

LESSON PLAN

Subject: Science

Lesson Topic: Conditions Necessary for Rusting

Grade: 6

Duration of Lesson: 2 sessions

Aim: Students should appreciate the conditions that are necessary for rusting

Objectives:

- a) Cognitive - Student should be able:
 - to describe rust as the brown substance found on iron when it exposed to air and water after observing cannon guns at Port Royal
 - explain that rust is produced by the combination of oxygen with metal after teacher demonstration
 - predict which materials are likely to form rust after observing several structures in Port Royal
 - design activities that can be used to prevent iron from rusting
- b) Psychomotor/skills - Student should be able:
 - Carry out simple activities to remove rust from cannon guns and other selected materials using sand paper
- c) Affective - Student should be able:
 - Work cooperatively in groups while carrying out activities
 - Show respect for each other during the lesson
 - Respect each other opinion
 - Fill out a worksheet at the end of the activity

Content

Rust is the brown substance found on iron when they react with air and moisture.

When iron is exposed to air and moisture over a period of time the iron slowly reacts with the oxygen producing iron oxide.

If salt and acid are present rusting occurs very rapidly

Some materials, e.g. iron will rust while others such as plastic, rubber and wood will not rust.

Rusting can be prevented by painting, oiling or greasing.

Instructional Materials

Sand paper, camera, notebook, pencil, cannon gun at site

Introduction:

Stage	Teacher's Role	Students' Role
Introduction	Students will be asked to brainstorm to identify the brown substance on the iron structures in Port Royal	Brainstorm to identify rust
Development	<ul style="list-style-type: none">• Explain that rusting results from the combination of iron and oxygen• Show students metal objects in the museum that are protected from rusting and others that are exposed to air and moisture• Instruct student to identify and record 10 objects in Port Royal that are likely and 10 objects that will not rust• Provide students with small pieces of sand paper and instructions for removing rust from an outdoor cannon gun• Ask students to identify way by which rusting can be prevented	<ul style="list-style-type: none">• Listen keenly and record important ideas in their notebook• Observe iron objects that are rusting and those that are protected from rusting• Observed and classify objects according to their ability to rust• Work cooperatively in groups and follow instructions while carrying out activities• Brainstorm to determine how rusting can be prevented
Culminating Activity	<ul style="list-style-type: none">• Ask selected students to summarize main ideas orally• Provide students with worksheet that summaries the main ideas of the lesson	<ul style="list-style-type: none">• Communicate ideas, listen to each other and participate in discussion• Complete worksheet

WORKSHEET ON RUSTING

a) What is rust?

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(2 marks)

b) Identify the materials that are necessary for rusting.

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(2 marks)

c) Describe how rust can be removed.

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(2 marks)

d) Describe 4 ways by which rust may be prevented

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(2 marks)