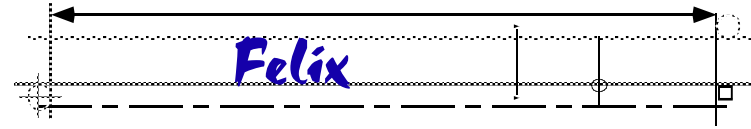


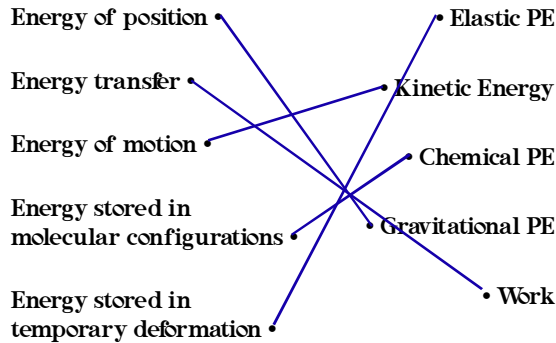
PhyzSketches: Energy Transformations

ENERGY AND THE POLE VAULTER



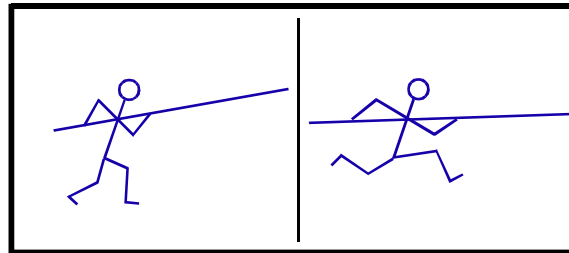
Match terms to definitions.

TRANSFER • Energy changes form
 TRANSFORM • Energy changes location



In each step of the sequence, an energy transformation is occurring. Draw initial and final images for each step and describe the initial and final types of energy and the object that has the energy. All descriptions should include words such as "in the." In each process, indicate whether energy is transferred, transformed, or both.

1. The vaulter accelerates along the approach.

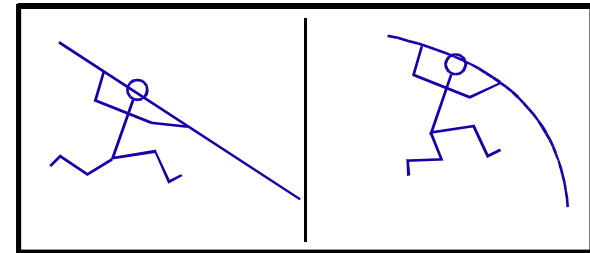


FROM
 Chemical potential energy in the vaulter

TO = FROM
 Kinetic energy of the vaulter

Energy was Transferred Transformed Both

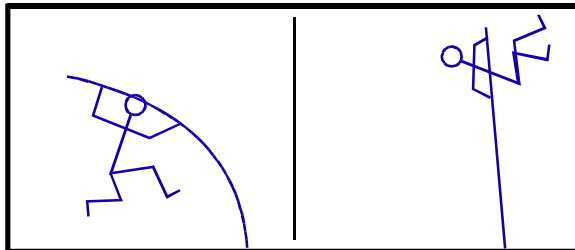
2. The planted pole flexes.



TO
 Elastic potential energy in the pole

Energy was Transferred Transformed Both

3. The vaulter rises.

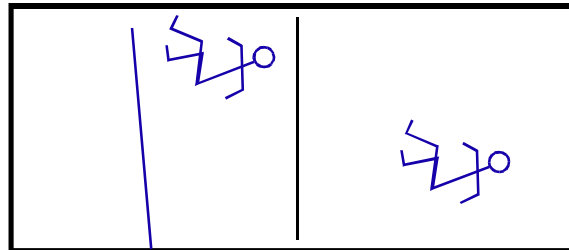


FROM
 Elastic potential energy in the pole

TO = FROM
 Gravitational potential energy of the vaulter

Energy was Transferred Transformed Both

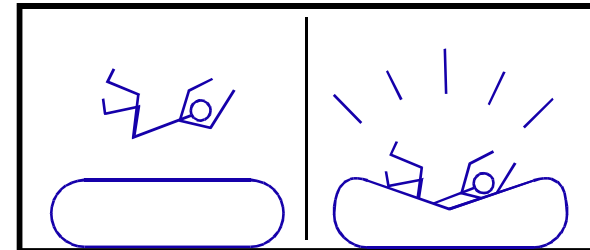
4. The vaulter descends.



TO = FROM
 Kinetic energy of the vaulter

Energy was Transferred Transformed Both

5. The vaulter lands.

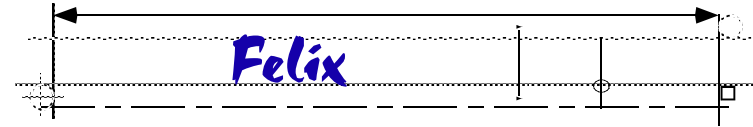


TO
 Work to deform bag
 Sound and thermal energy released

Energy was Transferred Transformed Both

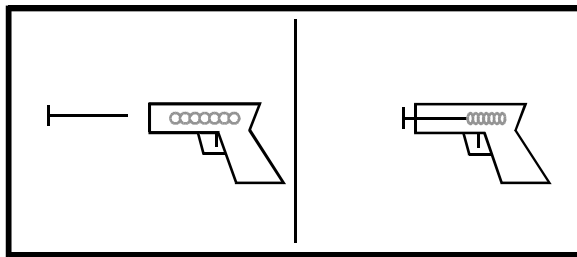
PhyzSketches: Energy Transformations

ENERGY AND THE DART GUN



In each step of the sequence, an energy transformation is occurring. Draw initial and final images for each step and describe the initial and final types of energy and the object that has the energy. All descriptions should include words such as “in the.”

1. The dart is loaded into the gun.

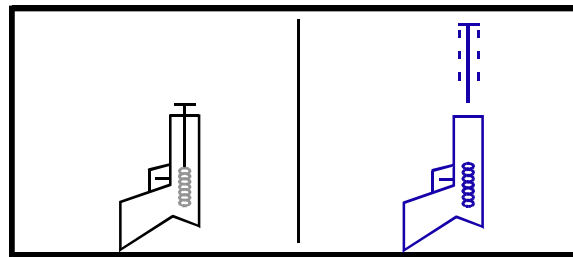


FROM
Chemical potential
energy in the
loader

TO = FROM
Elastic potential energy in the spring

Energy was Transferred Transformed Both

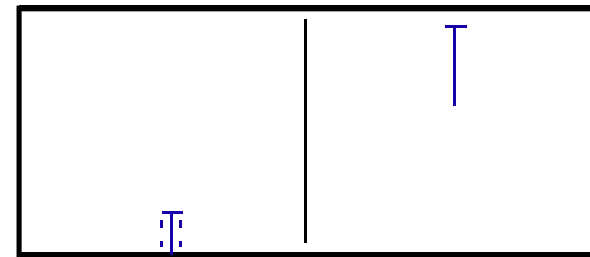
2. The dart is fired.



TO = FROM
Kinetic energy in the dart

Energy was Transferred Transformed Both

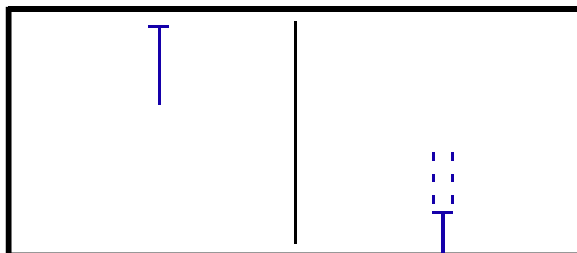
3. The dart rises higher and higher.



TO
Gravitational
potential energy in
the dart

Energy was Transferred Transformed Both

4. The dart falls back to Earth.

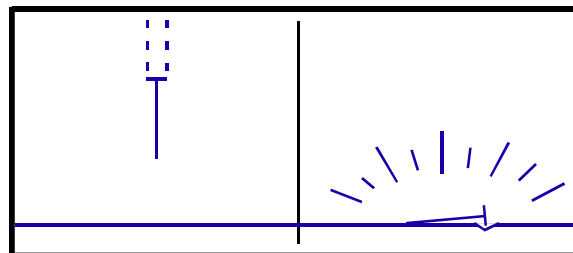


FROM
Gravitational
potential energy in
the dart

TO = FROM
Kinetic energy in the dart

Energy was Transferred Transformed Both

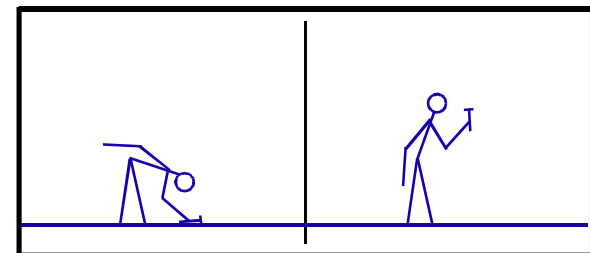
5. The dart strikes the ground.



TO = FROM
Sound and heat released
into the environment
Work done to deform
dart or ground

Energy was Transferred Transformed Both

6. The dart is picked up.



FROM
Chemical poten-
tial energy in the
lifter

TO
Gravitational
potential energy in
the dart

Energy was Transferred Transformed Both