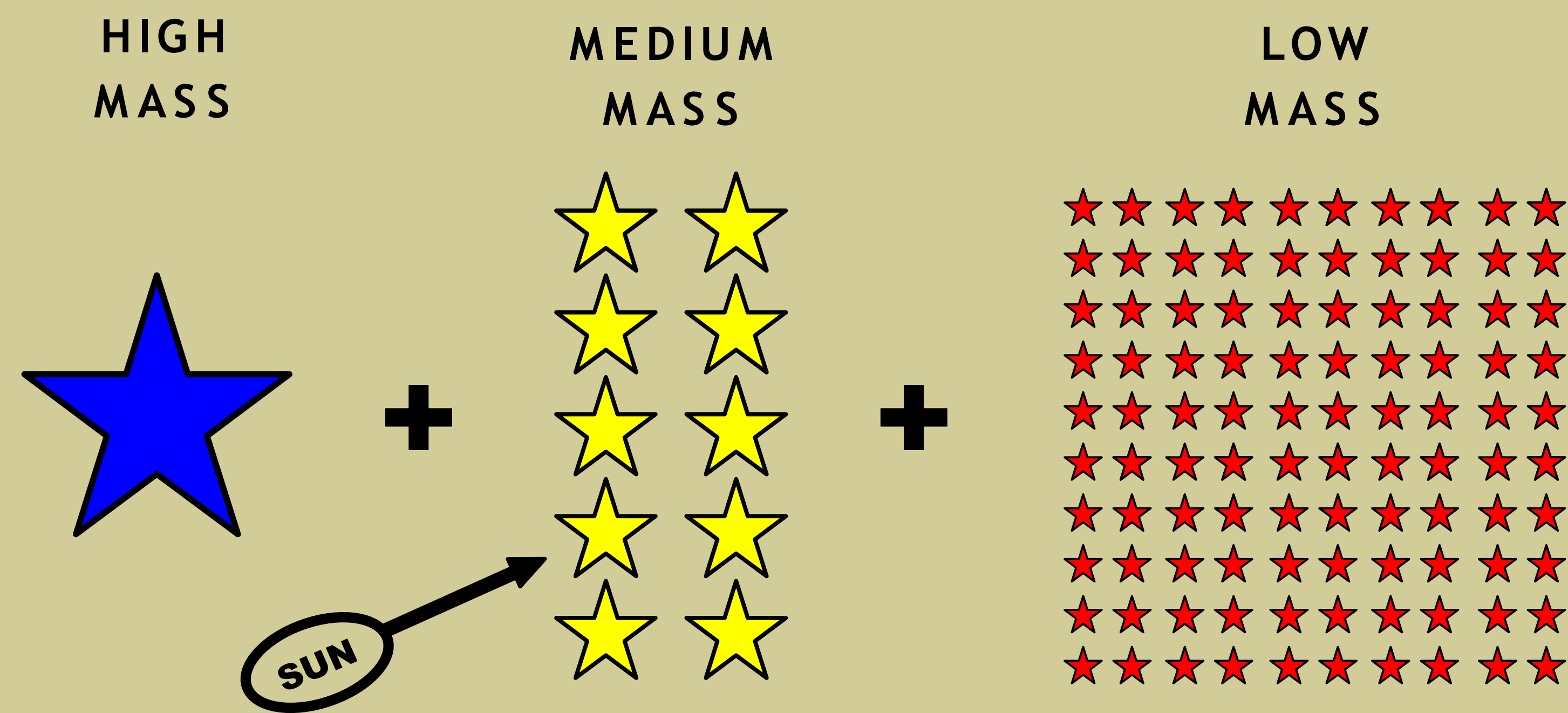
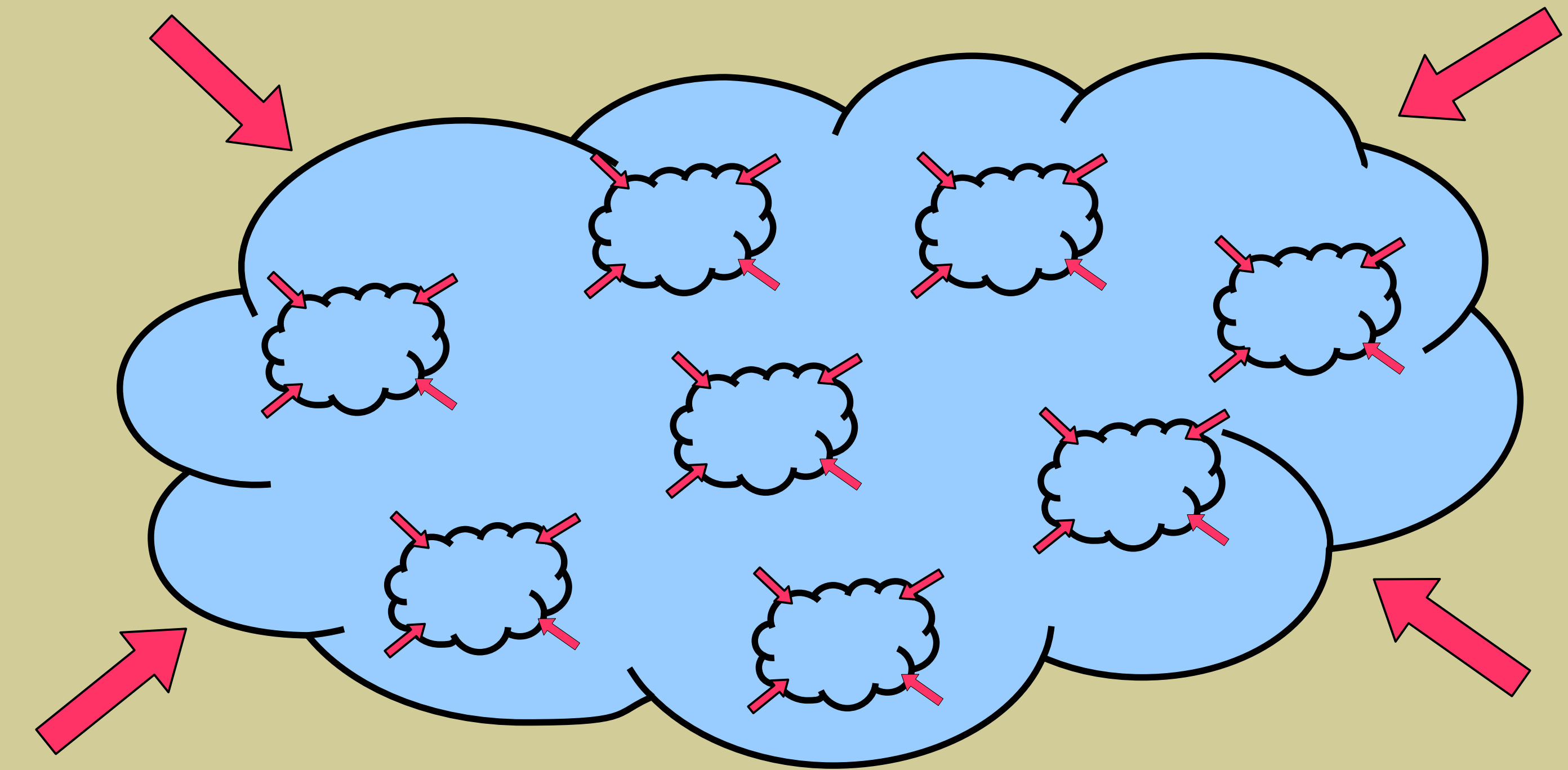


Stellar Nurseries - How Stars Form

Step 1: Gravitational Collapse

Before stars form, they begin as a huge cloud of gas in space, mainly hydrogen. Over time, the cloud's gravity will compress itself and fragments will form. At this stage these fragments are called protostars.

When stars form, they form many at once. The smallest "stellar nursery" can contain as many as one million stars (1,000,000).



Step 2: How Big and How Many

Stars can have different masses. Since small stars require less mass, it is easier to assemble many of them than big stars. This means that of the 1,000,000+ stars that are born together, a small number will have high masses, a medium number will have medium masses, and a large number will have low masses.

Step 3: Observe and Conquer

Astronomers can locate regions where stars have recently formed or are actively forming; then it's just a matter of measuring their masses. This distribution is called the **Initial Mass Function (IMF)**. Studying the IMF can provide insight into stellar lifetimes, galaxy masses & ages, interstellar enrichment and more.



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