

SCIENCE OF THE SNOWY SCHEME

with Kirsten Banks

YOU NEED ENERGY TO MAKE ENERGY

Multiple choice - research question

1

Kirsten said one of the fundamental laws of the universe was “energy can not be created or destroyed”. What law was she referring to?

CIRCLE ANSWER

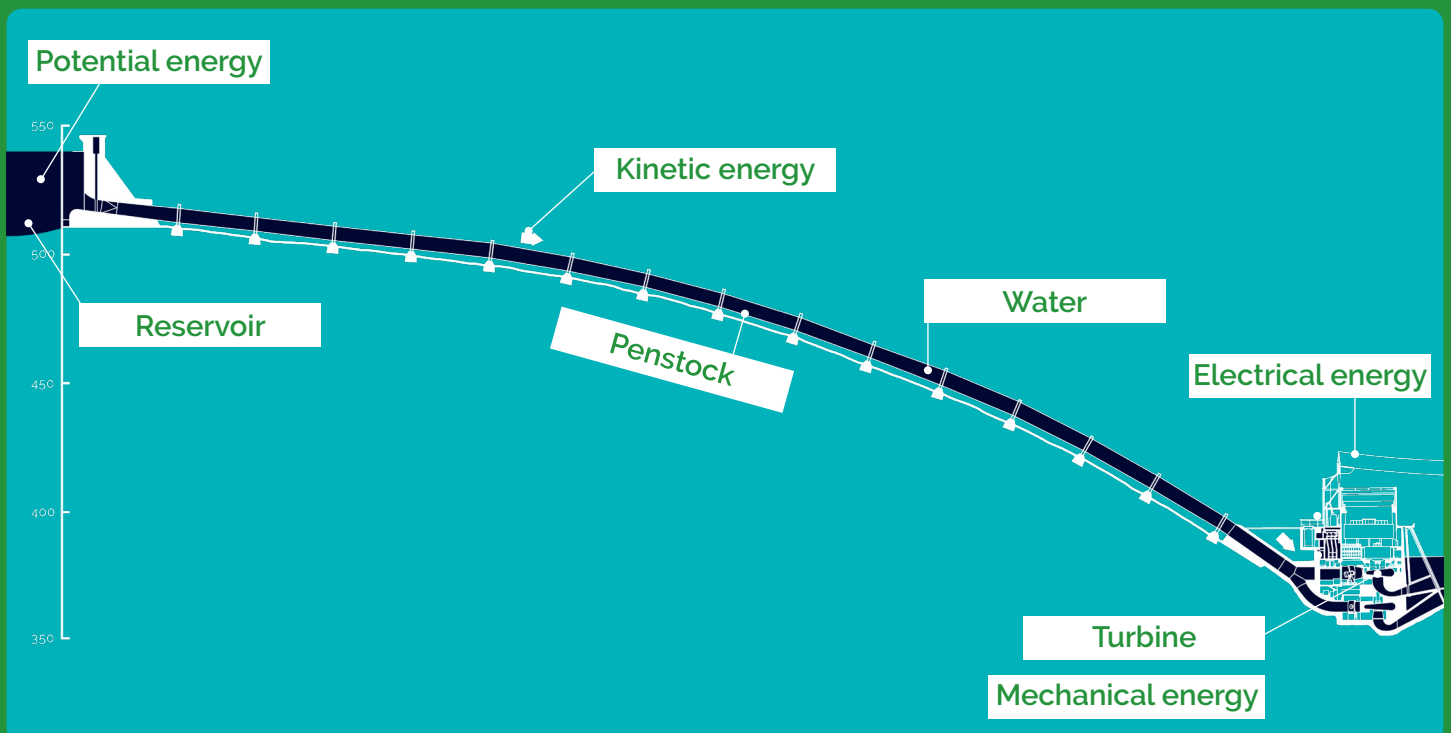
The law of conservation of energy

The law of school

The law of environment

Label the diagram using the word bank below

Potential energy | Water | Reservoir | Kinetic energy | Electrical energy |
Mechanical energy | Turbine | Penstock



Multiple choice

1

What spins the turbine?

CIRCLE ANSWER

Concrete

Water

Electricity

2

Water stored in the reservoirs is what kind of energy?

CIRCLE ANSWER

Kinetic

Mechanical

Potential

3

What is the name of the pipe the water flows through?

CIRCLE ANSWER

Penstock

Main Inlet Valve

Reservoir

Complete the sentences and questions

Circle or highlight the correct answer

1. What do the letters MIV stand for? **Main Inlet Valve** | Main Inlet Volume
2. What does the MIV do when opened? **Allows water to enter the turbine** | sucks water out of the turbine
3. Is the water entering the turbine regulated to rotate the shaft? **Yes** | No
4. What are the two main parts of the generator? **Rotor and stator** | shaft and stator
5. The rotor is connected to the **shaft** | MIV which is connected to the **turbine** | generator

How is electricity generated?

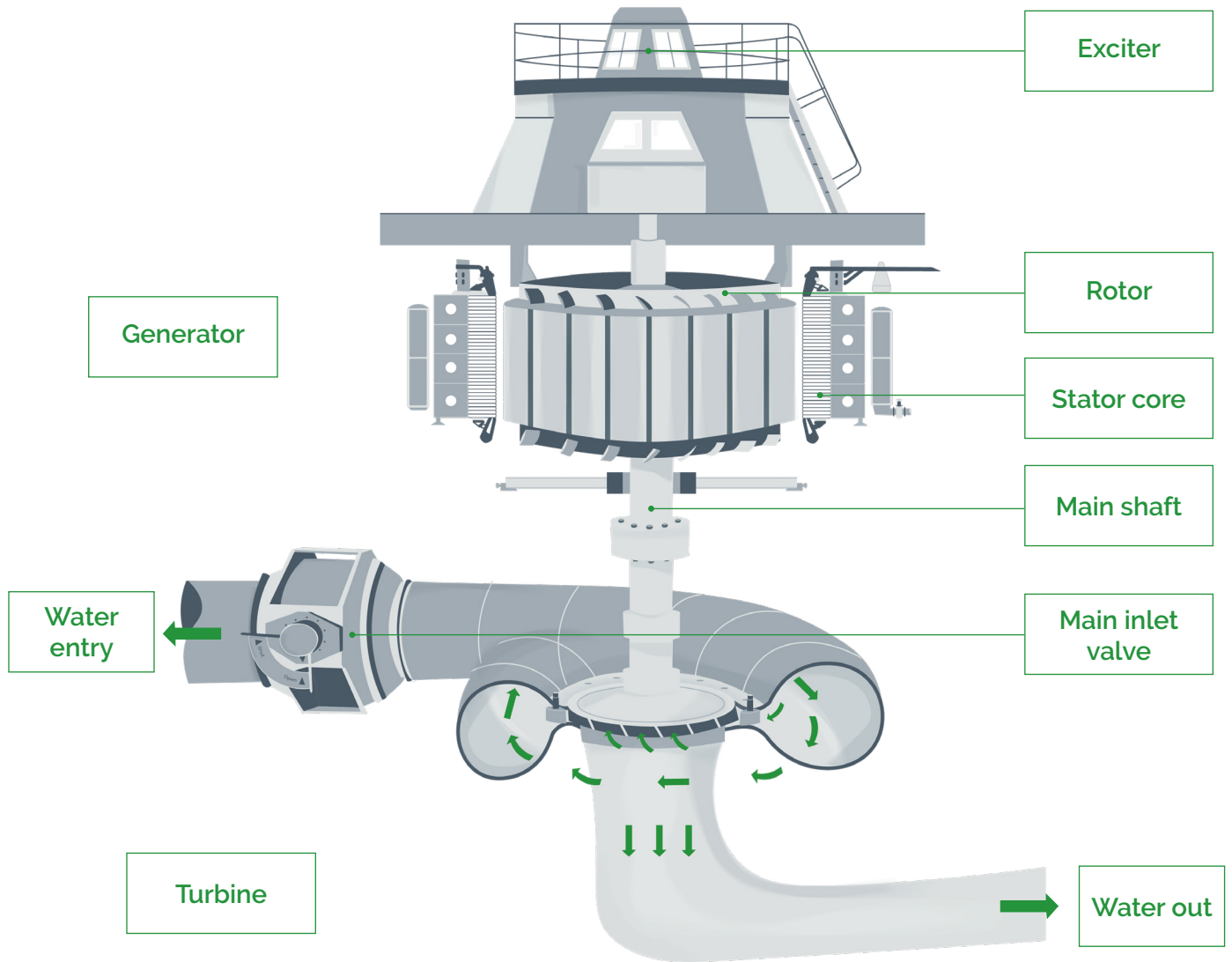
Use the word bank below to complete the description

grid | cuts | magnetic | electromagnets | stator | conductors | strength | electricity

The rotor has a series of **electromagnets** which can vary the **strength** of the **magnetic** field as it rotates. The magnetic field **cuts** all the **conductors** on the **stator**. Through this process we are able to produce **electricity** and export it out to the **grid**.

Label the diagram using the word bank below

Stator core | Rotor | Generator | Turbine | Main shaft | Water entry | Water out | Exciter | Main inlet valve



Scan for the turbine fact sheet and to find more relevant information

