Diffusion Simulator

In this activity, you will use an interactive simulation developed by the University of Colorado Boulder https://phet.colorado.edu/en/simulations/filter?type=html,flash&sort=alpha&view=grid

Remember, you can find the simulators in alphabetical order.

Diffusion

1. Using the arrows, increase the number of Blue particles and Red particles to 30 each. Click the Remove Divider button, and observe what happens.

   Did the particles stay on their side or did they mix?
   Does it seem random? What happens when the particles hit each other?

2. Now, Reset the Divider. Decrease the Temperature of both the Blue particles and Red particles to 50 K. Do you notice any change in their movement?

   Click Remove Divider, and observe. Did the mixing seem to happen faster, slower, or the same, at this lower temperature?

3. You can reset the whole experiment by clicking the orange button on the lower right. Try the experiement again, but this time change a different property, like Mass or Radius.

   At first, try to change only one thing at a time, so you can really see what effect each has.

   Have fun trying to make the Red particles as heavy, large, and as high a temperature as possible. What happens? Do the Blue and Red particles eventually still mix?

Credit: PhET Interactive Simulations, University of Colorado Boulder, https://phet.colorado.edu