Science – Year 3/4A Summer 1

States of Matter

What's the Matter?

Session 2

Resource Pack

Cut into strips 1 square X 6 squares. Give a strip to each pair/group participating in the Challenge for visitors on Solids and Liquids.

Weighing balloons

Experiment with weighing balloons before and after blowing them up.

Is there any difference? Why?

Can you challenge visitors with a balloon weighing activity?

What does it tell you about gases?

Work as a group to investigate your challenge, then decide how you can turn this idea into an exciting activity for visitors at the museum. Discuss what the activity teaches people about gases.

Now divide up the group to work on these 2 tasks

1. Write simple instructions for visitors to tell them how to do your activity. You could include pictures to illustrate the task if you like.
2. Explain what the results show about gases. You may need to use some scientific words to help. Below are some words that may be useful.

air, inflate, weigh, scales, weight, molecules, full, empty, balloon, gas,

Crushing bottles

Experiment with crushing plastic bottles. Try with the cap on, with the cap off and with the cap loosened.

What happens?
Why?

Can you challenge visitors with a bottle crushing activity?

What does it tell you about gases?

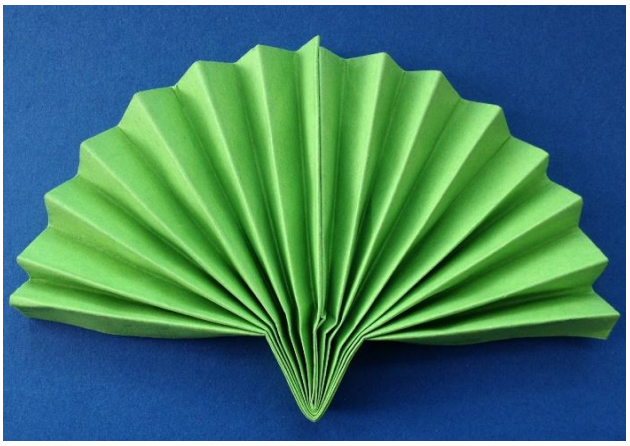
Work as a group to investigate your challenge, then decide how you can turn this idea into an exciting activity for visitors at the museum. Discuss what the activity teaches people about gases.

Now divide up the group to work on these 2 tasks

1. Write simple instructions for visitors to tell them how to do your activity. You could include pictures to illustrate the task if you like.
2. Explain what the results show about gases. You may need to use some scientific words to help. Below are some words that may be useful.

air, molecules, full, empty, bottle, gas, cap, squash, crush, squeeze

Wafting Feathers



Can you move a feather without even touching it?
How?
Could you think of a feather challenge for visitors?
What does it tell you about gases?

Work as a group to investigate your challenge, then decide how you can turn this idea into an exciting activity for visitors at the museum. Discuss what the activity teaches people about gases.

Now divide up the group to work on these 2 tasks

1. Write simple instructions for visitors to tell them how to do your activity. You could include pictures to illustrate the task if you like.
2. Explain what the results show about gases. You may need to use some scientific words to help. Below are some words that may be useful.

air, molecules, feather, fan, waft, movement

Squeezing sponges

Experiment with a sponge in water. Try floating it, prodding it and squeezing it.

Can you think of a sponge and water activity for visitors?
What does it tell you about gases?

Work as a group to investigate your challenge, then decide how you can turn this idea into an exciting activity for visitors at the museum. Discuss what the activity teaches people about gases.

Now divide up the group to work on these 2 tasks

1. Write simple instructions for visitors to tell them how to do your activity. You could include pictures to illustrate the task if you like.
2. Explain what the results show about gases. You may need to use some scientific words to help. Below are some words that may be useful.

air, molecules, sponge, water, bubbles, rise, lighter, trapped, gases, holes

Detecting smells

Do people know what they are smelling without looking or touching?
How?
Can you think of a smell detection activity for visitors?
What does this tell you about gases?

Work as a group to investigate your challenge, then decide how you can turn this idea into an exciting activity for visitors at the museum. Discuss what the activity teaches people about gases.

Now divide up the group to work on these 2 tasks

1. Write simple instructions for visitors to tell them how to do your activity. You could include pictures to illustrate the task if you like.
2. Explain what the results show about gases. You may need to use some scientific words to help. Below are some words that may be useful.

air, molecules, smell, nose, sense, detect, different, gases

Locating Smells

Dogs are famous for tracking down smells but can humans use their noses to locate the source of a smell too?

Can you think of a smell locating activity for visitors?

What does it tell you about gases?

Work as a group to investigate your challenge, then decide how you can turn this idea into an exciting activity for visitors at the museum. Discuss what the activity teaches people about gases.

Now divide up the group to work on these 2 tasks

1. Write simple instructions for visitors to tell them how to do your activity. You could include pictures to illustrate the task if you like.
2. Explain what the results show about gases. You may need to use some scientific words to help. Below are some words that may be useful.

air, molecules, smell, nose, sense, detect, gas, more concentrated, less concentrated, stronger, weaker, scent