Name		

Date _____ Pd___

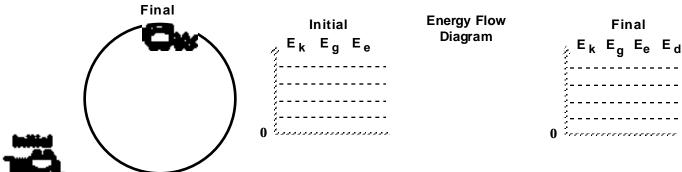
Unit VII: Worksheet 3a

For each situation shown below:

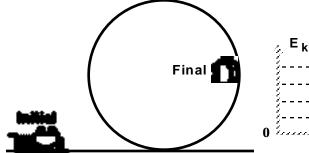
- 1. Show your choice of system in the energy flow diagram, unless it is specified for you.

 **Always include the earth in your system.
- 2. Decide if your system is frictionless or not, and state this.
- 3. Sketch an energy bar graph for the initial situation.
- 4. Then complete the analysis by showing energy transfers and the final energy bar graph.

1.



2.



Initial
E_k E_g E_e

Energy Flow Diagram

Final
E_k E_g E_e E_d

3.

A car rolls to a stop while moving up a hill. y > 0 v = 0 $v_0 > 0$

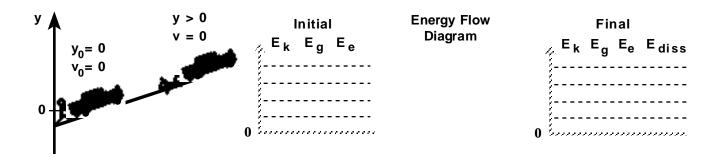
Initial
E_k E_g E_e

Energy Flow Diagram

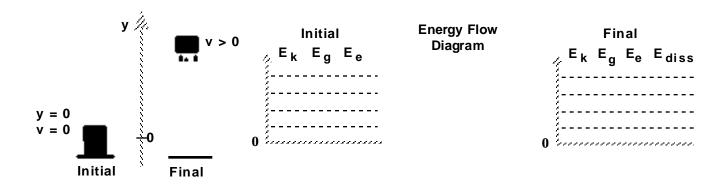
E_k E_g E_e E_{diss}

Final

4. A person pushes a car, with the parking brake on, up a hill.



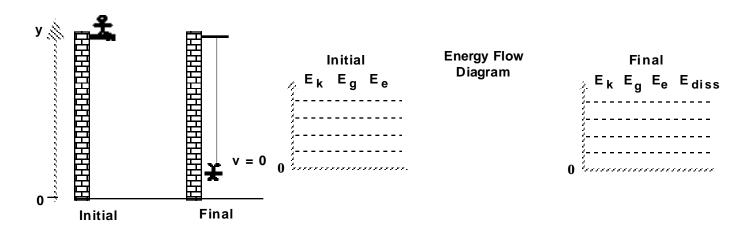
5. A load of bricks rests on a tightly coiled spring, then is launched into the air.



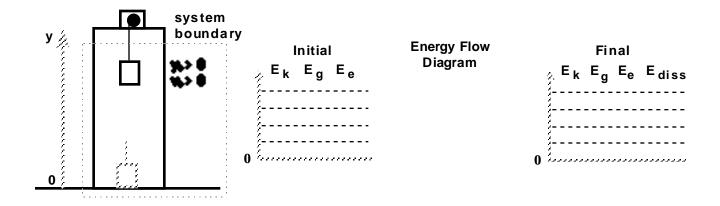
6. A crate is propelled up a hill by a tightly coiled spring.

	v > 0 Initial E _k E _g E _e Final	Energy Flow Diagram	Final E _k E _g E _e E _{diss}
Initial	0		0 (

7. A bungee jumper falls off the platform and reaches the limit of stretch of the cord.



8. An elevator, initially moving downward, is brought to rest on the ground floor.



9. Create your own situation and construct corresponding energy bar graphs and system schema.

System = ______

Initial Energy Flow Final Diagram E_k E_g E_e E_{diss}

0 %