

Manipulation n°2: How does a hydroelectric plant works?

→ Purpose: Use the equipment at your disposal in order to understand the operation of a hydropower plant.

→ Material: Water turbine, alternator , wires connection, alligator clips and power level indicator .

Follow→ the instructions and answer the question in sentences1



1. Connect the power level indicator to the two terminals of the alternator.

2. To the turbine under the tap at about 10 cm and open the valve very slightly to rotate the turbine.

(Slowly open the valve and Prevent water splashes out of the sink ! MANUPULER CAREFULLY) Providing leadership to the turbine start to turn for help .

How many red lights are turned on?

3. When the turbine turns, increase the water flow gently turning: how many red LED are switched on and how does the turbine turn?

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4. When the valve opens more what can be said about the amount of water coming out?

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5. Adjust the valve opening so as to have three LED switched on. Once this is done, increase the distance gate turbine carefully. How many red LED are switched on and how does the turbine turn?

6 . Why does turbine rotates faster in this experiment?

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7 . Conclusion: What are the ways to further top rotate the turbine (see questions 4, 5) ?



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