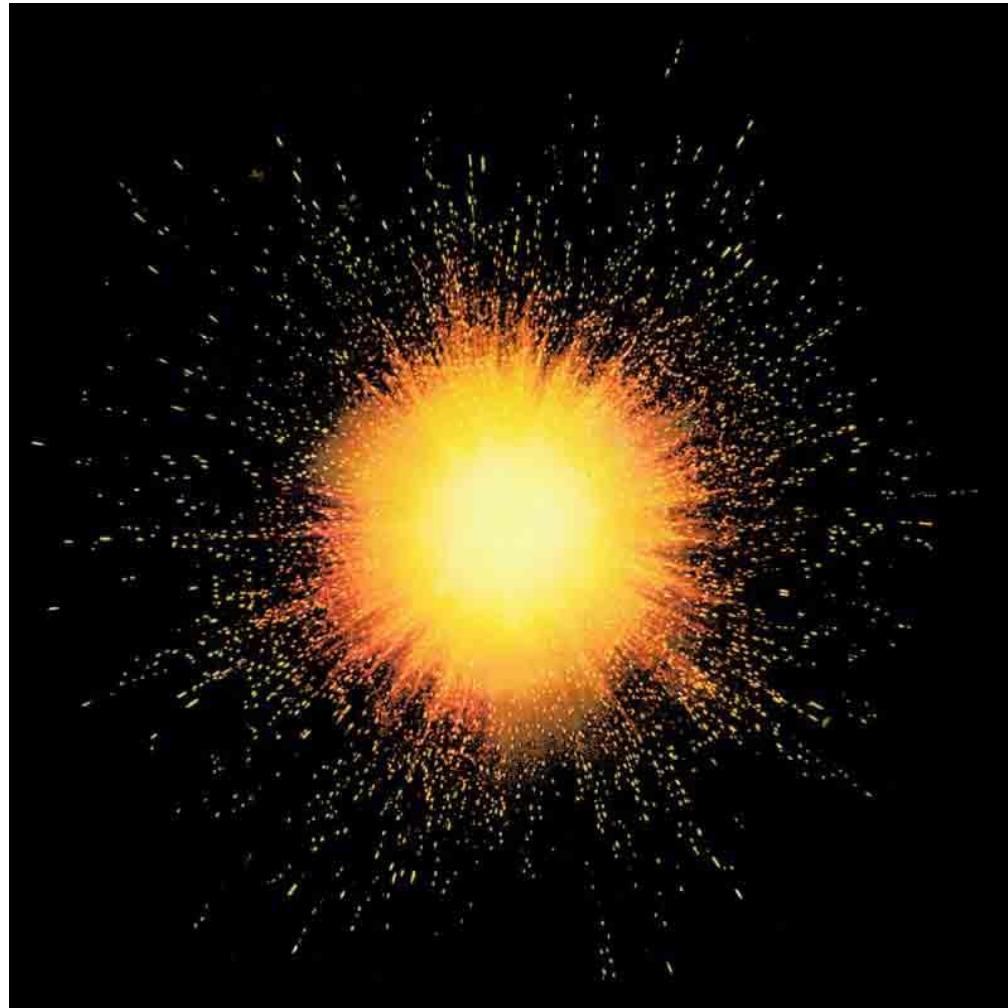
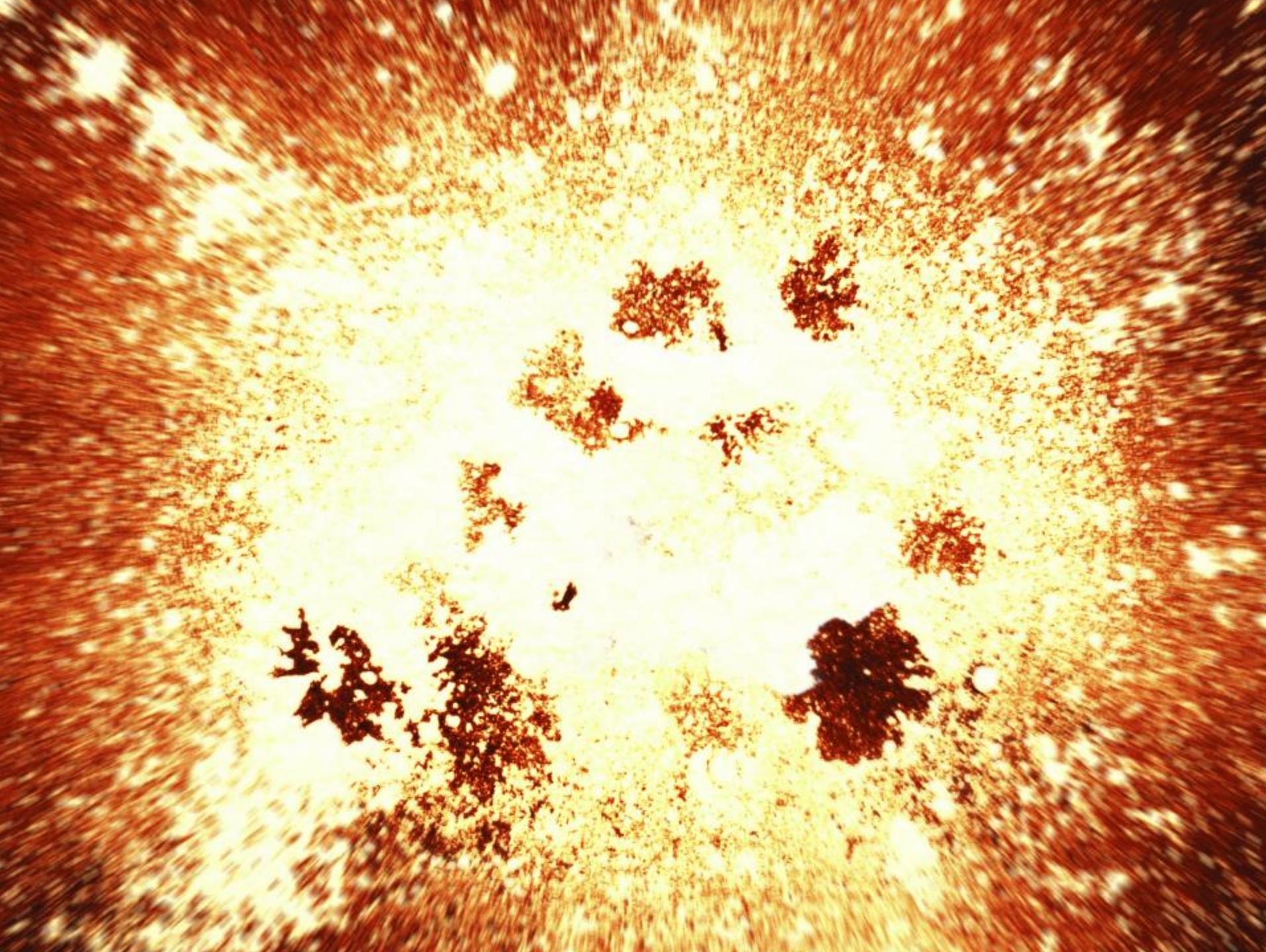


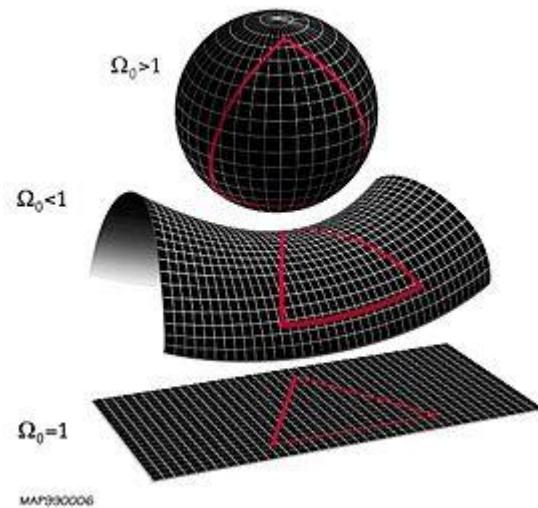
Origine della vita

Big bang





universo



universo

- 93.000.000.000 anni luce
- 4 " " proxima cent.
- 1 anno luce= 10000 miliardi di km

Via lattea



dimensioni

- INFLAZIONE
- L'universo ingrandisce a scatti di 10 alla -34 secondi
- 1° scatto 2,7 cm
- 2° scatto 7,4 cm
- 3° scatto 20 cm
- 20° scatto 4850 km
- 50° scatto 5480 anni luce

energia

10 a – 35 sec

10000000000000000000000000000000 gradi

1000 miliardi di miliardi di miliardi di gradi (univ. 10 mt)

1 nanosecondo (10 a -9 sec)

100000 miliardi di gradi (univ 1 miliardo km)

1 millisecondo (10 a -3 sec)

100 miliardi di gradi

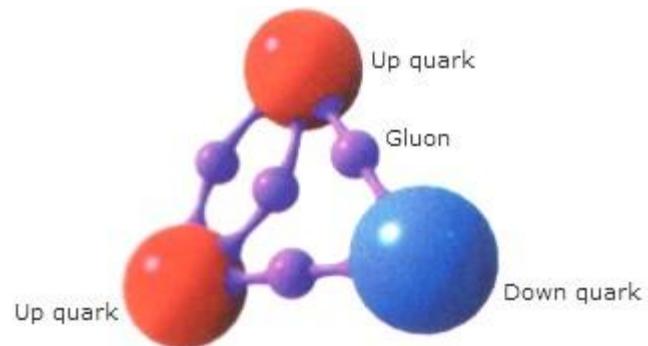
1 secondo

10 miliardi di gradi

100 secondi

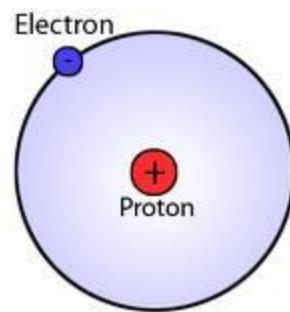
1 miliardo di gradi

barione



Gluons holding quarks together to form a proton
(diagram from *Scientific American*)

idrogeno



elio

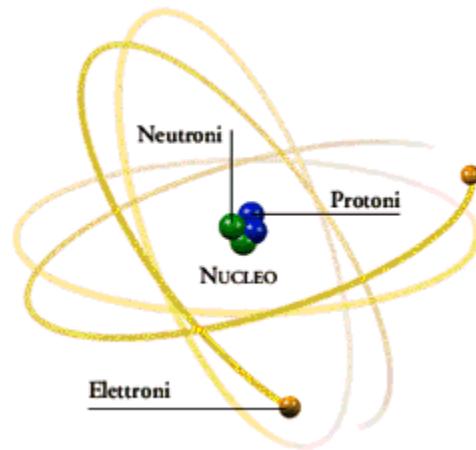


Tabella di Mendeleev

period	group	1*	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
		Ia	IIa	IIIa***	IVa	Va	VIa	VIIa	VIIIa	VIIIb	VIIb	VIIa	VIIb	IIIb	IVb	Vb	VIb	VIIb	VIIIb	
1	1	H	Be	Li	B	C	N	O	F	Ne				He						
2	2	Li	Be	Mg	Al	Si	P	S	Cl	Ar										
3	11	Na	Mg	Al	Si	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	
4	19	K	Ca	Sc	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Kr	
5	37	Rb	Sr	Y	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	Xe	
6	55	Cs	Ba	La	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
7	87	Fr	Ra	Ac	Ac	104	105	106	107	108	109	110	111	112	58	59	60	61	62	63
					****	****	****	****	****	****	****	****	****	****	Ce	Pr	Nd	Pm	Sm	Eu
															Gd	Tb	Dy	Ho	Er	Lu
															90	91	92	93	94	95
															Am	Cm	Bk	Cf	98	99
															Fm	100	101	102	103	Lr

alkali metals alkaline earth metals transition metals other metals other nonmetals halogens noble gases lanthanides actinides

* Numbering system recommended by the International Union of Pure and Applied Chemistry (IUPAC)

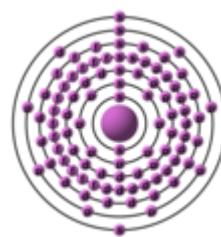
** Previous IUPAC numbering system

*** Numbering system recommended by the Chemical Abstracts Service

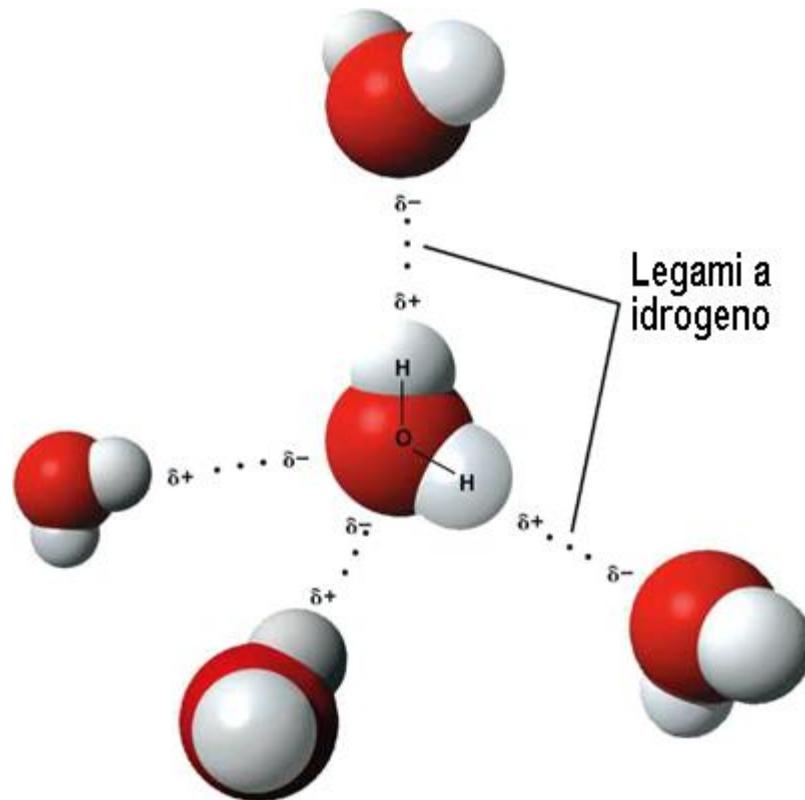
**** For the names of elements 104–112, see table.

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urano



acqua



nebulosa



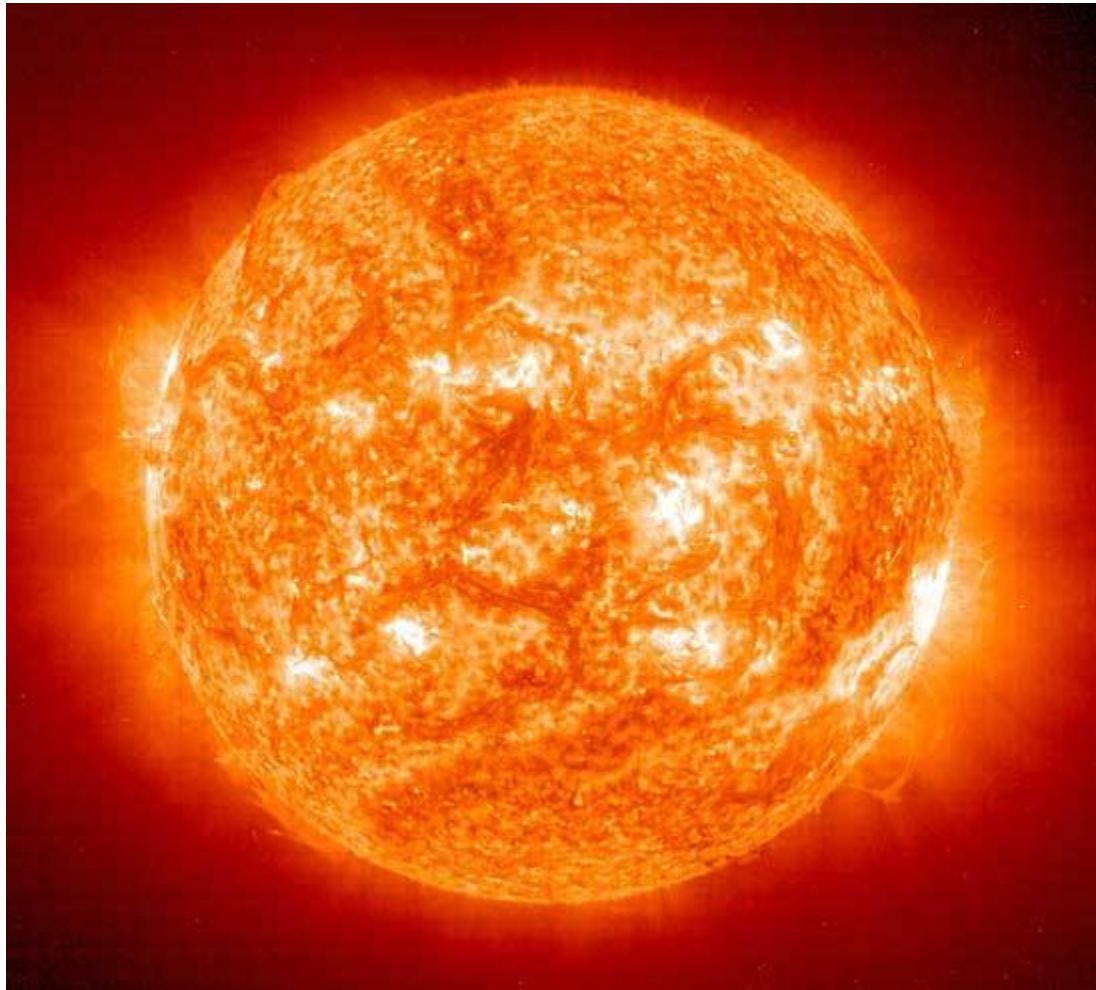
supernova



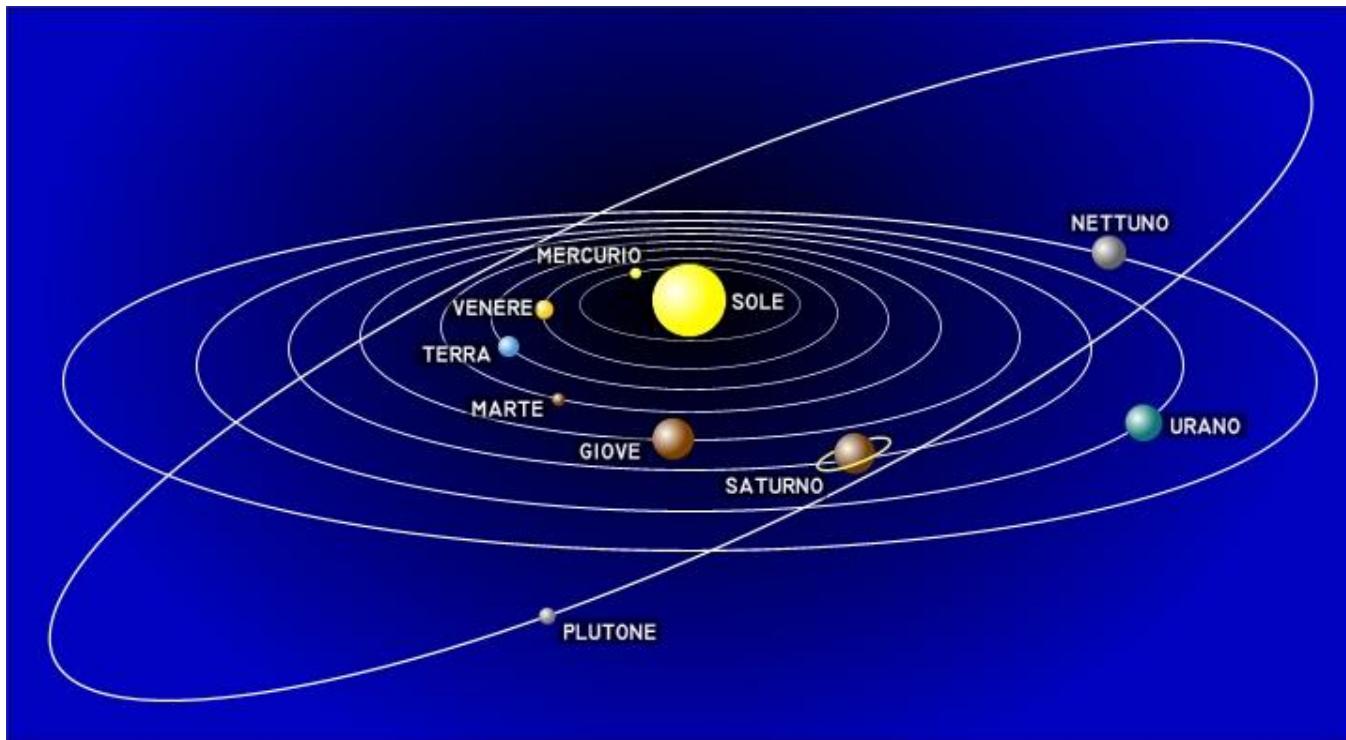
Sistema solare



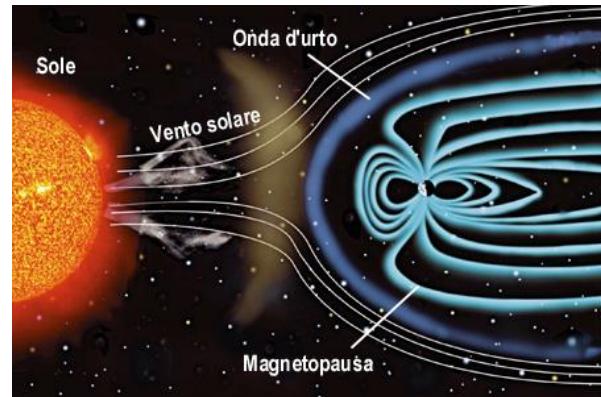
sole



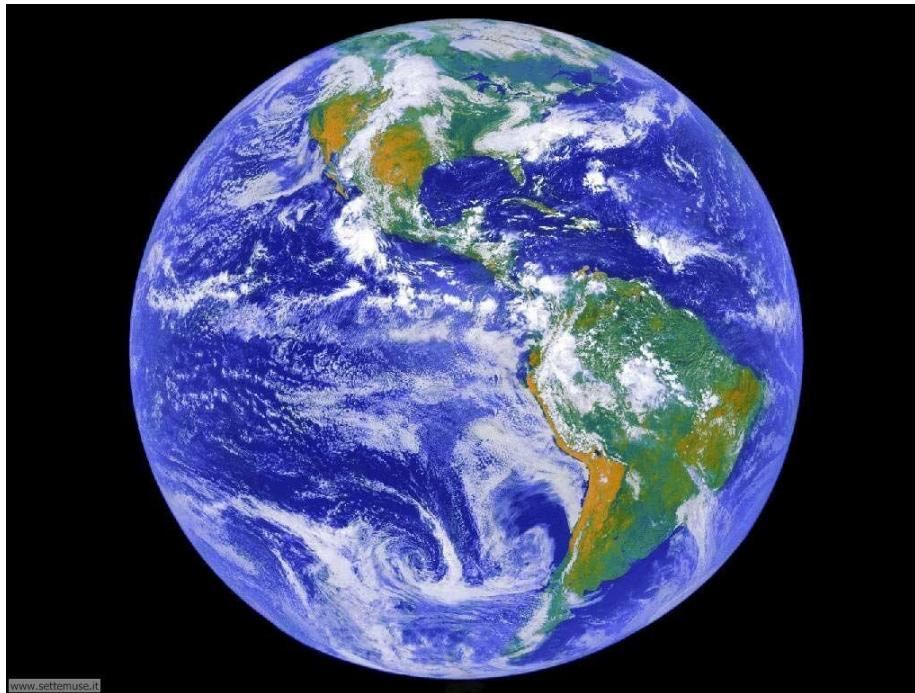
Sistema solare

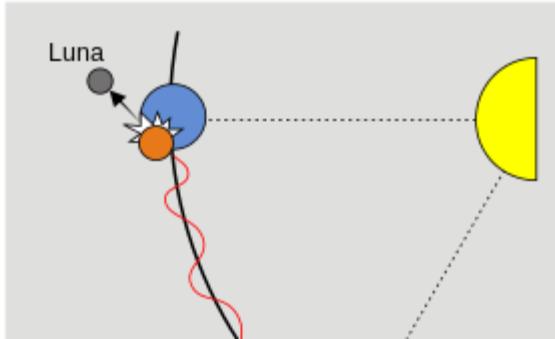
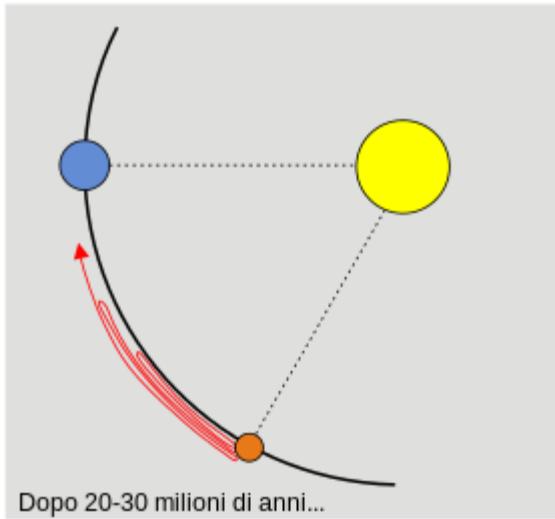
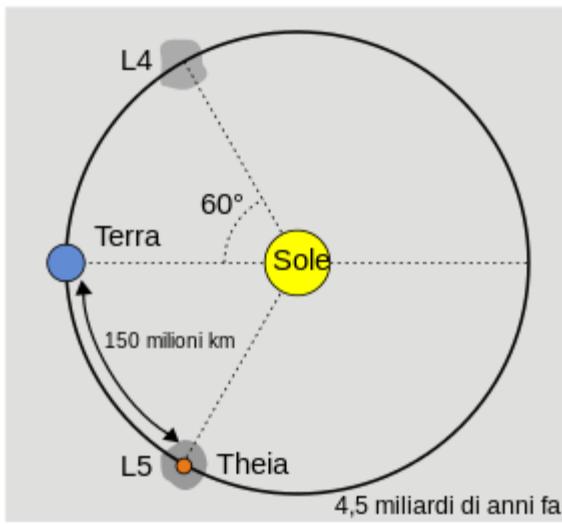


Campo magnetico

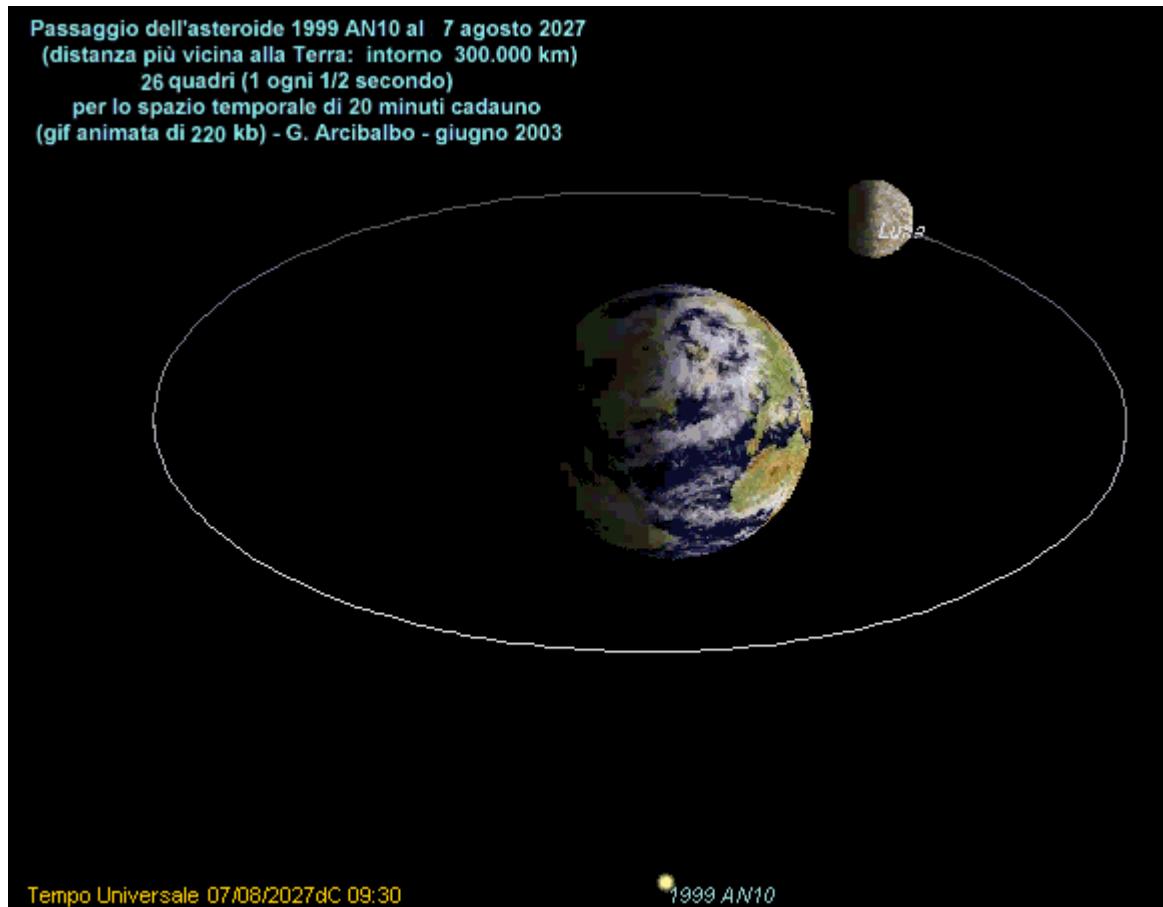


terra





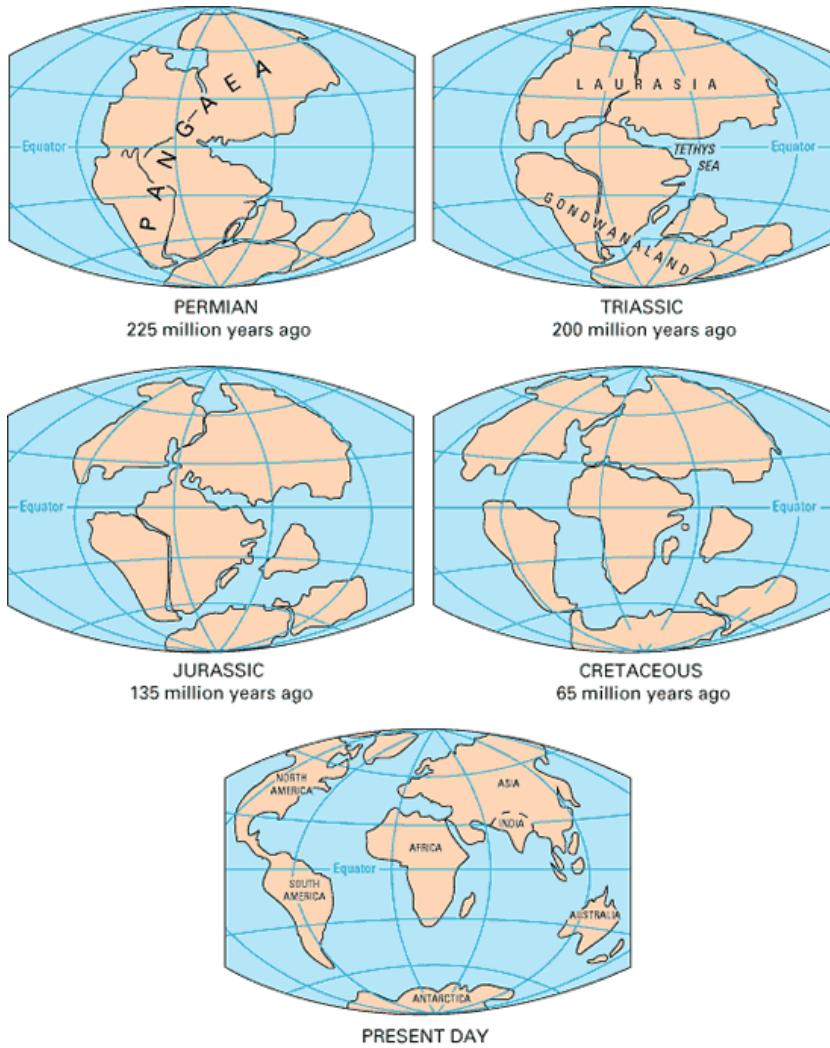
Sistema terra luna



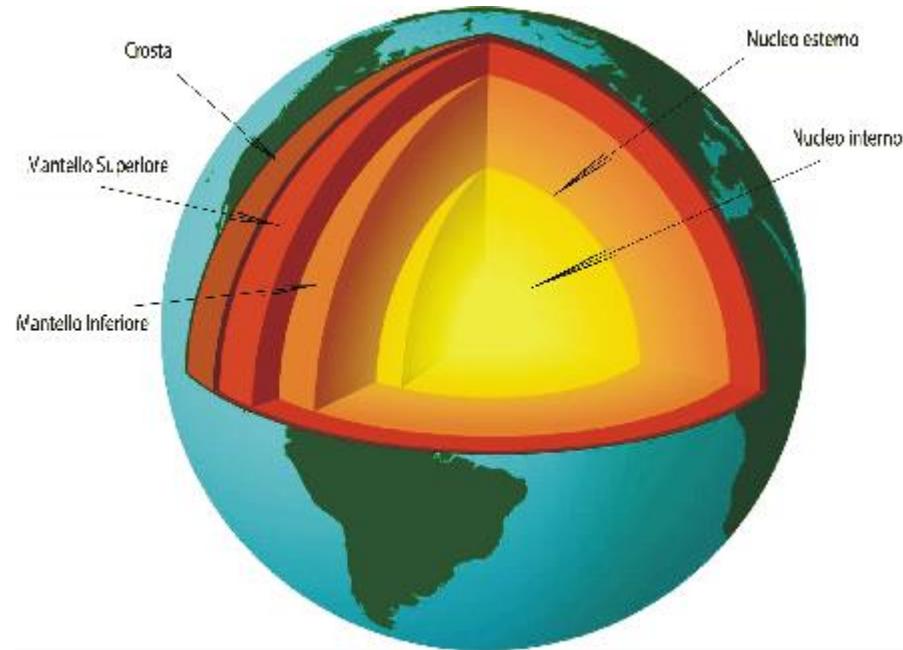
pangea



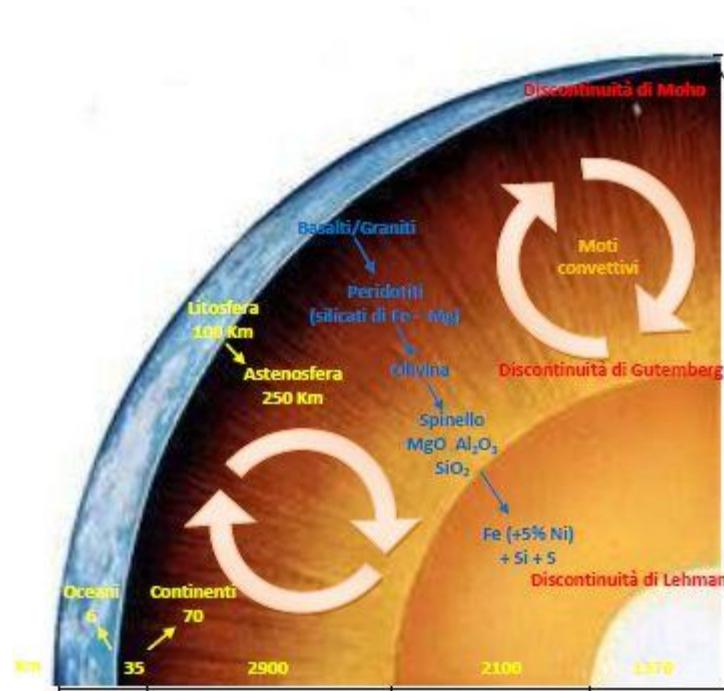
pangea



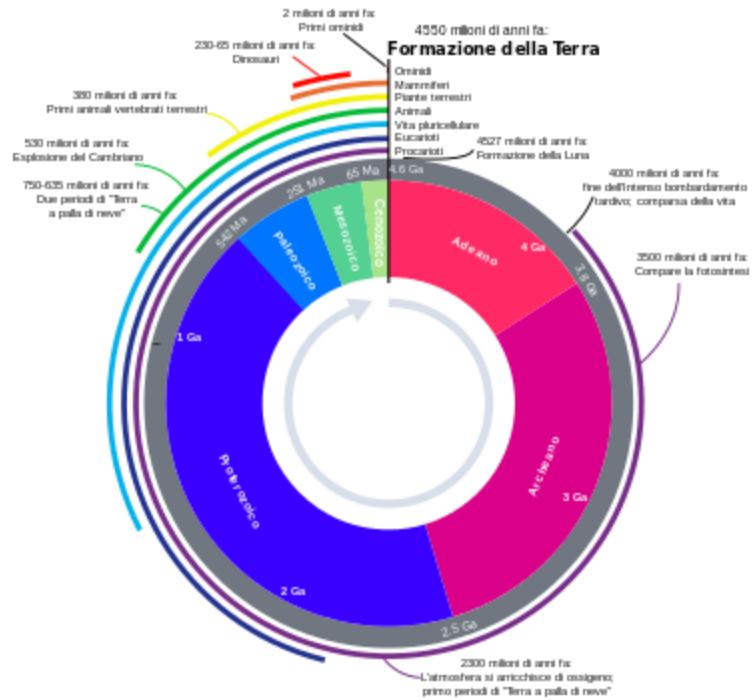
Statigrafia della terra



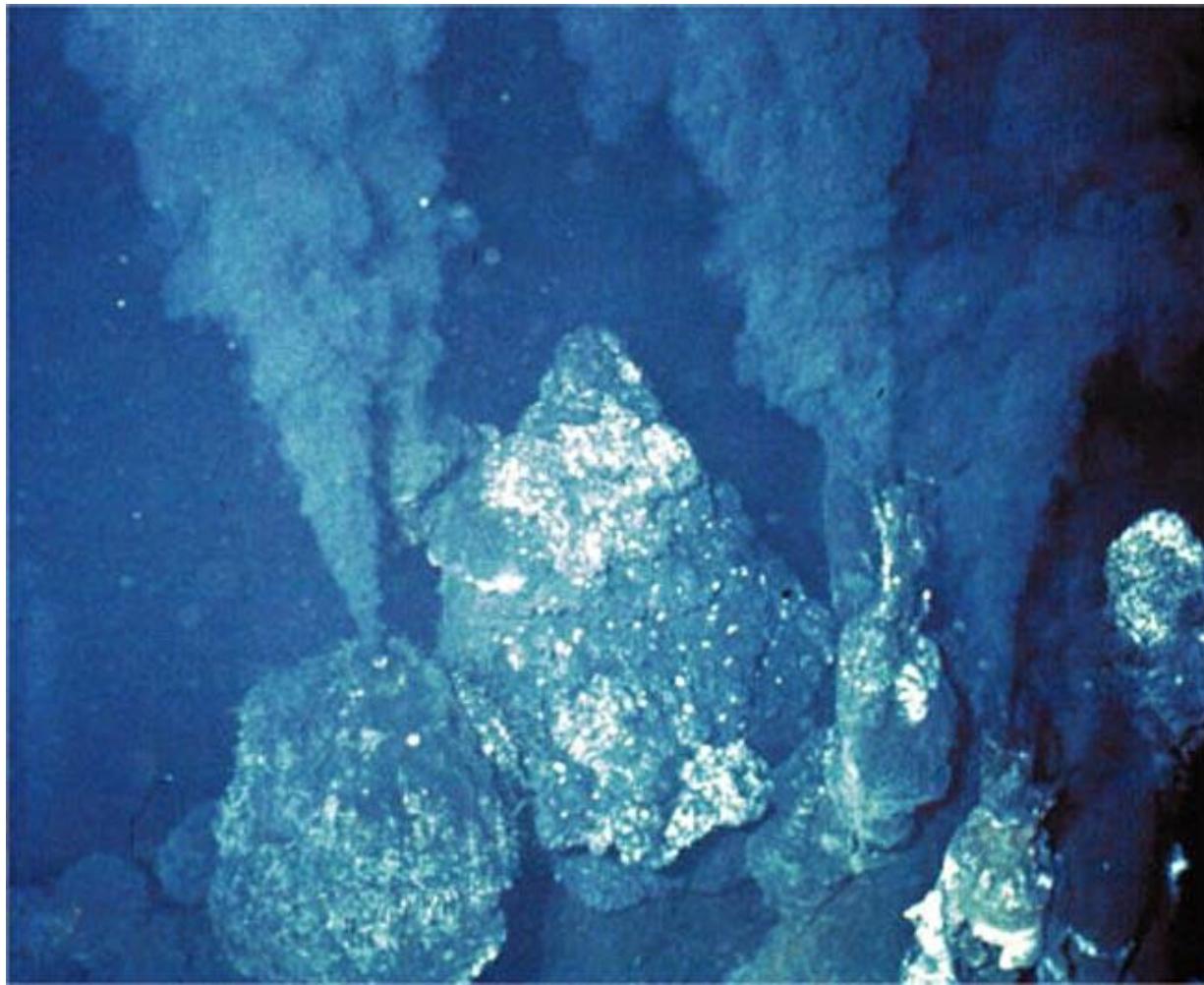
Moti convettivi



Cronologia della terra



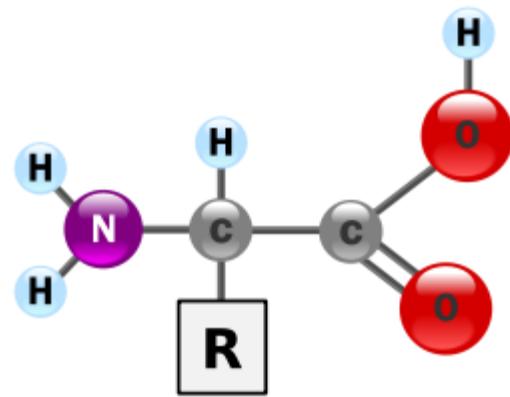
Black smokers



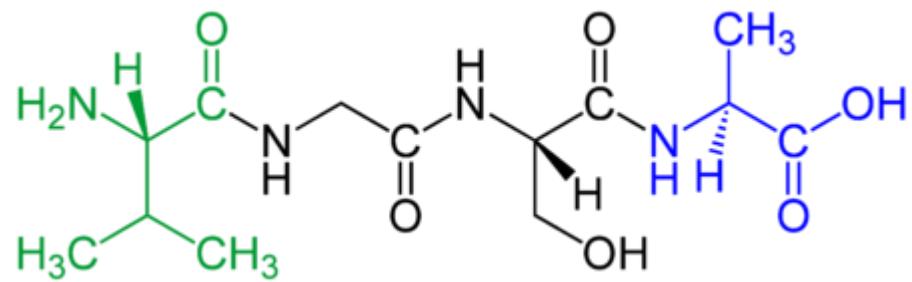
Solfuro di ferro



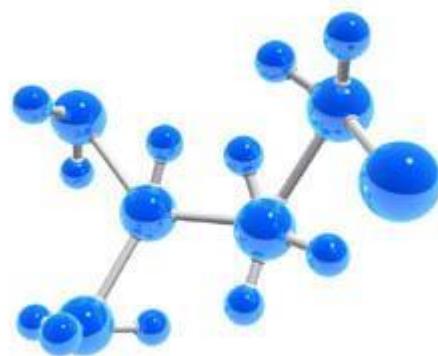
amminoacidi



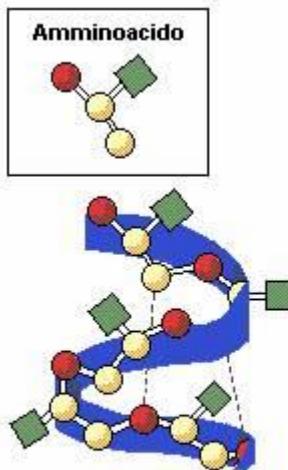
peptidi



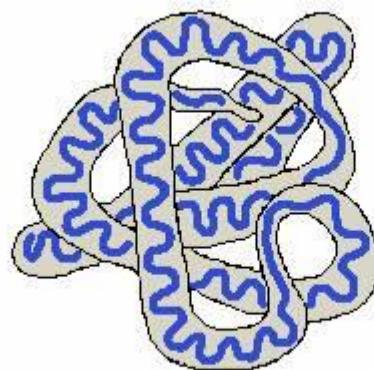
polipeptidi



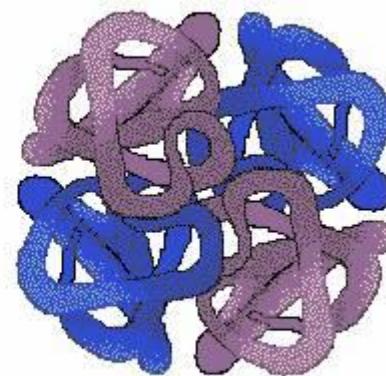
proteina



La **struttura secondaria** di una proteina si forma quando tra gli amminoacidi della struttura primaria si instaurano legami idrogeno che ne provocano la torsione.

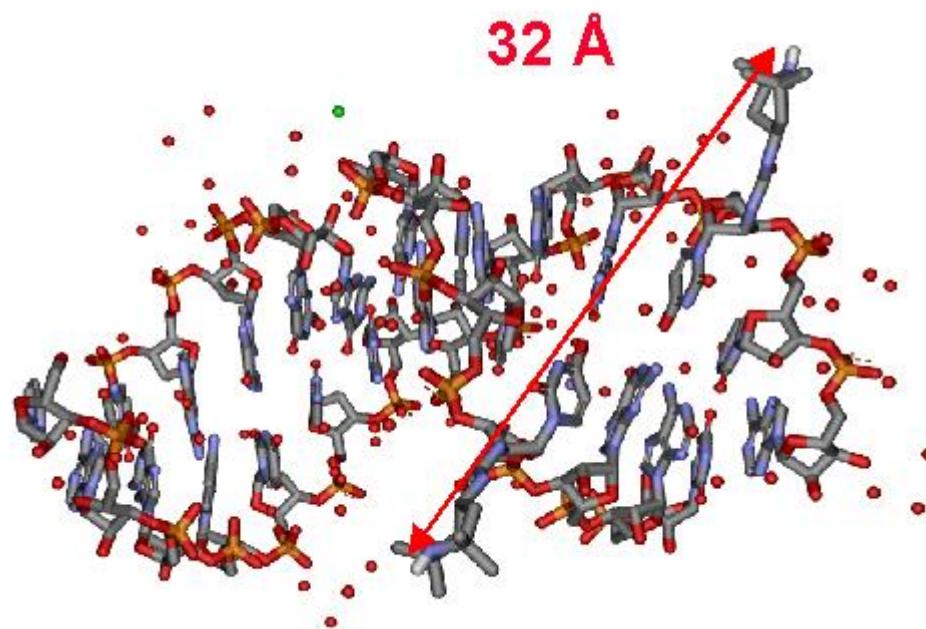


La **struttura terziaria** di una proteina è prodotta dall'interazione tra amminoacidi posti in punti diversi della struttura secondaria.

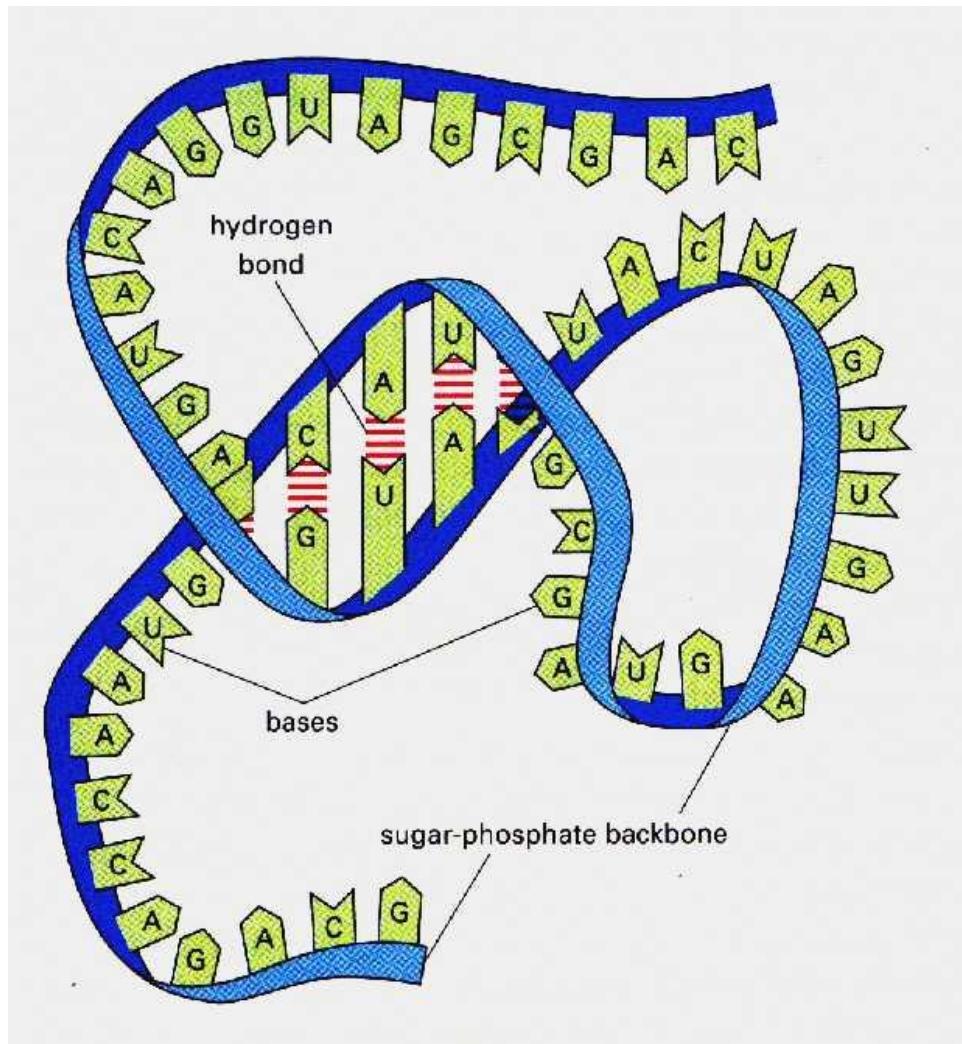


Quando due o più catene polipeptidiche a struttura terziaria si intrecciano, si forma una proteina a **struttura quaternaria**.

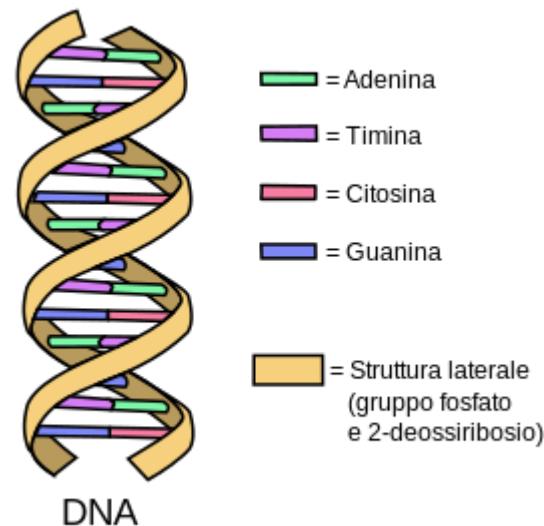
RNA



RNA



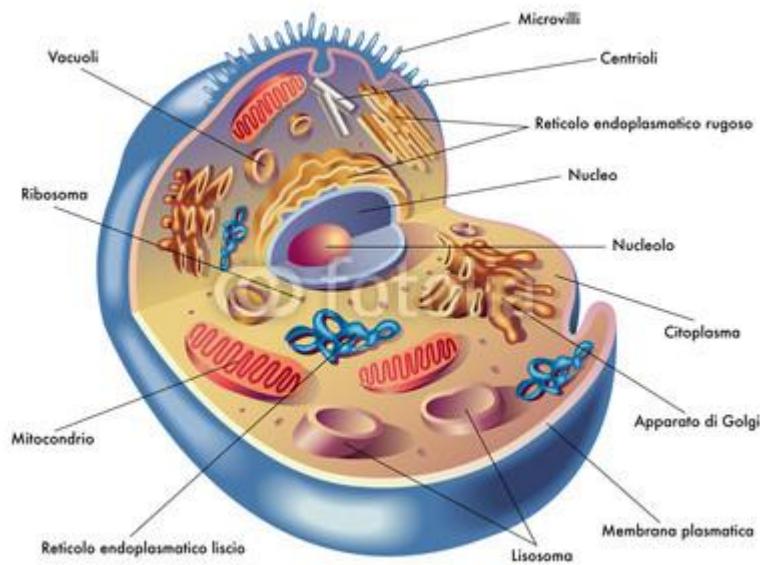
DNA



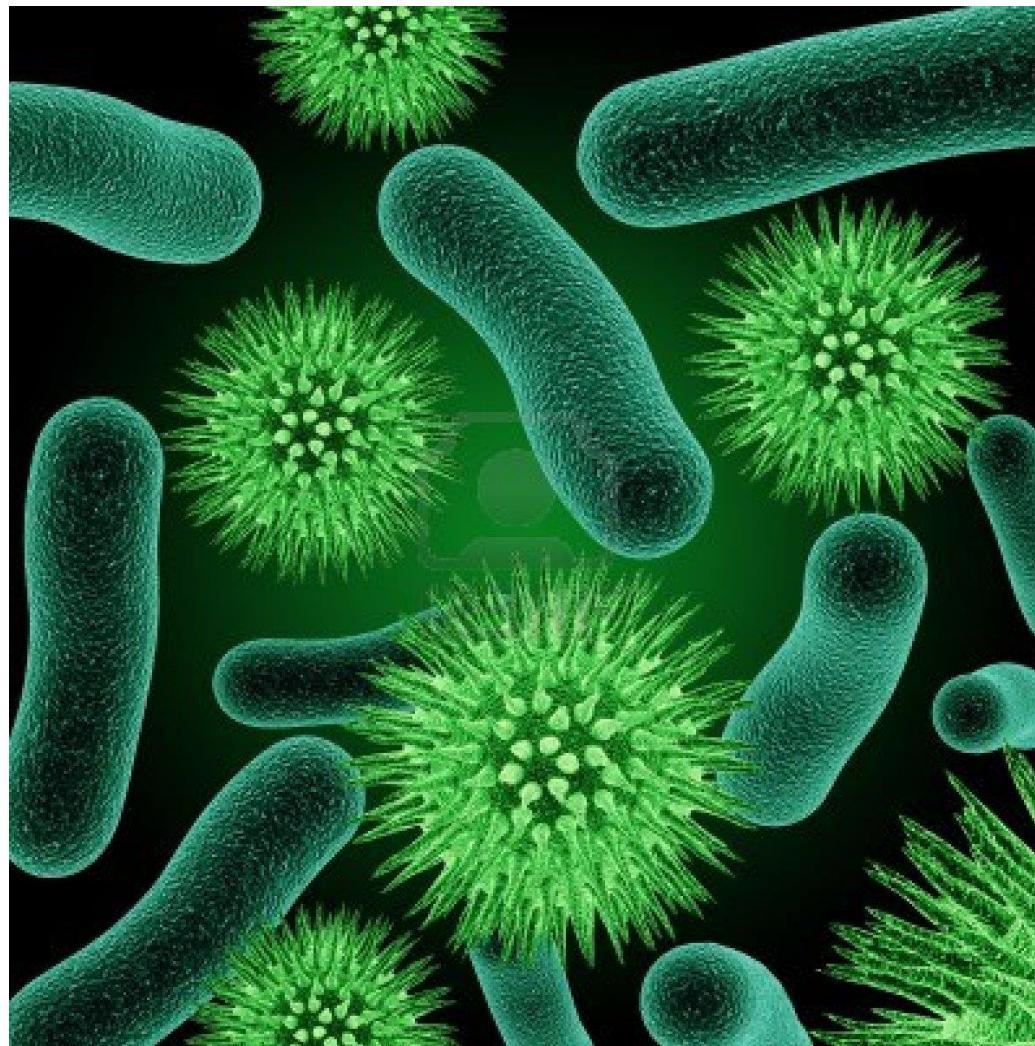
DNA



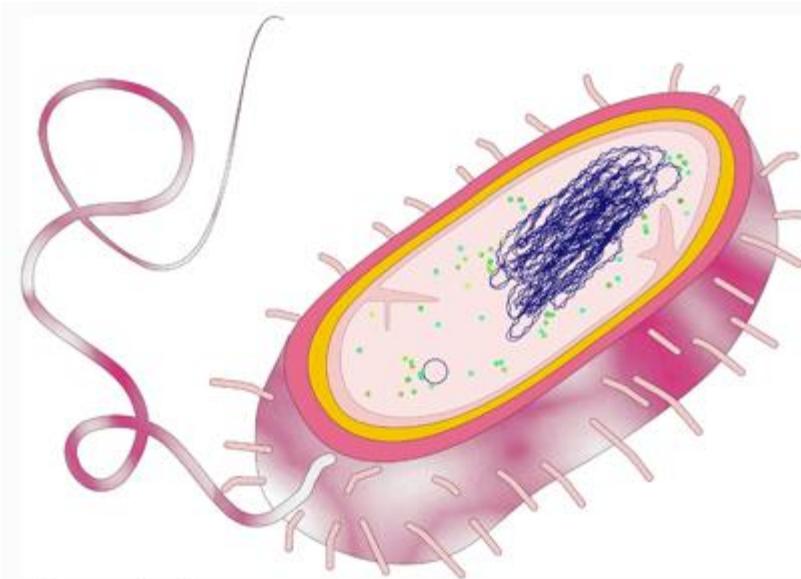
cellula



batterio



procarioti

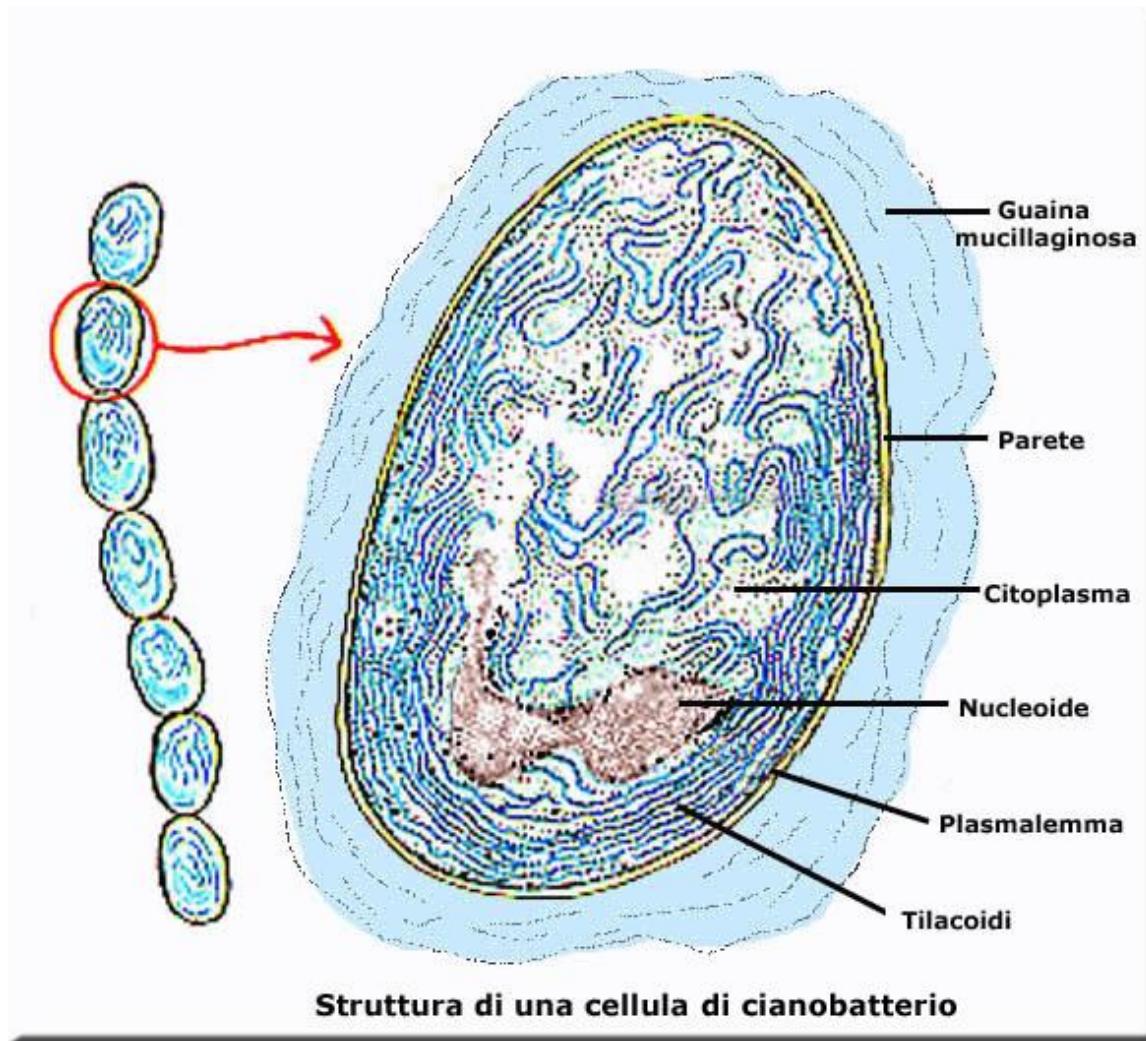


Procarioti. Rappresentazione schematica di un batterio flagellato. E' evidente la monocompartmentazione, col DNA circolare disposto nella zona detta nucleoide e la parete cellulare.

stromatoliti



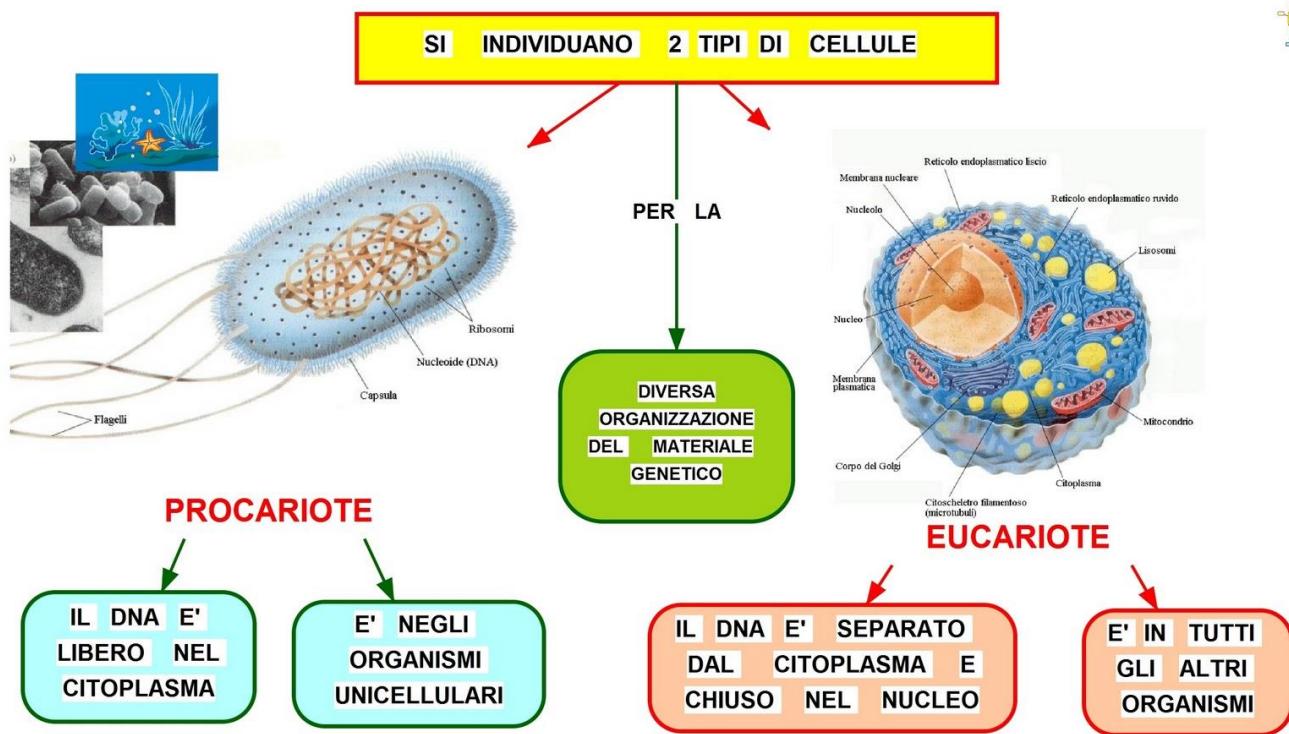
cianobatteri



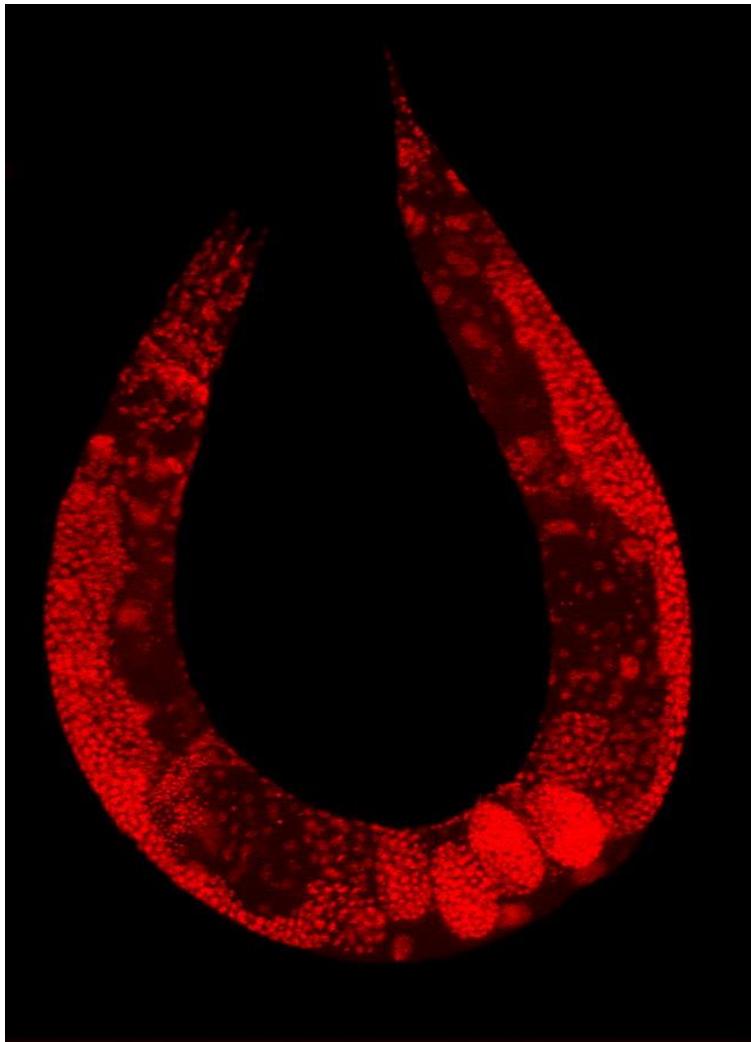
cianobatteri



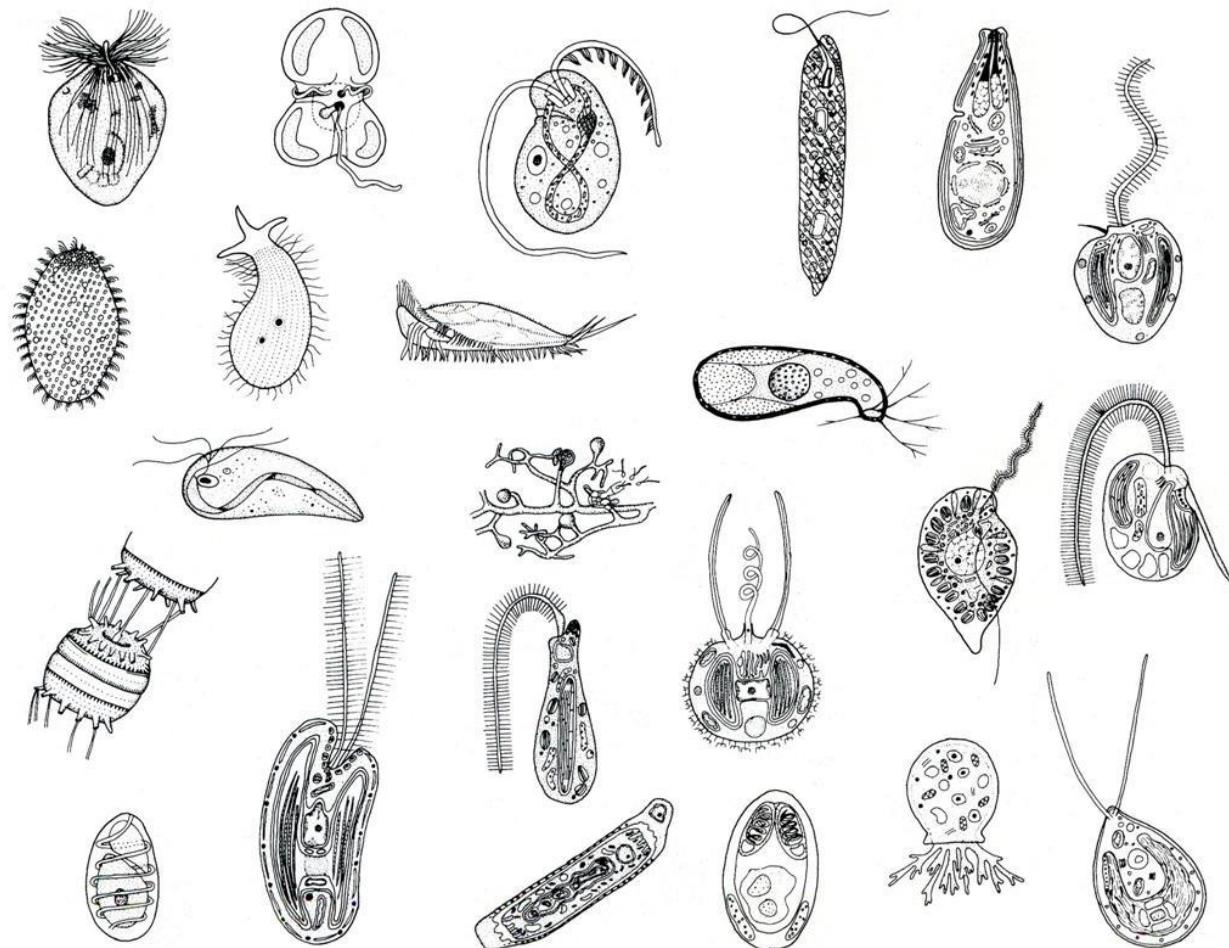
eucarioti



Organismi pluricellulari



Organismi pluricellulari



Tardo Proterozoico



glaciazioni

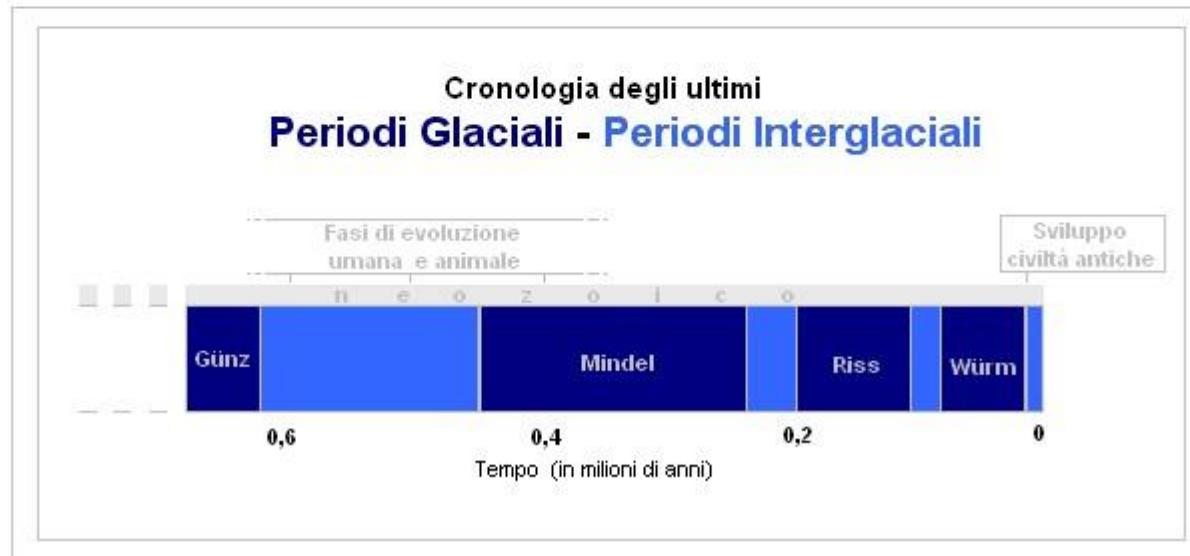


Alternanza storica
Ere Glaciali - Ere Interglaciali



dettaglio

Cronologia degli ultimi
Periodi Glaciali - Periodi Interglaciali



ediacarano



ediacarano



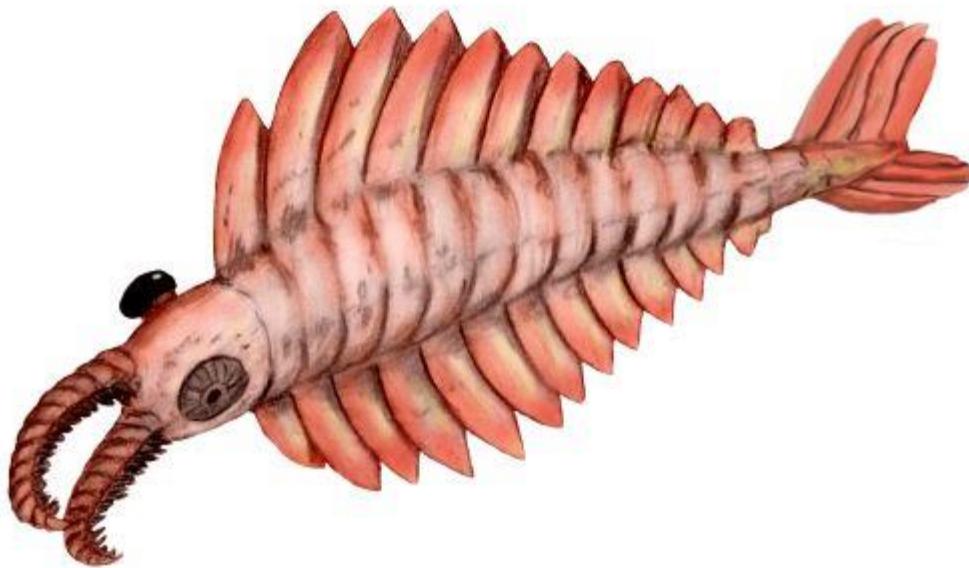
ediacarano



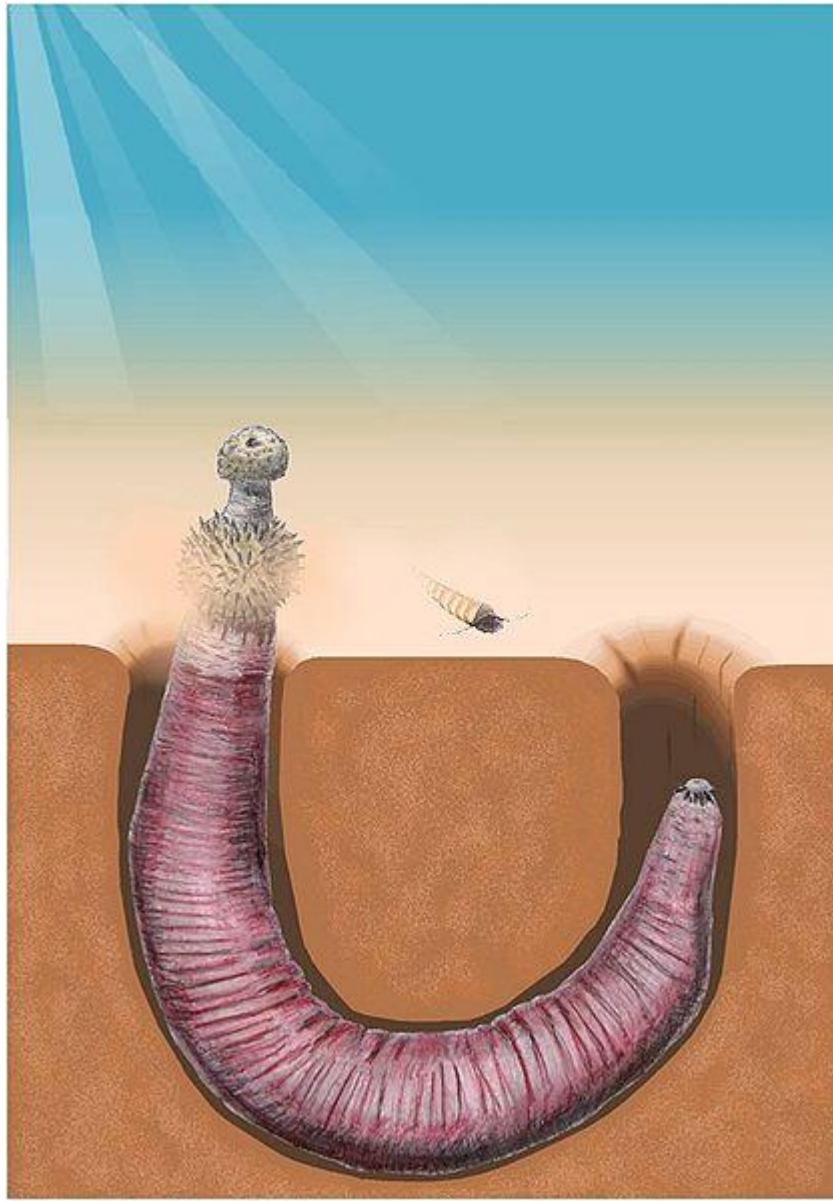
Cambriano



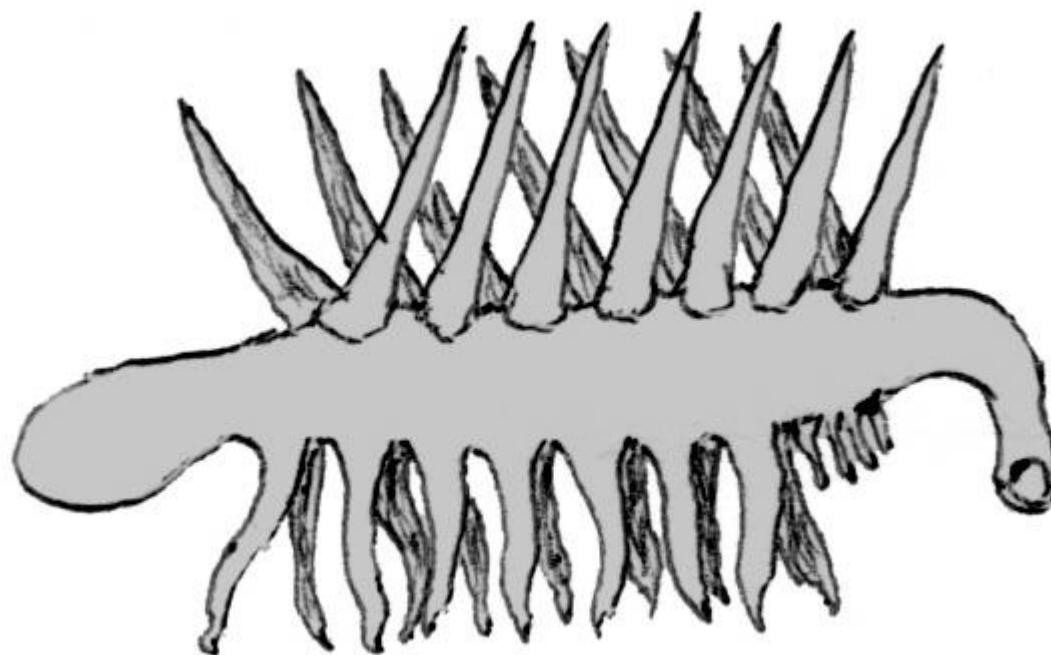
Cambriano



Cambriano



Cambriano



Ordoviciano



ordoviciano



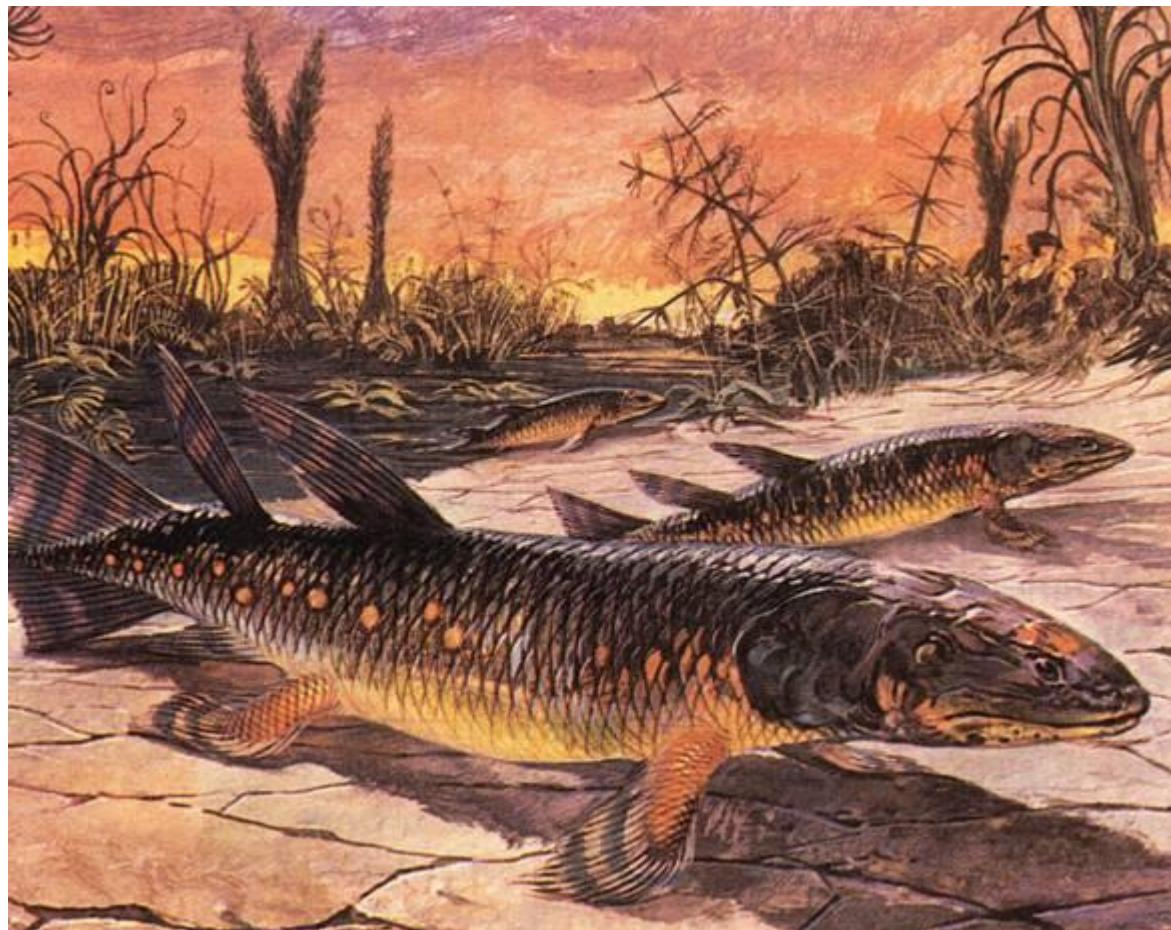
ordoviciano



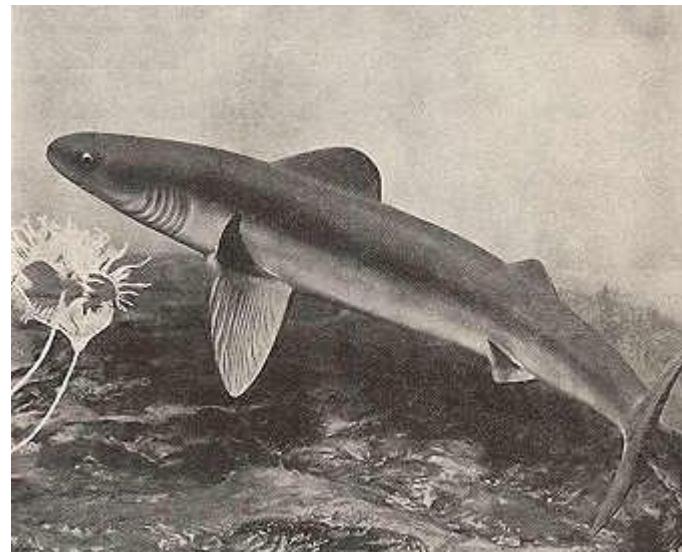
siluriano



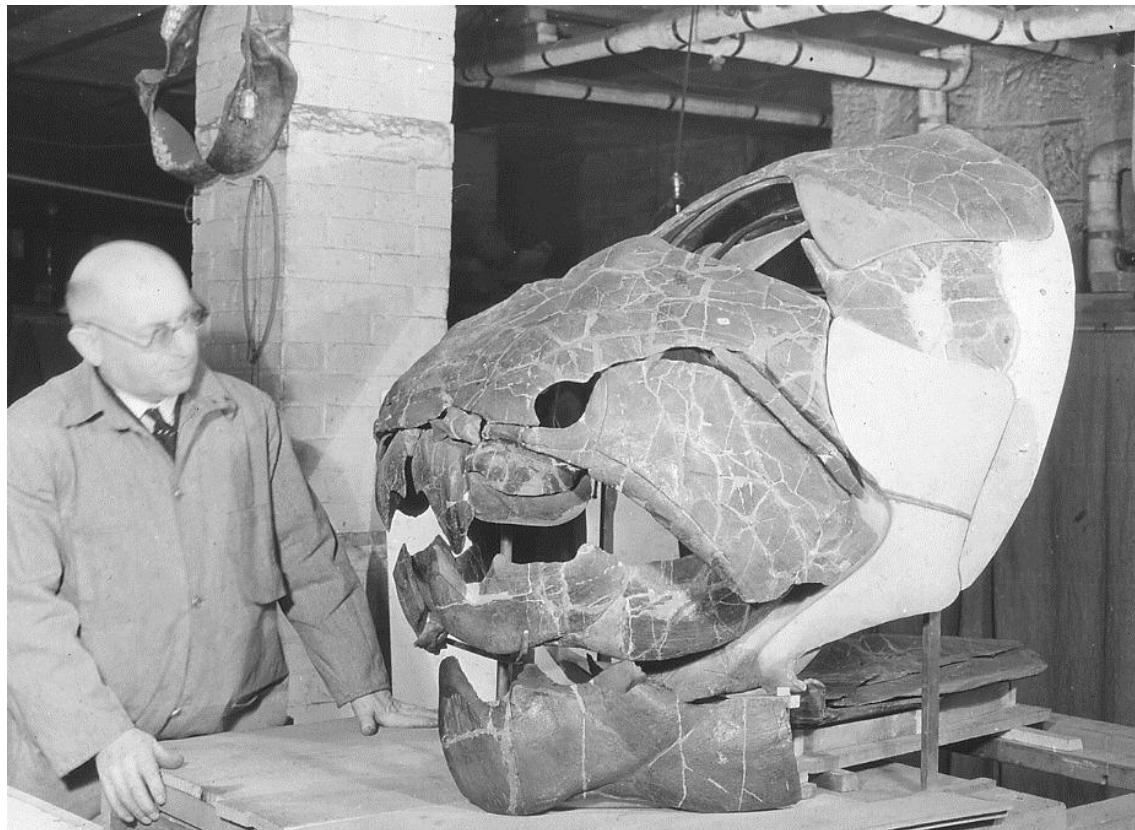
devoniano



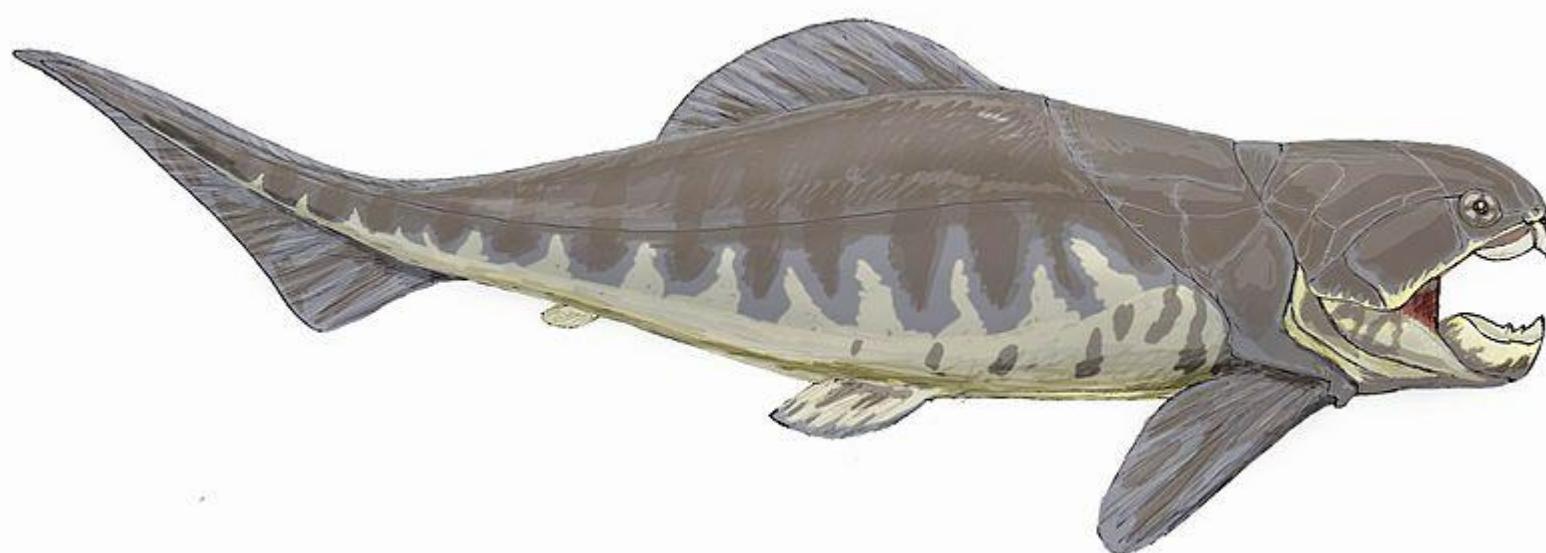
devoniano



devoniano



devoniano



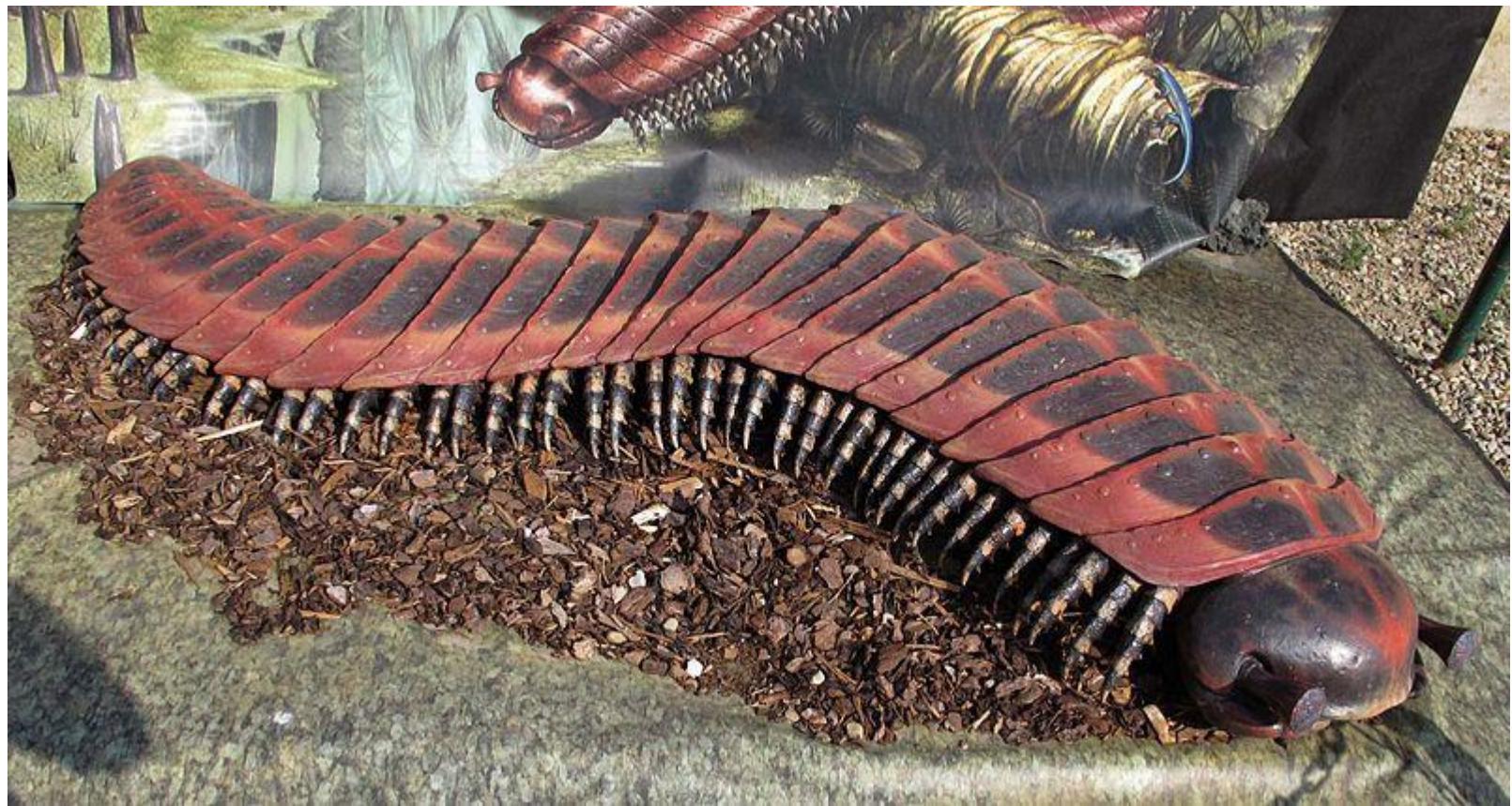
carbonifero



carbonifero



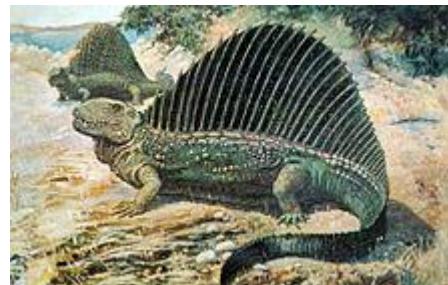
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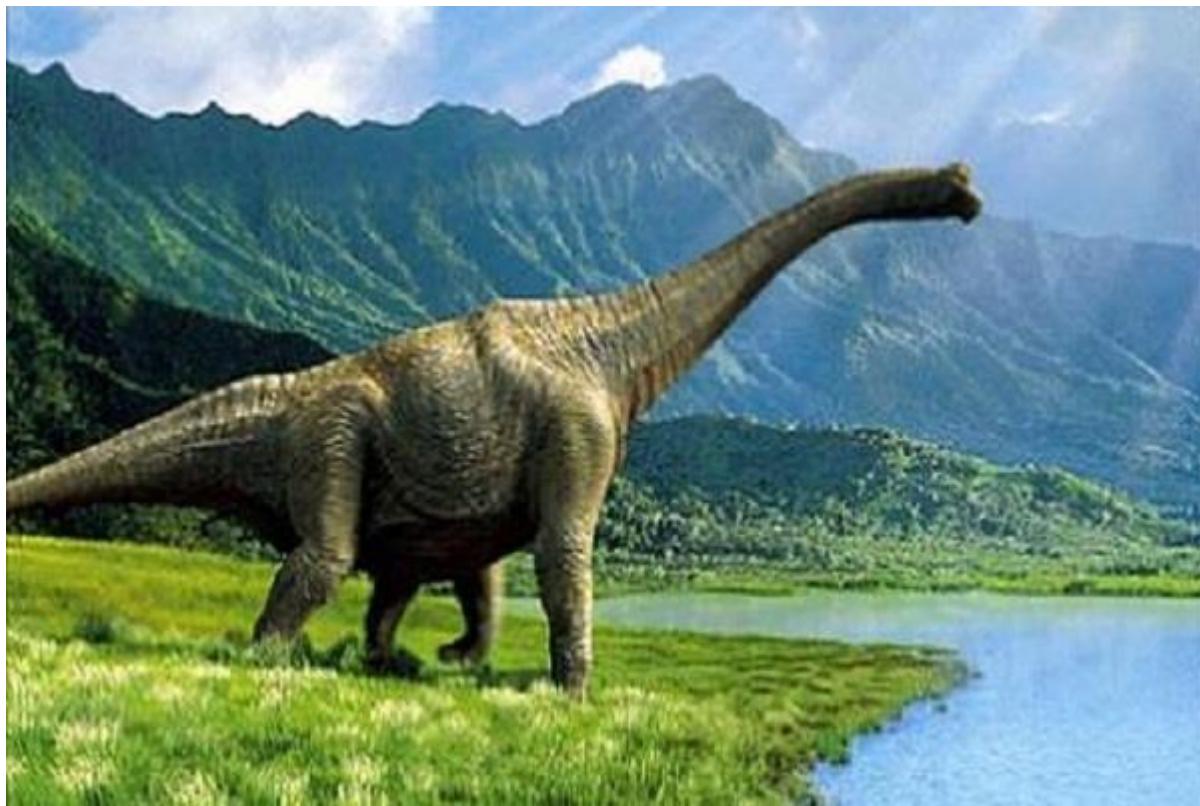
permiano



permiano



triassico



triassico



triassico



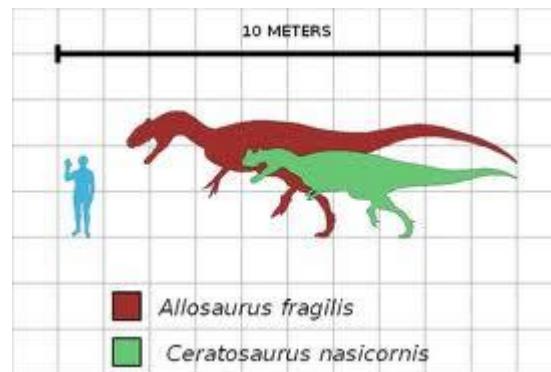
triassico



giurassico



giurassico



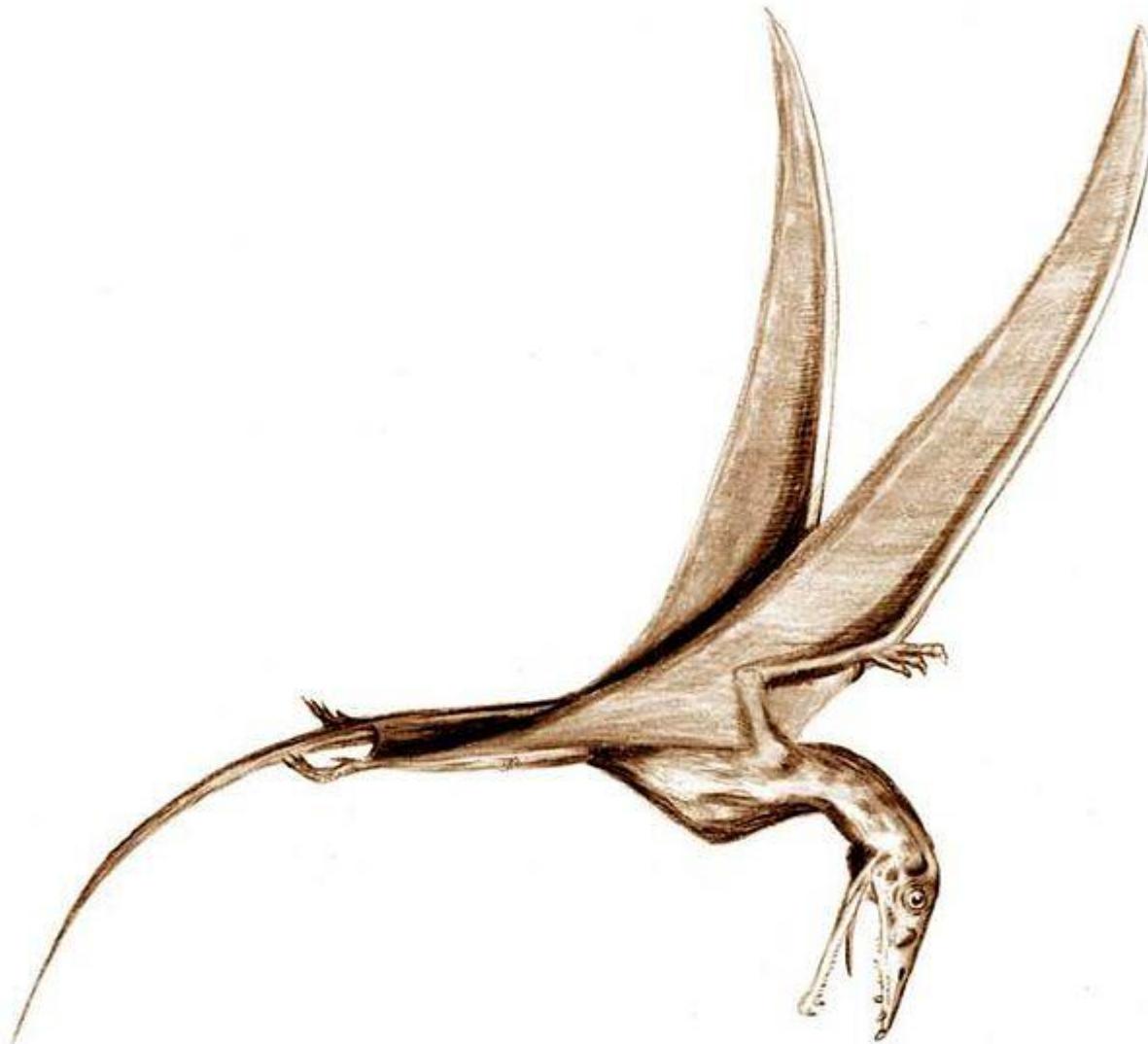
giurassico



giurassico



triassico



cretaceo



cenozoico

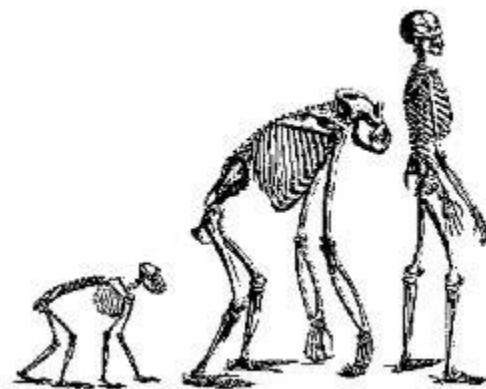


cenozoico

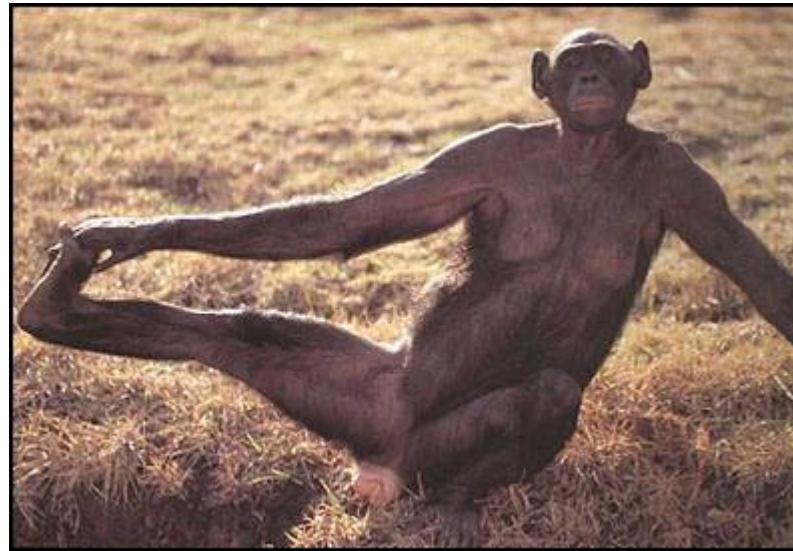




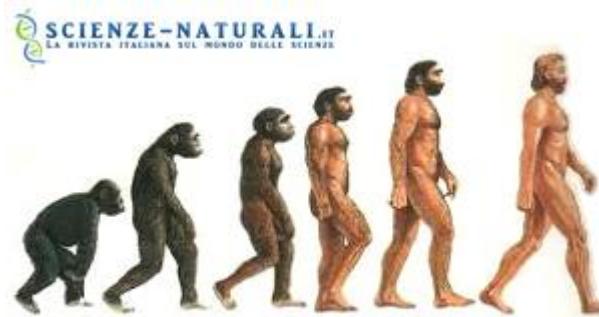
antropoide



bonobo



Evoluzione dell'uomo



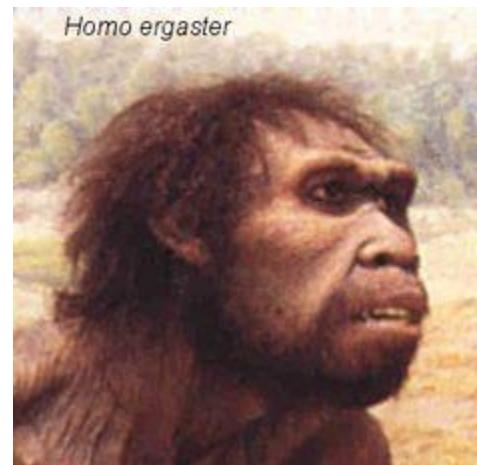
australopiteco



Homo habilis



Homo ergaster



Homo erectus



neanderthal



Homo sapiens

