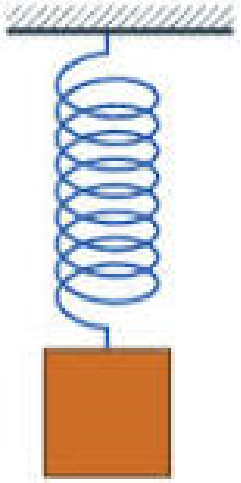
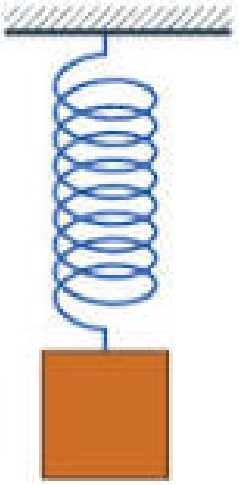
A 7.8 kg hawk is 5.6 m above the ground and is moving 6.3 m/s. Relative to the ground, find the total mechanical energy (ME) of the hawk.



A 2.12 kg mass hangs at rest from a vertical spring. The spring has a spring constant of 480. N/m and is stretched 43.3 cm. The mass is 1.15 m above the ground. Relative to the ground, find the ME of the mass/spring system.

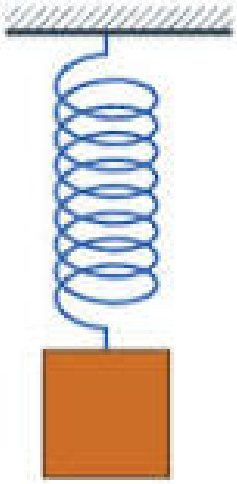
At the instant shown in the picture, this 24.6 kg child on a swing moves at 2.43 m/s and is 1.78 m above the ground. Relative to the ground, find ME of the child.



At the instant shown in the picture, this 1.5 kg mass is moving upward at 2.1 m/s and is 1.3 m above the ground. In addition, the spring has a force constant of 760 N/m and is stretched 18. cm. Relative to the ground, find the ME of the system.

A 7.8 kg hawk is 5.6 m above the ground and is moving 6.3 m/s. Relative to the ground, find the total mechanical energy (ME) of the hawk.

ME = 580 J

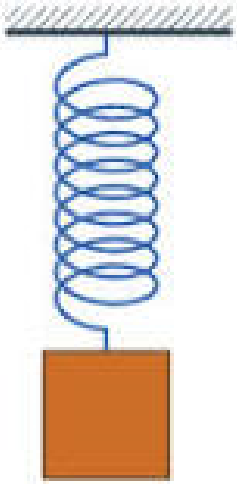


A 2.12 kg mass hangs at rest from a vertical spring. The spring has a spring constant of 480. N/m and is stretched 43.3 cm. The mass is 1.15 m above the ground. Relative to the ground, find the ME of the mass/spring system.

ME = 68.9 J

At the instant shown in the picture, this 24.6 kg child on a swing moves at 2.43 m/s and is 1.78 m above the ground. Relative to the ground, find ME of the child.

ME = 502 J



At the instant shown in the picture, this 1.5 kg mass is moving upward at 2.1 m/s and is 1.3 m above the ground. In addition, the spring has a force constant of 760 N/m and is stretched 18. cm. Relative to the ground, find the ME of the system.

ME = 35 J