



How many times can you stick a Post-it® note?

Unlike more permanent adhesives, the adhesive found on Post-it Notes is made up of a single layer of small spheres connected to paper. These adhesive spheres do not evenly cover the surface, kind of like the dots on a basketball. Because of the space between the spheres and the soft, stretchy material the spheres are made of, the adhesive does not stick strongly. This allows the Post-it Notes to be easily stuck, unstuck, and re-stuck several times!

Dr. Spencer F. Silver, a scientist at 3M, discovered the adhesive by accident, but did not have a use for it because it was not very sticky. Later, Art Fry, another 3M engineer, was marking pages in a choir songbook with paper that wouldn't stay put. It was Fry's idea to use the new adhesive for removable bookmarks! In 1980, after years of hard work, the removable bookmarks with the not-so-sticky adhesive were first sold as the classic yellow Post-it Note that everyone knows today.

Materials needed:

- Post-it Notes
- Smooth, dry, and clean surface (kitchen counter, window glass)
- Rough surface (brick, concrete)
- Dry dirt
- Water
- Optional: Glue stick and small scraps of paper

Step-by-step instructions:

1. Stick a Post-It Note to a smooth, dry, and clean surface.
2. Remove and re-stick the note until it no longer sticks.
3. Record how many times you could stick, unstick, and re-stick the note
4. Repeat the experiment with a new note on rough and dirty surfaces!
 - a.) a surface covered with a small amount of dry dirt
 - b.) a smooth surface made wet with a few drops of water
 - c.) a rough surface
 - d.) the skin on your hand
 - e.) somewhere on your clothing
5. What did you observe about each surface you tested? Record your observations and data on the following page.



How many times can you stick a Post-it® note?

Surface Type	Observations	Number of Post-it note “sticks”
Smooth, clean		
Dirt		
Wet		
Rough		
Skin		
Clothing		

Additional exploration:

- Make your own temporary “sticky note”. On one edge of a small piece of paper, use a glue stick to apply a small strip of glue. How many times can you stick, unstick, and re-stick it on the different surfaces you used above? What did you observe after repeated sticking and unsticking on each surface?

Discussion questions:

- Which surface was the best for repeated unsticking and re-sticking of the Post-It Note? Why do you think this might be?
- Some people use sticky notes on their clothes to help them remember a job or errand they are to do. Does that seem like a good idea?
- How did the temporary note work compared to the Post-It Note?

Additional Resources:

- From Celebrating Chemistry: NCW 2020 “Sticking with Chemistry.”
www.acs.org/content/acs/en/education/outreach/celebrating-chemistry-editions/2020-ncw/post-it-note.html

