

Wk 27 Energy

D1: Pulley

name:

System: person, chair, pulley and rope.

One of you sit in the chair and someone else pull on the rope.

1. Who did the work to add Mechanical Energy to the system?
2. What did they physically do to add the Mechanical Energy?
3. What kind of Mechanical Energy did the person being lifted gain?
4. Was there anything in the system that did work to convert some of the Mechanical Energy to another form? (In the wheels of the pulleys, perhaps?)
5. What form of energy (non-Mechanical) was it transferred to?

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D1: Bonga

name:

System: wind-up toy "Bonga"

Wind up Bonga, set him on the floor and see how far he goes.

1. Who did the work to add Mechanical Energy to the system?
2. What did they physically do to add the Mechanical Energy?
3. What kind of Mechanical Energy did the Bonga gain (before you set him down)?
4. After you set the Bonga on the ground and he started to go, what kind of Mechanical Energy was he converting that energy into?
5. Was there anything in the system that did work to convert some of the Mechanical Energy to another form? (Did Bonga's feet slip, perhaps?)
6. What form of energy (non-Mechanical) was it transferred to?

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D1: Pendulum

name:

System: mass on string - "pendulum"

**Pull the mass back to the line and let go.
Observe how high it goes on the other side.**

1. Who did the work to add Mechanical Energy to the system?
2. What did they physically do to add the Mechanical Energy?
3. What kind of Mechanical Energy did the mass gain before you let it go?
4. After you let the mass go, what kind of Mechanical Energy did it convert into as it went downward? Then what kind as it swung back up?
5. Did the mass make it all the way back up to its original height? Why not? (What might have done work to transfer some energy away?)
6. What form of energy (non-Mechanical) was it transferred to?

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D1: Mini-Catapult

name:

System: Mini-catapult and clay ball

Pull the clay ball on the catapult, bend the stick back and release.

1. Who did the work to add Mechanical Energy to the system?
2. What did they physically do to add the Mechanical Energy?
3. What kind of Mechanical Energy did the catapult gain before you let it go?
4. After you released it, what **kinds** of Mechanical Energy did it convert into as it flew?
5. What did the work to transfer all the energy away from the clay ball when it landed?
6. What form of energy (non-Mechanical) was it transferred to?

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D1: Hot Wheel

name:

System: Hot Wheel

**Pull the Hot Wheel on the track and let it go.
Observe how high it goes on the other side.**

1. Who did the work to add Mechanical Energy to the system?
2. What did they physically do to add the Mechanical Energy?
3. What kind of Mechanical Energy did the Hot Wheel gain before you let it go?
4. After you let the Hot Wheel go, what kind of Mechanical Energy did it convert into as it went downward? Then what kind as it went back up?
5. Did the Hot Wheel make it all the way back up to its original height? Why not? (What might have done work to transfer some energy away?)
6. What form of energy (non-Mechanical) was it transferred to?

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D1: Bounce

name:

System: Bouncy Ball

Lift the ball up to the height of the cart and drop it. Observe how high it bounces back up.

1. Who did the work to add Mechanical Energy to the system?
2. What did they physically do to add the Mechanical Energy?
3. What kind of Mechanical Energy did the ball gain before you let it go?
4. After you let the ball go, what kind of Mechanical Energy did it convert into as it went downward? Then what kind as it went back up?
5. Did the ball make it all the way back up to its original height? Why not? (What might have done work to transfer some energy away?)
6. What form of energy (non-Mechanical) was it transferred to?