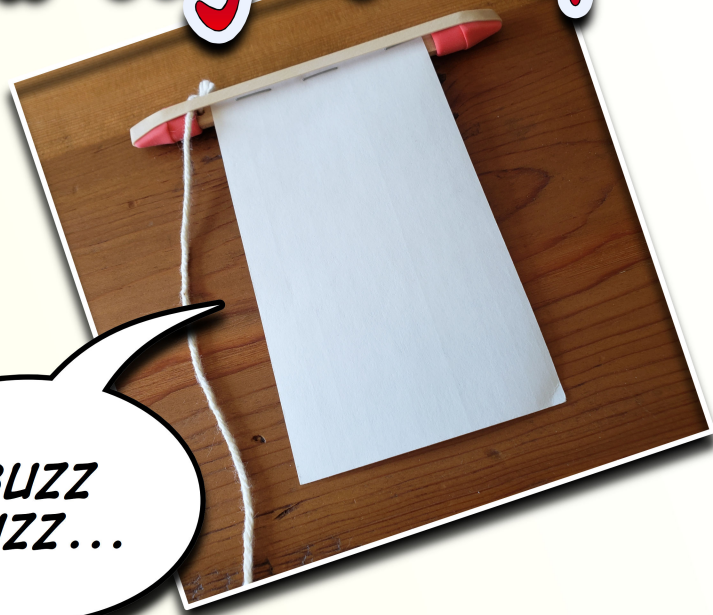




# Taking a "bug" for a spin



## What you need:

3-4 FEET OF YARN OR STRING  
STAPLER  
INDEX CARD  
POPSICLE STICK  
THICK RUBBER BAND (ABOUT AS LONG AS THE STICK)  
TWO PENCIL ERASERS  
DRILL OR A NAIL

## What to do:

USE THE DRILL/NAIL TO MAKE A HOLE IN ONE END OF THE POPSICLE STICK. THREAD AND TIE THE STRING THROUGH THE HOLE.  
PLACE A PENCIL ERASER ON EACH END OF THE STICK.  
CENTER AND STAPLE THE SHORT SIDE OF THE INDEX CARD ON THE STICK.  
STRETCH THE RUBBER BAND ACROSS THE STICK SO IT IS WRAPPED AROUND EACH PENCIL ERASER.  
SLOWLY SPIN THE DEVICE UNTIL YOU HEAR A BUZZING SOUND, ADJUSTING THE SPEED AS NEEDED.

## What's going on?

THE BUZZING SOUND YOU HEAR IS PRODUCED BY THE RUBBER BAND VIBRATING AGAINST THE STICK. THE VIBRATIONS ARE CAUSED BY THE AIR MOVING AROUND THE RUBBER BAND AS YOU SPIN THE DEVICE. AS YOU SPIN YOUR "BUG" FASTER, MORE AIR PASSES ACROSS THE RUBBER BAND. THIS INCREASES THE SPEED OF THE VIBRATIONS AND CREATES A HIGHER THE PITCH FROM YOUR "BUG."