

School Name: \_\_\_\_\_ Team Name: \_\_\_\_\_

Entry Number: \_\_\_\_\_

### Table of Activities

Activity Number	Description of Activity	Energy Source	Energy Category	Object Weight (lbs)	Horizontal Distance Traveled (feet)	Estimated Maximum Velocity of Object (feet/second)	Product of Weight and Maximum Velocity (lb-feet/second)
1							
2							
3							
4							
5							
6							
7							

**Note: For any Activity, the product of Object Weight times Maximum Velocity must be below 6 lb-feet/second and the object must have a maximum velocity below 25 feet per second.**

Examples of how to fill out the Table of Activities are provided below...

Example 1: Midway through the event, a billiard ball travels down a slide which impacts a block of wood which in turn triggers a pinball plunger to push a golf ball up an incline which then causes the golf ball to fly through the air landing in a cup.

This would have the following entries into the Table

<b>Activity Number</b>	<b>Description of Activity</b>	<b>Energy Source</b>	<b>Energy Category</b>	<b>Object Weight (lbs)</b>	<b>Horizontal Distance Traveled (feet)</b>	<b>Estimated Maximum Velocity of Object (feet/second)</b>	<b>Product of Weight and Maximum Velocity (lb-foot/second)</b>
3	Billiard ball rolls down a chute	Gravity	Gravity	.375	3.0	15	5.62
NA	Impact block of wood	None	None	.20	0.17	7	1.40
4	Pinball Plunger puts golf ball in motion	Pinball Plunger	Spring	.10	3.5	24	2.40

Comment 1: Impacting the block of wood and having the wood block move 2 inches is not an activity. It does not have an energy source.

Comment 2: The pinball plunger impacts the golf ball, but that is a self-contained activity (i.e. not two activities). In this case the object moving is the golf ball at .10 pounds and the energy source is the compressed spring being released.

Example 2: Midway through the event, a tennis ball rolls down a ramp which flips a switch on a motor that turns on a conveyor belt. There is a Rubik’s Cube on the conveyor belt which eventually falls off the end of the conveyor belt landing on a trigger for another subsequent activity.

This would have the following entries into the Table

Activity Number	Description of Activity	Energy Source	Energy Category	Object Weight (lbs)	Horizontal Distance Traveled (feet)	Estimated Maximum Velocity of Object (feet/second)	Product of Weight and Maximum Velocity (lb-foot/second)
3	Tennis ball rolls down a ramp	Gravity	Gravity	.13	4	10	1.30
NA	Ball triggers a motor	None	None	.03	0.10	10	0.30
4	Conveyor belt is moving	Motor	Other	NA	3.5	2	NA
4 (cont)	Rubik’s Cube moves on belt	Motor	Other	1.30	3.5	3	3.90
5	Rubik’s Cube falls down	Gravity	Gravity	1.30	1.2	4	5.20

Comment 1: Triggering a motor has no energy source. The trigger only turns on a motor. This is not an activity because it does not have an energy source.

Comment 2: The conveyor belt weight is not important because its motion is rotational and does not move laterally as a unit. Because the Rubik’s Cube (the laterally moving object) is moving, its weight is important. This combination of activities counts as only one activity. Note that the cube is already traveling at 3 feet per second and then picks up some more speed during its free-fall in Activity 5.