Lesson plan/note for week 5 ending, 10th February,2023

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| Term | 2nd term |
| Week | Week 5 |
| Date | 6th/7th/8th February, 2023. |
| Class | JSS 2 |
| Subject | Basic Science |
| Topic | Work, Energy and Power |
| Sub-topic | Changing forms of energy; calculation involving energy (energy transfer when work is done) |
| Period | 9th/7th/9th |
| Time | 2:00-2:30pm/12:30-1:00 pm/2:00-2:30pm. |
| Duration | 30 minutes each |
| Number in class | Twelve |
| Average age | 12 years |
| Sex | Mixed |
| Specific Objectives | By the end of the lesson, the students should be able to:  1.Explain changing forms of wealth energy.  2.Illustrate energy transfer that occur when work is done  3.Explain the relationship between work and energy.  Calculate energy transfer when work is done. |
| Rationale | To enable students understand and be able to explain and illustrate changing forms of energy as well as the calculations involved. |
| Previous Knowledge | Students have learnt potential and kinetic energy. |
| Instructional Resources | Pictures from the referenced text books. |
| Reference Material | Excellence in Basic Science and Technology for JSS 2 by Olushola Felix Bello. |

Lesson Development

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| Steps | Teacher’s Activities | Students’ Activities | Learning Point |
| Introduction | Teacher asks students to illustrate potential and kinetic energy | Students respond to teacher by illustrating potential and kinetic energy | To arouse students’ interest |
| Step I | Teacher explains the changing forms of energy: Potential energy easily becomes kinetic energy and the other way around. | Students listen to teacher’s explanation and ask questions where necessary. | To keep students focus on the lesson. |
| Step II | Teacher guides students to illustrate the energy transfer explained by the teacher. | Students illustrate the energy transfer | To encourage critical thinking |
| Step III | Teacher explains the relationship between work and energy transfer: When work is done, energy is transferred from one object or place to another. | Students pay attention to teacher’s explanation | To keep students focus on the lesson. |
| Step IV | Teacher guides students to solve the calculation on energy transfer when work is done. | Students participate in the class activity | To encourage critical thinking |
| Board Summary | Work, Energy and Power  Changing forms of energy (Energy transfer when work is done)  Potential energy easily becomes kinetic energy and vice versa. A falling ball is one example of this change in energy:  1.When the ball is on the table, potential energy is maximum, kinetic energy is zero  2.When the ball is falling, potential energy is decreasing, kinetic energy is increasing  3.As the ball hits the ground, potential energy is zero, kinetic energy is maximum.  Calculations Involving Energy (Energy transferred when work is done)  Energy is the ability to do work. When work is done, energy is transferred from one object or place to another.  --Work done = Force × distance  --Energy= Force ×distance.  That is, work done= Energy transferred= Force ×distance.  Like work, energy is measured in Joules.  Calculations  1.What is the work done and energy transferred by a ball with a mass of 200g that falls from a height of 1m?  Solution  Work done= Energy transferred=Force ×distance  Force=?  Mass=200g to kg  >1000g=1kg  200g= ?  200×1/1000  =0.2kg  Height= distance=1m  Force= mass ×acceleration= 0.2×10  Force=2N  Work done= Energy transferred= Force × distance  =2×1  =2 Joules | Students copy the note. | To serve as a reference point to students. |
| Evaluation | Teacher asks students the following questions:  1.Explain changing forms of energy.  2.Illustrate energy transfer that occur when work is done.  3.Explain the relationship between work and energy transfer.  4.What is the work done and energy transferred by a ball with a mass of 200g that falls from a height of 2m? | Students respond to teacher’s questions. | To ascertain students’ understanding of the lesson. |
| Conclusion | Teacher assesses students and make corrections where necessary | Students take correction | For a better understanding. |
| Assignment | What is the work done and energy transferred by a stone with a mass of 2kg that falls from a height of 0.5m? | Students write down the assignment | To engage students at home. |