Departmental Analysis

Math

1. **How are the department's curriculum and instructional strategies aligned with the school's Desired Results for Student Learning?**

    a. Communication: Students often work in groups where they discuss and work together to problem solve. Students are expected to communicate their math answers logically and clearly on paper and as well as be able to explain it in writing or direct another person through the problem.

    b. Critical Thinking: Math involves high amounts of logic and reasoning. We work to develop these skills by having them work collaboratively and using logic puzzles to explore new thought processes.

    c. Technology: We use a variety of technology including pencil and paper, whiteboards, powerpoints, calculators, hands-on manipulatives (algebra tiles, base ten blocks, fractions bars, etc.), and internet applets to synthesize a hands-on manipulative when one is not available or to engage their attention.

2. **How does each course offering align with the state's core curriculum that prescribes content and course specific intended learning outcomes?**
   The state core standards are heavily used when designing a course. We generally use Prentice Hall published textbooks and then align them with the state core. We use backward design and start with the end in mind and then design lessons to reach those goals.

3. **To what extent does the department utilize a variety of assessments to monitor student achievement and adjust instructional practices?**
   We use quizzes (some formal, some informal), end-of-unit tests, homework checks, mini-whiteboards during lessons for students to work examples that are then held up to check for understanding, hands-on projects, and remodifying and reteaching as necessary.

4. **How does the department collaborate with other departments to create integrated, relevant and authentic learning opportunities for students?**
   Where we are such a small school with a very small secondary program, we are very aware of what the other teachers are teaching. We can connect our math curriculum to the Financial Literacy class and to the physics class. We have helped students use statistical methods for their science fair projects, and how to create scale drawings in art.

5. **To what extent do department members utilize inclusionary teaching strategies to meet the needs of ALL students (ESL, Special Education, Gifted, etc.)?**
   We have fairly small class sizes, most ranging from 15 to 20, attend IEP meetings where necessary, make accommodations in class for students including using seating charts to give preferential seating as needed, allowing extended time, shortening assignments, individual instruction and extra help, and using projects to allow students to go deeper if interested.

6. **To what degree are the department's policies, operational procedures, allocation and use of resources aligned with the educational agenda of the school?**

Students have a set homework format that helps them to stay organized and each class has a set agenda that is followed daily. This allows students to know what they should be doing when. We also work closely with administration to procure resources for hands-on activities or when purchasing curriculum materials.

7. **How does the department collaborate and engage in ongoing professional development growth for the purpose of improving student's performance?**

Teachers participate in weekly in-service meetings as well as professional learning communities. We have attending Common Core training at another charter school as well as participated in regional SMECC meetings during the implementation of the common core. Teachers are participating in ongoing education.

8. **How do students have access to additional support beyond the classroom?**
   Students have access to additional support before/after school, through classes called math labs and study halls. They can reach teachers with questions through email as well as access their grades through SIS. We have several students recovering credits using A+ as well as using A+ for additional support.

9. **How do students have access and utilize technology as a regular part of the instructional program?**

We have a classroom set of scientific calculators and use online graphing utilities to graph equations and functions. The school has laptops which students use for A+ and the occasional online class. The school has wireless internet and some students take notes on their personal laptops. We have an Ednet program where some math will be offered broadcast from UVU.

10. **How is the department collectively addressing the school's current improvement goals?**

All teachers support the dress code and tardy policy. And help to implement any changes in the school. We also undergo teacher evaluation and use the constructive criticism to improve teaching practices.

Please summarize the final two questions

Areas of Strengths:

With respect to these questions, what are the department's strengths? What evidence/data validates these findings?

All teachers in the department are highly skilled. Both have a level 4 math endorsement and give clear and accurate instruction. Students always know what is expected of them and where they can find help. We feel that one of our strengths is in helping our special education students. We are willing to accommodate them and help them succeed. We work closely with the special education instructors to find what works best for our students and establish a physically and emotionally safe learning environment for all students.

Recommendations for Growth:

With respect to these questions, what are the major areas for departmental growth? What evidence/data validates these findings?

Areas for growth for the math department include being able to have math offered everyday instead of every other day. We feel that the students would benefit from this greatly and would help them to improve their understanding of mathematical concepts. We feel that we could also grow by having more hands-on, exploratory projects to allow students to discover the math for themselves and receive less direct instruction.