

Time Range Chart

- 1. Choose a tray with a single fossil on it.***
- 2. Give the phylum and group to which the fossil belongs.***
- 3. Use the chart which gives the age ranges of the fossils to identify the time range of that group.***
- 4. Choose a tray with a pair of fossils on it.***
- 5. The two fossils were found in the same rock unit. Examine each of the fossils and give the phylum and group to which it belongs.***
- 6. Use the chart to determine the age of the rock as accurately as possible.***

Teacher's Section

The purpose of this activity is to help students learn the various fossils and their time ranges and teach them how to use a time range chart.

Not all the common groups are on this chart so make sure that the fossils you set out for them are on the chart. The fossils for the pairs should be named.

Examples for the pairs:

Favosites and Halysites

Leptaena and Spirifer

Terebratula and Pecten

Productus and Dalmanites

Productus and Atrypa

Gryphea and Natica

Calymene and Agnostus

TIME RANGE CHART

		Cambrian	Ordovician	Silurian	Devonian	Carboniferous	Permian	Triassic	Jurassic	Cretaceous	Tertiary	Recent
Corals												
Favosites	U Ord to U Dev		█	█	█							
Halysites	Ord to Sil		█	█								
Zaphrentis	Carb					█						
Caninia	L Carb					█						
Lonsdaleia	Carb					█						
Lithostrotion	Carb					█						
Isastrea	Trias to Tert							█	█	█	█	
Thecosmilea	U Jur								█			
Trilobites												
Calymene	U Ord to L Dev			█	█							
Paradoxides	M Camb	█										
Trinucleus	M Ord		█									
Dalmanites	Sil to Dev			█	█							
Agnostus	Camb to Ord	█	█									
Brachiopods												
Lingula	Ord to Rec		█	█	█	█	█	█	█	█	█	█
Spirifer	Sil to Perm			█	█	█	█					
Productus	Dev to Perm				█	█	█					
Leptaena	Ord and Sil		█	█								
Atrypa	Sil to Dev			█	█	█	█					
Terebratula	Carb to Cret					█	█	█	█	█	█	
Bivalves												
Pecten	Cret to Rec									█	█	█
Trigonia	Jur to Cret								█	█	█	
Gryphea	Jur								█	█	█	
Cardita	Tert										█	█
Glycimeris	Tert to Rec										█	█
Crassetella	Cret to Rec										█	█
Mya	Jur to Rec								█	█	█	█
Carbonicula	Carb					█						
Gastropods												
Natica	U Jur to Rec									█	█	█
Turretella	U Jur to Rec									█	█	█
Neptunea	Tert to Rec										█	█
Planorbis	Jur to Rec								█	█	█	█
Graptolites												
Dictyonema	U Camb to L Carb	█	█	█	█							
Phyllograptus	L Ord		█									
Climacograptus	M and U Ord		█	█								
Didymograptus	L Ord		█									
Monograptus	Sil			█								

U = Upper, M = Middle, L = Lower, Rec = Recent

- 1 Draw lines to represent the time ranges for each fossil
- 2 What are the age ranges for each of the following groups:
 - a) Trilobites
 - b) Graptolites
 - c) Rugose Corals
- 3 What age would you assign to a rock which contained both of the fossils in the following pairs:
 - a) Favosites and Halysites
 - b) Productus and Atrypa
 - c) Leptaena and Spirifer
 - d) Gryphea and Natica
 - e) Terebratula and Pecten
 - f) Calymene and Agnostus
 - g) Productus and Dalmanites