

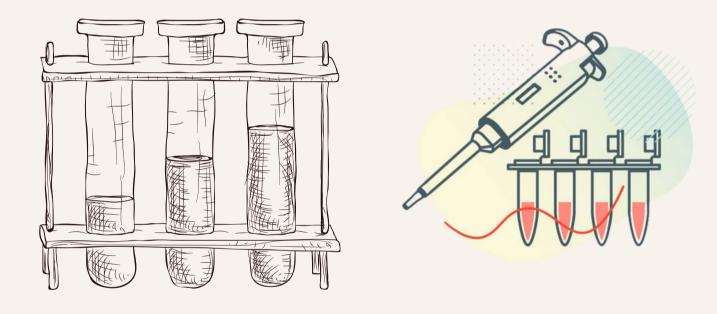
# Meet the Tools

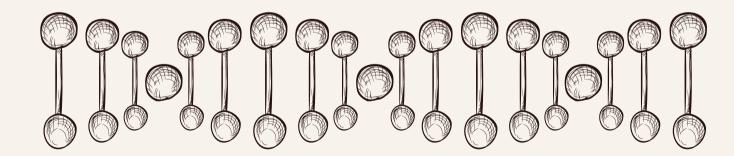
#### What is a Micropipette?

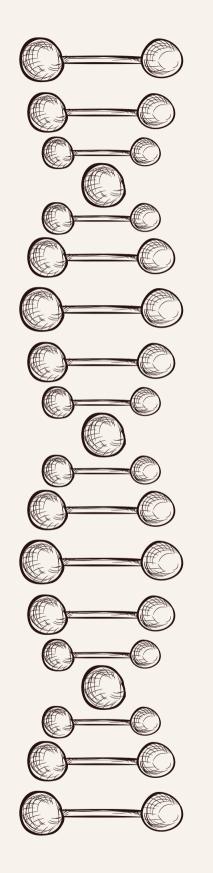
Micropipettes allow us to collect extremely precise measurements of liquid samples to measure chemical amounts or to safely collect and handle samples.

#### Who uses Micropipettes?

Microbiologists, chemists, immunologists, nutritionists, and pharmaceutical researchers all use micropipettes in their work.

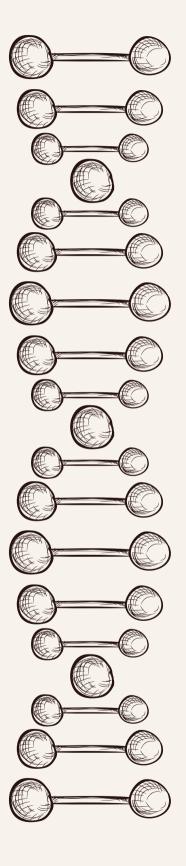






# Why are we using micropipettes?

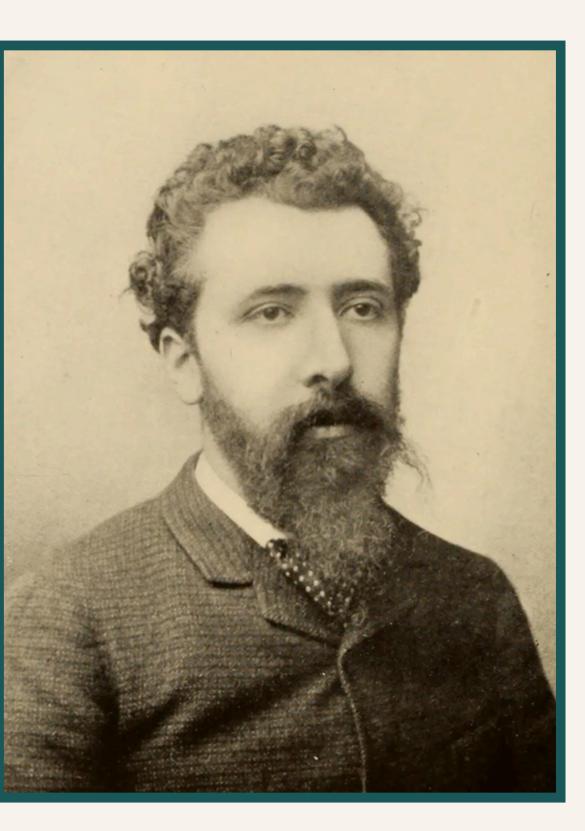
As we think about skin -- the ways it protects us, its evolutionary history, and the diversity of skin types among all living things -- it's a good time to get curious about how we've learned what we know about it. Using micropipettes is a good way to get hands on experience with some of the real tools biologists use.



## Meet the Artist

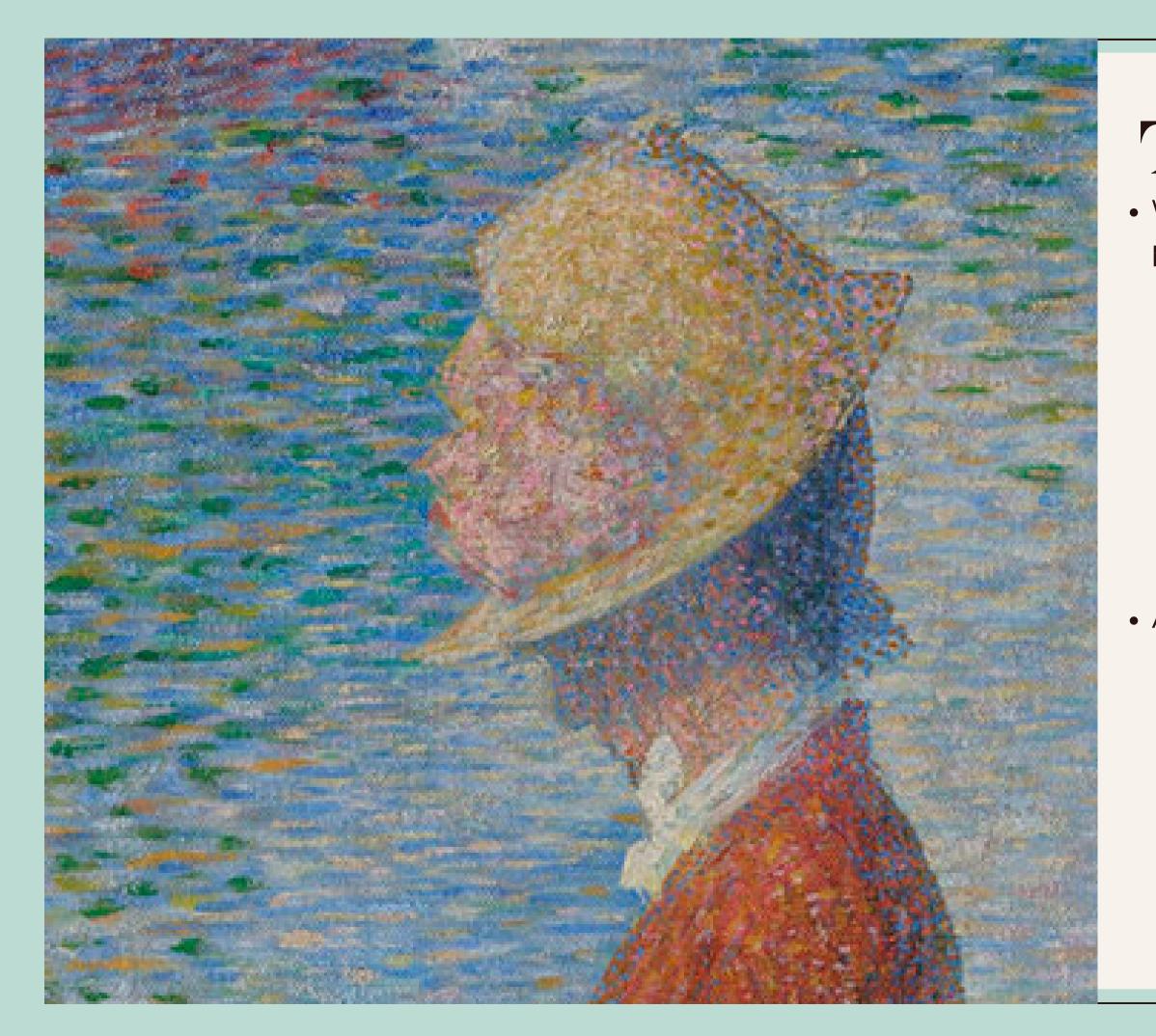
Georges Seurat (1859-1891) was a postimpressionist painter in France. He was deeply interested in science, and especially the way the brain and eye worked together to interpret the world.

Seurat invented a method of painting called Pointillism. Instead of using brush strokes, Seurat used thousands of dots of paint and never mixed his colors on his pallet. He trusted that the eye and brain of the viewer would mix the colors and create the image.









### Things to Notice

• What colors are used in this portion of the painting?

- Following the most advanced color theory of the time, Seurat used only "pure color" pigments, or pigments that can be found on the solar spectrum.
- If you look closely at this section, you will notice that there is no black paint.
- How does he create the dark color for the woman's hair and the shadow on her face?
  Are all of the dots uniform?
  - While Seurat is famous for painting with points, he did sometimes use very short strokes to create a feeling of flow or movement, as seen in the water here.
  - Just as in Seurat's paintings, everything on earth is made up of many smaller components. Are those components uniform?

# Micropipette Paint-By-Numbers

Look at your paint-by-numbers grid and choose a number to start with.



01

Use your micropipette to draw up paint from the container with that number.



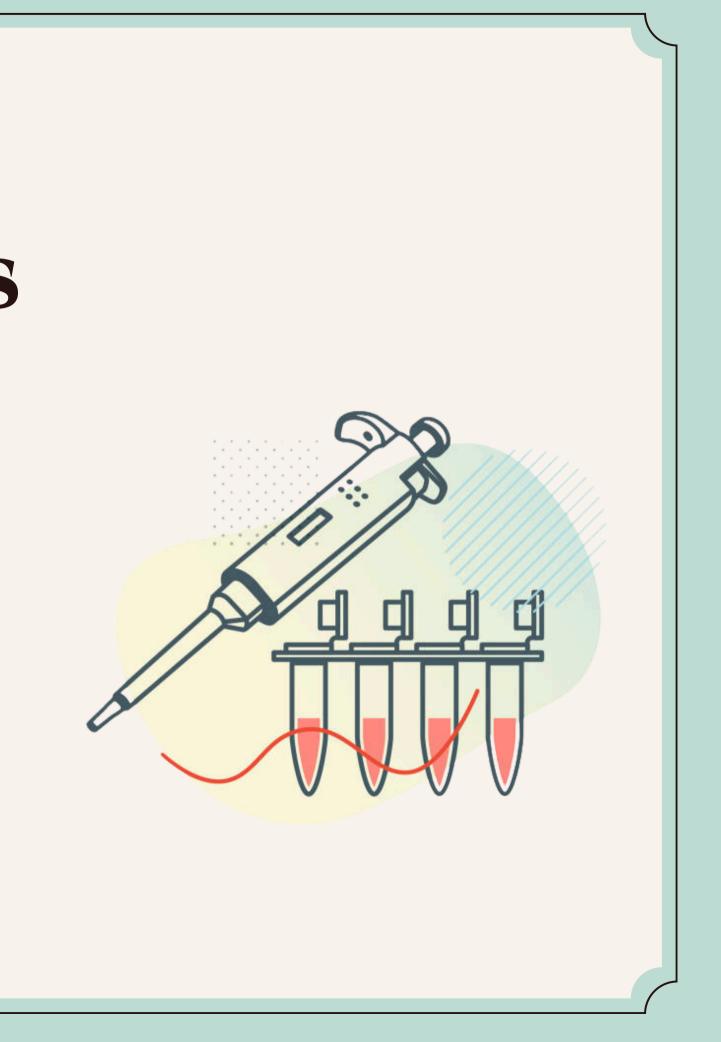
Dispense drops of paint onto the grid wherever that number occurs.



Repeat until every number in the grid is filled in and the painting is revealed

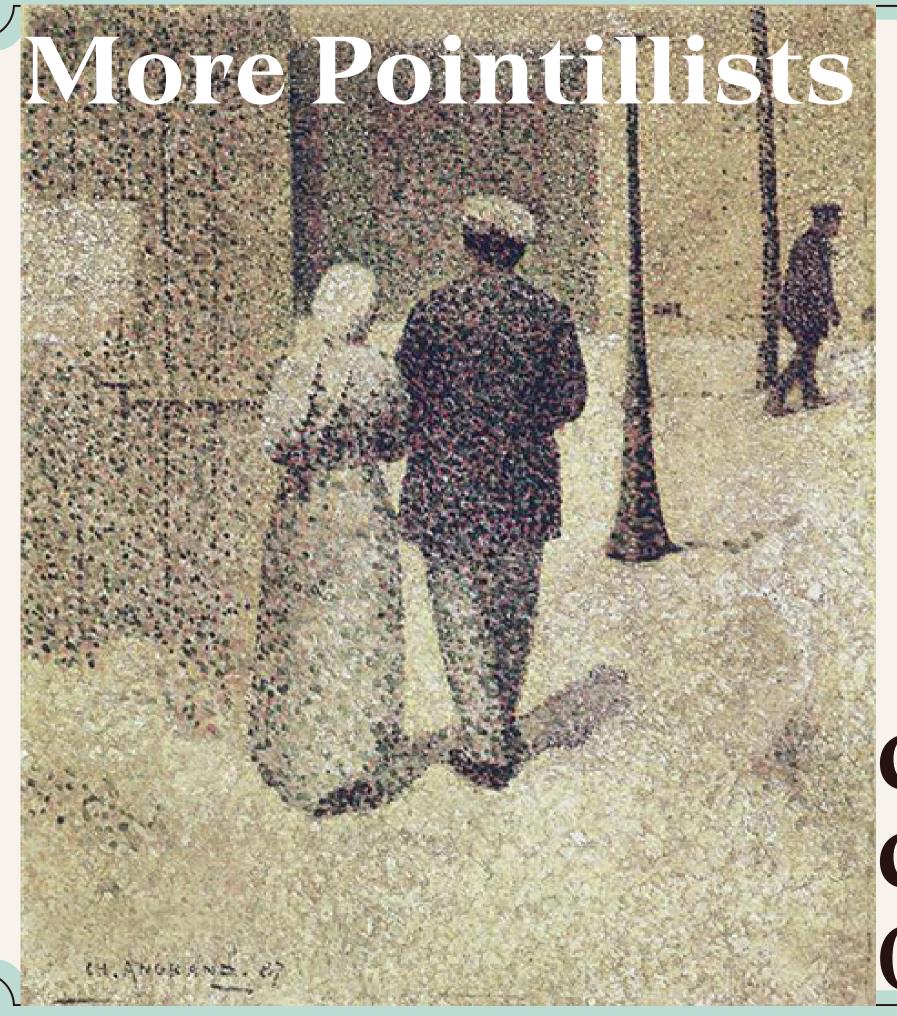
05

When you've finished, grab a blank grid and create your own pointillist piece!

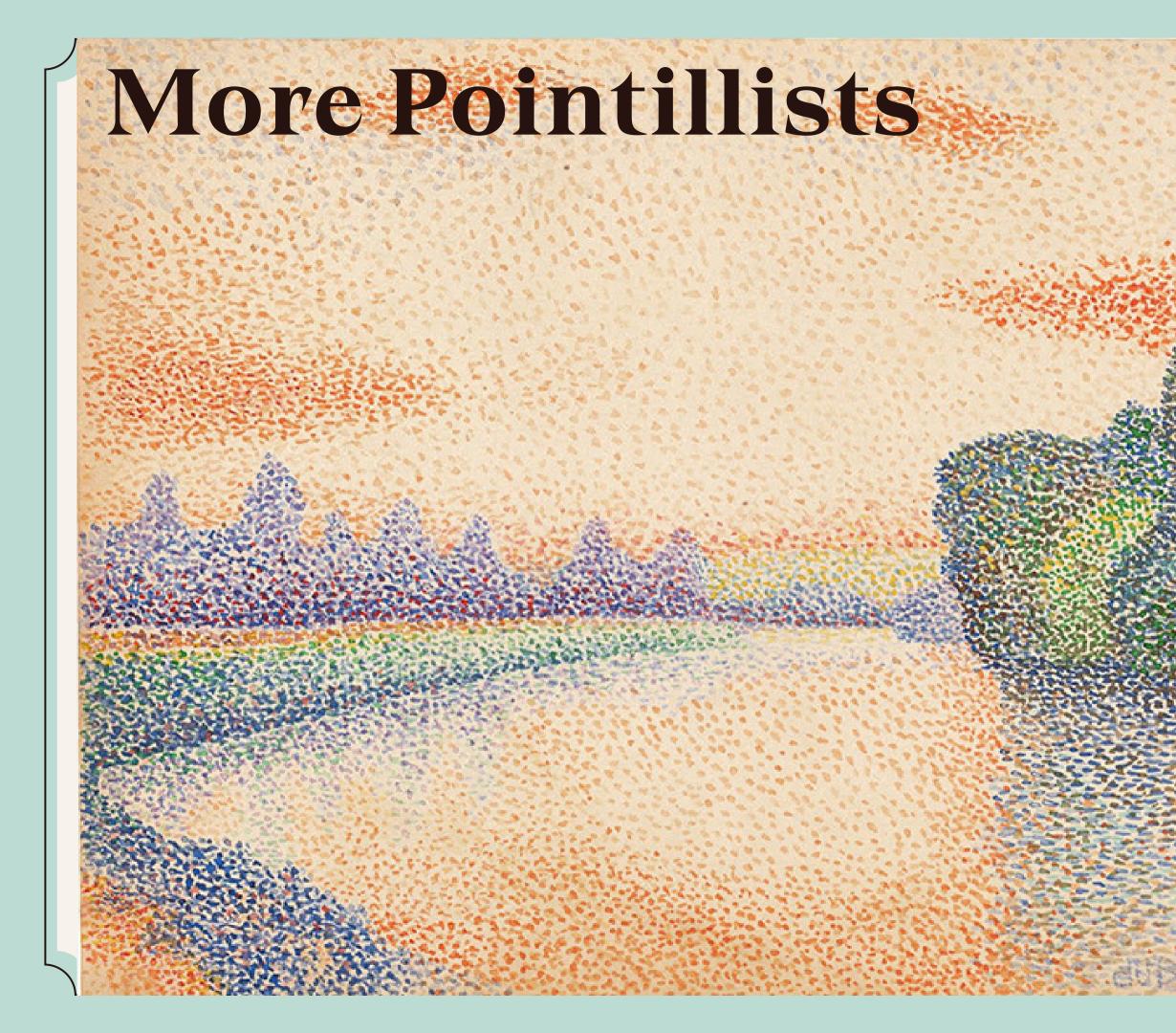


### **More Pointillists**

### Camille Pissarro's The Hay Harvest (1887)



#### Charles Angrand's Couple in the Street (1887)



### Albert Duboi-**Pillet's** The **Banks of** the Marne at Dawn (1888)



#### Paul Signac's Portrait of Felix Feneon (1890)



### Maximilien Luce's The Port of Saint-Tropez (1893)



## Henri-Edmond **Cross'** The Evening Air (1893)

# Sources

The National Gallery. "Georges Seurat (1859 - 1891) | National Gallery, London." Nationalgallery.org.uk, 2019, www.nationalgallery.org.uk/artists/georges-seurat.

"Georges Seurat, a Sunday on La Grande Jatte." ColourLex, colourlex.com/project/georgesseurat-a-sunday-on-la-grande-jatte/.

"Painting in Context: Seurat, a Sunday Afternoon on the Island of La Grande Jatte." ColourLex, colourlex.com/product/painting-in-context-seurat-a-sunday-afternoon-on-the-island-of-la-grande-jatte/. Accessed 17 July 2024.

"Artists of the Pointillism Movement." Invaluable, 12 Apr. 2023, www.invaluable.com/blog/artists-of-the-pointillism-movement/. Accessed 17 July 2024.