

<b>Committee for Mathematics Achievement Review of VMath by Voyager</b>					<b>Comments</b>
<b>Theoretical/ Research Basis</b>	Program based on solid theories of learning <b>and</b> teaching mathematics conceptually.	Program based on solid theories of learning <b>or</b> teaching that focus on mathematics conceptual development.	Program based on theories of learning and teaching that focus primarily on skill mastery.	Program is not based on any theory of learning or teaching.	“Vmath uses a direct instruction model with carefully scaffolded, detailed lesson support.” (p. 14 of Levels D-G <i>Program Guide</i> .)
<b>Effects on Student Achievement</b>	Randomized trial experimental research indicates program’s effect on student achievement.	Quasi-experimental design research indicates program’s effect on student achievement	Non-experimental or anecdotal evidence indicates program’s effect on student achievement.	No evidence of program’s effect on student achievement is available.	Results for 2004-2005 field tests at selected schools in three states are shown. No specific details about design of study were provided.
<b>Mathematics Content</b>	Program’s mathematics content aligns highly with Core Content 4.1 (90%)	Program’s mathematics content aligns moderately with Core Content 4.1 (75%)	Program’s mathematics content aligns minimally with Core Content 4.1 (50%)	Program’s mathematics content alignment with Core Content 4.1 not evident.	Company stated they are aligned with “highest NCTM Standards” but provided no evidence. They have done no alignment with Kentucky Core Content.
<b>Depth of Knowledge</b>	Program focuses on Webb’s Depth of Knowledge Levels 1, 2, and 3.	Program focuses on Webb’s Depth of Knowledge Levels 1 and 2 only.	Program focuses on Webb’s Depth of Knowledge Level 1 only.	Program’s focus on Depth of Knowledge is not evident.	The program focuses largely on rote learning with limited attention to concept development or problem solving. (“...students write answers to grade-level computational problems for a short interval of time.”)
<b>Instructional Strategies</b>	Program employs multiple and appropriate instructional strategies to develop all DOK levels.	Program employs limited but appropriate instructional strategies to develop most DOK levels.	Program employs limited instructional strategies to develop some DOK levels	Instructional strategies employed by the program are not clear.	“Vmath uses a direct instruction model with carefully scaffolded, detailed lesson support.” (P. 14 of Levels D-G <i>Program Guide</i> ) Program is highly structured.
<b>Assessment Strategies</b>	Program utilizes formative and summative assessments focused on all DOK levels.	Program utilizes formative and summative assessments focused on DOK levels 1 &2.	Program utilizes summative assessments focused on all DOK levels.	Program utilizes summative assessments focused on DOK level 1 and 2.	Online benchmark tests (beginning, middle and end of course) and paper-and-pencil pre- and post-tests for each module provide ongoing information about student learning. Computer-generated reports provide ongoing feedback in graphic form after teacher manually inputs some data. “...provides daily checks, progress monitoring, and benchmark assessments to insure students are on track to pass state tests.” (p. 9, <i>Program Guide</i> ). Benchmark and Progress Monitoring Assessments are based on work at University of Minnesota and became Curriculum-Based Measurement (CBM). (p. 24 <i>Program Guide</i> )

Committee for Mathematics Achievement Review of <i>VMath</i> by Voyager (Continued)					Comments
<b>Remediation Strategies</b>	Program provides specific remediation strategies for common misconceptions.	Program provides general remediation strategies for common misconceptions.	Program's remediation strategies focus on specific factual/computation errors.	Program's remediation strategies do not have a focus.	The program uses scripts to assist teachers with remediation strategies. The scripts address factual and computational errors. The script, based on students' responses, identifies the error and suggests how to reteach the material.
<b>Reporting System</b>	Reporting system includes individual and composite data for teachers, parents and students.	Reporting system includes individual or composite data for teachers, parents and students.	Reporting system includes individual or composite data for teachers.	Program does not include a reporting system.	A technology-based reporting system includes manual teacher input and provides individual and composite data for parents, teachers and students. (p. 27, <i>Program Guide</i> )
<b>Professional Development</b>	Program offers PD that assists teachers in diagnosis and remediation.	Program offers PD that assists teachers in limited diagnosis or remediation.	Program offers PD that assists teachers in technical aspects of program.	Program does not offer PD for teachers.	Company offers (at additional cost) support beyond the 3-4 hour implementation and technical session.
<b>Teacher Materials/Technology</b>	Teacher materials/technology provide substantial assistance to teachers in diagnosis and remediation.	Teacher materials/technology provide some assistance to teachers in diagnosis and remediation	Teacher materials/technology provides minimal support to teachers.	No materials or technology are available to teachers.	Program uses scripts to assist teachers and/or paraprofessionals in implementing lessons.
<b>Student Materials/Technology</b>	Student materials/technology are user friendly and developmentally appropriate.	Student materials/technology are user friendly or developmentally appropriate.	Student materials/technology provide minimal support for students.	No materials or technology are available for students.	Vmath provides an online web based technology component through which students can practice skills via web access. There is no use of hands-on materials. The program has 10 modules at each level, and problems can be identified specific to a module.
<b>Diverse Learners</b>	Program allows students to progress individually at an appropriate pace AND addresses the needs of diverse learners.	Program allows for student to progress individually at an appropriate pace OR addresses the needs of diverse learners.	Program has some individualized components and/or addresses the needs of some diverse learners.	Program is essentially the same for all students.	Vmath states "The technology component differentiates instruction by placing the students on their level of difficulty and pace." Teachers may set levels of difficulty for students.
<b>Program Purpose and Use</b>	Program is designed as intervention program for students who have fallen behind grade level in grades 3-6. It is designed to be delivered by a trained teacher or paraprofessional.				
<b>Costs</b>	\$399 for a teacher kit and \$60 per student (consumable).				
<b>Time</b>	30 – 40 minutes per day in addition to the core math program				