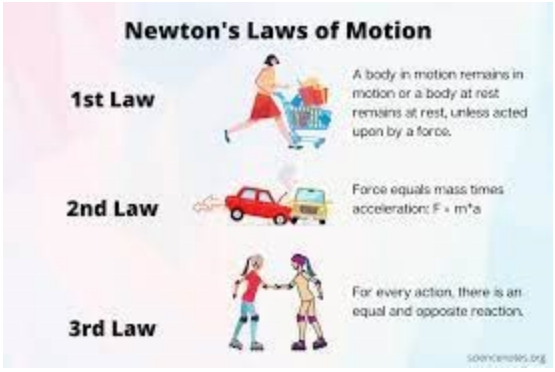
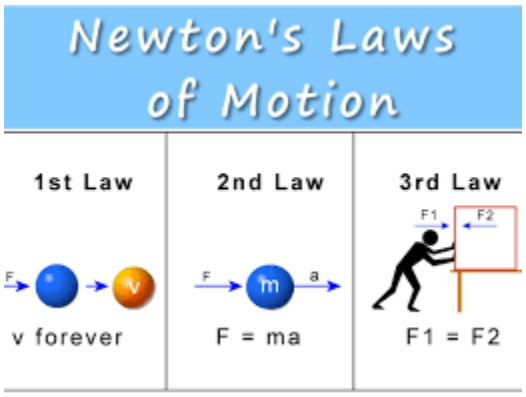
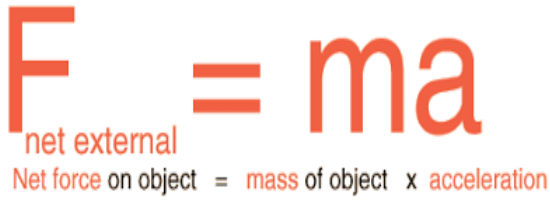
or 0248043888
https://www.TeachersAvenue.net
https://TrendingGhana.net
https://www.mcgregorinriis.com

BASIC 7

WEEKLY LESSON PLAN – WEEK 4

Strand:	Forces and Energy		**Sub-Strand:**	Force & Motion	
Content Standard:	B7.4.4.1Examine Newton's First Law of motion and understand its application to life B7.4.4.2 Recognize some simple machines, and show understanding of their efficiency in doing work				
Indicator (s)	B7.4.4.1.1 State and explain Newton's First Law of motion B7.4.4.1.2 Examine the application of Newton's First Law of motion in life B7.4.4.2.1 Identify simple machines B7.4.4.2.2 Describe the types and functions of lever B7.4.4.2.3 Know Work Input, and Output and Efficiency as they apply to machines.		**Performance Indicator:** Learners can describe the functions of a lever.		
Week Ending					
Class	B.S.7	**Class Size:**		**Duration:**	
Subject	Science				
Reference	Science Curriculum, Teachers Resource Pack, Learners Resource Pack.				
Teaching / Learning Resources	Pictures, Video, Charts, Power point Presentation.		**Core Competencies:**	• Digital Literacy • Critical Thinking and Problem Solving • Communication and Collaboration.	
DAY/DATE	**PHASE 1 : STARTER**	**PHASE 2: MAIN**			**PHASE 3: REFLECTION**

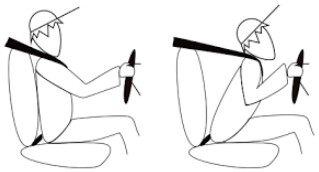
MONDAY	Learners brainstorm to explain the meaning of Motion.	1. Discuss with Learners Newton's Law of Motion. 2. Assist Learners to apply the Formula for calculating Newton's First law of motion. 3. Discuss with Learners the Formula for calculating the second and the third laws of Motion. 4. Using a Power Point Presentation, explain how to apply Newton's second Law of Motion in everyday life. 5. Assist Learners to give examples of Newton's second Law of Motion in their everyday lives.    **Equation of Newton's second Law of Motion;**	Learners in small groups to practice applying examples Newton Law of Motion.

The equation for Newton's second law is:

$$\vec{a} = \frac{\Sigma \vec{F}}{m} = \frac{\vec{F}_{\text{net}}}{m}$$

Examples of Newton's First Law of Motion in Everyday life;

6. Brakes applied by a Bus Driver Abruptly



7. An Object Placed on a Plane Surface
8. Marathoner Running beyond Finish Line
9. A Ball Rolling on the Ground
10. An Object Thrown in Outer Space

Applying Newton's Second Law Of Motion in everyday life;

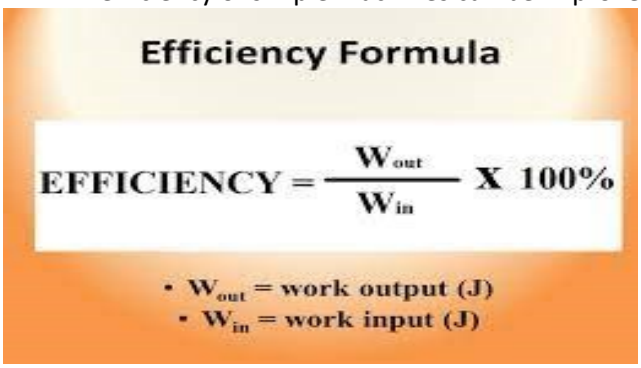
- We always see the applications of Newton's second law of motion in daily life when we try to move an object, like stopping a moving ball rolling on the ground, or pushing a ball to get it to move.
- Reducing the weight of racing cars to increase their speed.
- Push the cart

It is easier to push an empty cart in a supermarket than to push a loaded cart. More mass requires more power for acceleration.

- Two people walking

Of the two walking people, if one is heavier than the other, the one who weighs the heaviest walks slower because the acceleration of the one who weighs the lighter is more.

THURSDAY	Assist Learners to explain a Simple Machine.	1. Discuss with Learners examples of Simple Machines. 2. Learners brainstorm to explain the use of each Simple Machines mentioned. 3. Discuss the 6 types of Simple Machines with the Learners. 4. Assist Learners to state examples of each type of Simple Machine. 5. Assist Learners to identify the types of Lever. 6. Discuss the general functions of the types of Lever. **Examples of Simple Machines;** 7. Norias. . 8. Water pumps. 9. Cranes 10. Slide. 11. Up and down. 12. Wheelbarrow. 13. Gear. 14. Turnstile. 15. Axe. 16. Pair of scissors. **Types of Simple Machine and Examples;** 17. Pulley: blinds, garage doors, flag poles. 18. Lever: see saw, pry bar, lever action door latches. 19. Wedge: scissors, screw ,a knife. 20. Wheel and axle: office chairs, carts, wheeled carry-on luggage and toy cars. 21. Screw  22. Inclined Plane.	Learners in small groups to classify Levers into First, Second and Third classes. **Exercise;** 1. State 5 examples of a simple machine 2. Write 5 types of simple machines.

FRIDAY	Learners are to guided to explain the principles of the classes of Lever.	1. Assist Learners to differentiate between Work input, Work Output and Efficiency 2. Learners to explain efficiency of a machine as the ratio of work output to work input expressed as a percentage. 3. Discuss with Learners on the concept of efficiency of a machine. 4. Learners in small groups to describe how efficiency of simple machines can be improved .  Work input is defined as the effort force multiplied by the distance across which the force is exerted to a machine. Work output is defined as the resistance force multiplied by the distance over which the force is applied. The work output of an ideal machine is equal to the work input, i.e. efficiency. How do you calculate work input and work output? The work efficiency formula is **efficiency = output / input**, and you can multiply the result by 100 to get work efficiency as a percentage.	Reflect on the difference between Work input, work output and Efficiency. **Exercise;** Explain the following; 3. Work Input 4. Work Output 5. Efficiency.

Name of Teacher: ***School:*** ***District:***