



# OUTDOOR LESSON PLAN

School	Agrupamento de Escolas de Moure e Ribeira do Neiva
Subject	Science outdoors
Topic/Theme	Simulation of an explosive volcanic eruption
Timeframe	June 2022
Level	Eight grade

<p>Activity</p>	<ul style="list-style-type: none"> <li>- Simulation of an explosive volcanic eruption.</li> </ul>
<p>Objectives</p>	<ul style="list-style-type: none"> <li>- Distinguish the types of volcanic eruptions;</li> <li>- Observe the different materials exploded in volcanic eruptions;</li> <li>- Understand the geodynamics of the planet;</li> <li>- Improve student's teamwork;</li> <li>- Improve student's contact with the environment, understand and respect nature;</li> <li>- Develop interest in experimental sciences.</li> </ul>
<p>Material Media Resources needed</p>	<ul style="list-style-type: none"> <li>- Ammonia dichromate;</li> <li>- Matches;</li> <li>- Volcano model with metal/glass container</li> </ul>
<p>Description/ Step-by-step Procedure</p>	<ul style="list-style-type: none"> <li>- 1. In the container, inserted in the volcano model, mix the following ingredients: the ammonium dichromate and the match heads;</li> <li>2. Bury the magnesium tape in this mixture and leave out an end;</li> <li>3. Throw a lit match into the metal container with the mixture</li> <li>4. Stand back and watch.</li> </ul> <p>- EXPLANATION</p> <p>Explosive volcanic activity occurs when lava viscosity and gas contents are high. The increased pressure employed by magma and gas causes extremely violent explosions. In this type of volcanic activity, violent pyro clasts emissions (lapilli, bombs and ash) occur.</p> <p>Observation: In explosive volcanic activity, burning clouds can form, they move at high speed and are extremely destructive. It's also common to form domes and volcanic needles (due to the viscosity of the lava) and when an explosion occurs, they are capable of destroying partially or totally the volcanic structure.</p>

