Name: DUE DATE – TEST DATE:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Applied Physics**  Forces and Motion | | | | | evidence and practice  ASSIGNMENT NUMBERS FROM PORTFOLIO EVIDENCE & PRACTICE LOG |
| Status of Standard | | | | |
| Vocabulary is in bold! | | **Not Yet**  *I have no idea what to do.* | **Proficient**  *I can do it with some help and few mistakes.* | **Advanced**  *I can do it correctly and with confidence.* |
| I can… | |
| 1 | Describe how do forces affect the motion of an object. |  |  |  |  |
| 2 | Identify the four main types of friction. |  |  |  |  |
| 3 | Describe how do gravity and air resistance affect a falling object. |  |  |  |  |
| 4 | Identify the direction of earth’s gravity. |  |  |  |  |
| 5 | Explain why a projectile follows a curved path. |  |  |  |  |
| 6 | Define a **force** |  |  |  |  |
| 7 | Define a **newton** |  |  |  |  |
| 8 | Define a **net force** |  |  |  |  |
| 9 | Define a **friction** |  |  |  |  |
| 10 | Define **static friction** |  |  |  |  |
| 11 | Define **sliding friction** |  |  |  |  |
| 12 | Define **rolling friction** |  |  |  |  |
| 13 | Define **fluid friction** |  |  |  |  |
| 14 | Define **air resistance** |  |  |  |  |
| 15 | Define **gravity** |  |  |  |  |
| 16 | Define **terminal velocity** |  |  |  |  |
| 17 | Define **projectile motion** |  |  |  |  |
| 18 | Describe Newton’s first law of motion and its relation to inertia. |  |  |  |  |
| 19 | Describe Newton’s second law of motion and use it to calculate acceleration, force and mass values. |  |  |  |  |
| 20 | Relate the mass of an object to its weight. |  |  |  |  |
| 21 | Define **inertia** |  |  |  |  |
| 22 | Define **mass** |  |  |  |  |
| 23 | Define **weight** |  |  |  |  |
| 24 | Explain how action and reaction forces are related according to Newton’s third law of motion. |  |  |  |  |
| 25 | Calculate the momentum of an object and describe what happens when momentum is conserved during a collision. |  |  |  |  |
| 26 | Define **momentum** |  |  |  |  |
| 27 | Define **law of conservation of momentum** |  |  |  |  |
| 28 | Identify the forms of the electromagnetic force that can both attract and repel. |  |  |  |  |
| 29 | Identify and describe the universal forces acting within the nucleus. |  |  |  |  |
| 30 | Define Newton’s law of universal gravitation and describe the factors affecting gravitational force. |  |  |  |  |
| 31 | Describe centripetal force and the type of motion it produces. |  |  |  |  |
| 32 | Define **electromagnetic force** |  |  |  |  |
| 33 | Define **strong nuclear force** |  |  |  |  |
| 34 | Define **weak nuclear force** |  |  |  |  |
| 35 | Define **gravitational force** |  |  |  |  |
| 36 | Define **centripetal force** |  |  |  |  |
|  |  |  |  |  |  |
|  | **END GOAL** |  |  |  |  |
| 37 | Use all the concepts in this unit to describe, analyze, and persist in solving problems |  |  |  |  |