Since ice will condense the colder it gets, can it ever condense enough that it would sink in water?

Answer: Ice will sink in water only when his density will be greater than the density of water.
At 0° C density of ice is 917 kg/m^3, and the density of water is 1000 kg/m^3.

If we will cool the ice, his density will increase not enough to reach the value of 1000 kg/m^3. Under normal pressure even at -200° C ice will have density of 935 kg/m^3, which is not enough to sink in water. Only if we will cool the ice under pressure of 207.5 MPa (2048 atm), it will become into a new form of ice – ice III, which has a density of 1140 kg/m^3.

But, ice III exists only under very high pressures, and if we will try to get it into normal conditions, it will transform back into usual ice with a smaller density.