



**What's National Board Certification?**

It's a rigorous process that recognizes and rewards exceptional teachers who have demonstrated a high level of professional achievement and commitment to their students.

For more information, visit [www.nationalboardcertification.org](http://www.nationalboardcertification.org)

**The Attributes of Exemplary Teaching**

What makes an excellent teacher?

**Effective Teaching**

- Knows the content
- Knows the students
- Knows the pedagogy
- Knows the assessment
- Knows the professional self

**Effective Assessment**

- Knows the content
- Knows the students
- Knows the pedagogy
- Knows the assessment
- Knows the professional self

**Mathematics Standards (II-III+)**

**Standard II: Commitment to Mathematics Learning of All Students**

Exemplary mathematics teachers understand and value the mathematics learning of all students. Before the start of the school year and as mathematics instruction unfolds, they do their best to ensure that all students have an opportunity to learn and succeed in mathematics. Exemplary mathematics teachers are committed to the success and equitable treatment of all students—especially in their learning of mathematics.

**Chat Q1: How do you get your students to believe they can "do math"?**

**Mathematics Standards**

**Standard I: Knowledge of Mathematics**

Exemplary mathematics teachers have a deep and broad knowledge of the concepts, principles, techniques, and reasoning processes of mathematics. They know how to explain the mathematical concepts and processes in a way that is meaningful to their students and how these concepts and processes are used in the real world. They know how to explain the mathematical concepts and processes in a way that is meaningful to their students and how these concepts and processes are used in the real world.

**Chat Q1: What is a new connection you have recently made in math?**

**Mathematics Standards**

**Standard III: Knowledge of Students**

Exemplary mathematics teachers have a deep understanding of their students' prior knowledge of mathematics and their learning styles. They know how to tailor their instruction to meet the needs of all students. They know how to tailor their instruction to meet the needs of all students.

**Chat Q1: How do you get to know your students?**

**Mathematics Standards**

**Standard IV: Knowledge of the Process of Teaching**

Exemplary mathematics teachers understand the teaching process and how to use it to meet the needs of all students. They know how to tailor their instruction to meet the needs of all students. They know how to tailor their instruction to meet the needs of all students.

**Chat Q1: How do you manage your classroom?**

**Mathematics Standards**

**Standard V: Learning Environment**

Exemplary mathematics teachers create a learning environment that is safe, supportive, and challenging. They know how to tailor their instruction to meet the needs of all students. They know how to tailor their instruction to meet the needs of all students.

**Chat Q1: How do you create a classroom where students are excited to learn and to learning?**

**Mathematics Standards**

**Standard VI: Ways of Thinking Mathematically**

Exemplary mathematics teachers develop their own and their students' abilities to reason and think mathematically. They know how to tailor their instruction to meet the needs of all students. They know how to tailor their instruction to meet the needs of all students.

**Chat Q1: When do you find math topics to teach that really inspire your students?**

**Mathematics Standards**

**Standard VII: Assessment**

Exemplary mathematics teachers use a variety of assessment methods to assess their students' learning. They know how to tailor their instruction to meet the needs of all students. They know how to tailor their instruction to meet the needs of all students.

**Chat Q1: How do you get your students to self-assess beyond "what is my grade"?**

**Mathematics Standards**

**Standard VIII: Reflection and Growth**

Exemplary mathematics teachers regularly reflect on their practice, seek feedback, and use that feedback to improve their teaching. They know how to tailor their instruction to meet the needs of all students. They know how to tailor their instruction to meet the needs of all students.

**Chat Q1: How do you use the best practices and research to inform your teaching?**

**Mathematics Standards**

**Standard IX: Families and Communities**

Exemplary mathematics teachers collaborate with families and communities to support student learning. They know how to tailor their instruction to meet the needs of all students. They know how to tailor their instruction to meet the needs of all students.

**Chat Q1: How do you collaborate with families?**

**Mathematics Standards**

**Standard X: Professional Community**

Exemplary mathematics teachers are active members of a professional community. They know how to tailor their instruction to meet the needs of all students. They know how to tailor their instruction to meet the needs of all students.

**Chat Q1: How do you promote professional community within your school or department?**

**Four Elements of Certification**

1. **Exemplary Practice**

2. **Professional Portfolio**

3. **Interview**

4. **Reflection and Growth**

**Chat Q1: How do you use the best practices and research to inform your teaching?**

**Personal Advice**

- 1) Allow plenty of time (120 hrs min.)
- 2) Follow directions carefully
- 3) Have a backup plan for the testing
- 4) Get a good night's sleep
- 5) Get experience in all areas of math
- 6) Become an assessor
- 7) It is about the journey
- 8) Never quit

**Chat Q1: How do you use the best practices and research to inform your teaching?**

**Resources**

[www.nationalboardcertification.org](http://www.nationalboardcertification.org)

[facebook.com/nbc2025](https://www.facebook.com/nbc2025)

[instagram.com/nbc2025](https://www.instagram.com/nbc2025)

[linkedin.com/company/nbc2025](https://www.linkedin.com/company/nbc2025)

**Chat Q1: How do you use the best practices and research to inform your teaching?**

***Reflect on Your Practice:  
National Board Certification in Mathematics***

**S. Leigh Nataro  
@mathteacher24  
mathteacher@ptd.net**

**Friday, April 15 3:30 - 4:30**



**2016 NCTM ANNUAL MEETING  
& EXPOSITION**  
April 13-16 • San Francisco

# *What is National Board Certification???*

- Standards-based, voluntary
- Currently 112,00 NBCTs nationwide
- For teachers with 3+ years of experience
- Assessment center exercises and portfolio entries
- Focus is on teaching in your classroom
- Entries are scored by teachers
- Valid for 10 years, Moving to a 5 year renewal
- Requires reflection on practice



**NATIONAL  
BOARD**

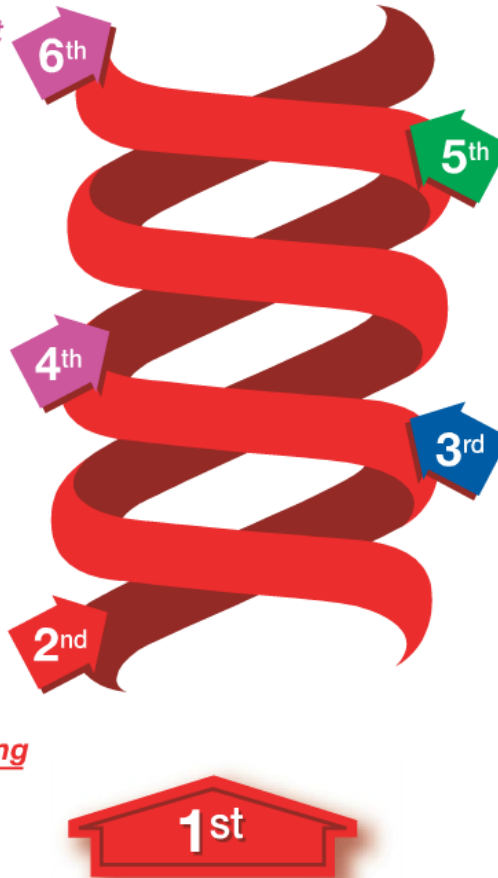
[http://www.nbpts.org/sites/default/files/what\\_teachers\\_should\\_know.pdf](http://www.nbpts.org/sites/default/files/what_teachers_should_know.pdf)

# The Architecture of Accomplished Teaching: What is underneath the surface?

*Set new high and worthwhile goals that are appropriate for these students at this time*

*Evaluate student learning in light of the goals and the instruction*

*Set high, worthwhile goals appropriate for these students, at this time, in this setting*








***Your Students - Who are they?  
Where are they now? What do they  
need and in what order do they  
need it? Where should I begin?***

*Reflect on student learning, the effectiveness of the instructional design, particular concerns, and issues*

*Implement instruction designed to attain those goals*

## Five Core Propositions

-  Teachers are committed to students and their learning
-  Teachers know the subjects they teach and how to teach those subjects to students
-  Teachers are responsible for managing and monitoring student learning
-  Teachers think systematically about their practice and learn from experience
-  Teachers are members of learning communities

# Five Core Propositions



**Teachers are committed to students and their learning**



**Teachers know the subjects they teach and how to teach those subjects to students**



**Teachers are responsible for managing and monitoring student learning**



**Teachers think systematically about their practice and learn from experience**



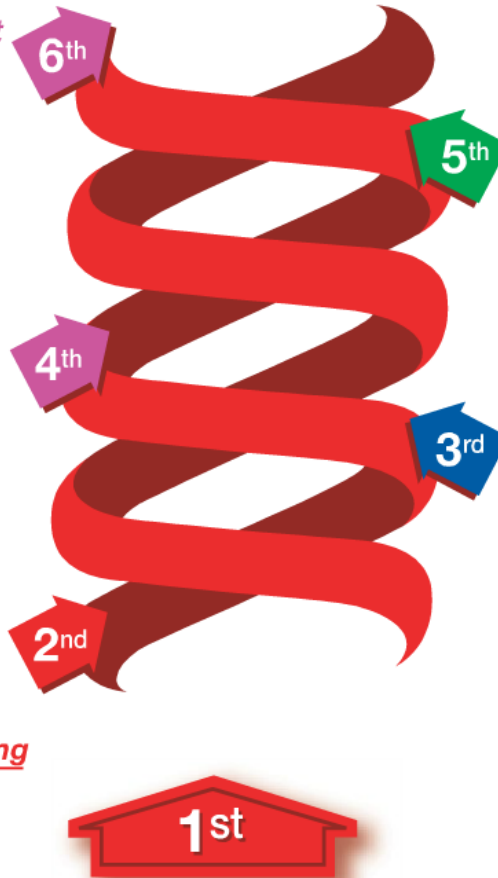
**Teachers are members of learning communities**

# The Architecture of Accomplished Teaching: What is underneath the surface?

*Set new high and worthwhile goals that are appropriate for these students at this time*

*Evaluate student learning in light of the goals and the instruction*

*Set high, worthwhile goals appropriate for these students, at this time, in this setting*








***Your Students** - Who are they?  
Where are they now? What do they need and in what order do they need it? Where should I begin?*

*Reflect on student learning, the effectiveness of the instructional design, particular concerns, and issues*

*Implement instruction designed to attain those goals*

## Five Core Propositions

-  Teachers are committed to students and their learning
-  Teachers know the subjects they teach and how to teach those subjects to students
-  Teachers are responsible for managing and monitoring student learning
-  Teachers think systematically about their practice and learn from experience
-  Teachers are members of learning communities

# Mathematics Standards (11-18+)

## **Standard I: Commitment to Mathematics Learning of All Students**

Accomplished mathematics teachers acknowledge and value the individuality and worth of each student, believe that every student can learn and use mathematics, and are dedicated to their success. Accomplished mathematics teachers are committed to the fair and equitable treatment of all students—especially in their learning of mathematics.

**Chat Q1: How do you get your students to believe they can "do math"?**



# Mathematics Standards

## Standard II: Knowledge of Mathematics

Accomplished mathematics teachers have a deep and broad knowledge of the concepts, principles, techniques, and reasoning methods of mathematics, and they use this knowledge to inform curricular goals and shape their instruction and assessment. They understand significant connections among mathematical ideas and the applications of these ideas to problem solving in mathematics, in other disciplines, and in the world outside of school.

**Chat Q2: What is a new connection you have recently made in math?**





# Mathematics Standards

## Standard III: Knowledge of Students

Accomplished teachers use their knowledge of human development and individual students to guide their planning and instructional decisions. They understand the impact of prior mathematical knowledge, home life, cultural background, individual learning differences, student attitudes and aspirations, and community expectations and values on students and their mathematics learning.

**Chat Q3: How do you get to know your students?**



# Mathematics Standards

## Standard IV: Knowledge of the Practice of Teaching

Accomplished mathematics teachers use their knowledge of pedagogy along with their knowledge of mathematics and student learning to inform curricular decisions; select, design, and develop instructional strategies and assessment plans; and choose materials and resources for mathematics instruction.

Accomplished mathematics teachers stimulate and facilitate student learning by using a wide range of practices.

**Chat Q4: How do you encourage class discourse?**



# Mathematics Standards

## Standard V: Learning Environment

Accomplished mathematics teachers create environments in which students are active learners, show willingness to take intellectual risks, develop self-confidence, and value mathematics. This environment fosters student learning of mathematics.

**Chat Q5: How do you develop a classroom where mistakes are valued or seen as important to learning?**



# Mathematics Standards

## Standard VI: Ways of Thinking Mathematically

Accomplished mathematics teachers develop their own and their students' abilities to reason and think mathematically—to investigate and explore patterns, to discover structures and establish mathematical relationships, to formulate and solve problems, to justify and communicate conclusions, and to question and extend those conclusions.

**Chat Q6: Where do you find rich tasks to facilitate seeing math from multiple perspectives?**



# Mathematics Standards

## Standard VII: Assessment

Accomplished mathematics teachers integrate a range of assessment methods into their instruction to promote the learning of all students by designing, selecting, and ethically employing assessments that align with educational goals. They provide opportunities for students to reflect on their strengths and weaknesses in order to revise, support, and extend their individual performance.

**Chat Q7: How do you get students to self-assess beyond "what is my grade?"**



# Mathematics Standards

## Standard VIII: Reflection and Growth

To improve practice, accomplished mathematics teachers regularly reflect on what they teach, how they teach, and how their teaching impacts student learning. They keep abreast of changes and learn new mathematics and mathematical pedagogy, continually improving their knowledge and practice.

**Chat Q8: When was the last time you experienced learning in the way your students learn?**



# Mathematics Standards

## Standard IX: Families and Communities

Accomplished mathematics teachers collaborate with families and communities to support student engagement in learning mathematics. They help various communities, within and outside the school building, understand the role of mathematics and mathematics instruction in today's world.

**Chat Q9: How do you collaborate with families?**



# Mathematics Standards

## **Standard X: Professional Community**

Accomplished mathematics teachers continually collaborate with other teachers and education professionals to strengthen the school's mathematics program, promote quality and continuity across grade levels and courses, and improve knowledge and practice in the field of mathematics education program.

**Chat Q10: How do you promote professional community within your school or department?**





# Four Components of Certification

- Component 1: Content Knowledge  
(Assessment Center with SR and CR)
- Component 2: Differentiation in Instruction (student work)
- Component 3: Teaching Practice & Learning Environment  
(video of teaching)
- Component 4: Effective and Reflective Practitioner

GEN: Early Childhood (3-8), Middle Childhood (7-12)

EA: Early Adolescence (11 - 15)

AYA: Adolescence and Young Adulthood (14 - 18+)

Cost \$475 per component, 4 years to complete



# Personal Advice

- 1) Allow plenty of time. (120 hrs min.)
- 2) Follow directions carefully.
- 3) Have a teacher do the taping.
- 4) Get a proofreader/cohort.
- 5) Get experience in all areas of math.
- 6) Become an assessor.
- 7) It's about the journey.
- 8) Renew (40 hours)



# Resources

<http://boardcertifiedteachers.org/>



[facebook.com/thenbpts](https://www.facebook.com/thenbpts)



[twitter.com/nbpts](https://twitter.com/nbpts)

S. Leigh Nataro  
mathteacher@ptd.net  
@mathteacher24