



A G.A.T.E.WAYS JOURNEY

For gifted Year 5 and 6 children with a

love of science and problem solving

'PANDEMIC ALERT.....'

THE RACE TO FIND A CURE FOR LEONORA!!!

G.A.T.E.WAYS is an independent organization offering challenging and enriching activities and experiences to develop and extend highly able children. This *JOURNEY* for both girls and boys will run over four sessions.

A new hypothetical virus, called Leonora has “jumped” from the macaque to infect humans in Peru, creating an epidemic there. Infected people have a 50% chance of dying, another 20% will be severely disabled, and 30% have a chance of survival.

You, and a team of scientists and doctors, have been given the challenge to contain the spread of the virus, and to find a cure for this deadly disease. Your journey will take you to Peru, where you'll meet virus superstars, become a doctor in ER for a day, and learn laboratory techniques in your quest to find a cure. Finally, you will become a delegate at the Leonora Emergency World Congress at which political leaders, humanitarians, top scientists and doctors will try to decide how to control what has now become a pandemic. At the conclusion of the congress, there is breaking news that will turn the congress on its head! How do we cope with these findings, and how does the human race move forward after such a catastrophe?

Session 1: Understanding The Leonora Epidemic

Come on a journey to Peru, where we investigate how the Leonora virus has spread from monkeys to humans. It is a devastating disease that has no cure or treatment, and we are in charge of saving the population of Peru, and perhaps the world as the virus is spreading fast! On our journey of discovery, we will encounter virus superstars, and learn about what makes them so (in)famous. We will also travel back in time to learn about historical epidemics, such as the plague, and how these were controlled. We finish today's session by designing a public health campaign to educate the local population about Leonora and how to minimise spreading the infection.

Session 2: Doctor for a day

Put on your lab coats as we become doctors in a hospital emergency department for a day! Six new patients have entered ER today with suspected Leonora virus infection. We analyse their symptoms to prioritise who is most likely to be infected, and we'll learn how hospitals deal with genuine virus outbreaks, such as Ebola. We will investigate different laboratory tests performed to diagnose infections, and will even purify some DNA of our own!

Session 3: Finding a cure

As Leonora virus is spreading rapidly across South America, what are our options for controlling the epidemic? We will examine current medical treatments, and learn how vaccines work. We will meet the key players in our immune system, which are so important for defeating virus infection, and use a microscope to study cells. In order to fast-track treatment at the frontline of Leonora infection, how can scientists and doctors speed up the development of new drug treatments?

Session 4: The Leonora Emergency World Congress

Despite 2 months of intense study, the Leonora virus has spread throughout South and Central America, and into Mexico in North America. There is great concern that we may now be looking at a possible global pandemic. The virus is about to reach the United States, and an emergency world congress involving leaders of countries, humanitarians, and top scientists and doctors has been called. You will be part of a group delegation representing one of these 'interest' groups. With your fellow delegates you will develop a report to present to the Congress, discussing how to control and deal with the pandemic. You will need to consider many things, for example how you might place restrictions on international travel. At the conclusion of the congress, there is breaking news that will turn the congress on its head! How do we cope with these findings? How does the human race move forward after such a catastrophe?

Requirements:

Writing paper (an exercise book would be ideal); well stocked pencil case which includes coloured pencils or textas, scissors and a glue stick. Also bring a small photo of yourself to Session 1, and a stamped, self-addressed DL envelope. In Sessions 2 and 3 you will require an old t-shirt/art smock (ie. lab coat). Come along with a snack each week (no nuts please). Small homework tasks may be set between sessions.

About the Presenter

Joanne Davis developed a fascination for science at a young age, getting her first microscope at 6 years old! As a research scientist with a PhD in Immunology and over 15 years' experience in the lab, Joanne is devoted to looking for a cure for cancer, and teaching. Joanne has participated in the Scientist in Schools program (CSIRO), and run the Eureka "curious science" program for G.A.T.E.WAYS. She has a passion for experimenting daily, whether it's in the lab, or in the backyard creating potions!

