**e-RPH PHYSICS FORM 5**

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| **DAILY LESSON PLAN** |
| **CLASS** |  | **WEEK** |  |
| **THEME** | Newtoninan Mechanics | **DATE** |  |
| **CHAPTER** | Force and Motion II | **DAY** |  |
| **TITLE** | Resultant Force | **TIME** |  |
| **LEARNING OBJECTIVE** |
| By the end of the PdPc, students will be able to:1. describe resultant force
2. determine the resultant force
 |
| **TEACHING AND LEARNING ACTIVITIES** |
| **Introduction:**1. Students and teacher do questioning and answering (Q&A) sessions to test the level of students’ existing knowledge.
2. Students pay attention to the teacher’s explanation about the resultant force
 |
| **Activities:**1. Students are divided into several groups.
2. Each group conducts ‘Think Pair Share’ activities.
3. Using the module, students will calculate the resultant force when two forces acted on an object in the following directions:(a) In the same direction(b) In the opposite direction(c) In a direction perpendicular to each other(d) In a direction that is not perpendicular to each other (using the scale drawing of the triangle of forces method and parallelogram offorces method).
4. Students share the results with others.
 |
| **Closure:**Students are answering questions 1-9 in Target PBD Physics form 5 page 1-6. |
| **REFLECTION** |
| \_\_\_\_\_\_ / \_\_\_\_\_\_ students able to achieve the learning objectives.\_\_\_\_\_\_ / \_\_\_\_\_\_ students able to complete the exercises given.\_\_\_\_\_\_ / \_\_\_\_\_\_ students need extra exercise and teacher guidance.Note: Today’s lesson will be carried forward due to:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| **DAILY LESSON PLAN** |
| **CLASS** |  | **WEEK** |  |
| **THEME** | Newtoninan Mechanics | **DATE** |  |
| **CHAPTER** | Force and Motion II | **DAY** |  |
| **TITLE** | Resultant Force | **TIME** |  |
| **LEARNING OBJECTIVE** |
| By the end of the PdPc, students will be able to:1. Communicate about resultant force, *F* when an object is :(i) stationary, F = 0 N(ii) moving with constant velocity, F = 0 N(iii) moving with constant acceleration, F ≠ 0 N
2. Solve problems involving resultant force, mass and acceleration of an object
 |
| **TEACHING AND LEARNING ACTIVITIES** |
| **Introduction:**1. Students and teacher do questioning and answering (Q&A) sessions to test the level of students’ existing knowledge.
2. Students pay attention to the teacher’s explanation about the resultant force
 |
| **Activities:**1. Students are divided into several groups.
2. Each group is given 30 minutes to discuss and complete the worksheet.
3. Students will discuss the resultant force acting on an object with the help of a free body diagram.
4. Students will solve problems involving resultant forces acting on:• objects that move horizontally or vertically.• passengers in the lift.• an object that is pulled using a pulley
5. Students present the results to their friends.
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| **Closure:**Students are answering questions 10-12 in Target PBD Physics form 5 page 6 - 9. |
| **REFLECTION** |
| \_\_\_\_\_\_ / \_\_\_\_\_\_ students able to achieve the learning objectives.\_\_\_\_\_\_ / \_\_\_\_\_\_ students able to complete the exercises given.\_\_\_\_\_\_ / \_\_\_\_\_\_ students need extra exercise and teacher guidance.Note: Today’s lesson will be carried forward due to:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| **DAILY LESSON PLAN** |
| **CLASS** |  | **WEEK** |  |
| **THEME** | Newtoninan Mechanics | **DATE** |  |
| **CHAPTER** | Force and Motion II | **DAY** |  |
| **TITLE** | Resolution of Forces | **TIME** |  |
| **LEARNING OBJECTIVE** |
| By the end of the PdPc, students will be able to:1. Describe resolution of forces
2. Solve problems involving resultant force and resolution of forces
 |
| **TEACHING AND LEARNING ACTIVITIES** |
| **Introduction:**1. Students and teacher do questioning and answering (Q&A) sessions to test the level of students’ existing knowledge.
2. Students pay attention to the teacher’s explanation about the resolution of forces
 |
| **Activities:*** + - 1. Students are divided into groups of 2 – 3 people.
			2. Each group is given 20 minutes to discuss and complete the work in the module in exercise involving dissolving forces into two components of force for objects moving in a direction not parallel to the direction of force action such as:• An object is pulled or pushed at an inclined angle.• The object slides on an inclined plane due to its weight.
			3. Students present the results to their friends
 |
| **Closure:**Students are answering questions 1-4 in Target PBD Physics form 5 page 10-12. |
| **REFLECTION** |
| \_\_\_\_\_\_ / \_\_\_\_\_\_ students able to achieve the learning objectives.\_\_\_\_\_\_ / \_\_\_\_\_\_ students able to complete the exercises given.\_\_\_\_\_\_ / \_\_\_\_\_\_ students need extra exercise and teacher guidance.Note: Today’s lesson will be carried forward due to:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| **DAILY LESSON PLAN** |
| **CLASS** |  | **WEEK** |  |
| **THEME** | Newtonian Mechanics | **DATE** |  |
| **UNIT** | Force and Motion II | **DAY** |  |
| **TITLE** | Forces in Equilibrium | **TIME** |  |
| **LEARNING OBJECTIVE** |
| At the end of PdPc, students will be able to:1. Explain forces in equilibrium
2. Sketch a triangle of forces in equilibrium
3. Solve problems involving forces in equilibrium
 |
| **TEACHING AND LEARNING ACTIVITIES** |
| **Introduction:**1. Pupils are exposed to several daily activities or phenomena related to the forces in equilibrium.
2. Students and teachers answer questions to test the level of student knowledge.
3. Students pay attention to the teacher's explanation about the forces in equilibrium. Students ask questions and answers with the teacher to test their existing understanding.
 |
| **Activities:**1. Students are divided into several groups.
2. Each group is given 30 minutes to discuss and complete the task.
3. Each group is given a small topic to discuss.
4. Students in groups take turns giving responses about the given topic.
5. The discussion is recorded. Each group is asked to draw a force triangle involving the balance of forces such as: • A stationary object on an inclined plane. • Picture frames hang with ropes.
6. Pupils solve problems involving force balance with the following methods: • Calculation method • Drawing the scale of a triangular force
 |
| **Closing:** Pupils answer the questions in the book Target PBD Physics Form 5 page 13-15 |
| **REFLECTION** |
| \_\_\_\_\_\_ / \_\_\_\_\_\_ students can achieve the set learning objectives.\_\_\_\_\_\_ / \_\_\_\_\_\_ students can complete the exercises given.\_\_\_\_\_\_ / \_\_\_\_\_\_ students need further training and teacher guidance.Note: Teaching and learning cannot be carried out today and will continue in the next learning session because:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| **DAILY LESSON PLAN** |
| **CLASS** |  | **WEEK** |  |
| **THEME** | Newtonian Mechanics | **DATE** |  |
| **UNIT** | Force and Motion II | **DAY** |  |
| **TITLE** | Elasticity | **TIME** |  |
| **LEARNING OBJECTIVE** |
| At the end of PdPc, students can:1. describe elasticity
2. experiment to investigate the relationship between force, F and extension of spring, x
 |
| **TEACHING AND LEARNING ACTIVITIES** |
| **Introduction:**1. Pupils are exposed to several daily activities or phenomena that are related to elasticity.
2. Students and teachers answer questions to test the level of student knowledge.
3. Pupils pay attention to the teacher's explanation about elasticity. Students ask questions and answers with the teacher to test their existing understanding.
 |
| **Activities:**1. Students will carry out activities to generate ideas about elasticity by using objects such as springs, sponges and rings rubber.
2. Students will design and conduct experiments to study the relationship between force and spring extension to prove Hooke's law, F = kx
 |
| **Closing:** Pupils answer the questions in the book Target PBD Physics Form 5 page 16 - 21. |
| **REFLECTION** |
| \_\_\_\_\_\_ / \_\_\_\_\_\_ students can achieve the set learning objectives.\_\_\_\_\_\_ / \_\_\_\_\_\_ students can complete the exercises given.\_\_\_\_\_\_ / \_\_\_\_\_\_ students need further training and teacher guidance.Note: Teaching and learning cannot be carried out today and will continue in the next learning session because:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| **DAILY LESSON PLAN** |
| **CLASS** |  | **WEEK** |  |
| **THEME** | Newtonian Mechanics | **DATE** |  |
| **UNIT** | 1.0 Force and Motion II | **DAY** |  |
| **TITLE** | Elasticity | **TIME** |  |
| **LEARNING OBJECTIVE** |
| At the end of PdPc, students can:1. Communicate about the law related to force, *F* and extension of spring*, x*
2. Solve problems involving force and extension of spring
 |
| **TEACHING AND LEARNING ACTIVITIES** |
| **Introduction:**1. Pupils are exposed to several daily activities or phenomena that are related to elasticity.
2. Students and teachers answer questions to test the level of student knowledge.
3. Pupils pay attention to the teacher's explanation about elasticity. Students ask questions and answers with the teacher to test their existing understanding.
 |
| **Activities:**1. Students are divided into several groups.
2. Each group is given 30 minutes to discuss and complete the assigned task.
3. Students are required to analyze the graph of F against x to determine the value of the spring constant, k the slope of the graph and the elastic potential energy from the area under the graph.
4. Students will discuss the factors that affect the value of the spring constant, k .
5. Pupils will be involved in problem solving including the combination of series and parallel spring arrangements.
 |
| **Closing:** Pupils answer the questions in the book Target PBD Physics Form 5 page 22 - 25. |
| **REFLECTION** |
| \_\_\_\_\_\_ / \_\_\_\_\_\_ students can achieve the set learning objectives.\_\_\_\_\_\_ / \_\_\_\_\_\_ students can complete the exercises given.\_\_\_\_\_\_ / \_\_\_\_\_\_ students need further training and teacher guidance.Note: Teaching and learning cannot be carried out today and will continue in the next learning session because:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |