

# MAKE A RUDE CAKES MAGIC WHEEL!

This wheel looks a little like a pinwheel and a little like a cake, but it's really called a phenakistoscope (fen-uh-kissed-oh-skope). That's a big, weird word. It's also known as a Magic Wheel. So let's call it that.

The Magic Wheel was invented by a scientist about 180 years ago, and some folks think it's the first form of animation (like cartoons). A Magic Wheel is just a circle on which something (like a Rude Cake) has been drawn a bunch of times in slightly different poses (like kicking a chocolate cupcake). When you spin the wheel, all the poses will come together to look like a moving cartoon.

You need the following to make this work:

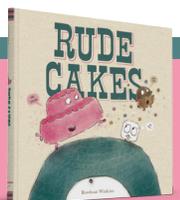
- 1 Magic Wheel
- 1 pencil with an eraser
- 1 thumbtack
- 1 mirror
- 1 XACTO knife
- 1 pair of scissors
- 1 grown-up (to print and cut your scope)



You probably noticed there's a Giant Cyclops eye in the middle of your Magic Wheel. Push your thumbtack through the center of the eye (sorry, Giant Cyclops) and pin the Magic Wheel loosely to the pencil's eraser. It will look a little like a lollipop. The image should be facing away from you. Try spinning to see if you've pinned it too tightly. It needs to be able to spin, so you might have to adjust how tightly you pinned it.

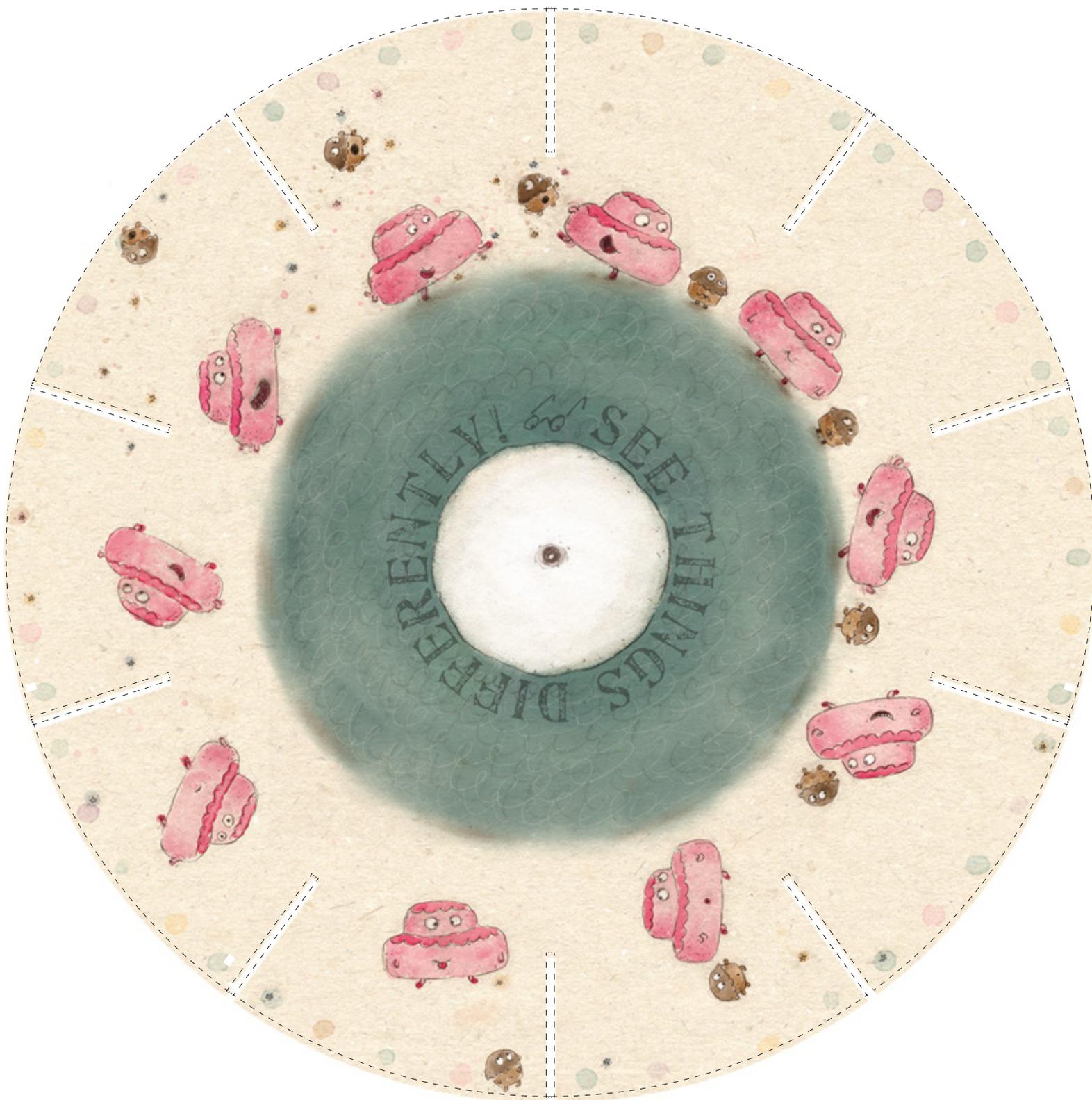
Go to your mirror and spin the Magic Wheel. Look at its reflection in the mirror. Now, this is the tricky part: you need to look at the reflection **through the slits along the side of the Magic Wheel**. If you don't look through the slits, all you see will see is a reflection of yourself holding a Magic Wheel that doesn't work. Maybe you are smiling. Maybe you aren't. But if you don't look through the slits, the image won't magically move. I don't know why this is true, but it is. Staring at yourself in a mirror holding a Magic Wheel that doesn't work is a little bit fun for a second or two, but not as fun as hours of staring at yourself in a mirror holding a Magic Wheel that magically moves. So look through the slits.

Try spinning both directions and at different speeds. One direction or speed may look better than the other. If you have trouble making sense of these directions, there are many places online where you can see how phenakistoscopes work. Try Googling "phenakistoscope," or you can go to my website ([rowboatwatkins.com](http://rowboatwatkins.com)), where you will find links to places that offer instructions on how to make your Magic Wheel work. Good luck.



Cut along the dotted line 

**NOTE:** Please print your scope on heavy stock paper (or glue it onto a cardboard circle, but so you can still see through the slits) because plain old paper is too floppy to spin. Sorry. I didn't invent gravity.



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