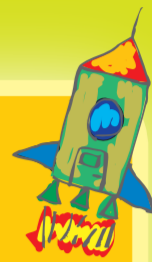


WEEKEND SCIENCE

WELCOME to Weekend Science! Every Saturday we're going to guide you through some cool experiments that you can do at home. It's a good idea for you to keep a record of what you do in a Science Journal. That way you can record what you learn, compare results and maybe use them to design new experiments! Remember to always ask a grown-up's permission before trying out an experiment.

歡迎閱讀《週末科學版》！我們每週六都要為你介紹可以在家中進行的有趣科學實驗。你可以在《科學日誌》中記錄自己做了哪些活動，這樣就可以將所學的記錄下來，比較這些結果，也許還可以利用它們來設計新的實驗！先看一下《科學日誌》的點子再開始吧。展開實驗之前，記得要獲得大人許可喔！



The holey bottle caper

整人水瓶

April Fools' Day may have passed but that doesn't mean you have to stop playing tricks on your friends. And in keeping with our mission to make science fun, in today's experiment you will create a worthwhile science experiment, and play a very wet prank on somebody. This simple experiment can be set up quickly using easily accessible household materials.

雖然愚人節已經過了，不過那不表示你不能繼續捉弄朋友。為了符合我們把科學實驗變有趣的精神，今天你將做一個值得一試的科學實驗，順便對某人開個濕答答的玩笑。準備這個簡單的實驗很快，利用家中隨手可得的家用品就可以了。

What you will need: an empty plastic soda bottle, a small nail, pliers and some water.

實驗所需：一個空的塑膠汽水瓶、一根小釘子、鉗子和一些水。



METHODOLOGY

Step 1: The first thing you need to do is make holes in the bottom of the bottle. Grip the nail with the pliers and carefully push the nail into the bottom of the bottle. Make about 12 holes.

Step 2: Now you've made the holes, fill the sink with about 5cm of water. It doesn't matter how deep it is, just make sure the water level is above the holes. As the sink is filling, keep hold of the bottle so that it doesn't tip over.

Step 3: Keeping the bottle in the sink, completely fill it with water from the tap. Lift the bottle out of the water and hold it over the sink to make sure it doesn't leak. Screw on the cap.

方法

步驟一：首先，將汽水瓶底鑽洞。用鉗子鉗住釘子，然後小心地把釘子穿進瓶子的底部。大約鑽十二個洞。

步驟二：鑽好洞後，在水槽中盛裝約五公分高的水。水深不是問題，只要確定水面高過瓶底的洞就行了。水槽蓄水時，要一直扶著瓶子，這樣瓶子才不會翻倒。

步驟三：讓瓶子保持在水槽中，打開水龍頭將瓶子灌滿水。將瓶子拎出水面，並保持在水槽之上，以免滴得到處都是。旋上瓶蓋。

SETTING UP THE PRANK 準備整人

Despite having holes, the water shouldn't leak. Dry the bottle and find a friend, then pretend that you cannot unscrew the lid. Your friend will think it's hilarious that you are so weak, and will probably grab the bottle to demonstrate his strength. But as soon as he unscrews it, the water will rush out of the holes and he will get very wet.

儘管瓶底有洞，水卻不會漏出來。把瓶子擦乾，然後找一個朋友。假裝你轉不開瓶蓋，你朋友可能會覺得你連瓶蓋都轉不開很可笑，然後就一把搶過瓶子想秀給你看他的力氣有多大。但他一轉開瓶蓋，水就會立刻從洞裡漏出來，把自己弄得濕答答。



WHY IT WORKS 實驗原理

The combination of surface tension and air pressure outside the bottle is strong enough to prevent the water from escaping. But as soon as the lid comes off, the air pressure from the top of the bottle increases, forcing the water out. To avoid annoying people too much, it's best to do this prank outside on a hot day. (JOHN PHILLIPS, STAFF WRITER)

表面張力加上瓶外的大氣壓力足以支撐水不從瓶中漏出。但蓋子一被打開，瓶子上方的大氣壓力增加，迫使水從下面溢出。為了不要太惹整別人，最好挑個大熱天在戶外進行這個搗蛋計畫。(翻譯：袁星塵)

VOCABULARY 今日單字

- 1. trick** /tr k/ n. 花招 (hua1 zhao1)
- 2. pliers** /pla z/ n. 鉗子 (qian2 zi5)
- 3. hole** /hol/ n. 洞 (dong4)
- 4. sink** /s nk/ n. 水槽 (shui3 cao2)
- 5. screw** /skru/ vi/vt. 旋 (xuan2)
- 6. surface tension** /s fs t n/ n. 表面張力 (biao3 mian4 zhang1 li4)



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Did you have fun with today's experiment? Why don't you e-mail us and let us know. We're always happy to hear from our readers!

喜歡今天的實驗嗎？歡迎來函指教！電子信箱：bingual@taipeitimes.com