

RICHARD W. SCHMIDT, Ed. D.

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PROFILE	
<p>Educator and geoscientist with 28 years experience in secondary science education. Extensive field experience as department head, science instructor, head coach, and emergency operations specialist. Active grant writer and innovator in the field of science curriculum design both traditional and blended/online. Practicing researcher and specialist in developing relationships between secondary and higher education institutions and the geoscience workforce. Adjunct instructor of leadership studies and field paleontology. Veteran volunteer firefighter and fire officer for 33 years.</p>	
EDUCATION	
<p>Doctorate of Education, Educational Leadership <i>Drexel University</i> Dissertation: Bridging the Geoscientist Workforce Gap: Advanced High School Geoscience Programs</p>	2011
<p>Certificate of Achievement in Weather Forecasting <i>Pennsylvania State University</i> Twelve credit, four course curriculum in weather forecasting</p>	2008
<p>Master of Education, Curriculum and Instruction <i>Pennsylvania State University</i> Educational Leadership curriculum with course work in supervision, administration, curriculum, research and personnel management</p>	1997
<p>Bachelor of Science, Secondary Education <i>Pennsylvania State University</i> Pennsylvania teaching certification in earth and space and general science</p>	1993
<p>Bachelor of Science, Earth Sciences <i>Pennsylvania State University</i> Diverse curriculum in geology, astronomy, oceanography and meteorology</p>	1993
<p>Fire Service Training Over 600 hours of specialized training in fire/rescue operations, management, leadership and education</p>	1998- Present
CERTIFICATIONS	
<p>Pennsylvania Principal Certification</p>	2009
<p>Pennsylvania Instructional II Certification Earth and Space Science, General Science</p>	1997

PROFESSIONAL EXPERIENCE, SECONDARY EDUCATION

Department Head, Upper Dublin High School

2012-2018

Served as department head for 14 person high school science department encompassing the content areas of biology, chemistry, physics, environmental, forensics and geosciences. Responsible for budget and requisitions, hiring, staffing and scheduling, student awards, and as liaison between teachers and parents. Acted as coordinator of day-to-day operations and as the point person for building administrators, guidance counselors and teachers. Extensive experience with regard to public education and (G)IEP and 504 regulations, computerized grading and class management systems, FERPA/HIPAA regulations, Title IX, PVAAS and PA Keystone exams, PA Educator Effectiveness model, Next Generation (and PA) Science Standards, labor negotiations/collective bargaining, Understanding by Design and Charlotte Danielson models.

Initiatives, Projects and Accomplishments

- Oversaw realignment of biology curriculum to comply with PA Keystone exam
- Supervised creation and implementation of remedial courses for students unable to pass the PA Keystone exam in biology
- Reviewed, interviewed and recommended numerous long term substitute teachers for teachers on maternity or sabbatical leave
- Managed yearly budget of approximately \$30,000 in equipment, textbook and technology needs
- Assisted in writing course acceleration policy that recognizes emerging trends in online education
- Spearheaded institution of the building's first "No Zero Initiative" to raise performance levels of struggling science students
- Assisted in managing district-wide science education efforts with K-12 science supervisor

Safety and Security Consultant, School District of Upper Dublin

2014-2020
2006-2009

Acted as emergency management consultant for initial district-wide safety/security assessment conducted in 2006 followed by ongoing support for adoption of recommendations from assessment report. Currently serve as coordinator of all emergency operations, planning, training and incident support at Upper Dublin High School.

Initiatives, Projects and Accomplishments

- Acted as coordinator for district-wide initiative in emergency operations, student safety, planning and training
- Created six district-wide presentations on emergency management and planning
- Coordinated federal certification of school district administration, faculty and staff in emergency management and incident command
- Designed framework for district-wide event and emergency communications system in conjunction with township emergency services and municipal government
- Built standardized system of accountability for students during evacuations
- Planned and coordinated all on and off-site high school evacuations (4 per academic year) for approx. 1,400 students and staff
- Acted as liaison between school district and local emergency management entities during several weather-related emergencies
- Trained staff and faculty in federal emergency response standards (ICS 100, etc.)

<p>Science Instructor, School District of Upper Dublin</p> <p>Instructor of seventh grade life science (1993), eighth grade earth and space science (1993-2001), tenth grade environmental science (2001), forensic science (2001-present), advanced earth and space science (2002-present) and advanced geosciences (2002-present). Creator of five separate science curricula never before offered in the history of the school district. Author of thirteen successful grants totaling \$82,000. Recipient of numerous teaching awards including the Presidential Award for Excellence in Math and Science Teaching, the highest teaching honor awarded by the federal government.</p> <p><i>Initiatives, Projects and Accomplishments</i></p> <ul style="list-style-type: none"> • Delivered diverse curricula for grades 7-8 and 10-12 in earth and space science, environmental science, advanced earth and space science, forensic science, and survival science • Authored 18 successful science education grants totaling nearly \$90,000 • Established, designed and instructed <i>Advanced Geosciences I and II</i>, <i>Advanced Earth and Space Science</i>, and <i>Forensic Science and Survival Science and Fitness</i>, all original curricula and the first of their kind in the Philadelphia region • Negotiated dual enrollment agreement between School District of Upper Dublin and West Chester University (PA) for <i>Advanced Geosciences I</i> and <i>Advanced Geosciences II</i> curricula, the first such agreement of its kind for the university's geology and astronomy department (2014) • Achieved eligibility of <i>entire</i> advanced geosciences program under PA Department of Community and Economic Development's Educational Improvement Tax Credit Program (2011) • Vetted the Next Generation Science Standards (NGSS) as part of Presidential awardee (PAEMST) activities (2011) • Initiated dual enrollment agreement between School District of Upper Dublin and the State University of New York (Oneonta) for <i>Advanced Geosciences I</i> and <i>Advanced Geosciences II</i> curricula, the first such agreement of its kind outside the state of New York as well as for the school district (2010) • Created the only public high school geoscience curricula in Pennsylvania to be accredited by a four year university (2010) • Co-chaired evaluation subcommittee for K-12 Curriculum Review (1997, 2007) • Appointed as the first full time geoscience instructor in the high school's history (2001) • Led the school district's first technology integration initiative in the mid 1990s • Facilitated unique educational partnerships with private and local government entities for science education initiatives in SCUBA-based marine archaeology and forensic science fire investigation • Established instructional modules in applied technology including GIS, GPS, ROVs, UAVs, remote sensing, weather forecasting and SCUBA diving • Installed and operated several real-time scientific instruments including Davis Instruments' <i>Vantage Pro2</i> weather station, Boltek's <i>LD 350 Lightning Detection</i> system and <i>EFM-100 Electric Field Monitor</i>, Steiner Enterprises' <i>EQ-1 seismometer</i> • Authored the "STORMcasts," online forecast bulletins sent throughout the tri-state region featuring meteorology-based vignettes for students and other interested parties as well as alert bulletins for impending weather events • Working knowledge of Microsoft applications: Word, Powerpoint, Excel, Outlook, Google applications: Gmail, Classroom, Docs, Sheets, Slides, Earth, Adobe applications: Acrobat, Audition, Photoshop 	<p>1993- Present</p>
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<p>Soccer Coach, Upper Dublin High School Served as boys soccer coach for eighth grade, junior varsity and varsity teams between 1993 and 2013. Appointed head coach of high school boys program in 2002. Responsible for selection, training and deployment of approximately sixty players along with coaching staff. Additional responsibilities included budget, awards, equipment accountability and coordination with parent booster organization. Most successful boys soccer coach in school district's history to date.</p> <p><i>Initiatives, Projects and Accomplishments</i></p> <ul style="list-style-type: none"> • Revitalized program after nearly fifteen year period of stagnation • Created new identity for program through unique uniform and logo never used before in the school's history • Instituted complex qualitative and quantitative selection process for three teams (ninth grade, junior varsity and varsity) • Managed off-season winter and summer teams for player development • Led teams to post season playoffs in nine of thirteen seasons • Won five Suburban One conference championships between 2004 and 2013 • Career record of 203-72-31 (142-69-20 as head coach) 	<p>1993-2013</p>
<p>Marching Instructor, Marple Newtown School District Marching instructor and former field show designer for award winning high school marching band. Responsibilities include instruction of marching and maneuvering techniques used in the 80-110 member competition marching band. Past responsibilities have also included assisting the band director in original field show design and music instruction of the brass section.</p> <p><i>Initiatives, Projects and Accomplishments</i></p> <ul style="list-style-type: none"> • Assisted in field show design between 1992 and 2007 • Supervised large marching band at countless competitions, parades and events • Instructed wind and percussion sections in marching and field visual techniques and precision • Mentored junior staff members in instructional methods and techniques • Earned first place in the Cavalcade of Bands (Yankee Division) competition circuit in 2014, 2015 and 2016 	<p>1991-Present</p>

PROFESSIONAL EXPERIENCE, HIGHER EDUCATION	
<p>Adjunct Professor, Rocky Mountain College Co-creator and primary instructor for summer field paleontology course offered through Rocky Mountain College (MT) to undergraduate students who spend two weeks with the Bighorn Basin Paleontological Institute (BBPI) based in Red Lodge, MT. Responsible for management of field operations, developing assessments, grading of students and coordination with RMC for enrolled students.</p> <p><i>Initiatives, Projects and Accomplishments</i></p> <ul style="list-style-type: none"> Assisted in brokering academic agreement between RMC and BBPI for three credit field paleontology undergraduate course Entrusted with curriculum development, classroom instruction and assessment of <i>GEO380 - Field Paleontology</i> in coordination with RMC geology department 	2017-2021
<p>Adjunct Instructor, Delaware County Community College Author and instructor of three credit course in emergency service management and leadership as part of the college's Emergency Management and Planning, Associate in Applied Science program. The program was created with support from the Department of Homeland Security with the intent of developing the knowledge and skills necessary to successfully manage the emergency services in the 21st century.</p> <p><i>Initiatives, Projects and Accomplishments</i></p> <ul style="list-style-type: none"> Created and designed curriculum and assessments for <i>EMER 120 - Leadership and Influence in Emergency Response</i> Instructed adult police, fire, and emergency medical service students in leadership and management theory with special emphasis on emergency service applications and institutions 	2003-2006
PROFESSIONAL EXPERIENCE, GEOSCIENCES	
<p>Director of Educational Programming, Bighorn Basin Paleontological Institute Director of Educational Programming for the newly restructured Bighorn Basin Paleontological Institute (BBPI), a non-profit organization of paleontologists, researchers, and educators primarily focused on paleontological research of the Mesozoic era as revealed by fossil deposits of the Bighorn Basin of Wyoming and Montana.</p> <p><i>Initiatives, Projects and Accomplishments</i></p> <ul style="list-style-type: none"> Appointed Director of Educational Programming (2016) for BBPI with chief responsibility of facilitating program accreditation by higher education institution(s) Responsible for development of undergraduate curriculum and associated instructional tools along with student assessments Introduced the use of COTS UAVs for aerial mapping and reconnaissance of fossils sites and currently engaged in ongoing research of UAV applications Contributed to the excavation and recovery of several prominent fossil finds from Jurassic and Cretaceous period Bighorn Basin deposits including <i>Basilemys</i>, <i>Edmontosaurus</i>, <i>Leptoceratops</i>, <i>Suwassea (holotype)</i>, <i>Allosaurus</i>, <i>Diplodocus</i>, <i>Camarasaurus</i>, <i>Triceratops</i>, <i>Tyrannosaurus</i> 	2012-Present

PROFESSIONAL EXPERIENCE, CURRICULUM DESIGN

<ul style="list-style-type: none">• <i>Survival Science and Fitness (SSF 398)</i>, Upper Dublin High School (2019)• <i>Field Paleontology (GEO 380)</i>, Rocky Mountain College/Bighorn Basin Paleontological Institute (2016-present)• <i>Advanced Geosciences II: Geology and Astronomy (AGS 381)</i>, Upper Dublin High School (2011)• <i>Advanced Geosciences I: Meteorology and Oceanography (AGS 371)</i>, Upper Dublin High School (2009)• <i>Leadership and Influence in Emergency Response (EMER 120)</i>, Delaware County Community College (2003)• <i>Advanced Earth and Space Science (AES 372, 371)</i>, Upper Dublin High School (2001)• <i>Forensic Science (FOR 323)</i>, Upper Dublin High School (2000)	Various
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VOLUNTEER SERVICE

Broomall Fire Company, Marple Township, Delaware County, PA

Firefighter, fire officer and former board of director for the Broomall Fire Company, a large, wholly volunteer suburban Philadelphia organization. Fire company currently operates a fleet of four front line apparatus with several auxiliary vehicles that provides fire/rescue protection for approximately 23,000 residents over ten square miles plus nine miles of Interstate 476. Company also provides first alarm automatic aid to five other adjoining municipalities. Call volume generally between 700 and 800 alarms per year. Net value of the organization approximately \$4 million. As fire officer, entrusted with the tactical deployment of fire personnel and equipment in all fire/rescue emergencies. Also responsible for training, purchasing, budget, and operations-based research and development.

1988-
Present

Initiatives, Projects and Accomplishments

- Appointed to the positions of director of fire training (1997-1999), fire lieutenant (1999-2000), fire captain (2001-2006, 2014-present)
- Led engine, ladder and/or rescue companies in countless fire and rescue situations including over one dozen weather-related natural disasters
- Elected to the position of board of director (2004-2008) and 2nd assistant chief (2007-2009)
- Commanded logistics section for 60 person, county-level disaster relief operations during national flood disasters in 1993 (Illinois/Iowa) and 1994 (Georgia)
- Commended four times for actions taken at life threatening emergencies
- Served alongside FDNY firefighters during the World Trade Center rescue/recovery operation (2001)
- Led innumerable training drills for emergency responders on fire ground operations, strategy and tactics, fire science, hazardous materials, leadership, disaster response and terrorism
- Devised company’s Weapons of Mass Destruction (WMD) response plan and training program
- Trained extensively in fire service leadership, management, strategy and tactics
- Authored or consulted for six successful fire service grants totaling over \$350,000
- Created and commanded the Broomall Fire Company and Delaware County Fallen Firefighter and EMS Memorial Honor Guards
- Commanded ceremonial units at nearly 150 local, state and federal special events
- Represented the United States fire service for such dignitaries as Vice President Dick Cheney, U.S. Fire Administration chief R. David Paulison, Pennsylvania Governor Tom Ridge, Philadelphia Mayors Ed Rendell and Michael Nutter, Stockport (England) Mayor Kenneth Holt and Greater Manchester Fire and Rescue Service (England) Chief Barry Dixon
- Organized and led the “Brotherhood Tour”, the first meeting between the fire services and communities of Marple Township, PA and Marple, England
- Led or assisted with ceremonial components for multiple line-of-duty-death memorial services and funerals in Delaware County and Philadelphia

GRANTS AND FUNDED RESEARCH	
<ul style="list-style-type: none"> • <i>Student vs. Wild I</i> - \$4,304 (2019) • <i>Augmented Reality Applications in the Sciences</i> - \$1,100 (2019) • <i>STORMcast II Technology Initiative</i> (\$1,500) • <i>Advanced Geosciences Computer Initiative</i> - \$19,183 (2015) • <i>Micrometeorology Studies</i> - \$6,550 (2014) • <i>Space Technology: ROV Science II</i> - \$1,558 (2014) • <i>Advanced Geosciences Electronic Wall Initiative</i> - \$27,000 (2012) • <i>Astronomy Software Initiative: Starry Night</i> - \$3,769 (2011) • <i>Marine Technology: ROV Science I</i> - \$1,402 (2011) • <i>Paleontology</i> - \$3,927 (2011) • <i>Oceanographic Research: Marine Navigation</i> - \$1,448 (2011) • <i>Project STORM: Lightning Detection System</i> - \$3,578 (2011) • <i>Project STORM: Severe Weather Detection and Alerting System</i> - \$1,685 (2009) • <i>CD/DVD Publishing in Science</i> - \$3,282 (2005) • <i>Survivair Pulse Tracker System</i> - \$13,212 (2004) • <i>Survivair AirPak System</i> - \$211,774 (2004) • <i>Fire Safety Public Education Trailer</i> - \$45,900 (2003) • <i>Project STORM Initiative</i> - \$6,500 (2002) • <i>Forensic Science: Crime STILL Doesn't Pay</i> - \$2,123 (2000) • <i>Thermal Imaging for the Fire Service</i> - \$22,400 (1999) 	Various
INVITED OR PEER REVIEWED PRESENTATIONS, PANELS, PUBLICATIONS	
<ul style="list-style-type: none"> • <i>Reopening the Mother's Day Quarry (Jurassic Morrison Formation, Montana) Is Yielding New Information</i> (Poster). Schein, J., Poole, J. Schmidt, R., Rooney, L. Geological Society of America Annual Meeting, Phoenix, AZ (2019) • <i>Dinosaur Treasures in our Backyards: A Model for Fostering Community Pride in Geological and Paleontological Resources</i> (Poster). Schein, J., Schmidt, R., Poole, J. Geological Society of America Annual Meeting, Indianapolis, IN (2018) • Interview committee for editor of the National Association of Geoscience Teachers' <i>In the Trenches</i> publication, Geological Society of America Annual Meeting, Denver, CO (2016) • <i>Getting Your Feet Wet: Simulation Science and the Marine Sciences Curriculum</i>, National Association of Geoscience Teachers - <i>In the Trenches</i>, Vol. 6, No. 1 (2016) • <i>A Well Untapped: Overcoming the Obstacles Inhibiting Dual Enrollment Agreements in the Geosciences</i>, Geological Society of America Annual Meeting, Baltimore, MD (2015) • <i>High School and Higher Education Partnerships: Bridging the Geoscience Workforce Gap</i>, West Chester University (2014) • <i>Critical Connections Between High School and College Geoscience Education</i>, Lafayette College (2014) • <i>STEM: What Inspires You?</i> (Keynote), 2nd Annual STEMathon, Harrisburg, PA (2014) 	Various

<ul style="list-style-type: none"> • <i>Fanning the Flames of Student Interest: Dual Credit Courses and Recruitment of Geoscience Majors</i>, Geological Society of America Annual Meeting, Denver, CO (2013) • <i>The Role of Schools in Creating Weather Ready Communities</i>, National Severe Weather Workshop, Norman, OK (2012) • <i>Fire Cause and Determination</i>, University of the Sciences in Philadelphia (2008) • <i>National Incident Management System</i>, School District of Upper Dublin (2007) • <i>Emergency Management and Education</i>, Gwynedd Mercy College (2007) • <i>What If? Emergency Management for Educators</i>, School District of Upper Dublin (2006) • <i>Simulation Science</i>, National Science Teachers Association national conference, Philadelphia, PA (2004) 	Various
HONORS, AWARDS, DISTINCTIONS	
<ul style="list-style-type: none"> • Awarded <i>Unit Citation</i> for actions at a life threatening vehicle accident with entrapment (2020) • Awarded <i>Unit Citation</i> for actions at a fatal house fire with entrapment (2020) • Granted <i>Research Associate</i> status at the New Jersey State Museum (2016) • Awarded <i>Unit Citation</i> for actions at a life threatening vehicle accident with entrapment (2015) • Awarded <i>Presidential Award for Excellence in Mathematics and Science Teaching</i> (2012) • Awarded <i>Unit Citation</i> for actions at a life threatening vehicle accident with entrapment (2011) • Awarded <i>Outstanding Earth Science Teacher (PA)</i>, National Association of Geoscience Teachers (2008) • Awarded <i>Award for Excellence in Earth Science Teaching (PA)</i>, Geological Society of America (2008) • Awarded <i>Life Membership</i>, Broomall Fire Company (2007) • Featured as representative of the <i>Be Exceptional</i> campaign, Pennsylvania State University (2008) • Awarded citation for <i>Dedicated and Faithful Service to the Community and Fire Service</i>, US House of Representatives (2006) • Inducted into <i>3E Institute Educator 500</i>, West Chester University (2005) • Awarded the <i>Stan MacFarlane Sportsmanship Award</i>, Suburban Philadelphia Soccer Officials Association (2004) • Served as ambassador between Marple Township, PA and Marple, England (2004) • Named <i>Firefighter of the Year</i>, Broomall Fire Company (1998) • Cited for <i>Distinguished Service and Exemplary Citizenship</i>, Delaware County, PA (1994) • Cited for <i>Contributions Made to the Community</i>, Marple Township Commissioners (1993) • Inducted into Sigma Gamma Epsilon earth science honor society (1992) 	Various
PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS	
<ul style="list-style-type: none"> • Paleontological Society (2015-Present) • National Association of Geoscience Teachers (2012-Present) • Delaware County Fallen Firefighter and EMS Memorial Committee (2011-2018) • American Geosciences Institute (2010-Present) • Geological Society of America (2008-Present) 	Various

MEDIA REFERENCES	
<ul style="list-style-type: none"> • <i>Paleontology in the Big Horn Basin</i>, Music Ranch Radio program, Red Lodge, MT (8/2020) • <i>A Dinosaur Planet at Upper Dublin High School</i>, Pennsylvania School Boards Association dailyEDition, successstartshere.org/success-stories/ (Feb. 17, 2020) • <i>Paleontology in the Big Horn Basin</i>, Music Ranch Radio program, Red Lodge, MT (7/2019) • <i>Apocalypse Now This: The Human Extinction</i>, Season 2, Episode 1, Dangerworks Studios, NY (12/2018) • <i>Paleontology in the Big Horn Basin</i>, Music Ranch Radio program, Red Lodge, MT (7/2018) • <i>Digging for Dinosaurs</i>, Ambler Gazette (9/9/2018) • <i>Robots in the Deep End</i>, Ambler Gazette (5/28/2017) • <i>New Tools, Old Bones: Bringing Fossils to Life Through Technology</i>, Great Big Story video network, Turner Broadcasting (7/2016) • <i>Upper Dublin High School Teacher Puts Humor into Weather Forecasts</i>, Ambler Gazette (1/22/2016) • <i>Dresher Man, Upper Dublin Teacher Digging Up Dinosaurs</i>, Ambler Gazette (3/26/2015) • <i>In the High Schools, An Army of Sleuths</i>, Philadelphia Inquirer (10/15/2008) • <i>Educator Spotlight</i>, Philadelphia Inquirer (7/6/2008) • <i>Dive, Dive, Dive</i>, Ambler Gazette (1/16/2002) • <i>Diversifying A Course of Study</i>, Philadelphia Inquirer (1/12/2002) • <i>Education Set Ablaze</i>, Philadelphia Inquirer (11/29/2000) • <i>Eighth Graders Get a Hands On Lesson in Meteorology</i>, Ambler Gazette (3/19/2000) 	Various
REFERENCES	
<p>Dr. Kristen Betts Clinical Professor, Drexel University EdD Program in Educational Leadership & Management MS Program in Higher Education kbettsonline@gmail.com</p> <p>Dr. James Ebert Professor, Department of Earth and Atmospheric Sciences State University of New York, Oneonta Ebertjr@oneonta.edu</p> <p>Dr. Allen Grant Assistant Clinical Professor, Drexel University Department Chair, Education Policy and Leadership Programs acg48@drexel.edu</p> <p>Ms. Kim Small K-12 Supervisor, Science Upper Dublin School District ksmall@udsd.org</p> <p>Ms. Bryna Vandergrift Grades 6-12 English and Language Arts Coordinator Upper Dublin School District bvandergr@udsd.org</p>	