A star is born! Blow up your star to about 10cm diameter	A star is born! Blow up your star to about 10cm diameter
Wait - don’t blow up the star any further	Wait - don’t blow up the star any further
Wait	Wait
Wait	Wait (planets are forming)
Wait	Blow up a little bit...

START	START
5 Million Years	5 Million Years
10 Million Years	10 Million Years
500 Million Years	500 Million Years
1 Billion Years	1 Billion Years

Wait	Blow up your star more. It is cooling, so colour your balloon red. It is now a supergiant!
Wait	The star's outer envelope blows away: deflate and cut up the balloon. A white dwarf in a planetary nebula remains
Blow up a little bit...	The planetary nebula blows further away - and is recycled. Put the balloon remnants in the recycling bin!
Deflate the balloon, and colour it black. The star's fuel is all burned, and a white dwarf remains	The nebula is gone, and the white dwarf has cooled and stopped glowing - colour it black
Very low mass stars - "red dwarfs" - burn their fuel very slowly, and live to great ages. They are the most common type of star, but not the most visible!	Stars like our sun live uneventful lives, which makes their planetary systems good places to live. Until the supergiant phase, that is... Earth will be engulfed in about 5 billion years' time! Will we be around to see it?

8 Billion Years	8 Billion Years
10 Billion Years	10 Billion Years
50 Billion Years	50 Billion Years
200 Billion Years	200 Billion Years
$0.4\ M_{Sun}$	$1\ M_{Sun}$

A star is born! Blow up your star to about 10cm diameter	A star is born! Blow up your star to about 10cm diameter
Wait - don’t blow up the star any further	Blow up a little bit...
Blow up a little bit...	Blow up the star as fast and as much as you can - when it is fully inflated, pop the balloon. Supernova!
Continue to slowly inflate the star. As it gets bigger it cools: colour it with yellow and red squiggles	All that remains is a black hole: all of the supernova remnants are thrown out into space
Quickly blow up the star, and pop it, in a supernova. A neutron star remains	The black hole is still there...

START	START
5 Million Years	5 Million Years
10 Million Years	10 Million Years
500 Million Years	500 Million Years
1 Billion Years	1 Billion Years

All of the supernova remnants are blown out into space, where they are recycled. Put the remnants in the recycling bin!	The black hole is still there...
The neutron star is still there...	The black hole is still there...
The neutron star is still there...	The black hole is still there...
The neutron star is still there...	The black hole is still there...
More massive stars live faster - and die younger, often violently. More mass means stronger gravity, overcoming any winds and collapsing the star in on itself - until it explodes	Very massive stars have very short lifetimes, burning through their fuel quickly, and shining very brightly as they do. Their cores are so heavy that nothing can stop them collapsing to a point - forming a black hole

8 Billion Years	8 Billion Years
10 Billion Years	10 Billion Years
50 Billion Years	50 Billion Years
200 Billion Years	200 Billion Years
8 M_{Sun}	16 M_{Sun}