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Suzanne Ingrid Doree* (doree@augsborg.edu), Augsburg College Campus Box 61, 2211 Riverside Avenue, Minneapolis, MN 55454. *What do you notice? Using conjecturing activities to teach inquiry and ignite student's curiosity about mathematics.*

What happens next? Does it always work? What if we tried this instead? How many are there? These sorts of questions are part of any mathematician's toolkit. We are well trained in the skill and art of inquiry. But how do we ignite students' curiosity and help them develop this ability?

For the past fifteen years I have taught a sophomore level discrete mathematics course that teaches inquiry through conjecturing activities. After all, conjecturing is at the core of what mathematicians do – it is our research experiment, our way of thinking through an abstract question, and prelude to developing a theory. Teaching conjecturing helps students grow their inner mathematicians, preparing them for advanced courses and undergraduate research. But the benefits extend beyond. Conjecturing activities ignite student's curiosity and develop their ability to inquisitively explore new ideas. As an added bonus, students enjoy making conjectures and so they spend a lot of time working on classwork in and out of class and they are more likely to persist in their study of mathematics.

In this talk I'll describe why we teach conjecturing and illustrate several successful mathematical conjecturing activities and reflections on what makes these activities work. (Received September 16, 2014)