

Pensumtekster for KJEMDID220/-P høst/vår 2017/18 525 sider

Ringnes, V., & Hannisdal, M. (2014). Kjemi fagdidaktikk. Kjemi i skolen. Oslo: Cappelen Damm Akademisk. 101s

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Abrahams, I. (2009). Does practical work really motivate? A study of the affective value of practical work in secondary school science. International Journal of Science Education, 31(17), 2335-2353. 18s

Anderson, L. W., & Krathwohl, D. R. (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives. New York: Longman. Kap. 1-3, s. 3-37. 35s

Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2007). Assessment for learning. Putting it into practice. Maidenhead: McGraw-Hill Education. E-bok, kap. 4, s. 67-115. 39s

Cannizzaro, S. (1858). Sketch of a course of chemical philosophy. Chicago: Chicago University Press. Online:

<https://ia801407.us.archive.org/29/items/sketchofcourseof00cannrich/sketchofcourseof00cannrich.pdf> Ca. 50s

Cartier, J. (2000). Using a modeling approach to explore science epistemology with high school biology students. Madison: National Center for improving student learning and achievement in mathematics and science. (s. 24-25), 2s

<http://ncisla.wceruw.org/publications/reports/RR99-1.PDF>

de Jong, O. (2008). Context-based chemical education: How to improve it? Chemical Education International, 8(1), 1-7. Fra <http://old.iupac.org/publications/cei/vol8/index.html>

Dewey, J. (1910). How we think. Boston: D.C. Heath & Co. E-bok, kap. 6, 68-78

Hobden, P. (1998). The role of routine problem tasks in science teaching. In K. Tobin & B. Frazer (Eds.), International handbook on science education (pp. 219-230). Dordrecht: Kluwer. (prepublication copy:

http://www.academia.edu/15366463/The_Role_of_Routine_Problem_Tasks_in_Science_Teaching) 12s

Hudson, J. (1992). The history of chemistry. Basingstoke: MacMillan. (Kapittel 5 og 6: s. 61-91)

Justi, R., & Gilbert, J. (2000). History and philosophy of science through models: Some challenges in the case of 'the atom'. *International Journal of Science Education*, 22(9), 993-1009. doi:10.1080/095006900416875 17s

Lijnse, P. (2004). Didactical structures as an outcome of research on teaching-learning sequences? *International Journal of Science Education*, 26(5), 537-554. doi:10.1080/09500690310001614753. 18 sider

McDaniel, M. A., Agarwal, P. K., Huelser, B. J., McDermott, K. B., & Roediger III, H. L. (2011). Test-enhanced learning in a middle school science classroom: The effects of quiz frequency and placement. *Journal of Educational Psychology*, 103(2), 399-414. doi:10.1037/a0021782. 15 sider

Papageorgiou, G., Grammaticopoulou, M., & Johnson, P. M. (2010). Should we teach primary pupils about chemical change? *International Journal of Science Education*, 32(12), 1647-1664. 18 sider

Pashler, H., Rohrer, D., Cepeda, N. J., & Carpenter, S. K. (2007). Enhancing learning and retarding forgetting: Choices and consequences. *Psychonomic Bulletin & Review*, 14(2), 187-193. 7 sider

Windschitl, M., Thompson, J., & Braaten, M. (2008). Beyond the scientific method: Model-based inquiry as a new paradigm of preference for school science investigations. *Science Education*, 92(5), 941-967. doi:10.1002/sce.20259, 27 sider

Windschitl, M., Thompson, J., Braaten, M., & Stroupe, D. (2012). Proposing a core set of instructional practices and tools for teachers of science. *Science Education*, 96(5), 878-903. doi:10.1002/sce.21027. 25 sider

Van Driel, J. H., & Verloop, N. (1999). Teachers' knowledge of models and modelling in science. *International Journal of Science Education*, 21(11), 1141-1153. 13s

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de Vos, W., & Verdonk, A. H. (1985). A new road to reactions. Part 1. *Journal of Chemical Education*, 62(3), 238-240.

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de Vos, W., & Verdonk, A. H. (1986). A new road to reactions: Part III. Teaching the heat effect of reactions. *Journal of Chemical Education*, 63(11), 972-974.

de Vos, W., & Verdonk, A. H. (1987). A new road to reactions. Part 4. The substance and its molecules. *Journal of Chemical Education*, 64(8), 692-694.

de Vos, W., & Verdonk, A. H. (1987). A new road to reactions. Part 5. The elements and their atoms. *Journal of Chemical Education*, 64(12), 1010-1013.

Ambitious Science Teaching (etter Windschitl et al. 2012): Core practices; 4 tekster som beskriver praksisene (pensum, 60 sider) og 4 verktøy som kan brukes til å strukturere arbeidet med disse; kan lastes ned fra <http://uwcoeast.wpengine.com/tools-planning/>

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