

Biology Lab



Overview:

Embark on a thrilling scientific odyssey through the mysterious realm of osmosis! Dive deep into the captivating world of water diffusion as it mesmerizes red blood cells. With stoppered test tubes and sodium chloride solutions in hand, unlock the secrets of tonicity levels. Will the cells remain resilient or burst under the pressure? Explore the captivating dance of isotonic, hypertonic, and hypotonic environments. Prepare to be amazed as you unravel the enigmatic forces that shape cellular destiny. Unleash your curiosity with this exhilarating laboratory adventure!

How to Find the Experience

Once logged in on the VXRLabs homepage, navigate to the "Subjects" tab, select the "Biology" option from the left-side menu, then select the "General Biology" option, then select the "Osmosis" option.

Next Generation Science Standards (NGSS)

Visit the link below or scan the provided QR code to see specific standards and acknowledgments.



Movement of Molecules Into or Out of Cells

<https://ngss.nsta.org/Resource.aspx?ResourceID=520>

Gameplay Instructions

Experimental Procedure: Demonstration of Tonicity in Red Blood Cells

The student will label three test tubes (1 to 3) and add the following:

Tube 1: 5 ml 0.9% NaCl plus three drops of sheep blood

Tube 2: 5 ml 10% NaCl plus three drops of sheep blood

Tube 3: 5 ml 0.9% NaCl plus distilled water and three drops of sheep blood.

1. Place the stopper over each the tubes.
2. The student will hold each tube in front of a sheet of paper with words on it. The student will then determine whether he can see the print on the page through the tube.
3. Relate print visibility to the effect of tonicity on cells.

