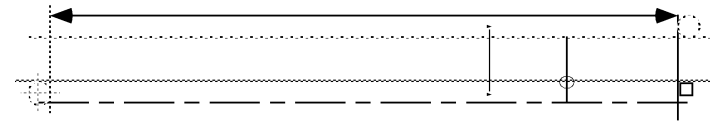# PhyzSketches: Energy Transformations

ENERGY AND THE POLE VAULTER

Match terms to definitions.

TRANSFER • • Energy changes form

TRANSFORM • • Energy changes location

Energy of position • • Elastic PE

Energy transfer • • Kinetic Energy

Energy of motion • • Chemical PE

Energy stored in
molecular configurations • • Gravitational PE

• Work

Energy stored in
temporary deformation •

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.
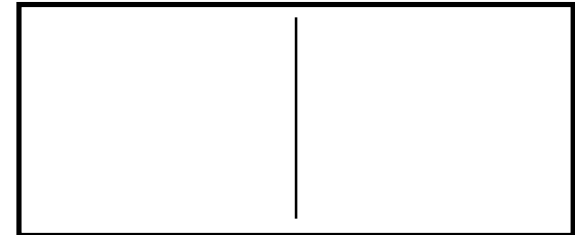
1. The vaulter accelerates along the approach.
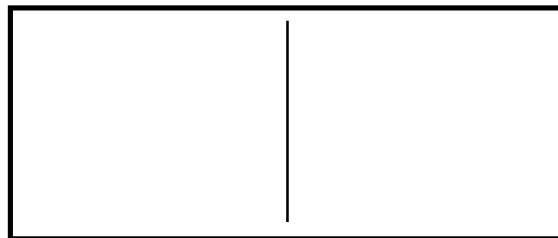
FROM   TO

Energy was __Transferred _Transformed _Both
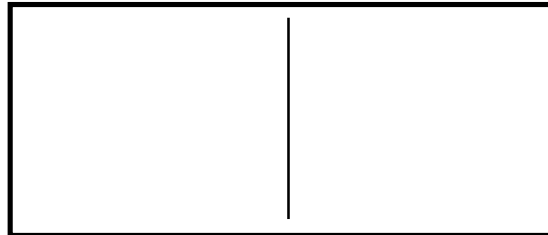
2. The planted pole flexes.

= FROM   TO

Energy was __Transferred _Transformed _Both

3. The vaulter rises.

FROM   TO

Energy was __Transferred _Transformed _Both

4. The vaulter descends.

= FROM   TO
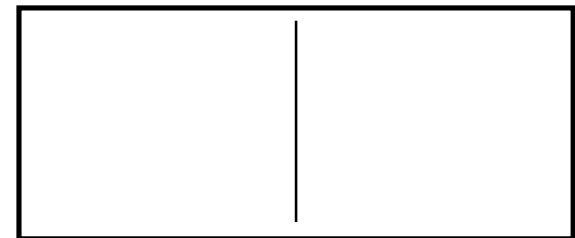
Energy was __Transferred _Transformed _Both

5. The vaulter lands.

= FROM   TO

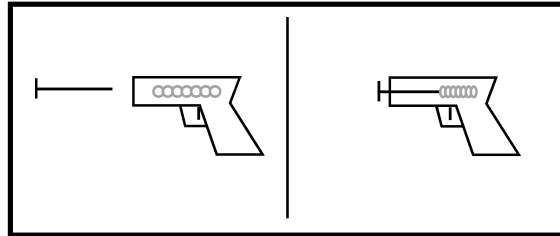Energy was __Transferred _Transformed _Both

PhyzSketches: Energy Transformations

ENERGY AND THE DART GUN
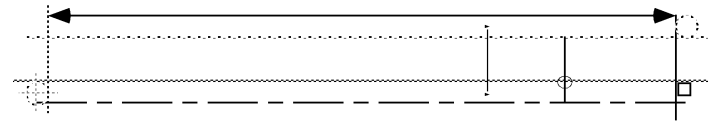
In each step of the sequence, an energy transformation is occurring. Draw initial and final images for each step and describe the initial and final types of energy and the object that has the energy. All descriptions should include words such as "in the."
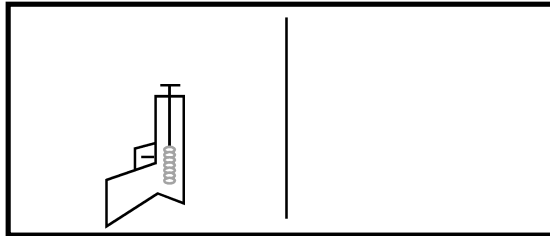
1. The dart is loaded into the gun.

FROM   TO = FROM
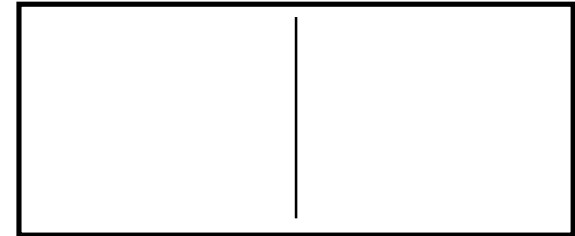
Chemical potential
energy in the   Elastic potential energy in the spring
loader

Energy was __Transferred _Transformed _Both

2. The dart is fired.

FROM   TO = FROM

Energy was __Transferred _Transformed _Both

3. The dart rises higher and higher.

FROM   TO

Energy was __Transferred _Transformed _Both

4. The dart falls back to Earth.

FROM   TO = FROM

Energy was __Transferred _Transformed _Both
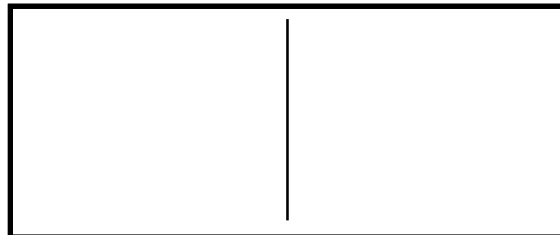
5. The dart strikes the ground.

FROM   TO = FROM

Energy was __Transferred _Transformed _Both

6. The dart is picked up.

FROM   TO

Energy was __Transferred _Transformed _Both

db