

# Important events in evolution

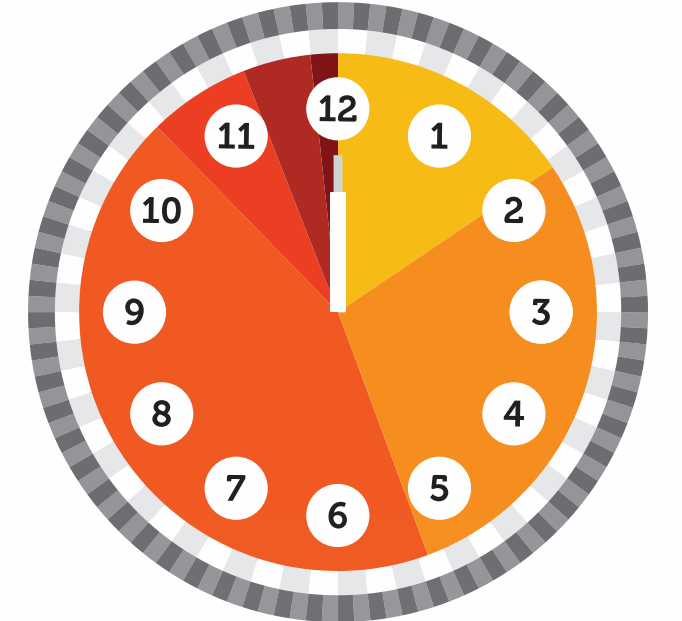
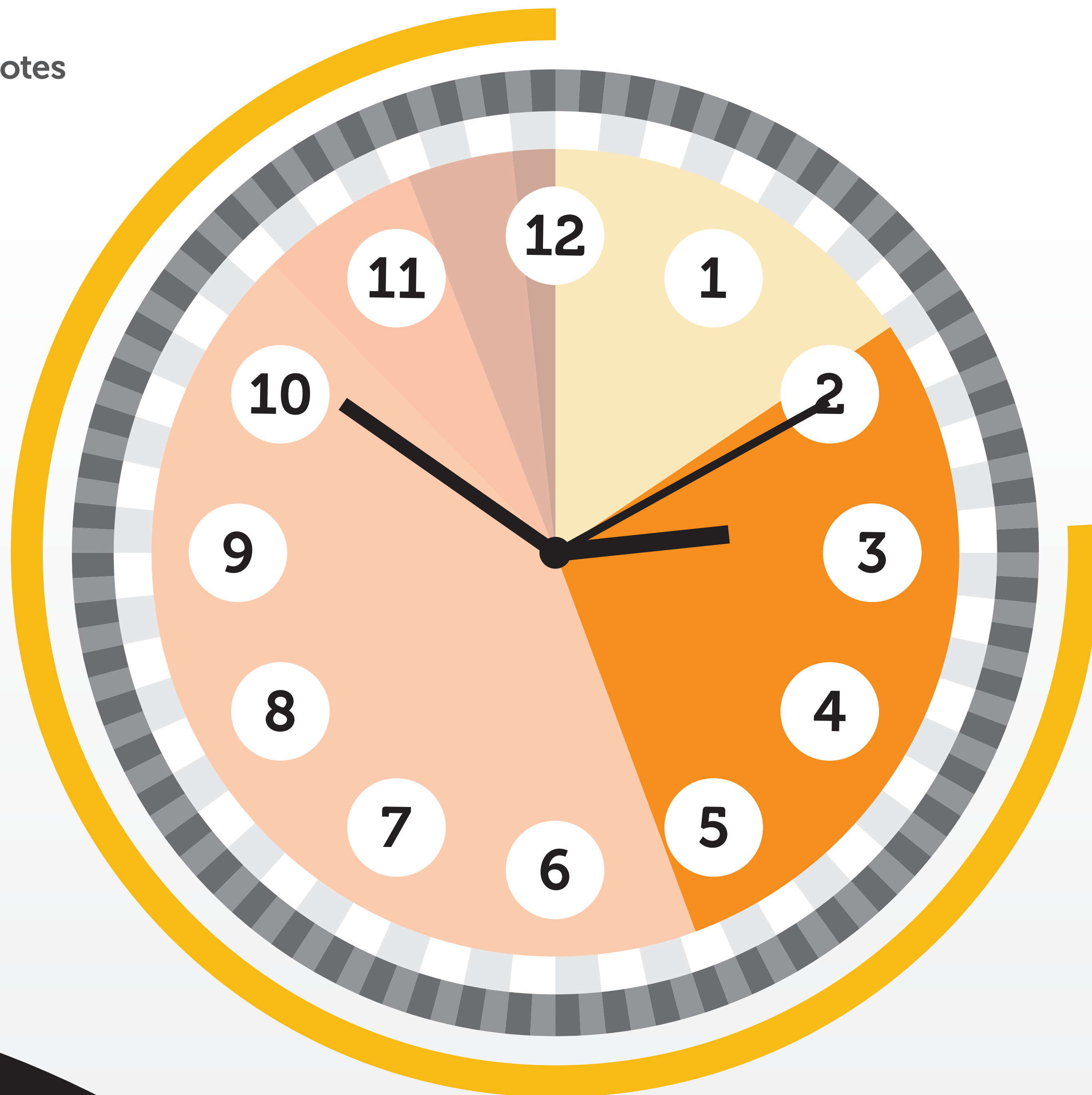
Significant events which impacted the history of Earth

**3.5 billion years ago**  
The earliest fossils

02:52:10 HRS



Prokaryotes



**The earliest known fossils are simple cyanobacteria, members of the Bacteria domain: unicellular organisms characterized by their small size, lack of a nucleus and organelles, with a very simple genetic material.**

Cyanobacteria obtain their energy through photosynthesis, producing glucose and releasing oxygen.

These fossils, which are dated 3.5 billion years old, were found in Western Australia, in an area called Pilbara.

They are fossilized organic material trapped in sediments, which prevented its decomposition and allowed the replacement of the original pore spaces with minerals over time. These bacteria probably changed the composition of the planet's atmosphere. Thanks to them, oxygen-breathing species were able to survive.

Cyanobacteria evolved very slowly, so the ones that currently exist are identical or nearly identical to these earliest fossils found.