

Utah Cutout Descriptions

<p>#1 The Early Years: Paleozoic During this era Utah was at the western edge of North America. The eastern portion of the state was a low plain with little relief at about sea level. What little sediment did reach the ocean was well washed quartz sand. Coral reefs, now exposed as thick limestones in the Wasatch Mountains, marked shallow seas that led to deep oceans in the west.</p>	<p>#2 Wind Deposited Sands: Early Jurassic Cut off from moisture-laden ocean winds by rising mountains to the west, desert sands were blown into Utah from the north and southwest. These blowing sands formed dunes which eventually turned into rock and are preserved in what is now called Navajo Sandstone. These ancient dunes are well exposed at Checkerboard Mesa in Zion National Park and on the San Rafael Swell.</p>	<p>#3 Famous Dinosaurs: Late Jurassic At this time Utah was hot, swampy lowland with mountains and volcanoes to the west and northwest. Meandering rivers and lakes abounded, while dinosaurs roamed the land. Their fossilized bones are preserved and can be seen at famous sites such as the Cleveland-Lloyd Dinosaur Quarry and Dinosaur National Monument.</p>	<p>#4 Coal Formations: Late Cretaceous Pressure from continental collision with the Pacific Plate to the west produced high mountains in western Utah. The eastern portion of the state was covered by an inland sea that stretched from the Gulf of Mexico to the Arctic. The coastal plain between these two areas advanced and retreated as sediment filled the sea and the basin filled the sea and the basin sank. Coal swamps formed behind barrier islands while dinosaurs continued to rule.</p>	<p>#5 Utah Starts to Come Up in the World: Paleocene Erosion worn down the mountains to the west and the sediments filled the inland sea to the east. Continued pressure from the Pacific Plate caused both the Uinta Mountains and the Colorado Plateau to uplift. The Colorado Plateau warped as it rose, marking the beginning of predominate swells and depressions now found in Utah (such as San Rafael Swell). A large freshwater body, called Lake Flagstaff, occupied a depression in what is now central Utah.</p>
<p>#6 Oil Shale and Fossil Fish: Eocene After spending nearly 500 million years near sea level, Utah continued its rise to nearly a mile high in elevation. Continued warping of the Colorado Plateau produced basins for lakes such as Lake Uinta. Organic-rich accumulations in the bottom sediments include well-preserved fish fossils and oil shales. The western mountains were reduced to relics.</p>	<p>#7 Uplift and Volcanics: Oligocene On the Colorado Plateau the lake basins were filled in and broad plains separated mountain uplifts. The beginning of modern rivers ran across these plains. The continental divide passed through northeastern Utah so the Green River in Wyoming drained to the Mississippi River. With the beginning of extension in western Utah, which would eventually lead to the Basin and Range, extensive volcanic activity started to occur.</p>	<p>#8 Precious Metals Emplaced: Miocene Whereas previous compression has moved the site of San Francisco close to Salt Lake City, extension was now moving the two apart. This extension separated uplifted mountain blocks from down-dropped basins forming the Basin and Range. Volcanic activity continued forming three great metallic mineral belts. From north to south they are: Park-City-Oquirrh, Deek Creek-Tintic, and Wah Wah-Tushar. The Colorado Plateau continued to rise and tilt northeastward.</p>	<p>#9 Water and Ice: Pleistocene The geography of Utah was very close to what it is now. Mountains, canyons, and rivers were all well in place. The climate at this time was wetter and colder and as a result glacial activity took place. Canyons were carved and expanded in the Uinta Mountains as well as in several other mountain ranges throughout the state. A giant water body called Lake Bonneville also formed, stretching from the Wasatch Mountains to Nevada and from the Utah-Idaho border nearly down to Cedar City in southern Utah.</p>	<p>#10 These are the Places: Present The geologic history of Utah has left an indelible mark on the state. It explains why the rocks to the east are brightly colorful while those to the west have somber colors, why there are spectacularly massive canyons on the Colorado Plateau while much of the Basin and Range has no external drainage, and why a high mountain chain, the Wasatch, runs down the middle of the state. This history determines the location of settlements, industry, and recreation sites.</p>