

STEM

Center for Teaching and Learning

Teaching and Learning

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1914 Association Drive Suite 201 Reston, VA 20191-1539

Phone: 301-482-1929 FAX: 888-247-2113 Engineering byDesign™ Agreement and Application FY2013-2015

Thank you for your interest in the Engineering byDesign™ Standards-based Model Program.

The STEM \oplus Center for Teaching and Learning's Engineering by Design (EbD^{TM}) program is a K-12 solution for states, school districts and schools wanting to deliver an engineering/technological literacy curricula through science, technology, engineering and mathematics (STEM.) In only the fourth year of existence, EbD^{TM} now includes over 350 participating schools nationwide. The EbD^{TM} Network links schools and teachers that believe that the ingenuity of children is untapped, unrealized potential, that properly motivated, will lead to the next generation of technologists, innovators, designers, and engineers.

ITEEA's **STEM** ⊕ Center for Teaching and Learning's[™] (formerly the Center to Advance the Teaching of Technology and Science) has developed the only standards-based national model for Grades K-12 that delivers *Technological Literacy*. *Engineering byDesign*[™] is a national *Model Program* that was developed in with the collaboration and leadership of a consortium of states, the Technology Education Advisory Council, ITEEA

Institutional Members, and the Science, Mathematics and Engineering Community. The model, called *Engineering byDesign™* is built on the *Standards for Technological* Literacy (ITEEA); *Principles and Standards for School Mathematics* (NCTM); and *Project 2061, Benchmarks for Science Literacy* (AAAS). Using a constructivist model, students participating in the program learn concepts and principles in an authentic, problem-based environment. Using a STEM focus, students are prepared to be technologically and engineering literate by Grade 12.

I hope that you will consider joining the "Network" and bring technological and engineering literacy to students while achieving higher gains in all aspects of the school program. The attached *Agreement and Application* is one way to ensure that the teacher, school, and district are able to fully utilize a standards-based

EbD-TEEMS™ Technology Starters/KITS 3-5 EbD-TEEMS™P'/KITS Exploring Technology 18 weeks Invention and Innovation 18 weeks 8 Technological Systems 18 weeks Foundations of Technology 36 weeks 10-12 **Technology and Society** 11-12 Advanced Design Applications 36 weeks 36 weeks 11-12 Advanced Technological Applications Engineering Design (Capstone)

program for curriculum, instruction and assessment. By becoming part of the Network, students will be prepared to be successful on the NAEP 2014 Technology and Engineering Literacy Assessment now under development.

Please complete the entire form (if you have a hard copy, download the formfill version at http://www.iteea.org/EbD/Resourses/EbDresources.htm and click on the Network Application and Agreement.) Once complete with signatures it can be submitted electronically (pdf files only) to bburke@iteea.org. If faxing the completed signed agreement, please use the "super-fine" resolution so that the agreement is received in readable condition. Please mail the original to the address on page 4.

Upon receipt of the signed Application, you will be notified of acceptance via email and hard copy letter. The email correspondence will convey important enrollment information for the $ebDonline^{TM}$ learning community. Should you have any questions, please don't hesitate to contact me.

Sincerely,

Barry N. Burke

Barry N. Burke

Director, STEM + Center for Teaching and Learning™



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Reston, VA 20191-1539 Phone: 301-482-1929 FAX: 888-247-2113

A G R E E M E N T and A P P L I C A T I O N

Engineering byDesign™ Network (EbD™)

This Agreement between	(School Name) of the							
(School District) located in(City, S								
and the International Technology and Engineering Educators Association's (ITEEA) STEM Center for Teaching								
and Learning [™] (STEM + CTL) Reston, Virginia, will s	erve to identify w	hat each party is	expected to perform over					
the time that the school is a member of the EbD^{m} Network of Schools. The total term of this commitment is two								
years provided that the State in which the school res								
States and school fees are paid (if applicable). The Ag	greement automa	tically renews at	three year intervals. Each					
party agrees to the following:								
School Application								
The school system submits this application to ITEEA- STEM & CTL that indicates its intention to implement the following								
EbD™ course(s)/Elementary building blocks. Please confirm by checking the box to the left of the course(s) that will be								
implemented.								
☐ Exploring Technology (Grade 6)	☐ EbD-TEEMS (Grade K)							
☐ Invention and Innovation (Grade 7)		VIS (Grade 4)	☐ EbD-TEEMS (Grade 1)					
☐ Technological Systems (Grade 8)	☐ EbD-TEEN	MS (Grade 5)	☐ EbD-TEEMS (Grade 2)					
☐ Foundations of Technology (Grade 9)								
☐ Technological Design (Grades 10-12)		Agreement Begins: FY						
☐ Technology & Society (Grades 10-12)								
☐ Advanced Design Applications (Grades 1	Agreement Ends: FY							
☐ Advanced Technological Applications (G	Note: Agreements automatically renew							
☐ Engineering Design (Grade 12 – capstone		, , ,						
The School agrees to the following stipulations as part of the Agreement:								

- 1. Curriculum: As part of the Agreement, each teacher at the school is provided unlimited access to the EbDPortal™ for the MediaRichedition™ (MRe) course guides. EbD™ Network schools and teachers agree to follow the scope and sequence for the course and to deliver the content using the Units and Lessons contained within the model Course Guides without modifications. During the term of the Agreement, updates to the course guides are provided as part of the annual fee. Middle school teachers use a combination of the Portal recommendations and the EbD™ Online Assessment to determine which units to teach in shortened time periods (4, 6, 9 or 12 weeks.)
- 2. Instruction: As part of this agreement, teachers from the Network School will be provided professional learning opportunities to ensure that the content within the Units and Lessons are delivered consistently. This will include a range of opportunities that are synchronous (face to face) and asynchronous (electronic through ebDonline™). EbD™ Network Teachers agree to become actively engaged in these opportunities.
- 3. The school system will create and sustain an EbD™ Collaboration Team. The team consists of (but is not limited to) representatives from the technology, mathematics, science, English, and counseling departments in the school, as well as one or two representatives from the community (PTA /engineering communities). If more than one school in a school district is participating in the EbD™ Network, one Collaboration Team may be created with representatives from each school.
- Every effort will be made to have the EbD™ teacher(s) attend the ITEEA Annual Conference and participate in sessions
 designated for the EbD™ Network. These sessions are essential to the value-added components of the Network and for
 classroom instruction.
 - i. While it is highly advantageous for teachers to participate in the face to face training at conference, economic conditions may limit this participation.



5. Using the EbD™ Online Assessment:

- a. The purpose of the EbD™ Online Assessment is to provide student data/information for teachers that informs their classroom instruction.
- b. The STEM © CTL's goal is to deliver uniform and equitable testing environments. For assessments to yield fair and accurate results, the assessment must be administered in consistent and standardized conditions. The best way to ensure that occurs is for all teachers and administrators to understand and recognize acceptable and unacceptable practices. As part of this agreement, users agree that it is a violation of test security for an individual to: Give examinees access to secure test items or materials before testing;
 - i. Create "fake" student accounts for which the teacher can access the assessments;
 - ii. Copy or reproduce all or any portion of any secure test screen;
 - iii. Use cell phones, electronics, or digital devices by test administrators, proctors or students during testing;
 - iv. Give unauthorized individuals access to secure test items or materials;
 - v. Copy, reproduce, use, or otherwise disclose in any manner inconsistent with test security regulations and procedures any portion of secure test materials;
 - vi. Provide answer keys or answers orally, in writing, or by any other means, to examinees;
 - vii. Coach examinees during testing by giving them answers to test questions or otherwise directing or guiding their responses or altering or interfering with examinees' responses in any way;
 - viii. Fail to follow security regulations and procedures for distribution and return of secure test materials, or fail to account for all secure test materials before, during, and after testing;
 - ix. Fail to properly monitor test administration, including permitting inappropriate collaboration between or among individuals:
- c. For each course within the Agreement, teachers will access the EbDPortal to have their students take the ITEEA/EbD™ online pre-tests and end-of-course assessment as well as the design challenge (end of course). Elementary assessments begin at Grade 3. Unique State student ID numbers are used to distinguish between students for assessment and reporting purposes at the school level. Data will be collected in compliance with FERPA requirements and consistent with proper professional practices and student confidentiality. ITEEA-STEM ⊕ CTL agrees that test scores shall be kept confidential and shall only be used for purposes of monitoring and reporting in aggregate the effectiveness of the course(s). Teachers that violate the confidentiality of the assessment will result in a breach of security and copyright and immediate removal from the Network. Notification of this breach shall be reported to the superintendent and any legal filings that may be instituted.
- d. Teachers are subject to confidentiality regarding the online assessment. Screen printing or otherwise making paper copies or digital copies of questions is considered a breach of security and subject to copyright violations. Sharing of teacher user id and password to other teachers is considered a breach of confidentiality of student data and copyright protected materials and cause for removal from the Network.

Equipment/Hardware/Software Requirements

The school agrees to provide a laboratory space that is conducive to the delivery of a Technology and Engineering/STEM program. The only requirement is to have sufficient quantities of resources that will ensure students participating in the course have access to equipment and processes necessary to design, construct, and present solutions to the technological and engineering problems they are presented. Students must have access to the following software applications (NOTE: Open Source Software is available that meet these criteria at no cost to the school/district):

- 1. CAD: Computer-aided-design software (e.g., AutoCAD, Google SketchUp or equivalent with drawing capabilities)
- 2. Word processing software (e.g., Microsoft Word, OpenOffice)
- 3. Spreadsheet software (e.g., Microsoft Excel, OpenOffice)
- 4. Presentation software (e.g., Microsoft PowerPoint, OpenOffice)

The STEM \oplus CTL has entered into an agreement with the Autodesk, Inc., that will enable all teachers and students to obtain free access to certain Autodesk products. These products may only be installed on the student's and teacher's personal computer. The STEM \oplus CTL may from time to time have offers to schools regarding free access to Autodesk products for school computers. Contact bburke@iteea.org for more information.

Costs

A summary of costs are as follows

- 1. The cost of the Network access is an annual fee provided terms of the Agreement are upheld. Pro-rated fees for a partial year do not apply. This fee is non-refundable. Access to the Network resources are based on payment of this fee. This annual fee may be paid by states for the schools. A list of the states and fees may be found at www.iteea.org/EbD/Network
- 2. Internet connectivity is required and supplied by the school.
- 3. Any travel costs or substitute teacher fees are the responsibility of the school/school system.

Model Program

The School agrees that the course(s) as implemented will serve as an ITEEA-EbD $^{\text{m}}$ /STEM \oplus CTL program model for other school districts. The School will make its program available for observation and visitation by other schools and districts. The school agrees to



exchange information concerning the program with other schools, whether or not these schools are enrolled in the EbD™ Network (curricular materials may not be shared unless approved by the ITEEA's STEM ⊕ Center for Teaching and Learning™).

Termination

The license granted hereunder shall cease should either party provide thirty (30) days written notice of its election to terminate the license agreement. Upon termination of the agreement, all curriculum materials, including any reproduction thereof, shall be immediately returned to ITEEA, but in no event later than fifteen (15) days after the effective date of termination. Other reasons for termination include non-participation in *eb*Donline™, the online Student Assessment & Design Challenge, breaches of security (assessments), copyright or non-payment of the annual fee.

Indemnification

To the extent permitted by law, the School District hereby agrees to indemnify, defend, and hold harmless ITEEA from and against, and in respect to, any and all losses, expenses, costs, obligations, liabilities, and damages, including interest, penalties, and reasonable attorney's fees and expenses, that ITEEA may incur as a result of any negligent or willful act of the School or any of its agents or employees or the failure by the School to perform any of its representations, warranties, commitments, or covenants under this Agreement.

Confidentiality

The parties to this Agreement understand and agree that the contents of this final Agreement, and the discussions, negotiations and curricular materials between the parties resulting in this final Agreement, shall be maintained as confidential and shall not be disclosed to any third party except to the extent required by applicable law. Curricular materials and access to the products and services are governed by Copyright laws.

The school district/school and ITEEA acknowledge and agree that the personally identifiable data is confidential, and shall be used, shared and maintained for the purposes set forth in this Agreement and only in accordance with reasonable privacy/security measures, proper professional practices, student confidentiality and applicable laws, including FERPA. Use or access to any protected data obtained as a result of these studies will be limited to representatives with a legitimate interest in accessing this data and re-disclosure of any personally identifiable information will be done in limited instances only, and only as allowed by, and consistent with, applicable laws. The school district/school shall be responsible for implementing annual notifications, record-keeping and other such privacy requirements relating to these services.

In cases where ITEEA uses specific internet based systems for delivery of curriculum, assessments or other relevant content to schools, teachers and students, the school district/school shall ensure that all users are properly registered and rostered into these systems in keeping with the policies and procedures ITEEA puts in place to ensure secure access to relevant information.

Entire Agreement

The initial term of this Agreement shall begin on the date of signing and end after two complete academic years have elapsed unless a party terminates the Agreement by notice to the other party in writing as defined in the section titled <u>Termination</u> (page 3). The agreement shall renew automatically provided all the terms of the contract have been met.

This Agreement, including any instruments of agreements attached hereto as exhibits or incorporated herein by reference, contains the entire understanding of the parties. This Agreement supersedes all prior agreements and understandings between the parties. This Agreement shall be binding upon, and shall inure to the benefit of, the parties and their respective successors and permitted assigns.

Superintendent of Schools	Date	CTE Director / TE-STEM Supervisor Date				
		Teacher(s) (use additional pgs. as needed) Date				
Principal	Date	Date				
		School IT Coordinator (recommended) Date				
Steven A. Barbato * Executive Director, ITEEA	Date					
		State Director, EbD™ Date				



Please type all information on this page. (Note, some information is automatically filled when completing page 1) Use Additional Teacher Page as Needed

School Contact Information									
School Name:									
Street Address:									
City:						State:		Zip Code:	
Phone:							Fax:		·
Principal's Name:	Pre:		First:				Last:		
Principal's Email:									
School Website									
Teacher Contact Information									
LEAD Teacher Name:	Pre:		First:				Last:		
LEAD Teacher Email:									
LEAD Teacher		entary : e Schoo	☐ Grl] Gr1] I&I	□ Gr2 □ TS	□ Gr3	☐ Gr4	□ Gr5
EbD™ Courses:		School:] TD	□ T&S	□ ADA	□ ATA	□ EngD
Teacher 2 Name:	Pre:		First:				Last:		
Teacher 2 Email:									
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Teacher 2 EbD™ Courses:		e School: School:	ol: □ ET] &] TD	□ TS □ T&S	□ ADA	□ ATA	□ EngD
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		Di	strict C	Conta	ict Ini	formatio	on		
School District:									
District Street Address:									
District City:					State	:	Zip Co	de:	
District Phone:							Fax:		·
Superintendent's Name:	Pre:		First:				Last:		
Superintendent's Email:								•	
District Website:									
District TE/STEM Supervisor:						I	Email:		

INSTRUCTIONS:

OBTAIN SIGNATURES on PAGE 3 and SEND Completed Form:

- a. Complete all the contact information. Please use the Form-Fill Version so that the information is legible. Forms that are unreadable will be returned.
- b. Obtain the signatures of the Teacher(s), Principal, TE/STEM Supervisor/Director, and the Superintendent and forward to: Barry Burke | Director, STEM ♦ Center for Teaching and Learning™

By FAX 888-247-2113 OR Email bburke@iteea.org

c. Executed copies will be posted on the EbDPortal™. A welcome letter and instructions on how to login will be sent to the lead teacher of record from this form.

Use this page for Additional Teachers ONLY

School Information									
School Name:									
City:						State:		Zip Cod	le:
Phone:							Fax:		
Teacher Contact Information									
Teacher 3 Name:	Pre:		First:				Last:		
Teacher 3 Email:									
Teacher 3 EbD™ Courses:	Middle	entary : e Scho School:	ol: □ E1	_	□ Gr1 □ I&I □ TD	□ Gr2 □ TS □ T&S	□ Gr3		□ Gr5 □ EngD
Total or Alberta			F *						
Teacher 4 Name:	Pre:		First:				Last:		
Teacher 4 Email:	<i></i>			17					
Teacher 4		entary : e Scho	' □ Gr <i>ol</i> : □ E1		□ Gr1 □ I&I	□ Gr2 □ TS	□ Gr3	□ Gr4	□ Gr5
EbD™ Courses:		School:			□TD	□ T&S		ATA 🗆 ATA	□ EngD
	_						Ι	1	
Teacher 5 Name:	Pre:		First:				Last:		
Teacher 5 Email:									
Teacher 5		entary :			□ Gr1 □ I&I	□ Gr2 □ TS	☐ Gr3	□ Gr4	□ Gr5
EbD™ Courses:	Middle School: □ ET High School: □ FoT				□ T&S	□ ADA	ATA 🗆 ATA	□ EngD	
Teacher 6 Name:	Pre:		First:				Last:		
Teacher 6 Email:									
Teacher 6						□ Gr2	□ Gr3	□ Gr4	□ Gr5
EbD™ Courses:					□ I&I □ TD	□ TS □ T&S	□ ADA	ATA 🗆 ATA	□ EngD
									-
Teacher 7 Name:	Pre:		First:				Last:		
Teacher 7 Email:									
Teacher 7		entary :			□ Gr1	□ Gr2	□ Gr3	☐ Gr4	□ Gr5
EbD™ Courses:	urses: Middle School: ☐ High School: ☐					□ TS □ T&S	□ ADA	ATA 🗆 ATA	□ EngD
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Teacher 8 Name:	Pre:		First:				Last:		
Teacher 8 Email:			1			•	1		
Teacher 8		entary :			□ Gr1	□ Gr2	□ Gr3	□ Gr4	□ Gr5
EbD™ Courses:		e Scno School:	<i>ol</i> : □ E1 : □ Fc		□ I&I □ TD	□ TS □ T&S	□ ADA	A 🗆 ATA	□ EngD