# **Rusting of Iron**

#### Equipment:

rusty piece of rail

#### Safety:

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### **Demonstration:**

The rusty piece of rail is demonstrated or passed around.

### **Obervation:**

The rust is easily recognizable due to its reddish-brown color.

### Explanation:

Rust is the corrosion product formed on iron or steel by reaction with oxygen in the presence of water. From a chemical point of view, rust consists of hydrous iron oxides of varying composition. In a simplified way, the formation of rust can be described by the following conversion formula:

4 Fe|s + 3  $O_2$ |g + 2 H<sub>2</sub>O|I  $\rightarrow$  4 FeOOH|s.

Rusting of a piece of iron in humid air takes about 10 years.

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Photo: pxhere.com

## <u>Disposal:</u>

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