**Curriculum Short Cycle Design**

**5th Grade Math**

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**Statement of Purpose**

Fifth grade math begins a new benchmark for students and truly begins the application part of mathematical thinking. It has been proven through State Data that the scores for 5th grade math go down between grades 4 and 6. According to Marzano, feedback from classroom assessment should: give students a clear picture of their progress on learning goals and how they might improve, encourage students to improve, be formative in nature and be frequent (Marzano, 2006). In order for this to take place students need to be able to have the objectives they are learning put into short cycles and spiraled back into the daily routine, so they can retain the information and feel success at the same time.

Students continue to struggle and develop many misconceptions in mathematics. Students need to be able to have immediate feedback on what they are doing in the classroom. As stated by Marzano, providing students with explanations as to why their responses are correct or incorrect is associated with a gain of 20 percentile points in student achievement (Marzano, 2006). By being able to assess students frequently it allows for the immediate feedback a student needs to feel successful. It also allows for the teacher to monitor any misconceptions a whole group or individual child has developed in the short cycle. Next, students need to be able to visually see how they are improving their achievement in the classroom. Marzano also states, that displaying assessment results graphically can go a long way to helping students take control of their own learning (Marzano, 2006). By giving frequent assessments students are able to see the gains they are making in the classroom, which will motivate them to want to continue their growth.

If students begin to take responsibility for their own learning by being aware of their progress then it will carry over to what their long term goals are in life. As stated in *Assessment for Learning*, when students do take some responsibility for their learning-when, in the psychological jargon, they develop the skills of metacognition- there can be surprising consequences (Black, Harrison, Lee, Marshall, & Wiliam, 2003). By giving the students the opportunity to learn how to become active learners, then they will be able to apply that strategy in everything they hope to do in life. By giving them the frequent assessments and feedback they will have fewer misconceptions in the field of mathematics and they may even be motivated to seek it as a long term profession.

The 5th grade short cycle design will spiral the learning objectives and at the same time allow for immediate feedback for each individual child. Students will have fewer misconceptions when they get into the 6th grade mathematics curriculum and will be motivated not only as a student but as a mathematician. By being able to see an end result and frequent growth students will want to continue progressing versus regressing.

Hopefully the success of the 5th grade math curriculum will begin to show the growth needed to allow students to be ready for further acceleration. It is important that the short cycle objectives are evaluated by a team of teachers in order to know what is needed for re-teaching and spiraling in the classroom. Not only will teachers know what they need to do for student success, but students will begin learning how to take responsibility for their learning by getting the immediate feedback they need for this to take place. Allowing for shorter chunks in the curriculum helps with the misconceptions in math, which is the overall goal for this curriculum design.

**References**

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