

新东方背诵文选全集36 PDF转换可能丢失图片或格式，建议
阅读原文

https://www.100test.com/kao_ti2020/118/2021_2022__E6_96_B0_E4_B8_9C_E6_96_B9_E8_c81_118588.htm

36. Plate Tectonics and Sea-floor Spreading The theory of plate tectonics describes the motions of the lithosphere, the comparatively rigid outer layer of the Earth that includes all the crust and part of the underlying mantle. The lithosphere(n.[地]岩石圈)is divided into a few dozen plates of various sizes and shapes, in general the plates are in motion with respect to one another. A mid-ocean ridge is a boundary between plates where new lithospheric material is injected from below. As the plates diverge from a mid-ocean ridge they slide on a more yielding layer at the base of the lithosphere. Since the size of the Earth is essentially constant, new lithosphere can be created at the mid-ocean ridges only if an equal amount of lithospheric material is consumed elsewhere. The site of this destruction is another kind of plate boundary: a subduction zone. There one plate dives under the edge of another and is reincorporated into the mantle. Both kinds of plate boundary are associated with fault systems, earthquakes and volcanism, but the kinds of geologic activity observed at the two boundaries are quite different. The idea of sea-floor spreading actually preceded the theory of plate tectonics. In its original version, in the early 1960 ' s, it described the creation and destruction of the ocean floor, but it did not specify rigid lithospheric plates. The hypothesis was substantiated soon afterward by the discovery that periodic reversals of the Earth ' s magnetic field are recorded in the

oceanic crust. As magma rises under the mid-ocean ridge, ferromagnetic minerals in the magma become magnetized in the direction of the magma become magnetized in the direction of the geomagnetic field. When the magma cools and solidifies, the direction and the polarity of the field are preserved in the magnetized volcanic rock. Reversals of the field give rise to a series of magnetic stripes running parallel to the axis of the rift. The oceanic crust thus serves as a magnetic tape recording of the history of the geomagnetic field that can be dated independently. the width of the stripes indicates the rate of the sea-floor spreading. 100Test 下载频道开通，各类考试题目直接下载。详细请访问 www.100test.com