Mechanics Station Cheat Sheet  
Get the 1 tote from the Cupboard in the classroom AND 3 engines from front of class



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| **Tire Change**  Tire PSI, Jacking up Car | 1. Remove a bit of air pressure before group gets there (around 30psi) 2. Students use pressure gauge to check tire pressure, split group up 3. Using “Tidy Tank” or air compressor, add air to inflate to 32psi 4. Using a lug wrench, loosen the lug nuts BEFORE raising the tire 5. Jack up car so the tire is about 1 inch off the ground 6. Block up the car with Jack Stands or blocks of wood (Explain for Safety) 7. Take the lug nuts off with lug nut wrench or by hand (remember to reinforce that right is tight, left is loose) and remove the tire. 8. Change tire, then in reverse order, put new tire on, hand tighten lug nuts, lower tire so there is grip on the floor 9. USE a torque wrench and set to 70lbs. Tighten lug nuts one at a time opposite of each other 10. Lower car the rest of the way |
| **Engine #1**  Oil Check | * Students check oil (make sure you have a rag) * Check dipstick, if oil is low and at the line (it should be) – explain that you add 1 litre of oil * **DO NOT** remove oil filter or oil pan from this engine. There is oil in it!! |
| **Engine #2**  Change Oil Filter | * Use the oil filter wrench or oil filter socket to remove the existing oil filter. Remember, right is tight, left is loose! * Once removed, use a bit of oil from the engine dipstick and add a small amount to the seal * USE YOUR HANDS to re-install the new filter. Turn ONLY ¼ turn after contact is made |
| **Engine #3**  Bolt removal and install plus engine part explanation | 1. Students take a few bolts off to expose the cylinders 2. Timing belt will already be exposed 3. Have kids use a socket wrench and sockets to loosen and remove some bolts. Make sure you explain right is tight and left is loose. 4. Make sure to explain cross threading, metal bolts, aluminum engine block. Stripping bolts in BAD!! |
| **Tools** | **Oil Filter Socket Oil Filter Wrench**    **Torque Wrenches Scissor Jack**      **Lug Wrenches** |