**Homework Menu Grid**

Complete some of the tasks from the grid below to reach a total of points over this unit of work. Try and cover a variety of tasks over the unit so that you’re practicing different skills. Once you’ve completed a task, colour that box on the grid to keep a record of your points. Can you get the highest point score this unit?

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| **Topic** | **1 Point** | **2 Points** | **4 Points** | **6 Points** | **10 Points** |
| **What are forces** | Name 3 things forces can do | Annotate a picture to show how a force causes changes on an object.  | Make a flow chart showing how to use a newton meter.  | Write a quiz and answer sheet with at least 5 questions on forces.  | Write a story that includes a description of at least 5 different forces. (you could describe your journey to school.)  |
| **Variables/displaying data** | Name the 3 variables.  | Explain the difference between the 3 variables and give examples of each.  | Produce revision notes to describe continuous and discontinuous data, and what type of charts/graph you can display the data. You could make flash cards, a poster for your wall, or something else that will support your revision. | Design a handout explaining how to draw and label a graph correctly. Include which variables go on which axis.  | Write a rhyme to describe variables.  |
| **Types of forces** | Name 5 different forces.  | Explain the differences between contact and non-contact forces, including an example of each. | Take a photo of some objects experiencing different forces. Label the photos with force arrows, and the direction they act in.  | Choose one of the following;Thinking about friction design a trainer to help an athlete run faster. Design a new cycle helmet to decrease air resistance whilst racing.  | What a drag! Create an experiment to show how different surface affect friction.  |

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| **Balanced and unbalanced forces** | Explain the difference between balanced and unbalanced forces. | Use a photo to show what forces are acting on an object and if they are balanced/unbalanced.  | Draw a poster to show how unbalanced forces lead to a resultant force in a game of tug of war.  | Create a mini quiz with 4 questions on calculating resultant forces on objects.  | Design a comic strip showing the forces of a person jumping out of a plane with a parachute. Watch the following video to help. <https://www.youtube.com/watch?v=vZYwsAvHgVw> |
| **Gravity/ Solar system** | Write a tweet from Isaac Newton talking about why apples fall from trees. | Draw a poster to show the planets in order in our solar system. Include a mnemonic (a silly rhyme.) | Link together weight, mass, and gravity in an equation. (including units for each) | Write two exam questions based on how gravitational strength on planets affects weight.  | Milky way Olympics. Design a high jump competition to show how high you can jump on all the planets.  |
| **Speed/ Acceleration** | Define speed and acceleration | Write the equation for speed including all units. | Write a diary entry of Isaac Newton explaining his 1st law of motion. | Design a poster showing how to turn the equation for acceleration into a triangle. | Create a jigsaw with all the equations we cover in forces. |