

A dark, foggy graveyard at night. In the background, a full moon is visible in the dark sky. A small, glowing yellow lightbulb icon is positioned in the upper right corner. The scene is dimly lit, with a beam of light from a tombstone illuminating the ground.

**WHAT YOU
DON'T KNOW**

CAN KILL

YOU!

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INTRODUCTION

Between the world we see and the things we fear tonnes of mysteries can be unravelled just by applying a little logic and a lot of science.

As human beings living in this world, we may not be aware of many dangers that can affect us during our daily life and so in this presentation we will present a few hidden risks of living in a rather unsafe environment.

RADIATION IS ALL AROUND US !!!

✓ -Radiation is simply the emission of energy in different forms



✓ -The sources of radiation vary from the biggest star to the smallest radioactive nucleus and we are exposed to all of this.

✓ -Radiation can be beneficial, yet it can be very harmful.

WHY SO LAZY?

The ready popcorn bag you throw in the microwave may take less time than having to heat a bowl of popcorn in the oven, but its dangerous effects are much more.

SO WHICH IS IT? TIME? OR YOUR LIFE?

Microwave popcorn bags break down when heated into a substance called perfluorooctanoic (PFOA).

The Environmental Protection Agency has identified PFOA as a “likely carcinogen.” Another study has found an acid that can be extracted from the chemical into humans.”



Unfortunately we couldn't perform the experiment to show the effects of radiation on animal cells, so we decided to represent the results on a plant instead and then create a relationship between how it effects a plant and how it effects a human.



Experiment report.

Objectives:

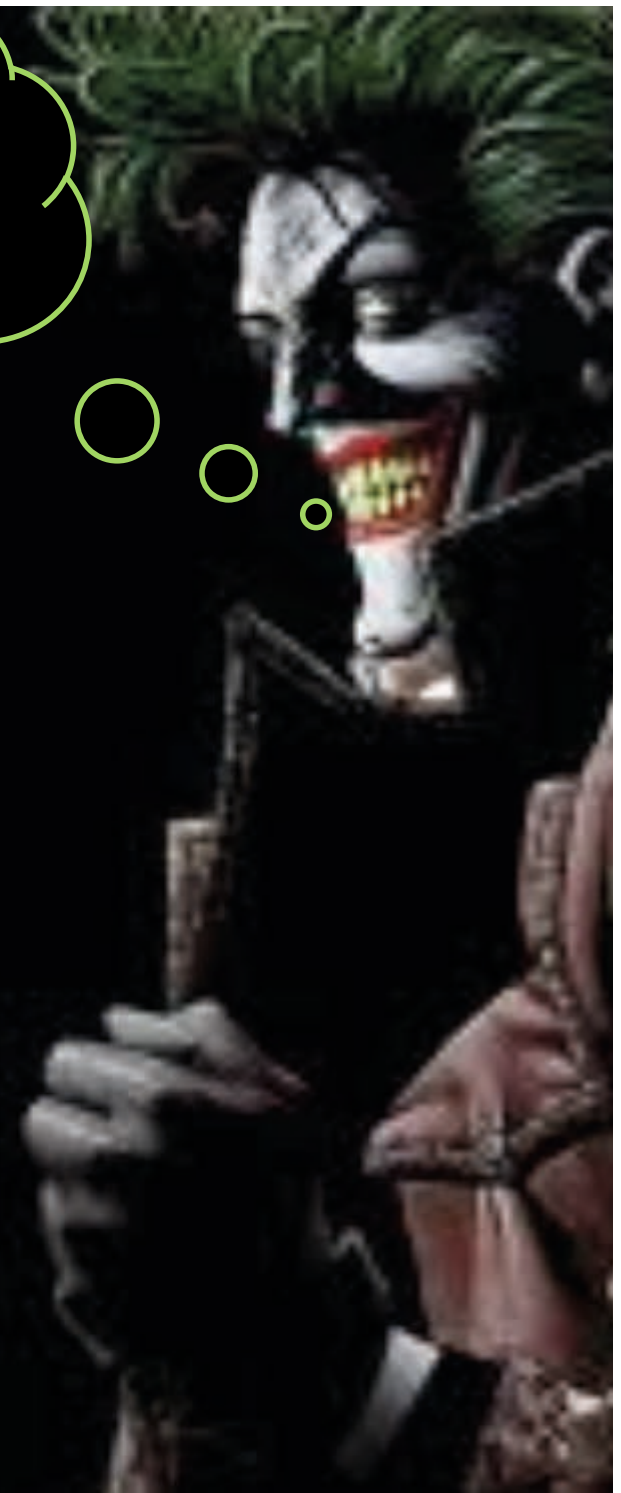
- To observe the difference of growth progression between the plant sample containing radioactive water and the one with normal water
- To understand the change occurring over a range of nine consecutive days.
- To define what the outcome was, and to create a relationship between our experiment's results and how it can effect a human's daily life.



Hypothesis

After a lot of in depth thinking we came to find out our prediction

- Our prediction is that the plant containing the micro waved water will not last and will eventually die.
- We came to this conclusion because we have studied that seeds exposed to high levels of radiation will not germinate and there for this problem can have a major impact on the plants growth.



Materials

✓ Two plants
in pots
containing soil

✓ Tap water
(Room
temperature)

✓ Microwave



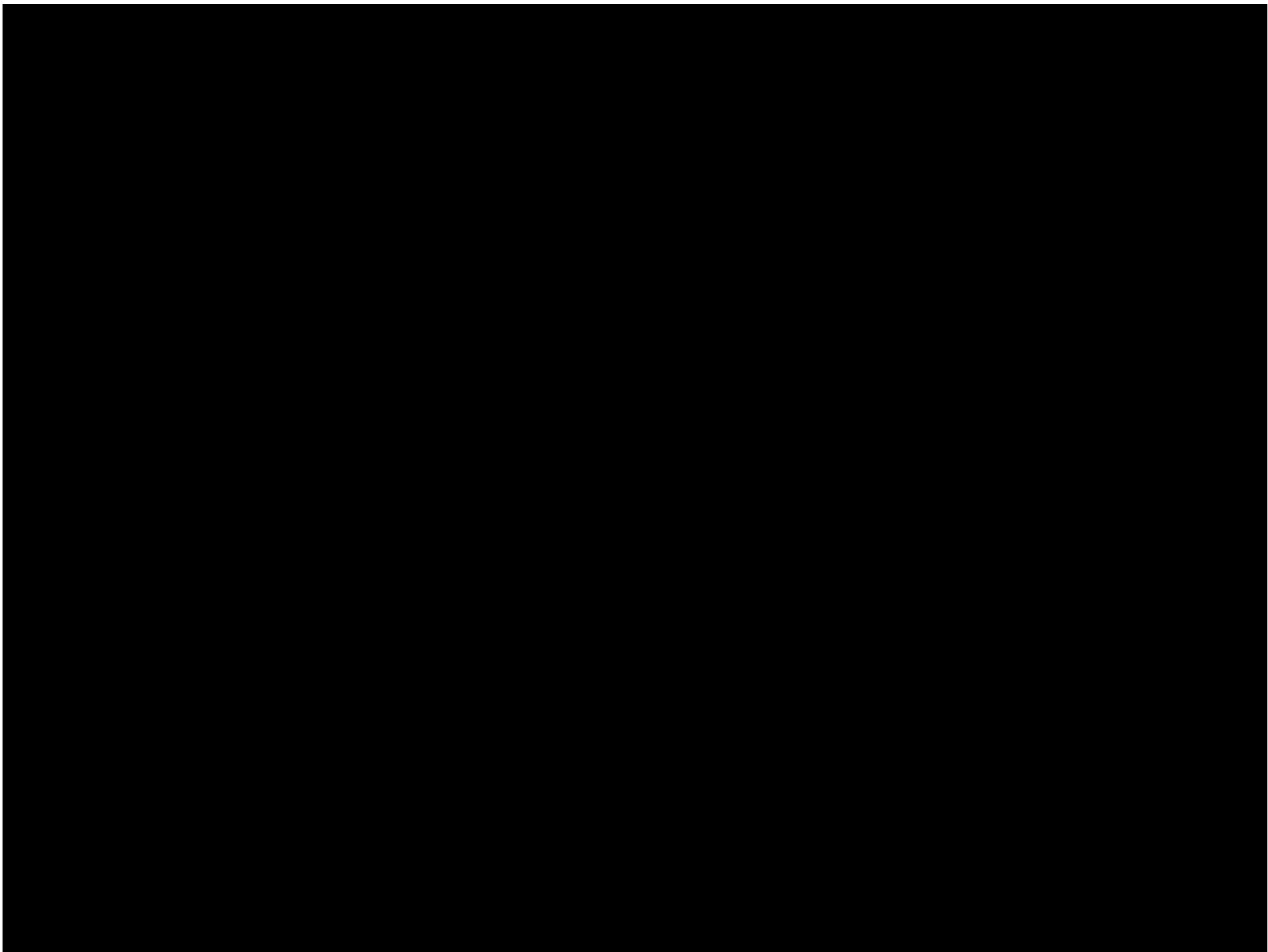
Procedures

- Make sure to have all the materials listed set on a table to be organised
- Next heat the water in a microwave for 30 seconds then leave it to cool it until it reaches room temperature.
- Prepare both plants, and water one plant with the micro waved water.
- Water the other plant with pure water.
- Repeat this procedure daily for 9 days
- Observe the changes and document your observation by taking a picture.



VARIABLES FOR PLANT RADIATION EXPERIMENT

| Dependant | Independent | Controlled |
|-------------------------------------|-------------------------------|------------------------------|
| The length of the plant stem | The treatment of water | Type Of Soil |
| The surface area per leaf | | Plant Species |
| | | Volume of Water |
| | | Intensity of sunlight |
| | | |



Conclusion

- Our hypothesis was correct, radiation can be as deadly as seen to plants, it targets the cells and it disrupts the seeds germination process.
- This can be linked to humans, just like the seeds are effected, our cells are also targeted causing more cancerous cells.
- Therefore we now know that heating up ready made popcorn in the microwave can severely effect us leading to death just like the micro waved water did to the plant.
- Some parents might decide to heat there child's milk in the microwave, well BEWARE. This act can lead to your child's death just like the plant.



Experiment 2

Aim:

- To investigate the harm and negative impact on health caused by waiting too long in the traffic.
- To investigate the different amount of carbon monoxide in a traffic and a non traffic place.

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Apparatus:

- Carbon monoxide meter
- Car

The Silent Killer !!

What is carbon monoxide?

A colourless, odourless gas which makes it hard to detect.

One of the many green house gases.

This is a common hazard that is related to the incomplete burning of natural gasses and carbon-based materials such as wood, coal, and kerosene.



The Effect.

- Carbon monoxide is not only harmful towards the human body but also the environment killing natural habitat, animals and plants as well as polluting the air which causes an increase in global warming.
- In car engines incomplete combustion takes place which results in the formation of carbon monoxide gas, due to the lack of oxygen.

The Effect Of CO in the Human Body.

- In the human body, our circulatory system works together to carry oxygenated blood to different organs in the body, in order to function well.



If too much carbon monoxide is inhaled then the blood will carry less oxygen and more carbon monoxide which will eventually poison and intoxicate many organs in our body. This can lead to death or even many severe chronic diseases.

Hypothesis

We predicted that the concentration of carbon monoxide in a traffic area is higher than a non traffic area, due to the high number of cars releasing carbon monoxide. Therefore we assumed that the results of the high concentrated traffic site is higher than the non traffic



Method

- **Set the carbon monoxide meter on zero (0 ppm).**
- **Measure the concentration of carbon monoxide in a non traffic area by holding the meter for ten minutes. (one car per 5 minutes).**
- **Repeat this three times**
- **Record the readings**
- **Repeat the experiment in a traffic area (highway) by holding the carbon monoxide meter for 5 minutes.**
- **Repeat this three times**
- **Record the reading.**

For both test repeat procedure three times for more reliable readings.



Variables for Carbon Monoxide Experiment

| Dependant | Independent |
|----------------------|-------------------------------|
| Rate of cars passing | Carbon Monoxide concentration |
| | Number Of People |

D

A

T

A



Carbon Monoxide concentration

| Non traffic area (one car /5min.) | High street (East Acton) (10 cars/min.) | Higher traffic area (M4) (30 cars/ min.) |
|--------------------------------------|---|---|
|--------------------------------------|---|---|

| | | |
|----------|----------|----------|
| 0.05 ppm | 0.35 ppm | 0.79 ppm |
|----------|----------|----------|

| | | |
|----------|----------|----------|
| 0.06 ppm | 0.43 ppm | 0.80 ppm |
|----------|----------|----------|

| | | |
|----------|----------|----------|
| 0.08 ppm | 0.45 ppm | 0.83 ppm |
|----------|----------|----------|

Average

0.063 ppm

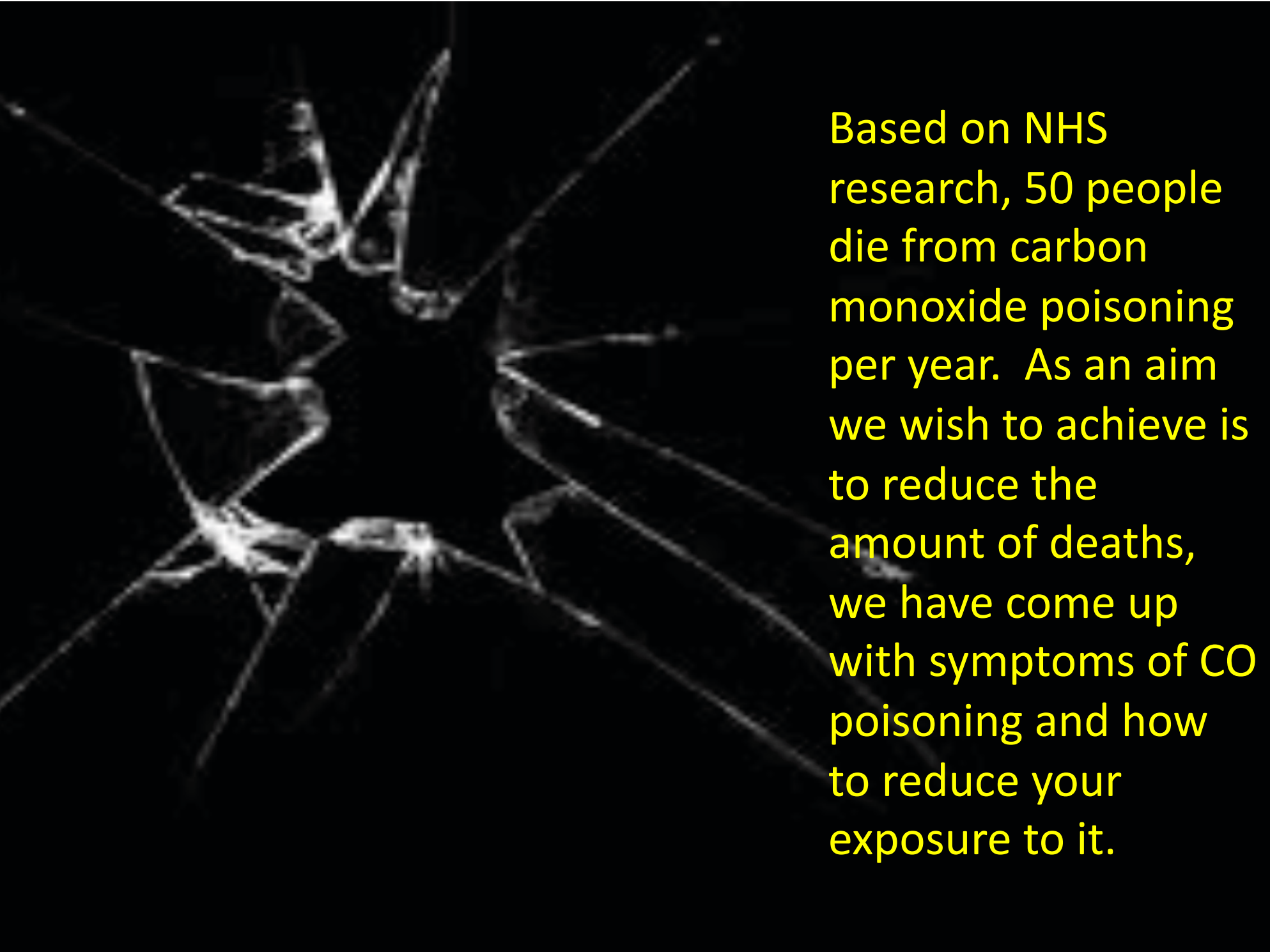
0.41 ppm

0.81 ppm

Average data



- *Non traffic area (one car)*
- *high street (East Acton)*
- *Higher traffic area (M4)*

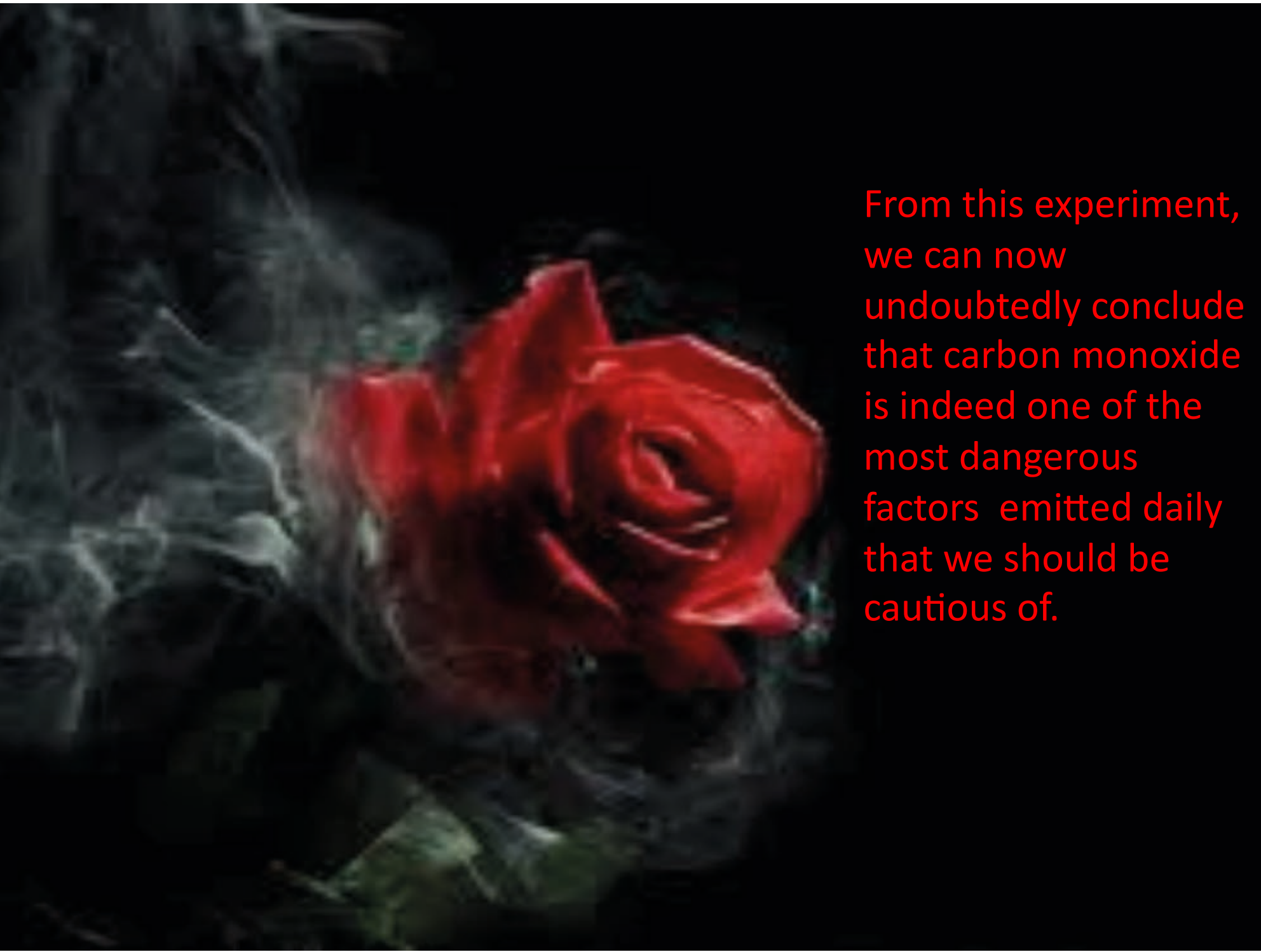


Based on NHS research, 50 people die from carbon monoxide poisoning per year. As an aim we wish to achieve is to reduce the amount of deaths, we have come up with symptoms of CO poisoning and how to reduce your exposure to it.

SYMPTOMS:

A headache is the most common symptom of mild carbon monoxide poisoning. Other symptoms include:

- dizziness and nausea (feeling sick)
- vomiting (being sick)
- tiredness and confusion
- stomach pain
- shortness of breath and difficulty breathing



From this experiment,
we can now
undoubtedly conclude
that carbon monoxide
is indeed one of the
most dangerous
factors emitted daily
that we should be
cautious of.

A dark, atmospheric photograph of a gothic-style interior. The scene is dimly lit, with a warm, reddish glow emanating from a window in the center. The architecture features pointed arches and stone masonry. To the right, a large stone cross is visible. The overall mood is somber and mysterious.

**Thank you
for
listening!!**