

## Is Science Enough?

Consider the following situations. They all involve decisions that you might have to make in the future. Would an understanding of the science involved be enough to help you make the decision in each case?

- Your doctor advises you to have your child immunised from an infectious disease that, if they caught it, would make them very poorly. However, there is a 1 in a 1000 chance that the child could suffer some bad side effects from the vaccine. Will you allow the process?
- The government says that due to the energy crisis and the threat of global warming, it is going to invest heavily in nuclear power. They are going to have a referendum (public vote) to approve or reject the idea. Which way will you vote?
- You are visiting a developing country as part of a team that is trying to help them with their hunger and disease problems. There is an ideal site for a solar farm that will generate electricity for fridges (to keep drugs cool) and for water pumping and purification. There are other sites, but they are either too far from the village or there are too many trees. Unfortunately, the ideal site has great cultural / religious significance for the villagers (perhaps it is a burial ground). The group leaders wish to build the solar farm there anyway. What is your view?
- You are discussing art and music with a friend. They point out that every colour that you see on a painting can be related to wavelengths of light. The eye turns the light into electrical signals sent to the brain. Equally, each note in a piece of music is carried by sound waves in the air. The ear converts those waves into electrical signals that travel along nerve paths to the brain. Your friend claims that physics tells you all that there is to know about art and music. Do you agree? Is there anything more to the experience of seeing a painting or listening to music that is not covered by the physics (or any other science for that matter)? Is it important to understand physics in order to study art and music?