

# From Knowledge to Knowing: An Inquiry into Teacher Learning in Science

[Beth Warren](#) and Mark Ogonowski

—(1998) Center for the Development of Teaching Paper Series. Newton, MA: EDC.

## Summary

This paper elaborates upon the idea of pedagogical content knowledge through close examination of a teacher's learning in science and addresses a question derived from Shulman's (1986) original work on teacher knowledge: "What is learning for teaching?" Pedagogical knowing is viewed as the practice of seeing into the subject matter through the eyes, hearts, and minds of learners, an image adapted from Ball. Presented is a case study of a second year, fifth-grade teacher as she conducted an investigation of aquatic ecology over a period of several months, in the context of a four-year project in which teachers examined science, science learning, and teaching through their own and their students' experience as learners. How this teacher came to learn to see into the subject matter, her own learning, and her students' learning as she worked to understand aspects of the ecology of a local pond, and how her experience figured into her identity as a learner and her practice as a teacher are analyzed.

[Access article.](#)