We all live in an age of constant change. This brings a certain amount of discomfort into our lives but often leads to desirable consequences. The CTE Resource Center has not been exempt from change. Over time, we've seen colleagues come and go, projects alter mid-stream, working environments shift, and business processes evolve to the point that we can barely remember how we did our work just a few years earlier. But, these have all led to positive results. The Center has weathered many challenges and emerged as a stronger, better defined, more cohesive entity than it was 31 years ago.

For example, the Center has always developed course-specific materials for Career and Technical Education. However, we rarely build a course from scratch any more; instead, we refine, enhance, and expand current courses to address evolving workforce needs, technology, and methods of instruction.

Even as we have adapted to change, we have successfully upheld the original vision for the Center. In 2012–2013, the CTE Resource Center recorded another year of serving Career and Technical Education (CTE) teachers and administrators across the Commonwealth, with the continued support from the Virginia Department of Education (VDOE), which funds and oversees our project, and from Henrico County Public Schools, which administers our grant.

This past year has brought an interesting variety of work to the Center, as well as new ways of addressing that work.

Agricultural Education Strategic Review

In the fall of 2012, the Virginia Department of Education, supported by the Center, began a strategic review of Agricultural Education in the Commonwealth. The goal was to ensure that Virginia offers modern programs to meet today's economic workforce needs and that the Commonwealth provides quality professional development for Agricultural Education teachers.

UVA's Weldon Cooper Center contributed extensive research, and three focus groups of educators and community stakeholders provided first-hand knowledge of current programs and positive suggestions for future high-quality offerings. The report, with specific recommendations for Agricultural Education course and program revisions, was submitted to the Virginia Superintendent for Public Instruction.

Work-Based Learning

The Virginia Department of Education initiated a thorough review of the many variations of work-based learning (WBL). The stated purposes of this review were to redefine the WBL methods used to provide on-the-job experiences for Virginia's CTE students and to redesign, refocus, and streamline Virginia's WBL procedures and guidelines.

UVA's Weldon Cooper Center again offered in-depth research on the topic, and in March 2013, the VDOE hosted a focus group meeting, where participants discussed WBL and ways to enhance how it is applied to and integrated into Virginia CTE courses. The group agreed that, in the Commonwealth, the following types of WBL should be implemented and documented: job shadowing, mentorship, service learning, internship, clinical experience, student apprenticeship, and cooperative education. Plans call for a newly minted *WBL Handbook*, slated for piloting in 2014–2015.

Ongoing Curriculum Emphases

CanDo

The CanDo online competency tracking system continues to gain users in local school divisions. Teachers appreciate how quickly they can record competency ratings, administrators like the many reports CanDo provides, and now both groups of educators look at CanDo as a tool to help measure student growth. During 2012–2013, 22 school divisions were documented as using CanDo.

Energy and Sustainability

Our efforts to address sustainability and renewable energy education continue. The VDOE directed the Center to address energy and sustainability concepts across the curriculum, as appropriate. To provide greater emphasis on energy, the Center infused additional energy concepts within an All Aspects of the Industry task, which appears in all high school CTE courses, and added energy-related information in ten specific courses. This work was completed in March 2013.

Thank You

We appreciate the continued support from the state and all localities in our 31 years of providing needed resources to CTE administrators, teachers, and school counselors.

As always, we welcome your comments and suggestions. Reflecting on the Center's changes through the years, we are grateful that many positive improvements have come because of your requests and ideas. Keep 'em coming!

Center Assignments 2013–2014

New Systems and Work Processes

This year we're tackling our curriculum projects in brand new ways. First, the VDOE has a new online sign-up process, CTEAPPS, for teachers and administrators to use when offering to serve on curriculum writing teams. This provides a consistent system for all writing teams and allows for a smooth information flow in school divisions and the VDOE.

The Center also has a new "app" for use with electronic writing teams. The "TeamsApp," built inhouse, can be employed in the curriculum development process to allow teachers to offer their input online. This provides the Center writer/editors a streamlined way to incorporate the modifications directly into Verso.

Also new this year is the Center's ability to conduct virtual meetings of all sorts. With recently installed equipment and software, Center writers may now "meet" with writing team members without anyone having to travel. With this same equipment, the Center also has the capability to create quality training and how-to videos.

New/Revised Instructional Frameworks

Thanks to the *Agricultural Education Strategic Review* and other initiatives, the VDOE and Center have given special attention to older curriculum documents in this year's list of projects. A careful review of copyright dates and course content led to a long list of courses that require updating. More than 75 courses are in process or in line for revision during 2013–2014. Included are *Bioengineering, Surgical Technologist, Radiologic Technology, Physical/Occupational Therapy, Equine Management Production, Logistics, Culinary Arts, Imaging Technology, Ecology and Environmental Management, Precision Machining Technology, Aerospace Technology, Accounting, Business Law, Entrepreneurship, HVACR, Fashion Design, Technology Foundations, Small Engine Repair, Computer Systems Technology, Leadership, Digital Marketing, Hotel Marketing, Floral Design and Floriculture, Introduction to Health and Medical Science, Greenhouse Plant Production/Management, Horticulture Sciences, Computer Solutions, Legal Systems/Medical Systems Administration, Programming, Electronics Systems III, Telecommunications, Principles of Technology, Landscaping, Energy and Power, Criminal Justice, Public Safety, Materials and Processes, Hospitality/Tourism/Recreation, Interior Design, Video and Media Technology, Plumbing, Turf Grass, Applied Agricultural Concepts, Geospatial Technology, Agricultural Production Management, Agricultural Production Technology,* and *Operating the Farm Business.* All will be published in June 2014, so that teachers and administrators may plan their 2014–2015 classroom instruction.

Curriculum Development

During 2012–2013, the Center completed 169 products and submitted them to the Department of Education and/or localities for review and approval:

DEPARTMENT OF EDUCATION

Academics (8)
Dance, Theater Arts SOL Revision
History Enhanced Scope and Sequence (ESS) VA US Government Differentiated Lessons
History ESS VA World Geography Differentiated Lessons
History ESS VA-US Differentiated Lessons
History ESS World History II Differentiated Lessons
Music SOL Revision
Science ESS - Chemistry
Visual Arts SOL Revision

Across the Board (42)
Cooperative Education Workshop Name Badges
Cooperative Education Workshop Program
Creating Excellence (2)
CTERS Users Manual 2012-2013
Energy Infusion Unit
Federal Performance Report 2011-2012
Governor's Health Academy Proposal (10)
Governor's STEM Academy Executive Summary
Governor's STEM Academy Assessment Report
Profiles for Cluster Video Web Pages (2)
Response to NASDCTEc Common Core Survey
RU Ready Cluster Profiles for VDOE
STEM Academy Proposal (6)
STEM briefs (9)
Task Lists 2013-2014
Teacher Recruitment Form for Writing Teams
Video Conferencing Hardware & Software Research
WRS Correlation to the CTE Common Core

Agricultural Education (10)
Advanced Forestry Management Task List
Ag. Fabrication and Emerging Technologies Task List
Agricultural Education Strategic Review
Agricultural Structural Systems Task List
Crosswalk: Ecology and Environmental Management with Sustainability and Renewable Technologies
Crosswalk: Floral Design I & II with Floriculture
Crosswalk: Horticulture Sciences with Specialty Horticulture Arts
Crosswalk: Small Engine Repair with Ag Production Management and Ag Production Technology
Introduction to Power, Structural, and Technical Systems Framework
Veterinary Science Framework Revision

Business & Information Technology (15)
Adv. Database Application Development Framework
Business Individualized Program Update
Business Management Framework Revision
CNSO I Framework Revision
CNSO II Framework Revision
Database Concepts Framework Revision
Digital Input Technologies Framework Revision
FBLA Local Chapter Annual Business Report Judging
FBLA New Adviser Guide 2012-2013 Revision
FBLA State Handbook 2012-2013
FBLA Web Site Design Event Judging
IT Fundamentals Framework Revision
Principles of Business and Marketing Framework Revision
Virtual Enterprises Case Study: Human Resources
Virtual Enterprises Case Study: Marketing

Career Connections (7)
Introduction to Teachers for Tomorrow
Parents Brochure (R U Ready?) 2013
R U Ready? Magazine 2013
Ready or Not 2013
TfT Program PowerPoint
Virginia Teachers for Tomorrow I Framework Revision
Virginia Teachers for Tomorrow II Framework Revision

Family and Consumer Sciences (6)
Early Childhood I Framework Revision
Early Childhood II Framework Revision
Family and Human Services I Framework Revision
Family and Human Services II Framework Revision
FCS-Specific Tasks Comparison Across Courses
Nutrition and Wellness Framework Revision

Health & Medical Sciences (12)
Emergency Medical Technician I Framework Revision
Emergency Medical Technician II Framework Revision
Emergency Medical Technician III Framework Revision
Health Assistant II (Psychiatric Aide) Framework Revision
Medical Assistant I Framework Revision
Medical Assistant II Framework Revision
Nurse Aide I Essential Competencies Revision
Nurse Aide II Essential Competencies Revision
Pharmacy Technician I Framework Revision
Pharmacy Technician II Framework Revision
Sports Medicine I Framework Revision
Sports Medicine II Framework Revision

Marketing Education (6)
Adv. Marketing Curriculum Revision
Effective Supervision through Leadership Instructional Unit Revision
Introduction to Marketing Framework Revision
Make It Your Business Framework Revision
Marketing Framework Revision
Preparing for Effective Trainers Instructional Unit Revision

Miscellaneous (1)
Meade Scholarships

Technology Education (14)
Biotechnology Foundations Framework Revision
Children's Engineering 2013 Convention Program
Children's Engineering Supplemental Design Briefs CD
Construction Technology Framework Revision
Electronics Systems I Framework Revision
Electronics Systems II Framework Revision
Engineering Analysis/Applications II Framework Revision
Engineering Concepts/Processes III Framework Revision
Engineering Explorations I Framework Revision
Engineering Studies Framework Revision
Forensic Technology Framework Revision
Graphic Communications Framework Revision
Production Systems Framework Revision
TSA Judging

Trade & Industrial Education (18)
Automotive Technology I Framework Revision
Automotive Technology II Framework Revision
Automotive Technology III Framework Revision
Aviation Operations Management Framework Revision
Building Trades I Framework
Building Trades II Framework
Carpentry I Framework
Carpentry II Framework
Carpentry III Framework
Commercial Photography I Framework Revision
Commercial Photography II Framework Revision
Electronics Technology II Framework Revision
Electronics/Robotics Technology I Framework Revision
Firefighting I Framework Revision
Firefighting II Framework Revision
Robotics Technology II Framework Revision
SkillsUSA Advisors' Manual
SkillsUSA Technical Standards

LOCALITIES (25)
Chesterfield Tech WRS Pre-Assessment Analysis
Goochland Course Offerings Brochure
Henrico Credentialing Brochure 2012
Issues and Solutions 2013
NAWI 2013 (3)
VACTE (10)
VACTEA (8)

CENTER PRODUCTS(5)
2012–2013 WRS Conference Handout
AIM Award Application
Highlights 2011–2012
Sustainability Promotional Flyer
WRS Resources

SUMMARY

Total DOE Products:	139
Total Tech Prep Products:	0
Total Local Products:	25
Total Center Products:	5
Total Products:	169

CTE Resource Center Products

The Virginia Department of Education contracts with the Center each year for development of a specified number of curriculum-related products. Development consists of any combination of research, writing, editing, design, and production.

CTE Resource Center Services

The Center provides services to the Virginia Department of Education and local school divisions to aid in the design and implementation of career and technical education programs.

Local development assistance: Career and technical educators benefit from many services provided by Center staff:

✦ Occupational research and analysis
✦ Facilitation of curriculum writing teams
✦ Suggestions for resources

Search: Patrons request resources on a specific education-related topic or subject area. Staff members select appropriate print or electronic items from the Center's holdings, and the Center librarian conducts an Internet search for relevant materials.

Library: Using our online library catalog of 7,000+ titles, educators may search and request items through the Center's Web site.

Printing: The Center coordinates printing and CD duplication of new and previously developed Virginia publications. The Center also provides this service on a cost-recovery basis to local school divisions.

Distribution: Verso, Virginia's Educational Resource System Online, is the Center's primary method of distributing CTE curriculum. This Web-based system allows educators online access to CTE task lists, student competency records, and instructional frameworks and provides them the ability to print basic course elements.

The few documents that are still printed are distributed according to Department of Education specifications and are available free of charge to Virginia career and technical educators. Selected products are available on CD and/or in PDF.

In-service programs: Local educators may request curriculum-related in-service programs and training sessions designed for specific audiences, delivered at the Center or in a locality. Requests have included

✦ introductory sessions on Verso, the Web-based curriculum system for CTE
✦ information sessions on CTE Resource Center resources for teachers
✦ presentations about Workplace Readiness Skills and All Aspects of Industry
✦ training sessions for writing teams
✦ workshops on using the Web as a teaching resource
✦ training sessions on CanDo, the online competency tracking system
✦ facilitation of business/industry panels to develop/validate task lists.

Ordering: To use Verso, Virginia educators may visit http://www.cteresource.org/verso/. Teachers and administrators may also place orders for printed materials or request information directly through Verso, which now incorporates all Center products, regardless of medium.

Printing

In 2012–2013, the Center coordinated the Department of Education-approved printing or CD duplication of 13,034 copies of 13 items.

Search

The Center's search service focuses on filling non-routine information requests by providing library, Web, and other resources. During 2012–2013, the Center addressed 12 research requests:

- ✦ Department of Education 1
- ✦ Field Requests (localities)...................... 11

Lending Library

This year, the Center library loaned 248 resources to Virginia teachers and administrators and acquired 104 new titles.

Distribution

In 2012–2013, the Center continued distributing printed, Web-based, and electronic documents to Virginia educators. Figure A breaks down the distribution figures.

For the past 10 years, Verso has been the primary method of distributing CTE task lists, student competency records, and instructional frameworks. The statistics for Verso distribution are identified separately, then included in the Center's total figures for distribution.

Figure A: Materials Distributed, 2012–2013

CTE (Non-Verso) Distribution		Course Access in Verso	
Print	17,232	Task List	188,636
CD	874	Individual Tasks	124,062
Electronic (PDF, Word, PPT, HTML)	12,091	SCR	27,078
Totals	**30,197**	Resources	68,190
		Totals	**407,966**
		Grand Total	**438,163**

Note: During 2012–2013, the Center reviewed and modified the way it tracked and counted its distribution items. When "documents" are in print or on a CD or are in a file of any sort, we continued to count each instance it is sent or downloaded. However, with most of our curriculum resources in Verso, the notion of a "document" no longer applies. We shifted our method of tracking distribution to page hits, which better reflects how patrons acquire our resources. To that end, we now show numbers that record when a patron looks at the various components of a curriculum framework: the full task list, an individual task, the student competency record (SCR), and the resources.

In-Service Programs

In 2012–2013, the Center presented or facilitated 101 in-service programs and workshops to approximately 1,521 people. Some Center presentations for school divisions and the Virginia Department of Education addressed curriculum issues, while others highlighted the Center's services and products. The Center also exhibited at 10 conferences.

Meeting Facilities Use

During 2012–2013, the Center hosted 25 curriculum groups and other meetings, primarily for the Office of Career and Technical Education, Virginia Department of Education, and for Henrico County Public Schools. Approximately 267 business representatives, advisory council members, administrators, school counselors, teachers, and students from across the state attended meetings at the Center.

CTECS

The Center managed Virginia's 2012–2013 program initiatives with CTECS. The year's work continued to focus on the Workplace Readiness Skills for the Commonwealth, with particular attention to the continued use and analysis of the fully implemented student assessment.

Web Statistics

The Center's Web site has become a primary vehicle for news articles, online resources, and major announcements about CTE curriculum activities across the Commonwealth. Through the site, educators have access to all Virginia CTE task lists, student competency records, and instructional frameworks, as well as library holdings, featured resources lists, and links to valuable education-related Web sites. Figure B provides the annual figures on the Center's Web site activity.

Figure B: Web Activity, 2012–2013

Main Categories	Page Views
About/Home	81,278
Services	8,733
Library	5,229
Links	8,820
CPG	34,428
APG	116,004
Verso	801,249
CanDo	6,573
TOTAL	**1,062,314**

Just for the Record

CTE Resource Center records show that in the past 31 years, since 1982–1983, the Center has

- ✦ distributed more than five million curriculum documents
- ✦ conducted 2,234 searches for information
- ✦ developed 2,741 curriculum products
- ✦ loaned more than 20,960 library items and acquired more than 11,730 library titles
- ✦ facilitated or presented to 1,949 groups, addressing more than 43,520 educators and business/industry representatives.

The CTE Resource Center welcomes visitors Monday–Friday, 8:00 a.m.–4:30 p.m. We invite you to visit the Center, browse our library holdings, and use our meeting rooms.

Thank You

The CTE Resource Center appreciates the support of the VDOE and local school divisions and is grateful for the opportunity to serve CTE in Virginia. We look forward to providing new resources for educators across the Commonwealth this year.