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| Does an object’s weight affect the force required to move it? |  | Science  Year 4 |
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| Overview It was noticed that different marbles rolled down the slope differently. A range of reasons were suggested for this including that the heavier an object, the more force required for it to move . Objectives To develop learning opportunities for deepening understanding about different forces and for identifying contact and non contact forces. Activity Record how many weights need to be placed at the end of the string in order for the car to move along the table. Add weights to the car. Does this affect the weight required on the “pull” to move it? Is there a pattern? What other things do you notice?  Record data and observations. Assessment **Science Understanding** - Draws a diagram of the experiment, showing the contact and noncontact forces with directional arrows. Ability to back up conclusions drawn with the data collected.  **Science Inquiry** – Ability to conduct, observe, record and reflect  **Science as a Human Endeavour –** Ability todescribe patterns and relationships eg correlaties weight on the pull with the weight on vehicle and uses this to predict – eg HM weights would be needed to pull a load of 40?  http://4.bp.blogspot.com/-fYh9m-uASNE/TzrST8d0WII/AAAAAAAAAeg/vsDD0MbnfuU/s1600/KNEX+sideview.jpg |  | **Materials** **Knex car**  **String**  **Weights**  **Table**  **Cup** **Australian Curriculum Year 4** **Science Understanding**  Forces can be exerted by one object on another through direct contact or from a distance  **Science as a Human Endeavour**  Science involves making predictions and describing patterns and relationships  **Science Inquiry Skills**  Suggest ways to plan and conduct investigations to find answers to questions  Use formal measurements  Use tables and simple column graphs  Suggest possible reasons for findings  Reflect on the investigation, - was it fair? |