

Chemical Chaos

5 Weeks



Rationale

After Professor Plutonium's unexpected visit, the challenge is set to create an interactive, informative and mind-blowing Science Fair to inform the population at large of the wonders of reversible and irreversible states of matter. As budding scientists, they will investigate and test substances that can be recovered from mixtures and solutions, as well as discovering that some cannot. Children will take on roles, negotiate tasks as they go and work together to plan, investigate and present their scientific findings, including writing explanations for Professor Pu's own scientific journal.

Hook

An eccentric scientist, Professor Plutonium (Pu) arrives on site and demonstrates experiments to the Year 5 children, challenging them to become scientists by exploring his investigations ready to share at the Science Fair.

Mini hook - Intech Winchester Science Centre

Outcome

An interactive Hill View Intech Science Fair, where Year 5 can educate and share their love of science with the rest of the school.

Collaboration

- Rely on others, make a meaningful contribution to the team and give praise and encouragement to others.
- Take on a specified role in a team, accepting delegated tasks and working towards achieving a common goal or outcome.
- Reach agreements through negotiation and compromise and resolve any difficulties amicably.

Thinking

- Process a variety of information using a range of organising tools.
- Give reasons, explain and justify their ideas and opinions using precise language.

Focus Subject - Science

Investigate Professor Plutonium's (Pu) first challenge of comparing and grouping materials by their state of matter (solids, liquids and gases), giving simple descriptions of each.

Plan, carry out and report on a scientific enquiry to answer Professor' Pu's question about how some materials can dissolve to become a solution and be recovered from the solution.

Focus Subject - English

Main writing tasks

Write an explanation of reversible and irreversible changes for Professor Pu to present in the World Scientific Journal, using appropriate grammar and punctuation, (fronted adverbials, noun phrases, appropriate conjunctions -causal connectives).

Plan and write an acrostic poem/What am I? riddle,

Focus Subject - ICT

Create a multiple choice quiz related to states of matter and changing states and format as a questionnaire to be given to visitors to the Science Fair, to test their knowledge and understanding. (See BBC bitesize)

Create a multi- media presentation to support the investigation to be represented at the Science Fair.

<p>Make predictions and investigate how Professor Pu could separate various materials from a mixture through filtration, evaporation, condensation and sieving.</p> <p>Observe the process of burning materials, noting the changes and identifying the new materials made as a result.</p> <p>Create a scientific investigation on a specified aspect of materials to demonstrate and explain the scientific processes involved and subsequent conclusions, so that it is accessible and meaningful to the audience of the Science Fair.</p>	<p>describing the different states of matter using correct terminology.</p> <p>Complete a standard (proforma provided) scientific report using modal verbs and devices that ensure cohesion to predict, describe the scientific process and arrive at a conclusion e.g. Firstly, after that.</p> <p>Other writing tasks Use organisational and presentational devices to write a report to present their investigation and the subsequent findings for the Science Fair (using the correct technical terminology and appropriate punctuation).</p> <p>Writing skills to cover Use of passive voice Use of adverbials to qualify Figurative language Formal tone</p> <p>Spelling, Punctuation and Grammar ~ible ~able Homophones Adverbials Sentence structures</p> <p>Talk 4 Writing strategies Reading as a reader Reading as a writer</p>	
<p>Application Subject- DT Create mechanisms linked to the trip to the Intech Science museum as part of the presentation of the Science Fair.</p>		
<p>Application Subject- PE Create a 'states of matter dance' using the movement patterns and changes in tempo and rhythm to illustrate scientific properties and processes.</p>		
<p>Home Learning Choose an experiment from sciencebob.com that focuses on filtration (reinforce safety and risk assessment), plan, carry out and write up in a chosen format to share with classmates.</p>		
<p>Visits and visitors Eccentric scientist Intech - Winchester Science Centre</p>		