

## SOLE SOURCE DETERMINATION

The Purchasing Division has been requested to approve a sole source purchase for the commodity or service described below. Pursuant to West Virginia Code 5A-3-10c, the Purchasing Division is attempting to determine whether the commodity or service is a sole source procurement. If you believe your company meets the required experience and qualification criteria stated below, please e-mail the Purchasing Division Buyer at [shelly.l.murray@wv.gov](mailto:shelly.l.murray@wv.gov) with a copy to [w.michael.sheets@wv.gov](mailto:w.michael.sheets@wv.gov) to express your interest in the project. Please forward any and all information that will support your company's compliance with required qualification and eligibility criteria along with any other pertinent information relative to this project to the Purchasing Division no later than 1:30 PM on 05/09/2011.

**Requisition Number:** EDD356329    **Department/Agency:** Education

### Detailed Description of Project:

- Will provide comprehensive research-based hybrid professional development for the teaching of mathematics content to 400 special education teachers in grades 5 through 12 including face-to-face content academies, a web-based learning tool, lead peer collaborator trainings and an evaluation component to measure its effectiveness. The contract will be for two years with 2 one-year renewals.
- Will conduct face-to-face professional development which includes:
  - 32 math academies (5-days each) for two years (16 math academies each year)
    - The academies will be held in each of the eight (8) Regional Education Service Agencies (RESAs)
    - 400 middle and high school special educators will attend both years
  - 4 one-day Lead Peer Collaborator TrainingsThe 32 math academies will begin June 2011 and end August 2013. The Lead Peer Collaborator Trainings will be conducted in September 2011 and April 2012.
- Will provide access/use to an established, research-based online, web-based program for teachers to use throughout the year to engage in mathematical problem solving to reinforce and deepen mathematical knowledge. The program must be based on the ACT-R theory of knowledge and performance. It must be built on a cognitive model that tracks user actions in order to determine the particular user

strategy in solving a problem (model tracing). In addition, each action that the user takes must be associated with one or more discrete skills and their individual performance on these skills must be tracked over time and dynamically displayed real-time for on-going formative assessment.

- Will design the professional development specifically to increase student achievement and teacher effectiveness by deepening teachers' understanding of mathematics, providing an environment in which teachers can learn to problem-solve in a student-centered environment, and facilitating teachers' reflections on their own teaching practices.
- Will monitor the implementation process of professional development in conjunction with the Office of Special Programs throughout the duration of the project.
- Will tabulate, analyze, interpret and report evaluation data of the effectiveness of professional development in conjunction with WVDE personnel

**Proposed Sole Source Vendor:** Carnegie Learning, Inc.  
37 Grant Street  
Frick Building, 20<sup>th</sup> Floor  
Pittsburgh, PA 15219

**Specific Eligibility Criteria:**

- The vendor must have availability and capacity to complete work within the established timelines of the project to begin June 2011 and conclude in May, 2013 with 2 one-year renewals.
- The vendor must have previous experience in developing, researching, and providing professional development in the teaching of mathematics to **all** teachers. Must also have experience collecting and analyzing evaluation data to determine its effectiveness and make necessary changes to the design and implementation if needed. The vendor must have completed similar research in the field of mathematics within a state of similar southern regional characteristics and demographics.
- The vendor must be a full-service education company with mathematics curricula and services that are making a significant impact on instruction in schools, validated by years of academic research, practical classroom experience and have consistently demonstrated improvement in mathematics scores for all participating student populations.

- The vendor must have previously developed a research-based, web-based learning tool for teachers to use throughout the year to engage in further mathematical problem-solving, reinforce and deepen mathematical knowledge, and reflect on their math understanding and teaching practices. This will enable continued time to work through the mathematical goals of the professional development. The program must be based on the ACT-R theory of knowledge and performance. It must be built on a cognitive model that tracks user actions in order to determine the particular user strategy in solving a problem (model tracing). In addition, each action that the user takes must be associated with one or more discrete skills and their individual performance on these skills must be tracked over time and dynamically displayed real-time for on-going formative assessment.
- The vendor must ensure that the content addressed in the professional development is aligned with and meets the expectations of the more rigorous West Virginia Next Generation Mathematics Content Standards and Objectives.
- The vendor must ensure that the content of the professional development be customized for West Virginia teachers to include specific connections to WESTEST 2 data and the needs of students in special education.
- The vendor must have experience designing, analyzing, interpreting and reporting evaluation data of the effectiveness of the professional development.
- The vendor must show evidence that participants have demonstrated a significant increase in Algebra 1 content knowledge and a positive attitude in the teaching of mathematics by using a third-party developed assessment and evaluation instrument.

**Specific Qualification Criteria:**

It is determined that Carnegie Learning, Inc. is the only full-service matching vendor that addresses all of the eligibility and qualifications for this project.

- The vendor is a full-service education company with mathematics curricula and services that are making a significant impact on instruction in schools, validated by years of academic research, practical classroom experience and have consistently demonstrated improvement in mathematics scores for **all** student populations. For over a decade, the vendor has been dedicated to supporting teacher knowledge and engagement with a professional development approach that aligns teaching and learning using standards-based curriculum and student-centered instruction. In the last five years, the vendor has

worked in West Virginia and around the country with an average of 1,000 schools in approximately 400 districts per year. In the past three years, the vendor has delivered services to 1171, 1314, and 1600+ schools respectively in 2008, 2009, and 2010, including implementations comparable to what the vendor proposes in West Virginia. The vendor's professional services are appropriate for teachers of mathematics students in grades k-12+.

- The vendor has designed and implemented comprehensive research-based hybrid professional development in the teaching of mathematics to **all** K-12 teachers. Specifically, the vendor's professional development program fully integrates and optimizes a teacher's abilities and the computer's capabilities to create a solution that engages students and teachers in real-world problem-solving and in building a deep conceptual understanding of mathematics. The vendor is the sole source of the *Content Academies* and *Cognitive Tutor* web-based learning tool.
- The vendor's *Content Academies* are designed to increase teacher effectiveness by deepening teachers' understanding of mathematics, providing an environment in which teachers can learn to problem-solve in a student-centered environment, and facilitating teachers' reflection on their own teaching practices. The vendor has developed the *Content Academies* applying new research (National Mathematics Advisory Panel, 2008) along with the National Council of Teachers of Mathematics (NCTM) new standards for the teaching of mathematics. All of the vendor's *Content Academies* incorporate three key components: 1) grade-appropriate content; 2) pedagogy based on problem-solving; and 3) heightened awareness of teaching as a basis for continuous professional growth. During the *Content Academies*, the vendor focuses on specific content-area goals that are designed to support success in the classroom. The vendor has customized for West Virginia teachers specific connections to WESTEST 2 data and the needs of students in special education. In addition, fostering a "Learning by Doing" environment is one of the hallmarks of the vendor's *Content Academies*. Teachers discover, explore, reason, share and reflect as active learners in cohort groups to make connections between math concepts. Participants engage in mathematical problem-solving using the *Cognitive Tutor* to reinforce and deepen mathematical knowledge.
- The vendor has developed the research-based, web-based learning tool *Cognitive Tutor* which is based on the ACT-R theory of knowledge and performance. It is built on a cognitive model that tracks user actions in order to determine the particular user strategy in solving a

problem (model tracing). In addition, each action that the user takes is associated with one or more discrete skills and their individual performance on these skills is tracked over time and dynamically displayed real-time for on-going formative assessment. Both the *Cognitive Tutor* web-based program access and all materials from the *Content Academies* provide the special education teachers with tools to reflect on their own mathematical understanding and teaching practices throughout the year.

- The vendor has experience collecting and analyzing evaluation data to determine the effectiveness of the *Content Academies* and makes necessary changes to the design and implementation if needed. Two earlier versions of the *Content Academies* were piloted in Dallas, Texas and Barboursville, West Virginia that indicated a need to develop a prototype for coaching and professional learning communities and to continue strengthening the teachers' abilities to help their students "think on a deeper level".
- The vendor has completed an extensive research project in the field of mathematics within a state of similar southern regional characteristics and demographics by using a third-party developed assessment and evaluation. This research derived from the vendor's work with the Green River Regional Education Cooperative (GRREC), an intermediate unit providing professional development to 33 Kentucky school districts. In the course of the three-year project, more than 220 K-8 teachers participated in one or more week-long *Content Academies*. Faculty at the University of Louisville formally evaluated the Green River project (Jones & Bush, 2009) examining the *Content Academies'* effects on teachers' knowledge of, beliefs about, attitudes toward and teaching of mathematics. Results showed: 1) participants who attended the *Content Academies* all three years had a significant increase in both their algebra content knowledge and their positive attitudes towards the teaching of mathematics; 2) for all K-8 teachers, increases in knowledge gained for algebra topic sub-scores were consistent across grade spans; 3) statistical tests of the average difference in knowledge gain scores showed that teachers' learning rather than chance accounted for the differences; and 4) teachers' attitudes toward teaching math also became far more positive following the *Content Academies* and the improved feelings about teaching math were due to their learning, rather than chance. (Jones & Bush, 2009)
- The vendor aligned the content addressed in the professional development with the expectations of the more rigorous West Virginia Next Generation Mathematics Content Standards and Objectives.

- The vendor has availability and training capacity to complete the work within the established timelines of the project to begin June 2011 and conclude in May, 2013 with the option of two (2) one-year renewals.

**Section II (to be completed by Purchasing Division Buyer)**

Purchasing Bulletin Advertising Date(s) \_\_\_\_\_

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Interest Received: Yes \_\_\_\_\_ No \_\_\_\_\_

Action: Returned to Agency for Formal Advertising \_\_\_\_\_

Awarded to Suggested Vendor \_\_\_\_\_

**Certified as Correct By:** \_\_\_\_\_  
(Buyer)

Date: \_\_\_\_\_

(REV 12/07)