

## **Dr. Christopher Dobson**

*Professor of Biology and Integrated Science*  
Biology Department, Grand Valley State University  
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### EDUCATION

D.A. Biology, Idaho State University, August 2001

M.S. Biology, Portland State University, June 1997

B.S. Biology, Oregon State University, June 1992

### PROFESSIONAL EXPERIENCE

Biology Department, Grand Valley State University

*Professor, 2015-Present*

*Associate Professor, 2007-2015*

*Assistant Professor, 2003-2007*

BIO 104 Biology for the 21<sup>st</sup> Century (lecture and lab)

BIO 120 General Biology I (lecture)

BIO 121 General Biology II (lecture)

SCI 225 Integrated Life Science for K-8 Teachers (lecture and lab)

SCI 336 Ecology for K-8 Pre-Service Teachers (lecture and lab)

Science Department, Front Range Community College

*Regular Faculty, 2000-2003*

BIO 105 Science of Biology (lecture and lab)

BIO 109 Human Biology (lecture)

BIO 112 General College Biology II (lecture and lab)

Department of Biological Sciences, Idaho State University

*Graduate Fellowship, 1997-2000*

BIOL 100 Concepts in Biology: Human Concerns (lecture)

BIOS 221 Introductory Microbiology (lecture)

BIOS 223 Introductory Microbiology (lab)

BIOS 299 General Zoology Study Methods (lecture)

BIOS 425 Human Anatomy (lab)

Biology Department, Portland State University

*Graduate Teaching Assistant, 1994-1997*

BIO 105 General Botany (lab)

BIO 251 Principles of Biology (lab)

## PROFESSIONAL ACTIVITIES

### Professional Memberships

Michigan Science Teachers Association, 2004-Present

National Association of Biology Teachers, 1997-Present

National Science Teachers Association, 1999-Present

Society for College Science Teachers, 2004-Present

### Publications (\*undergraduate student, \*\*graduate student)

- Szarecka, A. and C. Dobson. 2019. Protein structure analysis: Introducing students to rational drug design. *The American Biology Teacher*, 81(6):423-429.
- Dobson, C. 2019. Guiding ecological investigations: Students learn science practices and the nature of science. *MSTA Journal*, 64(2):14-24.
- Woller-Skar, M., H. Snyder\*\*, and C. Dobson. 2018. Heat exchange on the scale of ecosystems in the lab: Using bottle biology to measure the impact of vegetation on regional climate. *The American Biology Teacher*, 80(1):42-46.
- Dobson, C., M. Woller-Skar, and J. Green\*. 2017. An inquiry-based activity to show the importance of sample size and random sampling. *Science Scope*, 40(8):76-81.
- Koren, E. \*, J. Meaney\*, G. Roloff, C. Dobson, and J. Jacquot. 2016. Practicing citizen science: An investigation of schoolyard resource availability and population dynamics. *MSTA Journal*, 61(2):57-67.
- Dobson, C. and A. Bennett\*. 2014. The biodiversity invasion: 5E lesson addresses NGSS. *MSTA Journal*, 59(1):52-61.
- Dobson, C. and D. Postema\*. 2014. The amazing ecology of terrestrial isopods: Third-grade students investigate roly-polies to learn about ecosystems. *Science and Children*, 51(7):60-66.
- Dobson, C., S. Brusselmans\*, S. Ruddy\*, and J. Swidorski\*. 2013. Forest for the trees: 5E lesson addresses NGSS. *MSTA Journal*, 58(2):1-8.
- Dobson, C., S. Oostdyk\*, and P. Radtke\*. 2013. Next Generation Science Standards: Lost in the woods? *Science Scope*, 37(1):53-59.
- Frasco, M.\* and C. Dobson. 2010. Moss, beech trees, and stemflow: Integrated science. *MSTA Journal*, 55(1):27-35.
- Wampler, L.\* and C. Dobson. 2010. Helicopter seeds and hypotheses...that's funny! *Tried and True: Time-Tested Activities for Middle School*, ed. Liftig, I., NSTA Press, National Science Teachers Association, pp. 77-80.
- Wampler, L.\* and C. Dobson. 2010. Helicopter seeds and hypotheses...that's funny! *The Frugal Science Teacher, PreK-5: Strategies and Activities*, ed. Froschauer, L., NSTA Press, National Science Teachers Association, pp. 107-110.
- Wampler, L.\* and C. Dobson. 2010. Helicopter seeds and hypotheses...that's funny! *The Frugal Science Teacher, 6-9: Strategies and Activities*, ed. Froschauer, L., NSTA Press, National Science Teachers Association, pp. 133-136.
- Joseph, S.\*\* and C. Dobson. 2010. Life science arcade aligned with 2009 science GLCEs. *MSTA Journal*, 55(2):64.

- Burton, S. and C. Dobson. 2009. Spork & beans: Addressing evolutionary misconceptions. *The American Biology Teacher*, 71(2):89-91.
- Dobson, C. 2008. *Critical Thinking Skills: Measuring Higher Cognitive Development with Bloom's Taxonomy*. Saarbrücken, Germany: VDM Verlag Publishing, 40pp.
- Wampler, L.\* and C. Dobson. 2008. Helicopter seeds and hypotheses...that's funny! *Science Scope*, 32(1):72-74.
- Dobson, C. 2008. Ecological field studies: Through field studies, students learn scientific process and ecological content. *The Science Teacher*, 75(2):40-43.
- Capps, A.\* and C. Dobson. 2007. Life science arcade addresses standards. *MSTA Journal*, 52(2):55.
- Zeeff, C.\*, A. Palazzolo\*, and C. Dobson. 2007. Doing sophisticated science simply: Help students understand the nature of science. *Science Scope*, 31(2):72-73.
- Gauss, M.\* and C. Dobson. 2006. The biodiversity box: Inquiry science at the elementary level. *MSTA Journal*, 51(2):31-32.
- Dobson, C. 2006. Becoming a science educator. *Focus on Microbiology Education*, 12(3):12-13.
- Dobson, C. 2005. Implications from a study on critical thinking. *Focus on Microbiology Education*, 12(1):2-5.
- Dobson, C. 2002. The scholarship of teaching. *Career Advice for Life Scientists*, ed. Marincola, E., The American Society for Cell Biology, pp. 16-18.
- Dobson, C. and R. Seeley. 2000. Using Bloom's Taxonomy to measure the development of critical thinking skills in anatomy and physiology. *HAPS Educator: Human Anatomy & Physiology Society*, 5(1):25-26.
- Barbur, J., C. Dobson, and A. Morris. 1999. *Testbank to Accompany Biological Perspectives: Biological Sciences Curriculum Study*. Dubuque, IA: Kendall/Hunt Publishing.
- Dobson, C. 1999. The scholarship of teaching. *American Association for Cell Biology Newsletter*, 22(9):3-4.

**Select Presentations** (\*undergraduate student, †author only)

- Dobson, C. 2019. Guiding ecological investigations: Students learn science practices and the nature of science. Michigan Science Teachers Association Annual Conference, Grand Rapids, MI.
- Dobson, C., S. Oostdyk, and P. Radtke. 2015. Next Generation Science Standards: Lost in the woods? National Science Teachers Association National Conference, Chicago, IL.
- Dobson, C., S. Brusselmans<sup>†</sup>, S. Ruddy<sup>†</sup>, and J. Swidorski<sup>†</sup>. 2014. Forest for the Trees: 5E lesson addresses NGSS. National Association of Biology Teachers National Convention, Cleveland, OH.
- Dobson, C., H. Miller, P. Llerandi-Román<sup>†</sup>, and S. Mattox<sup>†</sup>. 2013. Integrating climate change for elementary pre-service teachers. National Science Teachers Association National Conference, San Antonio, TX.
- Dobson, C. and S. Haley\*. 2012. Global climate change and integrated science. National Science Teachers Association National Conference, Indianapolis, IN.
- Dobson, C. and L. Wampler<sup>†</sup>. 2010. Helicopter seeds and hypotheses...That's funny! National Science Teachers Association National Conference, Philadelphia, PA.

- Burton, S. and C. Dobson. 2010. Spork & Beans: Addressing evolutionary misconceptions. National Science Teachers Association National Conference, Philadelphia, PA.
- Wampler, L.\* and C. Dobson. 2009. Helicopter seeds and hypotheses...that's funny! Michigan Science Teachers Association Annual Conference, Detroit, MI.
- Dobson, C., S. Brusselmans<sup>†</sup>, S. Ruddy<sup>†</sup>, and J. Swidorski<sup>†</sup>. 2008. Forest ecology in the classroom. National Association of Biology Teachers National Convention, Memphis, TN.
- Postema, D.\*, T. Klumpel\*, and C. Dobson. 2008. Teach inquiry and ecology using pillbugs. Fall Science Update, Grand Valley State University, Allendale, MI.
- Dobson, C. and M. Gauss<sup>†</sup>. 2007. The biodiversity box. National Science Teachers Association National Conference, St. Louis, MO.
- Capps, A.\* and C. Dobson. 2007. Life science arcade. Michigan Science Teachers Association Annual Conference, Grand Rapids, MI.
- Bennett, A.\* and C. Dobson. 2007. Biodiversity invasion. Fall Science Update, Grand Valley State University, Allendale, MI.
- Dobson, C. 2005. Implications of a study using Bloom's Taxonomy to measure critical thinking. National Science Teachers Association Midwestern Area Convention, Chicago, IL.
- Dobson, C. and S. Burton. 2005. Spork and beans. National Association of Biology Teachers National Convention, Milwaukee, WI.
- Dobson, C. 2004. Assessing higher-level thinking using Bloom's Taxonomy. National Association of Biology Teachers National Convention, Chicago, IL.
- Dobson, C. 2004. Investigating ecology as a model for doing science. Michigan Science Teachers Association Annual Conference, Lansing, MI.
- Seeley, R. and C. Dobson. 2000. Development of problem solving skills, diagnosis, and prescription of student study methods. Human Anatomy & Physiology Society National Conference, Charlotte, NC.
- Belzer, S., C. Dobson, and S. Burton. 1999. Using an innovative model to help future biology teachers adopt a conceptual framework or scholarly approach to teaching. National Association of Biology Teachers National Convention, Ft. Worth, TX.

### Chapter Review

- Campbell, A., L. Heyer, and C. Paradise. 2014. *Integrating Concepts in Biology*. Trunity.com eBook, [www.trunity.com/products/digital-textbooks/integrating-concepts-in-biology](http://www.trunity.com/products/digital-textbooks/integrating-concepts-in-biology).
- Shuster, M., J. Vigna, G. Sinha, and M. Tontonoz. 2010. *Biology for a Changing World*. W. H. Freeman-Scientific American, New York, NY.
- Phelan, J. 2009. *What is Life? A Guide to Biology*. W. H. Freeman and Co., New York, NY.
- Belk, C. and V. Borden. 2007. *Biology: Science for Life*, 2<sup>nd</sup> ed., Prentice Hall Publishing, Upper Saddle River, NJ.
- Krogh, D. 2000. *Biology: A Guide to the Natural World*, 2<sup>nd</sup> ed. Prentice Hall Publishing, Upper Saddle River, NJ.
- Postlethwait, J. and J. Hopson. 1999. *Explore Life*. Brooks/Cole Publishing, Pacific Grove, CA.

## **Manuscript Review**

*Journal of College Science Teaching*  
2010-2020, 35 manuscripts

*The Michigan Academician*  
2008, 1 manuscript

## **Proposal Review**

National Science Teachers Association National Conference, Indianapolis, IN, 2012.

## **K-12 Grant-Funded Projects**

### Grand Valley State University:

#### *Science Teacher Education and Development*

Title II, Part A, Improving Teacher Quality, Michigan DOE  
Key Personnel, 2011-2013, Schiller, E. Project Director  
Middle Schools, Muskegon and Wyoming Public School Districts

#### *Target Inquiry: Further Development and Testing of Target Inquiry Model*

NSF, Divisions of Elementary, Secondary, and Informal Education  
Senior Personnel, 2011-2012, Herrington, D. Project Director  
Middle and High Schools, West Michigan Public School Districts

#### *A Sustainable Collaboration to Improve Content, Assessment, Reflection and Efficacy of Science Teachers*

Title II, Part A, Improving Teacher Quality, Michigan DOE  
Key Personnel, 2006-2008, Joseph, J. and E. Schiller Project Directors  
Middle Schools, Grand Rapids and Muskegon Public School Districts

#### *Professional Development for Conceptual Change in Middle School Science Teaching*

Title II, Part A, Improving Teacher Quality, Michigan DOE  
Key Personnel, 2004-2005, Joseph, J. Project Director  
Middle Schools, Grand Rapids and Muskegon Public School Districts

#### *Developing, Reflecting, Explaining & Achieving Through Middle School Science*

Title II, Part A, Improving Teacher Quality, Michigan DOE  
Key Personnel, 2003-2004, Joseph, J. and S. Carson Project Directors  
Middle Schools, Grand Rapids and Muskegon Public School Districts

#### *Building Science Leaders: Grade Level Facilitators*

Title II, Part A, Improving Teacher Quality, Michigan DOE  
Professional Development Faculty, 2003-2005, Meyers, K. and M. Sheline Project Directors  
Elementary and Middle Schools, West Ottawa and Wyoming Public School Districts

### Portland State University:

#### *Urban Ecosystems Project*

Graduate Assistant, 1996-1997, Center for Science Education  
Middle Schools, Portland Public School District

*Mt. Hood National Forest Teacher Training Project*  
Graduate Assistant, 1995-1996, Center for Science Education  
High Schools, Western Oregon Public School Districts