

Module 9: Earth's History
Topic 1 Content: Unconformities Notes

Introduction

The screenshot shows a digital interface for an educational module. At the top, a dark grey header contains the word "Unconformities" in white. Below this, the word "Introduction" is written in a smaller font. The main title "Unconformities" is displayed in a large, bold, black serif font. To the right of the main text area are three vertical, dark brown rectangular buttons with white text, labeled "Angular Unconformities", "Disconformities", and "Nonconformities" from top to bottom. Below the title and buttons, a paragraph of text explains that when using relative age dating, geologists look for gaps in the rock record called unconformities, which occur when a layer of rock is removed. It instructs the user to click the buttons to explore these types.

When applying relative age dating techniques to layers of rocks, geologists must look for a few unconformities. Unconformities are gaps in the rock record that take place when a layer of rock has been removed from the rock record. In this interactivity, click each of the panels to explore the different unconformities.

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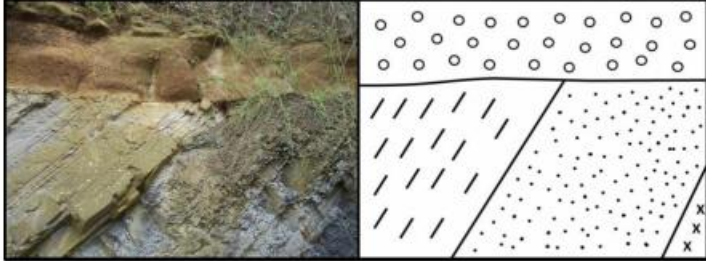
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Angular Unconformities

Unconformities

Angular Unconformities

Angular Unconformities



Angular unconformities represent a gap in the rock record that exists between a horizontal layer of sedimentary rock and tilted layers of rock. The unconformity is easily observed in both the image and sketch of the rock outcrop shown above.

Disconformities

Nonconformities

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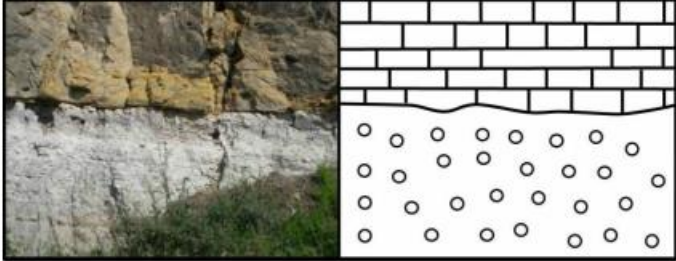
Disconformities

Unconformities

Angular Unconformities

Disconformities

Disconformities



A disconformity exists where the missing rocks exist between two horizontal layers of sedimentary rock. The difference in age between the two sedimentary rocks can be millions of years. The rock is missing due to erosion, or in some cases the rock was never deposited at all. A disconformity is easily observed in sketches as a wavy line. The disconformity may be harder to recognize when looking directly at an outcrop. Can you spot the disconformity in the image and sketch shown above?

Nonconformities

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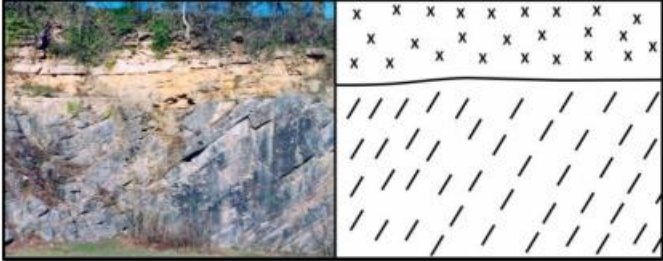
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Nonconformities

Unconformities

Angular Unconformities
Disconformities
Nonconformities

Nonconformities



Nonconformities exist when an erosional surface separates older igneous or metamorphic rocks from sedimentary rocks. In order to observe nonconformities, you will need to be able to recognize all three rock types. In a sketch, the nonconformity is represented by a wavy line, much like a disconformity. Can you spot the nonconformity in the image and sketch shown above?

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