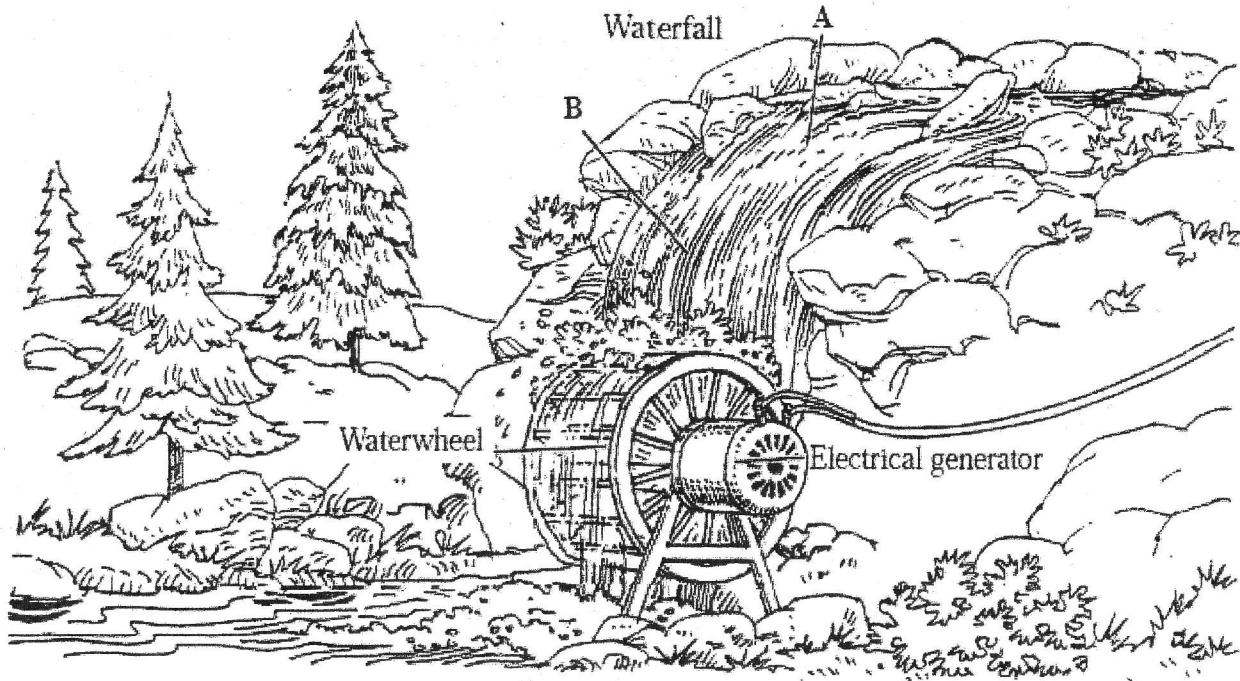


OPEN RESPONSE #3: ENERGY & MOMENTUM

In the diagram below, the falling water turns the waterwheel. The turning waterwheel generates electricity.



The water moves slowly at point A and then falls rapidly past point B.

- Describe the changes in kinetic and gravitational potential energy of the water as it travels from point A to point B.
- Explain why not all of the energy of the moving water available at point A is captured by the waterwheel to generate electricity.
- Describe **two** ways the system can be changed so that more energy from the falling water is converted into electrical energy.