



MEDICINE, CONFLICT AND EMERGENCIES



History, Literacy & Science



11 - 16 year olds



30 minutes - 4 hours

The National Memorial Arboretum is home to many memorials recognising those who serve in the emergency services and medical units within the British Armed Forces. In times of peace and conflict, medical teams go above and beyond to protect their country and the people who call it home.

In times of conflict, scientists and medical professionals often have to develop new treatments and medicines, which are then used in civilian hospitals. This activity looks at the major medical treatments and processes developed in times of conflict or national emergencies, and how they went on to benefit the Nation.

Radioactivity and X-Rays

Marie Curie was a Nobel Prize-winning scientist. Her research led to the development of x-rays. During the First World War she drove ambulances equipped with x-ray equipment to the front lines.

ACTIVITY:

Do some research into Marie Curie. Write three questions that you would ask her and discuss why.

HINT: Visit: www.mariecurie.org.uk/who/our-history/marie-curie-the-scientist

1. _____

2. _____

3. _____

ACTIVITY:

Today, radiographers use x-ray technology and other similar medical processes. Using the internet, do some research into the work that radiographers do.

HINT: Visit: www.healthcareers.nhs.uk/explore-roles/allied-health-professionals/roles-allied-health-professions/diagnostic-radiographer

Some questions you might ask:

- How did you become a scientist?
- What is an x-ray?
- What does a day at work look like?
- What special clothes do you wear to work?



National Memorial Arboretum
Staffordshire DE13 7AR
www.thenma.org.uk



Charity No. 1043992

Radioactivity and X-Rays

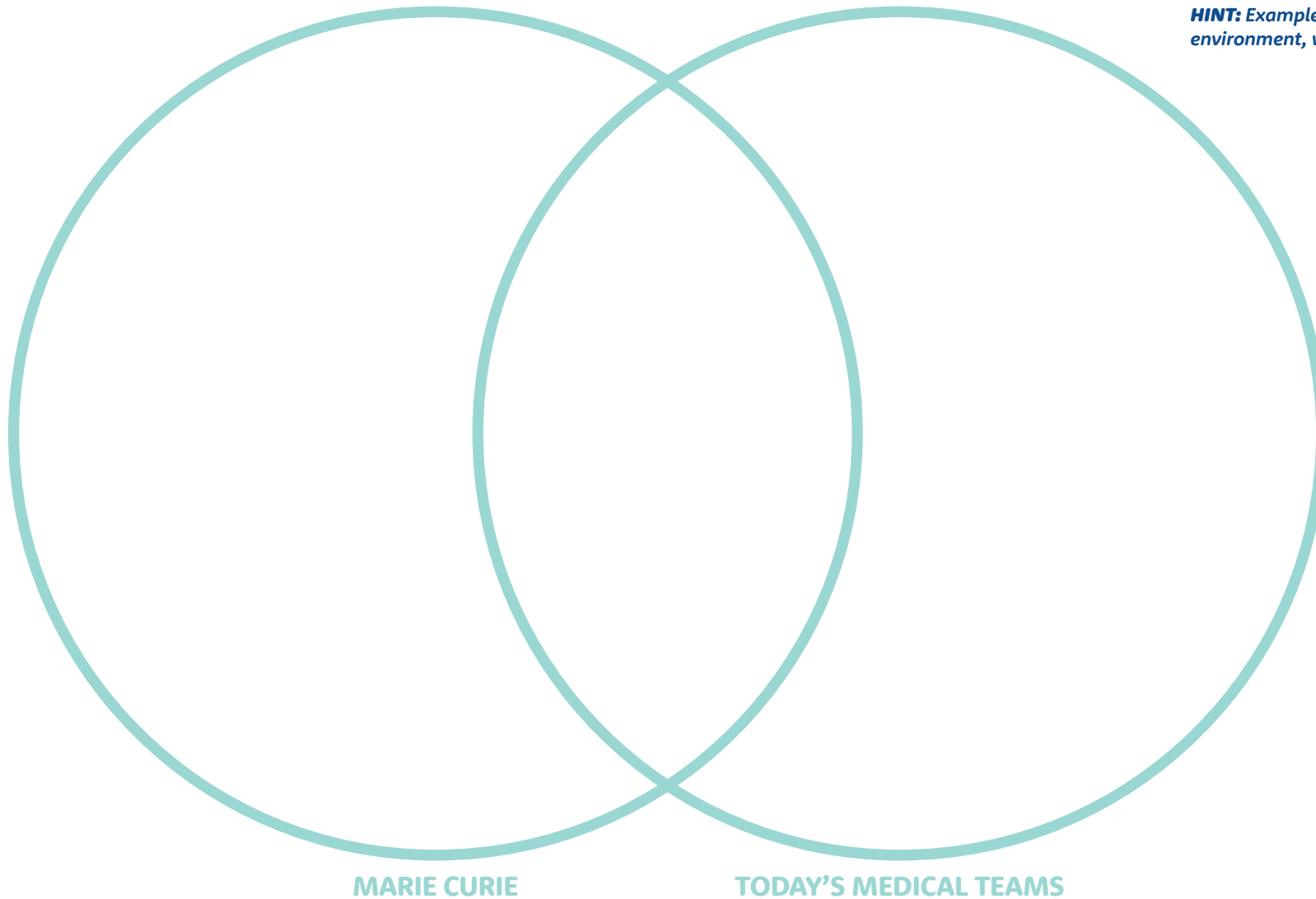
ACTIVITY:

Use the Venn diagram to list the important work done by Marie Curie and the medical teams of today. The finished diagram will identify similarities and differences.

ACTIVITY:

Discuss the key factors that change the health of a population.

HINT: Examples could be war, technology, environment, weather conditions.



Triage

The Royal Army Medical Corps (RAMC) was set up to care for British soldiers. It used a special system called 'triage' where sick soldiers were put into one of three possible groups:

Slightly injured

Soldiers who did not need much care. They were quickly given treatment wherever they were and then carried on fighting.

Need hospital

Soldiers who needed to be transported for treatment. They were taken to the nearest hospital base.

Beyond help

Soldiers who did not have much chance of getting better. They were made comfortable but little treatment was given as others had priority.

ACTIVITY:

You are an army medic. Make a list, or draw injuries you might see.

Which triage group would you put them in?

HINT: You might use these examples:

- An airman with a broken leg.
- A soldier with a gunshot wound.
- A sailor with a scald or burn.

LIST

	Slightly injured	Need hospital	Beyond help
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DRAW

Stainless Steel

On the eve of the First World War, Harry Brearley discovered stainless steel. He had been developing the alloy for two years while working at a company which supplied weapons and machinery for the War Department. Soon, stainless steel was used to make equipment used in the war, including weapons and medical instruments.

ACTIVITY:

What are the properties of stainless steel?

ACTIVITY:

Why is stainless steel a good material for use in medical equipment?

ACTIVITY:

Stainless steel is also used to make household items. Look around your house to find three objects made from stainless steel:

1. _____ 2. _____ 3. _____

Definition: An alloy is a mixture of two or more elements, where at least one element is a metal. Many alloys are mixtures of two or more metals.

ACTIVITY:

Stainless steel is an alloy made from Iron, Chromium and other elements. In the table below, identify three different alloys and their properties.

ALLOY	PROPERTIES

Covid-19

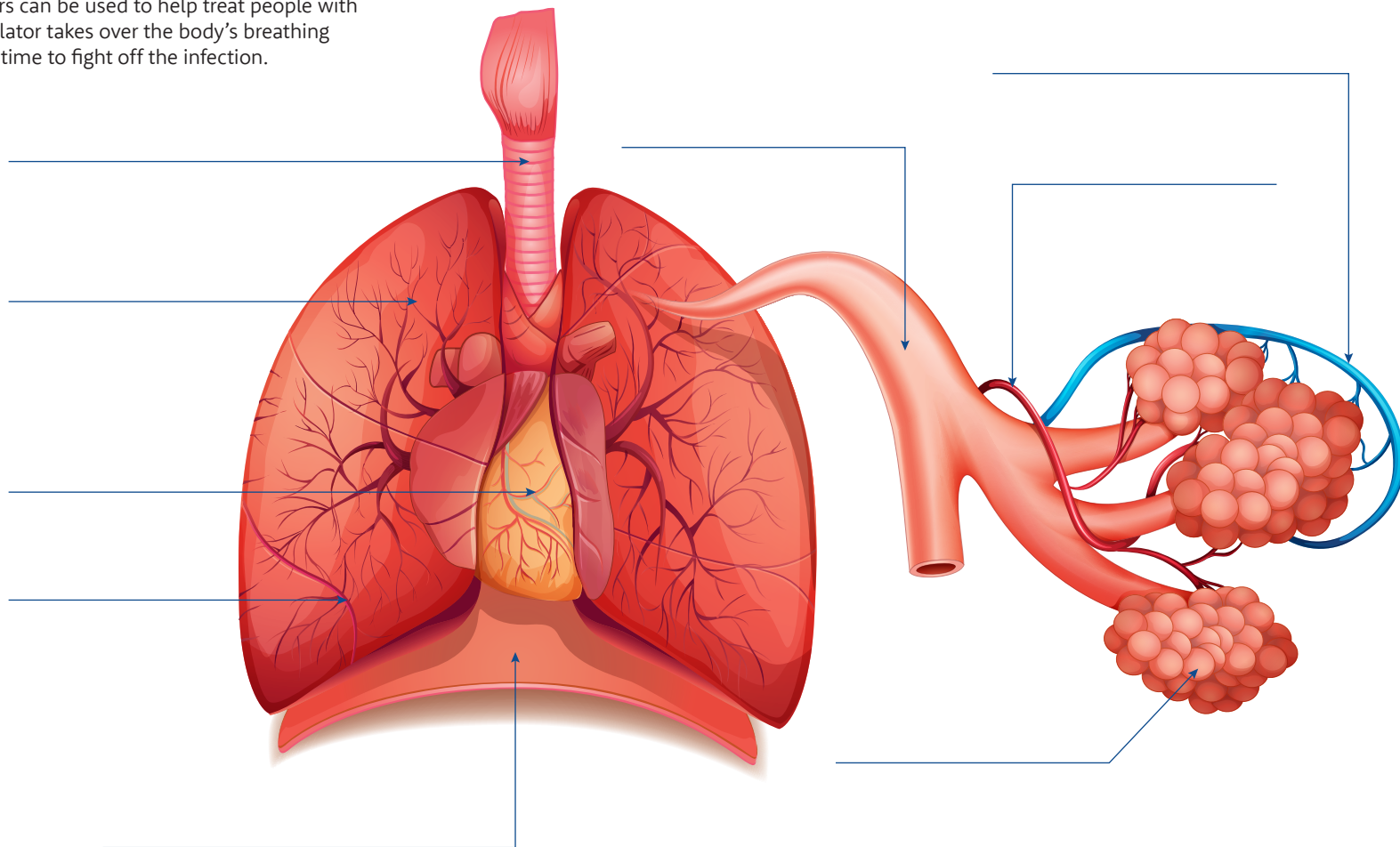
The outbreak of Covid-19 is a national emergency and members of the emergency services are going above and beyond in service of their country. Doctors, nurses and other medical professionals use a range of equipment when treating people with Covid-19. Although this equipment was used before the outbreak, it is needed in greater quantities than it previously was. Here, you will take a look at some of the equipment needed and why.

Covid-19 can affect people's lungs and cause severe breathing difficulties. Ventilators can be used to help treat people with the infection. A ventilator takes over the body's breathing function and gives it time to fight off the infection.

ACTIVITY:

Label the parts of the human respiratory system on the diagram below.

HINT: Visit: www.bbc.co.uk/bitesize/guides/z6h4jxs/revision/1



Covid-19

People working in the emergency services, including NHS staff, wear personal protective equipment (PPE) to protect themselves and stop the virus spreading. Covid-19 is spread when an infected person breathes out small droplets. These droplets are then inhaled by another person or land on hard surfaces where other people can come into contact with them.

ACTIVITY:

Using your knowledge of how the virus is spread, explain how PPE and washing your hands can prevent the spread of the virus:

1. _____
2. _____
3. _____

ACTIVITY:

Why is it important that we protect members of our emergency services by using PPE?

ACTIVITY:

How could the country thank members of the emergency services for their work during the Covid-19 outbreak?

FURTHER THINGS TO DO:

Share your photos and findings with us.



Come to visit the National Memorial Arboretum to discover more about some of the medicine memorials linked to your work.