NAME: COURSE: FVS PHYSICS A

TEACHER : MODULE 4: JOULE’S JUNGLE GUIDED NOTES

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| Lesson | Essential Questions | Your notes |
| 4.01 Forms of Energy | What is energy? What is its SI Unit? |  |
|  | What is potential energy? |  |
|  | What is kinetic energy? |  |
|  | Christy just got a new car for her 16th birthday. If she is traveling through town at a constant speed of 14.0 m/s, and the kinetic energy of the car is 8.24 E4 J, what is the mass of the car and contents? |  |
|  | What is the gravitational potential energy of an object of weight 24 N at a height of 3.2 m from the ground? |  |
|  | What does the law of conservation of energy state? |  |
| 4.02 | Define work. Give its SI unit. |  |
|  | Define Power. Give its SI unit. |  |
|  | Oliver lifts a carton of books that is 25 kg from the floor to a shelf that is 1.2 m high. Katrina lifts a carton of books that is 26 kg to a lower shelf that is at a height of 0.8 m from the floor. It takes Oliver 1.2 min to do that work while Katrina does it 0.8 min. Who does more work? Who uses more power? |  |
| 4.03 | What is a conservative force? Give examples. |  |
|  | What is a non-conservative force? Give examples. |  |
|  | Explain the law of conservation of mechanical energy. Write the equation. |  |
|  | If there are non-conservative forces, how would you calculate the energy lost as heat? |  |
|  | What is Hooke’s law? |  |
|  | What is elastic potential energy? |  |
| 4.04 | Distinguish between closed, open and isolated systems. |  |
|  | Identify 5 situations of energy transformation in everyday life highlighting the types of energy transformation. |  |