

Interaction Stations Teacher Notes

Identification of Energy Sources, Receivers, and Forms

Station 1: Hands

Energy source (ES): hand (chemical, mechanical/motion) → Energy receiver (ER): hand (mechanical/motion, thermal - heat)

Station 2: Plastic Shopping Bag

Energy source (ES): plastic bag (electrical – static electric charge) → Energy receiver (ER): paper (mechanical/motion)

Station 3: Paddle Ball

Energy source (ES): hand/paddle (chemical, mechanical/motion, gravitational potential) → Energy receiver (ER)/Energy source (ES): ball on elastic tether and elastic tether stretched (mechanical/motion, elastic, gravitational potential) → Energy receiver (ER): ball, paddle, elastic tether (elastic, mechanical/motion, thermal)

Station 4: Electric Circuit

Energy source (ES): battery (chemical, electrical) → Energy receiver (ER): light bulb (thermal and radiant)

Station 5: Solar Powered Propeller

Energy source (ES): sun (radiant) → Energy receiver (ER)/Energy source: panel (electrical) → Energy receiver (ER): motor/propeller (mechanical/motion)

Station 6: Noise Maker

Energy source (ES): air (mechanical/motion) → Energy receiver (ER): noise maker (mechanical/motion – sound emitted due to vibration of air molecules)

Sound will be emitted as students blow into the horn due to vibration of air molecules.

Station 7: In Hot Water

Energy source (ES): hot water (thermal) → Energy receiver (ER): spoon (thermal – heat)

Station 8: Beads

Energy source (ES): sunlight (radiant) → Energy receiver (ER): beads (chemical)

■ **Note:** *UV beads contain pigments which react with ultra-violet light from the sun.*

Station 9: Spinning Top

Energy source (ES): hand (mechanical/motion, chemical) → Energy receiver (ER): top (mechanical/motion – including sound, radiant - light)

Station 10: Yo-Yo

Energy source (ES): position of yo-yo (gravitational potential energy) → Energy receiver (ER): yo-yo (mechanical/motion)

Station 11: Pop Up Toy

Energy source (ES): hand (chemical, mechanical/motion) → Energy receiver (ER)/ Energy source (ES): compressed spring (elastic) → Energy receiver (ER): toy (mechanical/motion, gravitational potential)

Station 12: Waves

Energy source (ES): finger (chemical, mechanical/motion) → Energy receiver (ER): water and float toy (mechanical/motion)