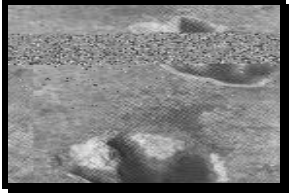
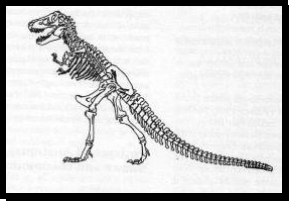




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# ***How should we Interpret the Fossil Record?***

Below is the 'storyboard' of a TV programme about how the Fossil Record should be interpreted. Read through the script and then answer the questions below.

<u>VISUALS</u>	<u>PROGRAMME TRANSCRIPT</u>
	<p><b>Narrator:</b> Fossils are the preserved evidence of past life. A fossil may be a foot imprint in sandstone or a frog trapped in amber. A woolly mammoth, frozen in the Siberian tundra, and a T-Rex in the western 'badlands' of Alberta, Canada, are examples of fossils.</p>
	<p>Today, there is growing scientific controversy over what the fossil record is telling us. Back in 1859, Charles Darwin thought that this record would eventually support his hypothesis that all organisms gradually evolved from a common ancestor. He assumed that the rocks would later reveal many fossils with intermediate forms. Yet surprisingly, despite the fact that we now have many more specimens, this assumption has not been confirmed.</p>
	<p>As Professor Steve Jones of University College London has noted: '<i>The fossil record – in defiance of Darwin's whole idea of gradual change – often makes great leaps from one form to the next.</i>'</p>
	<p>This programme will examine three different theories which attempt to explain the lack of intermediate forms in different ways. Many scientists support these theories, but the three disagree with each other.</p>
	<p>First, scientists called 'phyletic gradualists' argue that the lack of intermediates is due to the rarity of fossilization. The fossil record is not very good evidence for evolutionary change in general. This was the explanation Darwin gave in 1859, and is still the most common view held today.</p>
	<p>Second, scientific advocates of 'punctuated equilibrium' argue that the lack of intermediates is because evolution occurs in sudden bursts. Therefore, any intermediates which did exist would not have been around long enough for their evidence to be preserved.</p>
	<p>Third, scientific advocates of 'phyletic discontinuity' argue that the lack of intermediates is because life has not evolved from a common ancestor. The fossil record is a very good source of evidence about organisms in the past. It shows how each biological form (or <i>Baupläne</i>) must have had an independent origin. This theory is held by a growing minority of academics.</p>
	<p>What does the fossil record really show? We will try to discover which theory is best.</p>

