



**TPS Publishing Inc with Illinois State University, Invicta Education and Action Based Curriculum
Creative Core Curriculum Mathematics with Literacy and STEM program, 2012**

Summary of the Program

TPS Publishing Inc. and partners have constructed the 'Creative Core Curriculum Mathematics with Literacy and STEM' program (*the program*) with the intent to enhance the Mathematics learning and teaching in your State schools. Through adhering to the **Common Core State Standards for Mathematics**, the program presents Mathematics as a way of thinking and learning incorporating literacy skills necessary for academic success in acquiring Mathematics as an academic language.

Written through the perspective of the educator and the student, the materials ingrained in the program provide the educator with guidance and tools necessary for student success.

The program provides for grades K-5 and has been built by a group of companies who each have expertise in Mathematics and have jointly built a program which is inclusive and activity based.

We provide three key inquiry based component areas;

- **TPS Publishing Inc.** - Traditional lesson plans using manipulatives, provided by Invicta Education, exactly aligned to each Common Core State Standard.
- **STEM project based learning cycles** – **Illinois State University** provide wonderful activities, via learning cycles, especially useful, as a visual assessment tool and for advanced learners covering a group of Common Core State Standards including all Mathematical practice requirements.
- **Crafting projects – aligned to each Common Core State Standard.** **Action Based Curriculum** provides nasen approved projects which are a by standard, visual assessment tool and are inclusive but particularly useful for far below grade students, ELL and Special education users.

Each set of lesson plans complement each other; Together they cover the full criteria of Your State requirements and offer a wonderful activity based learning program with all writers basing content on grade specific literacy materials.

Our team utilize a 'by standard, strand and or learning cycle structure' that engages students in active interaction with the content. This approach is based on the concept that we all learn best by doing, rather than simply listening or watching. Our Professional Learning Opportunities also utilize the "learn by doing" philosophy and methodology. Participants understand the "how" and the "why" of the pedagogy by experiencing and engaging in Mathematics.

The traditional teaching materials are comprised of the following components:

<p>Teacher Materials</p> <ul style="list-style-type: none"> • Teacher Textbook • Universal Access Teacher Classroom Guide K-3 	<p>Student Materials</p> <ul style="list-style-type: none"> • Student Textbook • Student at Grade & Advanced Workbook K-3 • Student Strategic & Intensive Workbook K-3 • Student Workbook G4 and G5
<p>Teacher/Parent Materials</p> <ul style="list-style-type: none"> • Teacher/Parent Coaching & Literacy Guide K-5 	<p>Assessments K-5</p> <ul style="list-style-type: none"> • Test Practice Questions • Achievement of Mathematics Standards Assessment Grid • Reflecting on My Experiences in Mathematics • CD Rom Practice Questions by Standards • Writing Activities and Archway ELL Support Tool • Performance-based Tasks
<p>Inquiry Based Mathematical Practice Assessment Tools</p> <ul style="list-style-type: none"> • STEM Projects K-8 • Crafting Guides K-5 	
<p>Materials for Additional Focus K-3</p> <ul style="list-style-type: none"> • CD Rom program for additional focus material arranged by standard • Reteach K-2 Workbooks and CD Rom Answers on Blackline Masters • Workbook and Assessment question answers CD Rom • Blackline Masters Accessible in print and digitalized formats, easy to produce dark areas conserved to preserve toner. 	

Teaching Mathematics through Standards

The Teacher's Edition is organized specifically to empower teachers by building their knowledge and understanding of Mathematics in a way that is comprehensive but does not sacrifice integrity.

Teacher's Materials - The Teacher's Edition: Engaging Learning

You will find the credits, contents pages and editor/author introduction at the beginning of each teacher textbook. Included in this area are the following:

Full contents listing; Materials required to deliver all content for the grade being taught; Suggested daily/weekly routines; Suggested questions to continually include in your classroom teaching; **Planning information;** **Assessment information;** **Program component information;** A list of Common Core State Standards for Mathematics for the grade, within which you can see both the teacher and student textbook page references for each standard detailed.

To introduce each unit of study in the Teacher's Edition, the author provides: **Background Information:** comprehensive details and knowledge of the subject; presented in a non-threatening manner. Information is provided for each strand covered in the section. This is followed by pages focusing the teacher on; **Standard Set and Alignment to the standards** - connects State requirements and learning objectives by focusing on the specific standard addressed in each section; assists teacher in maintaining an awareness of the standards. **Math Language:** specific words which will be used during class discussions and text passages. **An explicit introductory lesson plan** - step-by-step procedure for introducing the unit. All lessons focus primarily on *activating students' prior knowledge through a variety of instructional strategies*, and capturing the students' attention and interest. Students are kept engaged through age appropriate text and hands-on activities.

The key components of a thorough lesson plan are included as follows: Objectives, Behavioral, and Conceptual; Core Curriculum Mathematics Standard(s); Vocabulary; Materials required; What students should know already; Lesson structure, including introduction, middle, activity suggestions and summary; Teacher assessment notes. **Student and classroom activities** then follow, exactly aligned to the standard. We include individual, pairs

and classroom group activities. Engaging students in problem-solving enhances their ability to succeed in school. Teacher friendly hands-on activities encourage students to learn and practice skills in meaningful context. Each standard set has its own exercises, which take an average of 50 minutes to conduct. The materials used in the exercises are generally easily accessible (found in local stores) and inexpensive, however we offer a comprehensive series of manipulatives to complement all aspects of the program. **Teacher tips** appear on many pages offering the teacher guidance for delivery of the exercises. The tips inform teachers of the overarching concepts to be covered during each lesson. A full list of the related mathematical practice pages is provided to aid practice and comprehension. At the end of most strand sections you will find: **Common misconceptions**, detailing problems you may be challenged with, providing advice to resolution. **In the classroom**; further activity ideas linked to the relevant standard. **In the home**; ideas, by standard, to set for students to work at home with parent/guardians. At the back of the teacher textbook you will find the glossary, a year planner with a full list of lessons, and the by standard assessment grid.

Teacher Materials: Universal Access Teacher Classroom Support Guide. Grades K-3.

The classroom guide has been written to especially help teachers cover all content, with all students. The lessons are focused on key topics in Grades K-3. We have provided information for delivery of content to each of the student groups you may teach:

Intensive, Strategic, At Grade, Advanced.

Teacher Materials: Teacher/Parent Coaching & Literacy Guide.

The guide provides parents with philosophical statements about learning Mathematics and ideas regarding the role of the parent in helping the child to succeed. Explanation is provided for the new Common Core State Standards. We firmly believe that Teacher, Parent, Student (TPS) is a successful recipe. We provide a full and detailed guide for the group to use and follow. Within this product we have: **Parent information regarding the standards, Coaching notes for teachers and parent/guardians**, in bullet style presentation form, for ease of use and comprehension. **Mathematics and Literacy Connections** — equips teachers and parent/guardians with literacy-based exercises that provide opportunities to teach/reinforce reading skills and metacognitive strategies through content-related concepts. The exercises are also available as black line masters.

Assessment: - Continual assessment is vital. Our major assessment tools are innovative craft and STEM projects, which work along side our Assessment CD Rom Database.

Teacher Materials: STEM Project Lesson Plans

Illinois State University have worked in conjunction with TPS, to provide exciting inquiry based projects linked to the TPS traditional teacher textbook, to completely cover Mathematical practices and key core curriculum Mathematics standards using real life application. For a group of standards, one project has been created using a learning cycle each of which includes:

Lesson Objective(s); Preparation; Explore It; Describe It; Use It; Common Core State Standards Link

Teacher Materials: Crafting Project Lesson Plans

Action Based Curriculum are a British company who have focused their energy on providing excellent materials which are **nasen** approved for all learners, including those with disabilities, ELL and special education needs. Each core curriculum Mathematics standard is addressed using a combination of Mathematics, Literacy and Science inquiry based projects with crafting equipment and reader books. The output from each student is personalized enabling pride in each student. Lessons are set out in a similar manner to the traditional lesson plans but, within each lesson, teachers read or are read to by their students, and over a series of one hour sessions they align exactly to grade appropriate Mathematics and cover elements of Science and ELA standard content. Each crafting exercise is specifically linked to a personal, social and health topic as well as specifically covering the Mathematical content. Teachers can choose whether to incorporate the extensions of the personal, social and health topic or not.

One teacher wrote *"It not only focused children on the outcome of the activity, but helped them produce work to a very high standard that gave great sensory benefits. It was motivational due to the independence it gave them."*

Teacher Materials: Teacher Assessment, K-2 Reteaching workbooks, Archway literacy program, Focused Tutorial, Answer and Blackline Master CD Rom's. Supporting Learning for All Students; Teacher Assessment CD Rom -Assessing Student Learning.

When working with students, teachers continuously assess understanding and comprehension of skills and concepts through implementing various assessment strategies. As students' abilities to express their learning vary, it is essential to also vary the type of instruments used as assessment to provide efficient windows to view learning. As teachers assess students' success sporadically during learning experiences, there are three phases of assessment available. Pre-unit assessments are ingrained into the introductory lesson for each chapter. The assessments are presented through a lesson plan which introduces the chapter, in the form of activities providing the teacher with approaches to assessing prior knowledge. During unit assessments consist of hands on activities and assessment questions measuring individual student progress. It is suggested that these assessments occur at regular intervals at the teachers' discretion, as the teacher has the ability to control the pacing of the lessons.

During or after formal assessments.- Teachers often diagnose a need for further reinforcement of skills and concepts taught previously. We encourage continual assessment during lesson delivery and support end of strand assessment, using our Teacher Assessment CD Rom. Over 2,200 questions are available; categorized by grade, standard and ability level. You can select and run pre post assessments to help you immediately recognize student ability. Using end of strand selections you can monitor student comprehension using relevant workbooks ensuring each student reaches full potential. Then you can select and run post-unit assessments.

Reteaching Resources, K-2 workbooks, and Archway, are also available to support student learning. We recommend these workbooks be used at the end of a grade, in conjunction with the Focused Tutorial CD Rom, for reteaching prior grade content not yet mastered. They provide focused and standards aligned practice for the students. Archway is a program for teaching students how to read and write English Language and is provided within the reteach kit to enable teachers to help students who are far below grade improve literacy skills and as a result increase Mathematics language learning.

Focused Tutorial; The focused tutorial is a PowerPoint presentation covering Mathematics taught within K-3 by topic. It is recommended for use for those who really struggle with traditional book learning, either due to low English Language skills or other special needs. The content of the reteaching materials are less dense than the Student Edition, and break down difficult concepts into segments less challenging to comprehend.

Blackline masters; The masters permit teachers to provide a visual approach to skills and concepts for students whose learning style respond well to such support. The black line masters are accessible in print and digitized formats, which are easy to reproduce with a feature that conserves toner.

Planning Instruction; A Teacher's Greatest Concern - Issues of Time and Covering Curriculum

A primary concern each school year is "covering the curriculum". The Teacher's Edition provides links, which integrate Reading/Language Arts and Science grade level standards. Use the Mathematics and Literacy Connections with Archway to combine literacy with numeracy instruction. Having the ability to cover Mathematics and reading simultaneously ensures good use of instructional time; student contact time is maximized, positively impacting the depth of learning.

Teacher/Parent Assessment Communication:

The Teacher/Parent Coaching and Literacy Guide provides the following assessment materials, which can be useful communication tools: **The Mathematics Report Card and Hands-on In the Home activities.**

Teacher Professional Development:

Professional Development is offered at varying levels; online materials are available at no additional cost and on-site workshops from one half day to ten full days can be booked at affordable prices. Tutors will be professionals from Illinois State University and you can receive course content at their premises if preferred.

Student Materials: Student Traditional Textbook:

Student Edition - The Student Edition provides students with enough information in the text to build an understanding of the concepts. The text has been written in the student’s language, meaning that the number of content-related words in each passage is appropriate for K-5 graders. STEM projects and Crafting projects provide wonderful fully inclusive, visual assessment tools.

The Student Edition is organized around the idea that every child deserves to be successful in Mathematics. The organization includes the following components in sequence; **The Standard Set** - exposure to the standards in an effort to reinforce key concepts; **Math Language** - promotes subject matter knowledge and language development through learning related vocabulary necessary for building academic language; **Activities** - hands-on activities allow students the opportunity to exercise knowledge, skills, and concepts related to each standard and engage in problem solving tasks while approaching learning through multimodal experiences.

Student Materials: STEM Project Lesson Plans

By creating exciting STEM projects for students to complete we will engage student minds from the outset. Mathematics will be a lesson to look forward to and application of Core Curriculum Content will occur each week of the school year. Students will be engaged as they act out the part of pilots, car mechanics, accountants and other real life professionals.

Student Materials: Crafting Project Lesson Plans

The best narrative to provide from a student perspective is to quote one of the students themselves; *“This is MAGIC, my work looks professional.”* Each project is written to be inclusive. Equally, a small group could work on crafting; on STEM and traditional within each classroom and rotate. The personal, social and health topics improve student communications, team spirit and well-being.

Student Materials: Traditional Student Workbooks.

To master content, students need plenty of practice. For grades K-3, we provide an At Grade & Advanced Workbook, and a Strategic and Intensive workbook, which provides extension activities so that at grade and advanced students can progress. For Grades 4 and 5 we provide one workbook for all students as we believe for the key test years content, we must focus on achievement via inquiry based activities rather than via graded workbook practice.

We hope you enjoy reviewing the program.

Should you require assistance please email; commoncore@tpspublishing.com

Warmest regards,

Maz Wright

