Mad Science Workshop @ AIS: Dry Ice Capades

Date: 10, 11 Oct 2012
Level: Grade 1, aged 6

Mad Science Scoreboard @ AIS

✔ Level Appropriate Lesson Plan
  • Inquiry based
  • Varied teaching strategies used to make learning fun
  • Modeled the language of The Scientific Method
  • Hands-on activities in groups & as individuals
  • Applications of science process skills

✔ Brought Science to Life
✔ Delivered by A Dynamic & Quality Mad Scientist
✔ Engaged pupils with fun & interesting activities

Mad Scientist
- Kinetic Keng
Doing The Run Around

Science Concept Learning 1: Molecules make up matter or material

Science Concept Learning 2: There are 3 states of Matter: Solid, Liquid & Gas

A Solid State is where a material is held together by forces and has a definite shape

Teaching Strategy: Movement

Science Concept Learning 3: Matter can change from one state to another by adding or removing heat/energy

A Liquid State is where some of the binding forces are broken and the liquid takes on the shape of the container it is in

A Gaseous State is where molecules can move freely and have the highest level of energy
Not So Solid

Science Concept Learning: Adding enough heat to a solid will cause it to melt into a liquid. Removing heat reverses the result.

Teaching Strategy: Demonstration

Dry Ice Introduction

Science Concept Learning 1: Dry Ice doesn’t melt & is very cold at -79 ° C

Science Concept Learning 2: Dry Ice is the solid form of Carbon Dioxide

Science Concept Learning 3: Dry Ice changes from a solid to a gas when energy is added
Spoons

“Screaming Spoon”

Hands-On Experiment:
Use Dry Ice to turn water droplets into ice in seconds

Change of state:
Liquid to Solid
Make A Prediction: If I put...
1 spoonful of Dry Ice into the Red balloon
2 spoonful of Dry Ice into the Blue balloon
3 spoonful of Dry Ice into the Green balloon?

The result:

Science Concept Learning 1: The more Dry Ice you put in it, the bigger the balloon

Science Concept Learning 2: Shaking the balloon creates friction which gives energy to the Dry Ice and made it change into gas faster
Foamy Fog

Washing of hands
‘The Mad Science Way’

Clapping your hands
releases the
trapped Carbon
Dioxide gas
Cool Colours

What is your prediction – what is changing colour? The liquid? Dry Ice? Or the cup?

Reflections - Fishy Matters
Engaged & Active Learners

Mad Science class is a lot of fun!

“"Yes, we made the right prediction!"

Try Mad Science At Your School!

For more information about Mad Science programs for Preschool & Elementary / Primary Levels, kindly contact:

Karen Khoo
9760 5285
quarksofkhoo@gmail.com

www.madscience.org/sg