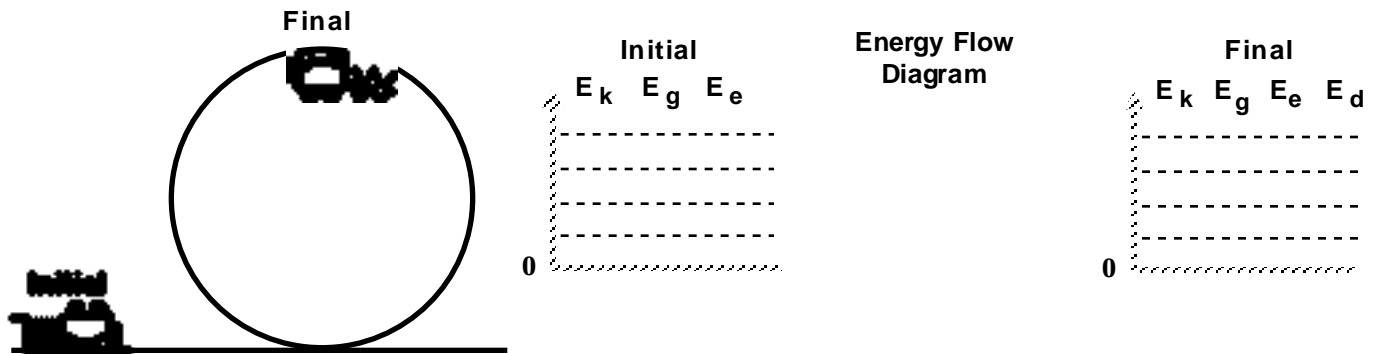


## Unit VII: Worksheet 3a

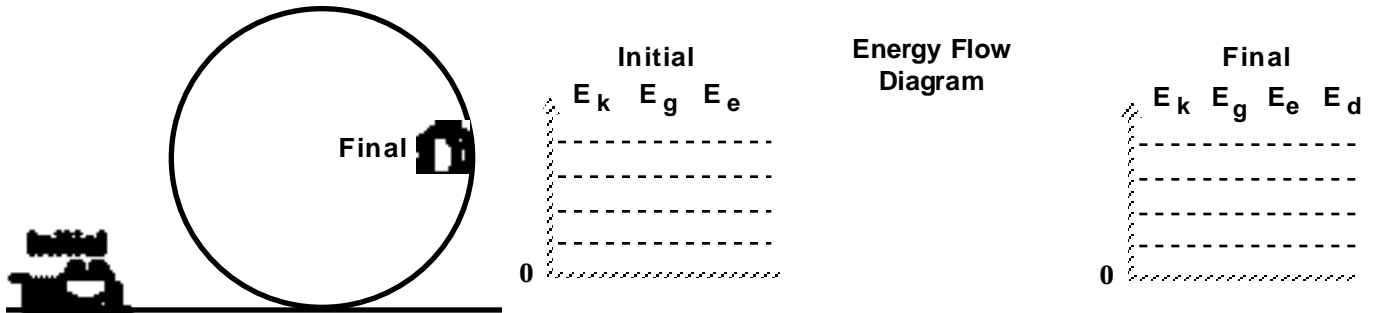
For each situation shown below:

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.

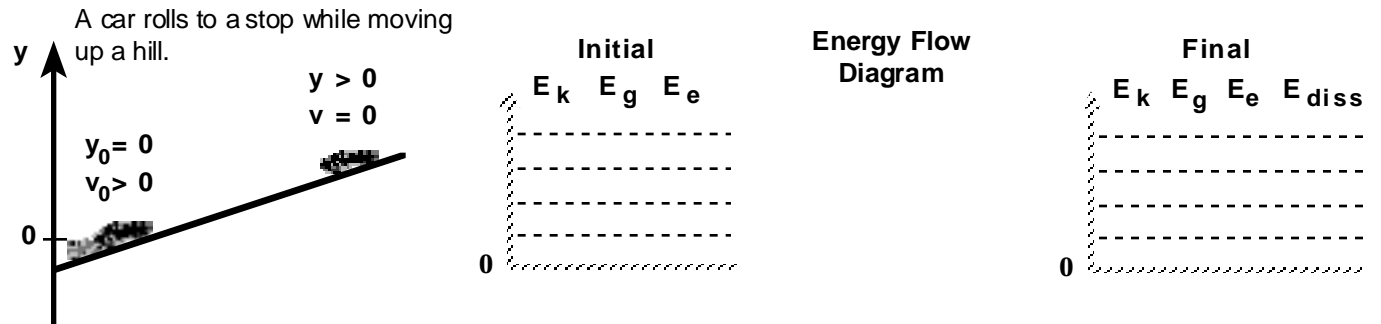
1.



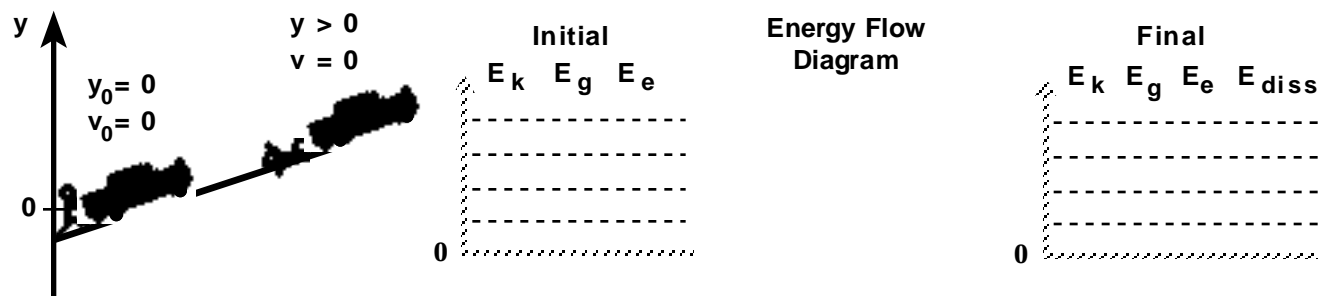
2.



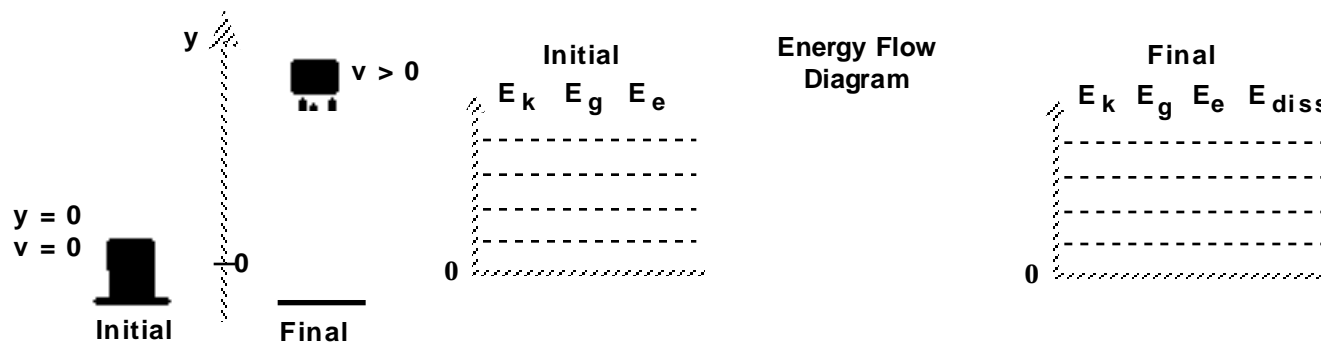
3.



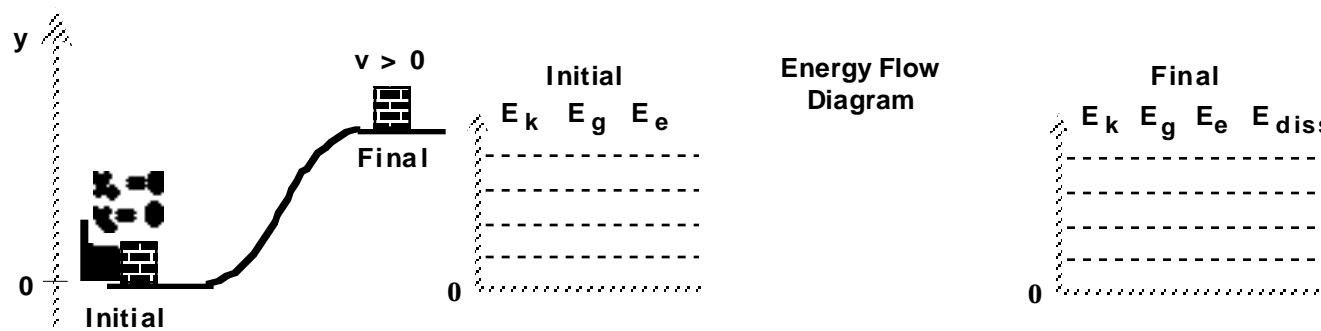
4. A person pushes a car, with the parking brake on, up a hill.



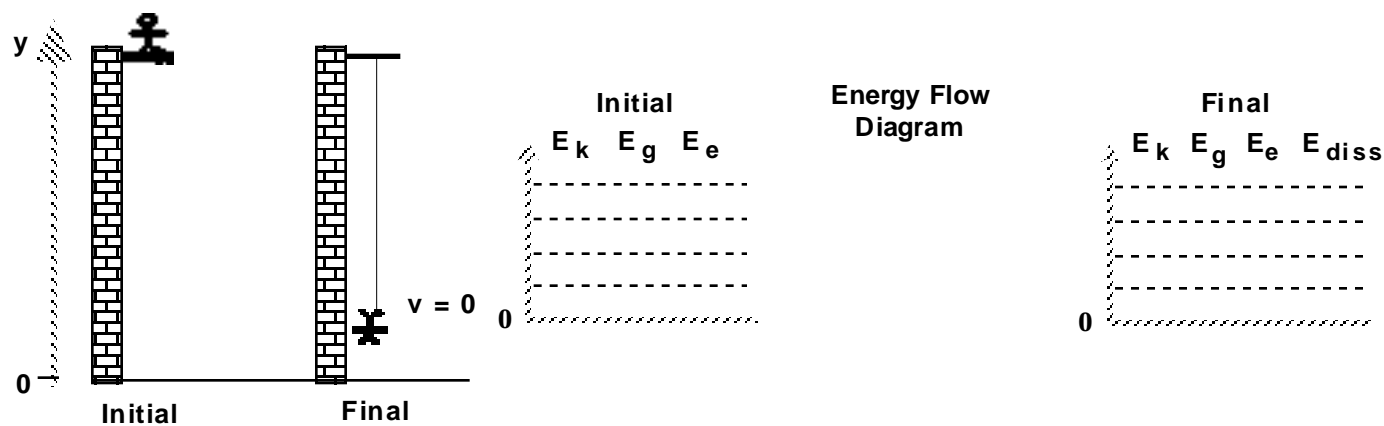
5. A load of bricks rests on a tightly coiled spring, then is launched into the air.



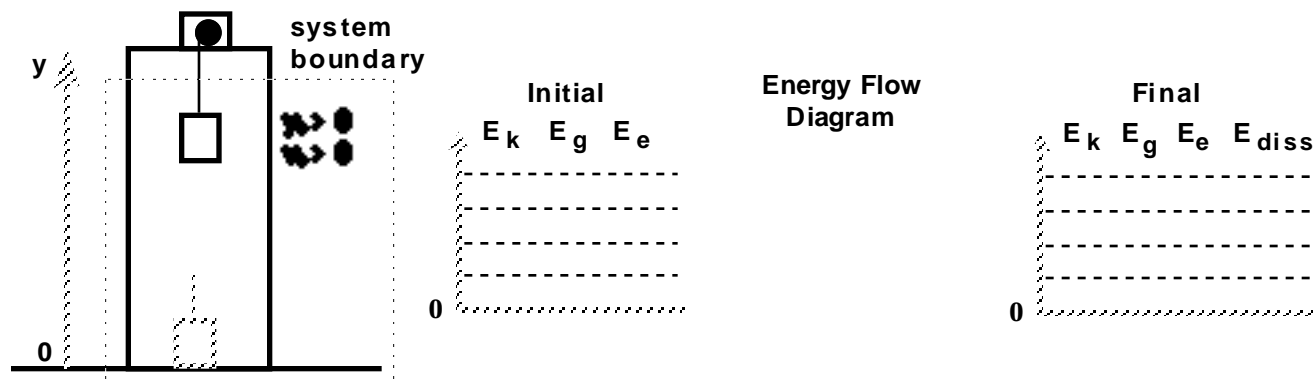
6. A crate is propelled up a hill by a tightly coiled spring.



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 = \_\_\_\_\_

