Wk 26 Energy

1a Popper

name:

System: Popper, table
Turn the popper inside out. Place it on the table and watch it pop!

1. Who did the work to add Mechanical Energy to the system?

2. What did you physically do to add the Mechanical Energy?

3. What kind of Mechanical Energy did the popper gain as a result of what you did?

□KE □GPE □EPE

4. Right after the pop, what kind of mechanical energy did the popper's energy convert into?

□KE □GPE □EPE

5. When the popper reached its maximum height, what kind of mechanical energy did the popper's energy convert into?

□KE □GPE □EPE

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Wk 26 Energy

1b: 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 have before you let it go?

□KE □GPE □EPE

4. After you let the mass go, what kind of Mechanical Energy did it convert into as it went downward?

□KE □GPE □EPE

5. Then what kind as it went back up?

□KE □GPE □EPE

6. 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?)

7. What form of energy (non-Mechanical) was it transferred to?

□Light □Heat □Electrical PE □Chemical PE

Wk 26 Energy

1b: 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 have before you let it go?

□KE □GPE □EPE

4. After you let the mass go, what kind of Mechanical Energy did it convert into as it went downward?

□KE □GPE □EPE

5. Then what kind as it went back up?

□KE □GPE □EPE

6. 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?)

7. What form of energy (non-Mechanical) was it transferred to?

□Light □Heat □Electrical PE □Chemical PE

Wk 26 Energy

1c: Hot Wheel

name:

System: Hot Wheel & Track
Pull the Hot Wheel at the top of 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 as a result of what you did?

□KE □GPE □EPE

4. After you let the Hot Wheel go, what kind of Mechanical Energy did it convert into as it went downward?

□KE □GPE □EPE

5. Then what kind as it went back up?

□KE □GPE □EPE

6. 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?)

7. What form of energy (non-Mechanical) was it transferred to?

□Light □Heat □Electrical PE □Chemical PE

Wk 26 Energy

1c: Hot Wheel

name:

System: Hot Wheel & Track
Pull the Hot Wheel at the top of 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 as a result of what you did?

□KE □GPE □EPE

4. After you let the Hot Wheel go, what kind of Mechanical Energy did it convert into as it went downward?

□KE □GPE □EPE

5. Then what kind as it went back up?

□KE □GPE □EPE

6. 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?)

7. What form of energy (non-Mechanical) was it transferred to?

□Light □Heat □Electrical PE □Chemical PE

Wk 26 Energy
1d: Spring

name:

System: Spring & Mass
Lift the mass until the spring is no longer stretched, then let it go.

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?

□KE □GPE □EPE

4. After you let the mass go, what kind of Mechanical Energy did it convert into as it went downward?

□KE □GPE □EPE

5. When the spring is fully extended and the mass comes to a temporary halt at the bottom, what has the energy been converted into?

□KE □GPE □EPE

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 converted to?

□Light □Heat □Electrical PE □Chemical PE

Wk 26 Energy
1d: Spring

name:

System: Spring & Mass
Lift the mass until the spring is no longer stretched, then let it go.

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?

□KE □GPE □EPE

4. After you let the mass go, what kind of Mechanical Energy did it convert into as it went downward?

□KE □GPE □EPE

5. When the spring is fully extended and the mass comes to a temporary halt at the bottom, what has the energy been converted into?

□KE □GPE □EPE

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?

□Light □Heat □Electrical PE □Chemical PE

Wk 26 Energy

1e: Record Player

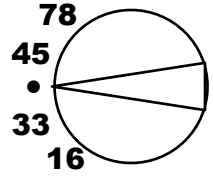
name:

System: Record Player
Put a record on and play it!

1. What kind of energy does the record player start with? Is it a form of mechanical energy?

2. What kind of energy does the record player's motor convert the energy into? Is that a form of mechanical energy?

3. When you disengage the motor by switching the speed control to the dot, what happens to the record's motion?



4. What force slowed the record down?

5. What type of nonmechanical energy did the energy get converted into?

☐ Light ☐ Heat ☐ Electrical PE ☐ Chemical PE

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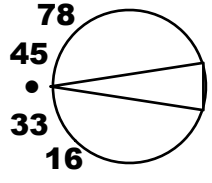

4. What force slowed the record down?

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