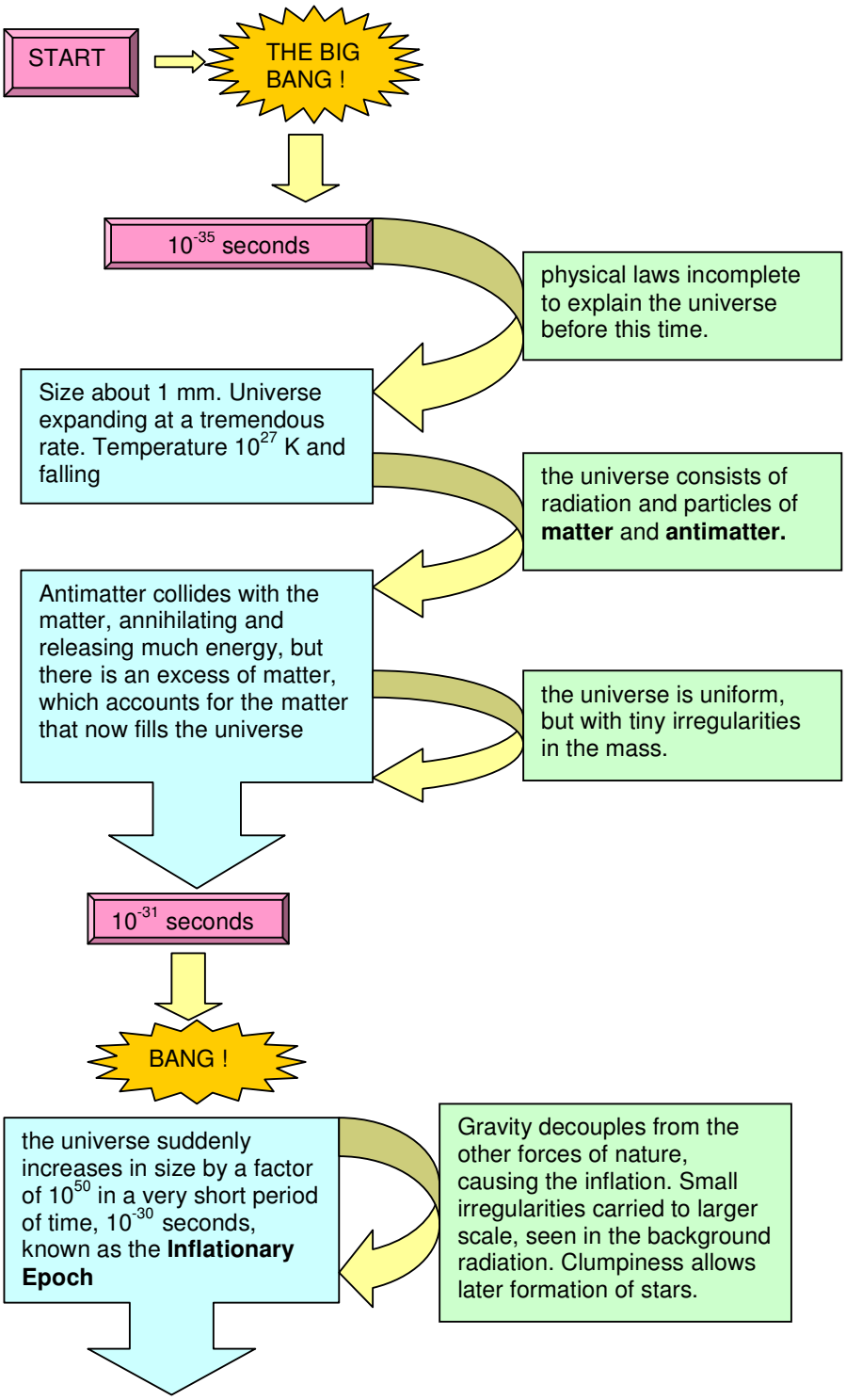
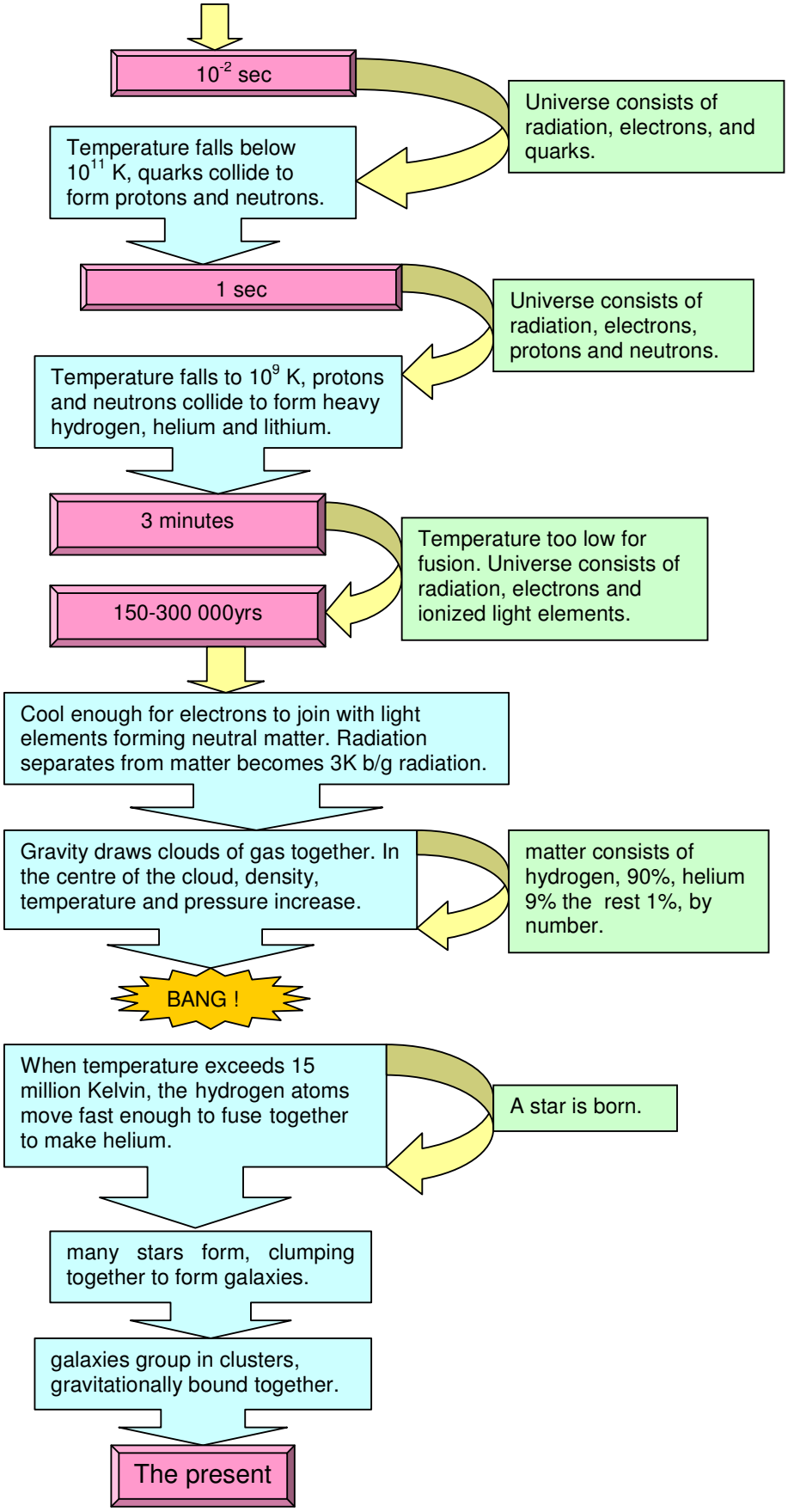
The Universe-Time Line

The evolution of the universe is shown in the flow chart below




10^{-2} sec
Universe consists of radiation, electrons, and quarks.
Temperature falls below 10^{11} K, quarks collide to form protons and neutrons.
1 sec
Universe consists of radiation, electrons, protons and neutrons.
Temperature falls to 10^{9} K, protons and neutrons collide to form heavy hydrogen, helium and lithium.
3 minutes
Temperature too low for fusion. Universe consists of radiation, electrons and ionized light elements.
150-300 000yrs
Cool enough for electrons to join with light elements forming neutral matter. Radiation separates from matter becomes 3K b/g radiation.
Gravity draws clouds of gas together. In the centre of the cloud, density, temperature and pressure increase.
matter consists of hydrogen, 90%, helium 9% the rest 1%, by number.
BANG !
When temperature exceeds 15 million Kelvin, the hydrogen atoms move fast enough to fuse together to make helium.
A star is born.
many stars form, clumping together to form galaxies.
galaxies group in clusters, gravitationally bound together.
The present