

To: Subject Advisors, Teachers, Parents and Caregivers of NS Tech Learners

Topic: Understanding electricity production

Message Objective(s):

- -To explore the different sources of energy for electricity production
- -To discuss how electricity is distributed to the homes

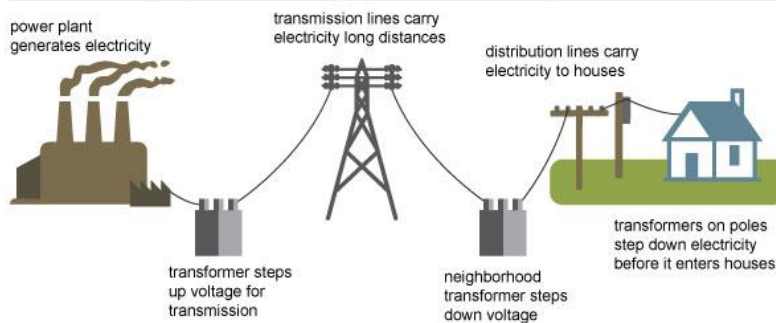
As Term 3 comes to a close which was mainly comprised of the topic on Energy and Change, it is important to revisit the aspects on energy and how they relate to our day to day living. Many of our learners will be resting at home and the issue of electricity production will surely visit their minds.

1. Where does this electricity come from?
2. How is it produced?
3. What is used in producing electricity?
4. How does get to our homes?
5. What happens during load shedding and power outages?

Mains electricity refers to the electricity that we make use of in the homes. Electricity is produced in power stations and electricity from the power station is transferred in a circuit to our homes and back to the power station. The power station needs a source of energy. The source of energy in South Africa is mainly **coal** and running water stored in large dams. The possibility of **nuclear power** generation is still a subject of debate in South Africa. The potential energy stored in the energy source converted to electrical energy.

The electricity produced is transferred through **pylons and large cables** to our homes. **Transformers** are used in regulating the amount of electricity being transferred. The diagram below further illustrates the movement of electricity from production to consumption

Electricity generation, transmission, and distribution



Source: Adapted from National Energy Education Development Project (public domain)

To enable learners to further understand this topic it is advised to take learners to local distribution sub stations if they are accessible. Furthermore learners can be assisted in making models of electricity generation, transmission and distribution using the diagram above.

Thank you.

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Reference: <https://www.eia.gov/energyexplained/electricity/delivery-to-consumers.php>