

Unit --:Lesson: Earth's History

How do we define the Age of Dinosaurs?	<ul style="list-style-type: none"> <li>• 230 million years ago</li> <li>• Earth's history about 4.6 billion years long</li> </ul>
What are fossils?	<ul style="list-style-type: none"> <li>✓ the remains of organisms, such as animals and plants, that have been preserved in rock for millions of years.</li> <li>✓ Usually found in the form of imprints (ex. dino footprint)</li> <li>✓ Organisms become fossilized as they are submerged in water and buried by layers of sediment, subjected to pressure for millions of years</li> </ul>
Vocabulary	
<u>absolute dating:</u>	<p>process of determining a specific date of an object</p> <ul style="list-style-type: none"> <li>▪ the longest unit of geological time</li> </ul>
<u>eon:</u>	<ul style="list-style-type: none"> <li>▪ a major division of geologic time that is a subdivision of an eon</li> </ul>
<u>era:</u>	<ul style="list-style-type: none"> <li>▪ the period of time covering the physical formation and development of the earth</li> </ul>
<u>geologic time:</u>	<ul style="list-style-type: none"> <li>▪ a visualization of how the earth and its lifeforms have changed through geologic time</li> </ul>
<u>geologic timeline:</u>	<ul style="list-style-type: none"> <li>▪ the time required for half the atoms in an element to divide in half</li> </ul>
<u>half-life:</u>	<ul style="list-style-type: none"> <li>▪ the extinction of a large number of species in a short period of time that is usually caused by a catastrophic global event like an asteroid</li> </ul>
<u>mass extinction event:</u>	<ul style="list-style-type: none"> <li>▪ a division of geologic time and a subdivision of an era</li> </ul>
<u>period:</u>	<ul style="list-style-type: none"> <li>▪ the process by which an unstable nucleus of an atom spontaneously releases energy through the emission of radiation used in dating fossils and rocks.</li> </ul>
<u>radioactive decay:</u>	<ul style="list-style-type: none"> <li>▪ the process of determining the order of events in geologic time</li> </ul>
<u>relative dating:</u>	<ol style="list-style-type: none"> <li>1. Relative time: the sequence of events or the order in which something occurred</li> <li>2. absolute time: measuring the radioactive decay of known elements, such as Carbon 14, Potassium-Argon, or Uranium 235.</li> </ol>
How do you determine the age of fossils and rocks?	<ul style="list-style-type: none"> <li>➤ The earth has changed, but the laws of nature remain the same</li> <li>➤ scientists use these laws to figure out what happened in the past</li> <li>➤ Scientist John Playfair says, "Amid all the revolutions of the globe ... Nature has been uniform, and her laws are the only things that have resisted (change). The rivers and the rocks, the seas, and the continents have been changed in all their parts; but the laws which describe those changes, and the rules to which they are subject, have remained invariably the same."</li> </ul>
How do scientists piece together the history of the earth?	<ul style="list-style-type: none"> <li>○ Although things about the earth have changed, the laws to explain these changes don't change</li> <li>➤ Scientists gain clues like this from fossils all over the world to put together a snapshot of how Earth has changed throughout time.</li> </ul>