Review of articles for FY2M class
J. Erhart

Scopus – **magnetic field, magnetic force**

Cross, R.
Surprising behaviour of a spherical magnet on an aluminium incline
(2025) Physics Education, 60 (3), art. no. 033004

Cross, R.
Observations of two spherical magnets spinning around each other
(2025) Physics Education, 60 (3), art. no. 033007

Cross, R.
Random motion of a spherical magnet on a horizontal surface
(2025) Physics Education, 60 (3), art. no. 033005

Cross, R.
Experiments with a magnetic cannon
(2025) Physics Education, 60 (2), art. no. 025003

Williams, H.
How to levitate a lightbulb
(2024) Physics Education, 59 (4), art. no. 045040

González, M.I.
A do-it-yourself demonstration of the magnetic force between parallel wires
(2024) Physics Education, 59 (3), art. no. 035024

Cross, R.
A simple LC circuit with a parallel diode
(2024) Physics Education, 59 (3), art. no. 033007

Freitas, W.P.S., Carvalho, P.S., Calheiro, L.B., Goncalves, A.M.B.
Demonstration of bonding interaction by attraction and repulsion forces measurement using disc magnets
(2024) Physics Education, 59 (3), art. no. 035013

Erhart, J., Hejsková, P.
Investigating magnetization of permanent magnets by magnetic flux viewing film
(2024) Physics Education, 59 (2), art. no. 025023

Cicuta, P., Organtini, G.
A modern, rapid and simple investigation of Ampère's law
(2024) Physics Education, 59 (2), art. no. 025033

Thompson, F.
Torsion balance helps identify ferro-, dia- and paramagnetic materials
(2023) Physics Education, 58 (6), art. no. 063003

Grebenev, I.V., Kazarin, P.V.
Demonstration of the refraction of magnetic field lines in a magnetic material
(2023) Physics Education, 58 (6), art. no. 065007

Walsh, R.
Magnetic 'Coulomb' barrier
(2023) Physics Education, 58 (6), art. no. 063001

Kekule, T.
Simple demonstration of Ampere's law
(2023) Physics Education, 58 (1), art. no. 015009

Jaafar, R., Mat Daud, A.N.
EM-FOR: simple and low-cost force on a straight current-carrying conductor in a magnetic field experimental kit
(2023) Physics Education, 58 (1), art. no. 015001

Westermann, N., Staacks, S., Heinke, H., Möhrke, P.
Measuring the magnetic field of a low frequency LC-circuit with phyphox
(2022) Physics Education, 57 (6), art. no. 065024

Koblischka, M.R., Koblischka-Veneva, A.
Measurement of the characteristics of the Earth's magnetic field using a smartphone magnetic sensor
(2022) Physics Education, 57 (4), art. no. 045021

Lee, H., Chen, Y., Lee, J., Moon, S.J., Kim, J.B.
Simple motor variants
(2022) Physics Education, 57 (4), art. no. 045014

Cross, R.
A Faraday's law paradox
(2022) Physics Education, 57 (1), art. no. 013003

Malgieri, M., Calcagnile, S., Zuccarini, G., Onorato, P.
High school student difficulties in drawing the field lines for two magnets
(2021) Physics Education, 56 (6), art. no. 065007

Rizcallah, J.A.
A deformable wireframe in a uniform magnetic field
(2021) Physics Education, 56 (4), art. no. 045008

Romero-Abad, D.
The magnetic field in the axis of an elliptic loop current
(2021) Physics Education, 56 (2), art. no. 025014

Goh, K.L.
Conditions for maximal magnetic moment on current loop
(2020) Physics Education, 55 (4), art. no. 043003

Pili, U.B.
Modeling damped oscillations of a simple pendulum due to magnetic braking
(2020) Physics Education, 55 (3), art. no. 035025

González, M.I.
Force exerted by a magnet on a circular coil
(2019) Physics Education, 54 (5), art. no. 055025

Goh, K.L.
Work-energy on square loop generator
(2019) Physics Education, 54 (4), art. no. 043002

Prabha, S.
Variation of the magnetic moment of a bar magnet with its inclination with the magnetic meridian of the Earth
(2019) Physics Education, 54 (1), art. no. 013003

Babović, M., Babović, V.
A few simple classroom experiments with a permanent U-shaped magnet
(2017) Physics Education, 52 (1), art. no. 015021

Mayer, V.V., Varaksina, E.I.
An apparatus to demonstrate linear and nonlinear oscillations of a pendulum
(2016) Physics Education, 51 (4), art. no. 045012

Haidar, S.
Thomson's ring experiment with resonant LC circuit
(2016) Physics Education, 51 (1), art. no. 015013

Abdul-Razzaq, W., Biller, R.D., Wilson, T.
The Earth's magnetic field fuels inter-disciplinary education
(2015) Physics Education, 50 (2), pp. 218 - 223

Amrani, D.
A simple experiment showing the determination of the magnetic dipole moment of a permanent disc magnet
(2015) Physics Education, 50 (2), pp. 142 - 145

Ladino, L.A., Rondón, S.H., Orduz, P.
Motion of a charged particle in a constant and uniform electromagnetic field
(2015) Physics Education, 50 (2), pp. 165 - 169

Lara, V.O.M., Amaral, D.F., Faria, D., Vieira, L.P.
Demonstrations of magnetic phenomena: Measuring the air permeability using tablets
(2014) Physics Education, 49 (6), pp. 658 - 662

Gates, J.
Magnetic force and work: An accessible example
(2014) Physics Education, 49 (3), pp. 299 - 302

Onorato, P., de Ambrosis, A.
How can magnetic forces do work? Investigating the problem with students
(2013) Physics Education, 48 (6), pp. 766 - 775

Hudoba, G.
Amazing magnetic balls
(2013) Physics Education, 48 (4), pp. 424 - 425

Zhong, J., Cheng, Z., Ge, Z., Zhang, Y., Lu, W., Song, F., Li, C.
Nonlinear vibration of a magnetic spring
(2012) Physics Education, 47 (4), pp. 444 - 447

Molina-Bolívar, A., Abella-Palacios, J.
A simple and accurate balance measures magnetic field
(2011) Physics Education, 46 (5), pp. 517 - 518

Ganci, S.
Verifying magnetic force on a conductor
(2011) Physics Education, 46 (1), pp. 14 - 16

Andrews, D., Carlton, K., Lisgarten, D.
The magnetic field inside a long solenoid - A new approach
(2010) Physics Education, 45 (5), pp. 529 - 532

Abdul-Razzaq, W., Biller, R.D.
Geomagnetism and induced voltage
(2010) Physics Education, 45 (4), pp. 368 - 371

Straulino, S., Cartacci, A.
An educational Kohlrausch ammeter
(2010) Physics Education, 45 (2), pp. 158 - 161

Kodama, K.
A simple demonstration of a general rule for the variation of magnetic field with distance
(2009) Physics Education, 44 (3), pp. 276 - 280

Füllekrug, M.
Exploration of the electromagnetic environment
(2009) Physics Education, 44 (2), pp. 133 - 137

Cartacci, A., Straulino, S.
Measuring the Earth's magnetic field in a laboratory
(2008) Physics Education, 43 (4), pp. 412 - 416

Gluck, P.
Apparatus for magnetic field measurements
(2007) Physics Education, 42 (2), art. no. 013, pp. 201 - 205

Yap, J., MacIsaac, D.
Analysing simple electric motors in the classroom
(2006) Physics Education, 41 (5), art. no. 007, pp. 427 - 431

Linford, P.
Archaeomagnetic dating
(2004) Physics Education, 39 (2), pp. 145 - 154

Whaler, K.A., Holme, R.T.
The Earth's main magnetic field
(1999) Physics Education, 34 (4), pp. 180 - 184

Falcone, I.
J J Thomson and the discovery of the electron
(1997) Physics Education, 32 (4), pp. 226 - 231

Austin, L.
Magnetic and electric field strengths of high voltage power lines and household appliances
(1997) Physics Education, 32 (2), pp. 108 - 110

Andrews, C., Simmons, A., Williams, S.
Magnetic resonance imaging and spectroscopy
(1996) Physics Education, 31 (2), pp. 80 - 85

Fu, Y.
Students' understanding of the magnetic field of a circular current loop
(1990) Physics Education, 25 (6), art. no. 308, pp. 325 - 327

Jones, D.G.C.
Magnetic field measurements in the teaching laboratory
(1986) Physics Education, 21 (3), art. no. 415, pp. 188 - 189

Maloney, D.P.
Charged poles?
(1985) Physics Education, 20 (6), art. no. 009, pp. 310 - 316

Briggs, A.G., Briggs, M.S.J.
Depiction of magnetic fields
(1981) Physics Education, 16 (2), art. no. 410, pp. 101 - 102

Morton, N.
Electric and magnetic forces between parallel-wire conductors
(1979) Physics Education, 14 (6), art. no. 315, pp. 369 - 373

Ericson, T.J.
Nuclear magnetic resonance apparatus at low cost
(1972) Physics Education, 7 (2), art. no. 006, pp. 107 - 111

Preece, P.F.W.
The force of interaction between permanent magnets
(1970) Physics Education, 5 (5), art. no. 003, pp. 275 - 279

Moore, W.S.
Electron paramagnetic resonance
(1968) Physics Education, 3 (1), art. no. 303, pp. 11 - 16

Heywood, J.B.
Magnetohydrodynamics
(1968) Physics Education, 3 (5), art. no. 005, pp. 260 - 265

Ciftja, O., Bentley, C.L.
Circular Motion of a Charged Particle in a Uniform Constant Magnetic Field Revisited
(2025) Physics Teacher, 63 (4), pp. 269 - 273

Krulj, I.M., Sliško, J.
Absence of buoyant force in free fall: A magnetic demonstration
(2023) Physics Teacher, 61 (4), pp. 312 - 313

Finazzi, M., Zani, M.
Origin of the Laplace Force Applied to a Current-Carrying Wire Immersed in a Magnetic Field
(2023) Physics Teacher, 61 (4), pp. 286 - 289

Daubert, A., Jerman, Z., Planinšič, G.
Refrigerator Magnet Investigation
(2023) Physics Teacher, 61 (3), pp. 186 - 190

Wannous, J., Horvath, P.
Precise Measurements Using a Smartphone's Magnetometer - Measuring Magnetic Fields and Permeability
(2023) Physics Teacher, 61 (1), pp. 36 - 39

Ha, H., Jang, T., Sohn, S.H., Kim, J.
Magnetic Force between a Multilayered Solenoid and a Magnet
(2022) Physics Teacher, 60 (8), pp. 663 - 666

Saslow, W.M.
Magnetic Poles: A Missing Manual
(2022) Physics Teacher, 60 (7), pp. 540 - 545

Forringer, E.R.
Measuring and Modeling the Force between Permanent Magnets
(2022) Physics Teacher, 60 (7), pp. 546 - 548

Minkin, L., Sikes, D.
Measuring the Magnetic Field Vector of Earth
(2022) Physics Teacher, 60 (3), pp. 200 - 201

Taylor, R.
The On-Axis Magnetic Field for a Single, Helical Turn Coil
(2021) Physics Teacher, 59 (6), pp. 455 - 458

Garciá-Farieta, J.E., Márquez, A.H.
Beyond the Magnetic Field of a Finite Wire: A Teaching Approach Using the Superposition Principle
(2021) Physics Teacher, 59 (5), pp. 348 - 350

Wilson, M.T.
Misconceptions Arising from the Infinite Solenoid Magnetic Field Formula
(2021) Physics Teacher, 59 (3), pp. 213 - 215

Behroozi, F.
Dancing pins and waving flowers: Two new demos for visualizing magnetic field lines
(2021) Physics Teacher, 59 (1), pp. 66

Monteiro, M., Organtini, G., Martí, A.C.
Magnetic fields produced by electric railways
(2020) Physics Teacher, 58 (8), pp. 600 - 601

Maheswaranathan, P.
An Experiment to Verify the Current Dependence of Ampère's Law for a "long" Straight Current-Carrying Conductor
(2020) Physics Teacher, 58 (8), pp. 581 - 584

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Magnetic Forces between a Magnet and a Solenoid
(2020) Physics Teacher, 58 (5), pp. 330 - 334

Cookson, E., Nelson, D., Anderson, M., Barsukov, I., McKinney, D.L.
Exploring Magnetic Resonance with a Compass
(2019) Physics Teacher, 57 (9), pp. 633 - 635

Nuryadin, B.W., Rusman, R.
Simple determination of Curie temperature using a smartphone magnetometer
(2019) Physics Teacher, 57 (6), pp. 422 - 423

Syed, M., Nuessle, N.
What a Metal Pipe Can Teach You about Magnetism
(2019) Physics Teacher, 57 (5), pp. 330 - 333

Pili, U., Violanda, R.
Measuring a spring constant with a smartphone magnetic field sensor
(2019) Physics Teacher, 57 (3), pp. 198 - 199

Henrich, V.E.
Wooly Willy: Distance dependence of magnetic field
(2019) Physics Teacher, 57 (3), pp. 196

Hart, F.X.
The Magnetic Field Along the Axis of a Short, Thick Solenoid
(2018) Physics Teacher, 56 (2), pp. 104 - 106

Ogawara, Y., Bhari, S., Mahrley, S.
Observation of the magnetic field using a smartphone
(2017) Physics Teacher, 55 (3), pp. 184 - 185

Oostra, B.
The wire balance
(2016) Physics Teacher, 54 (9), pp. 560 - 564

Foster, T., Cary, A., Mottmann, J., van Wyngaarden, W.
A new version of an old demonstration experiment using the Elihu Thomson jumping ring apparatus
(2016) Physics Teacher, 54 (8), pp. 488 - 491

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Historic methods for capturing magnetic field images
(2016) Physics Teacher, 54 (3), pp. 134 - 137

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DC-powered jumping ring
(2016) Physics Teacher, 54 (2), pp. 112 - 116

Magnetic field lines on the Sun
(2015) Physics Teacher, 53 (6), pp. 384

Prentice, A., Fatuzzo, M., Toepker, T.
Charged particle dynamics in the magnetic field of a long straight current-carrying wire
(2015) Physics Teacher, 53 (1), pp. 34 - 37

Binder, P., Hui, K., Goldman, J.
Magnetic fields at the center of coils
(2014) Physics Teacher, 52 (9), pp. 560

Williams, J.E.
Measuring earth's local magnetic field using a helmholtz coil
(2014) Physics Teacher, 52 (4), pp. 236 - 238

Koser, J.
Magnetic force demo
(2013) Physics Teacher, 51 (5), pp. 260 - 260

Chen, Z., Dan Dahlberg, E.
Deformation of water by a magnetic field
(2011) Physics Teacher, 49 (3), pp. 144 - 146

Lunk, B., Beichner, R.
Exploring magnetic fields with a compass

(2011) Physics Teacher, 49 (1), pp. 45 - 48

Akoglu, R., Halilsoy, M., Mazharimousavi, S.H.
Simple system to measure the earth's magnetic field
(2010) Physics Teacher, 48 (8), pp. 549 - 550

Riveros, H.G., Betancourt, J.
Interacting compasses
(2009) Physics Teacher, 47 (7), pp. 460 - 462

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A para- and dia-magnetism balance
(2009) Physics Teacher, 47 (6), pp. 395

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The biot-savart law: From infinitesimal to infinite
(2008) Physics Teacher, 46 (1), pp. 44 - 47

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A magnet rolling in the earth's magnetic field
(2007) Physics Teacher, 45 (8), pp. 522 - 523

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Spherical rare-earth magnets in introductory physics
(2007) Physics Teacher, 45 (7), pp. 409 - 415

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Measuring the forces between magnetic dipoles
(2007) Physics Teacher, 45 (6), pp. 348 - 351

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An elementary model of the earth's magnetic field
(2007) Physics Teacher, 45 (3), pp. 168 - 170

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Magnetic force in an electrolyte
(2007) Physics Teacher, 45 (1), pp. 50 - 51

Arndt, E.
A magnetic paradox
(2006) Physics Teacher, 44 (8), pp. 524 - 527

Kanim, S., Thompson, J.R.
Magnetic field viewing cards
(2005) Physics Teacher, 43 (6), pp. 355 - 359

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Simple demonstration of the Earth's magnetic field
(2005) Physics Teacher, 43 (2), pp. 68

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A simple laboratory experiment to measure e/k
(2005) Physics Teacher, 43 (1), pp. 27 - 28

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Simple experiments to study the earth's magnetic field
(2004) Physics Teacher, 42 (8), pp. 458 - 461

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Classroom demonstration of magnetic force
(2004) Physics Teacher, 42 (8), pp. 500 - 501

Casaca, A., Silva, J.P.
Magnetic forces acting on rigid current-carrying wires placed in a uniform magnetic field
(2004) Physics Teacher, 42 (3), pp. 161 - 163

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Displaying magnetic forces produced by currents
(2003) Physics Teacher, 41 (5), pp. 307

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The magnetic field along the axis of a long finite solenoid
(2002) Physics Teacher, 40 (5), pp. 288 - 289

Schmidt, M.F.
Investigating refrigerator magnets
(2000) Physics Teacher, 38 (4), pp. 248 - 249

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Measuring earth's magnetic field simply
(2000) Physics Teacher, 38 (2), pp. 113 - 114