

References

- Bartholomew Consolidated School Corporation. (2012). *Select a school*. Available from the Bartholomew Consolidated School Corporation website:
<http://www.bcsc.k12.in.us>
- Bartholomew Consolidated School Corporation (2012). *UDL videos from BCSC: UDL and instructional consultation teams (ICT) at BCSC*. Retrieved from the Bartholomew Consolidated School Corporation website:
<http://www.bcsc.k12.in.us/page/346>
- Bouck, E. C., Courtad, C. A., Heutsche, A., Okolo, C. M., & Englert, C. S. (2009). The virtual history museum: A universally designed approach to social studies instruction. *Teaching Exceptional Children*, 42, 2 pp. 14-20.
- Center for Applied Special Technology. (Producer). (2010). *UDL unplugged: The role of technology in UDL*. Available from the Center for Applied Special Technology website:
http://www.udlcenter.org/resource_library/videos/udlcenter/meetauthors#video1
- Center for Applied Special Technology. (Producer). (2009). *A district implements UDL*. Available from the Center for Applied Special Technology website:
<http://udlspotlight.wordpress.com/category/bcsc-district-udl-initiative/>
- Center on Teaching and Learning (2005). *A world class community learning system*. Retrieved from Bartholomew Consolidated School Corporation website:
<http://c2.bcsc.schoolwires.net/cms/lib/IN01000842/Centricity/Domain/1/A%20World%20Class%20Community%20Learning%20System.pdf>
- Columbus East High School. (2012). *What is senior project?* Retrieved from

Bartholomew Consolidated School Corporation website:

<http://www.bcsc.k12.in.us/site/Default.aspx?PageID=1240>

Council for Exceptional Children. (April, 2011). *AARA in action: Universal Design for Learning expanded in Indiana school district with stimulus funding*. Federal Outlook for Exceptional Children. Retrieved from the Council for Exceptional Children website:

http://issuu.com/ellipse1/docs/230249_cec_foec_fy2012?mode=embed&layout=http%3A%2F%2Fskin.issuu.com%2Fv%2Fflight%2Flayout.xml&showFlipBtn=true

Doyle, M. B. & Giangreco, M. F. (2009) Making presentation software accessible to high school students with intellectual disabilities. *Teaching Exceptional Children*, 41, 3, pp. 24-31.

Gravois, T. A., and Rosenfield, S. A. (2006). Impact of instructional consultation teams on the disproportionate referral and placement of minority students in special education. *Remedial and Special Education*, 27, 1 January/February (pp. 42 - 52).

Hitchcock, C., Meyer, A., Rose, D., & Jackson, R. (2002). Providing new access to the general curriculum: Universal design for learning. *TEACHING Exceptional Children*, 5(2), 8–17.

Individuals with Disabilities Education Act of 2004, 20 U.S.C. § 1414 (2004).

Nelson, L.L., Arthur, E., Jensen, W., & Van Horn, G. (April, 2011). Trading Textbooks for Technology: New Opportunities for Learning. *Kappan*, 92 (7), 46-50.

Northside Middle School. (2012). *What does PBIS look like at Northside?* Retrieved from

- the Bartholomew Consolidated School Corporation website:
<http://www.bcsc.k12.in.us//site/Default.aspx?PageID=9732>
- Lord Nelson, L., Van Horn, G., Jensen, W., Vogel, J., & Garrity, K. (2012). *Building School Capacity around the Implementation of Universal Design for Learning: Using a Rubric to Guide and Investigate Practice*. Manuscript submitted for publication.
- Meo, G. (2008). Curriculum planning for all learners: Applying universal design for learning (UDL) to a high school reading comprehension program. *Preventing School Failure*, 52, 2 (pp 21-30).
- Indiana Department of Education. (2012). *Demographic data*. Retrieved from the Compass site of the Indiana Department of Education:
<http://compass.doe.in.gov/Dashboard.aspx?view=CORP&val=0365&desc=Bartholomew+Con+School+Corp>
- The New Tech Network. (2010). *Our model: What fuels our success*. Retrieved from New Tech Network website: http://www.newtechnetwork.org/newtech_model
- PATINS Project (2009). *Promoting achievement through technology and instruction for all students*. Retrieved from the PATINS website: <http://www.patinsproject.com/>
- Rose, D. H., & Dalton, B. (2006). Engaging the text: Brain research and the universal design of reading strategy supports. In D. H. Rose & A. Meyer (Eds.), *A practical reader in universal design for learning* (pp. 133-148). Cambridge, MA: Harvard Education Press.
- Sugai, G., , Horner, R. H., & Gresham, F. (2002). Behaviorally effective school

environments. In M. R. Shinn, G. Stoner, & H. M. Walker (Eds.), *Interventions for academic and behavior problems: Preventative and remedial approaches* (pp. 315-350). Silver Springs, MD: National Association for School Psychologists.

Sugai, G., Horner, R. H., Dunlap, G., Hieneman, M., Lewis, T. J., Nelson, C. M., et al. (2000). Applying positive behavioral support and functional assessment in schools. *Journal of Positive Behavioral Interventions*, 2, 131-143. et al., 2000, p. 133.

Appendix A

A Description of UDL

Principles	Representation	Action and Expression	Engagement
Guidelines	1: Provide options for perception	4: Provide options for physical action	7: Provide options for recruiting interest
Guidelines	2.: Provide options for language, mathematical expression, and symbols	5. Provide options for expression and communication	8: Provide options for sustaining effort and persistence
Guidelines	3: Provide options for comprehension	6: Provide options for executive functions	9: Provide options for self-regulation

CAST graphic:

http://www.udlcenter.org/sites/udlcenter.org/files/updateguidelines2_0.pdf

UDL calls for:

1. Defining goals that provide appropriate challenges for all students, ensuring that the means is not a part of the goal.
2. Using methods that are flexible and diverse enough to support and challenge all learners.
3. Using materials that are flexible and varied and take advantage of the digital media, such as digitized text, multimedia software, video recorders, tape recorders, and the Internet.
4. Using assessment techniques that are sufficiently flexible to provide ongoing, accurate information to inform instruction and determine student understanding and knowledge (Meo, 2008, p. 22).

Appendix B

UDL Rubric: A Portion

		Not Yet Evident	Emerging	Intermediate	Advanced
Individual Goals	Clarity of goals and evidence of different objectives for various learners	No students are clear on the overall goal and all students are expected have the same objectives.	Few students are clear on the overall goal for the lesson and their learning objectives.	Some students are clear on the overall goal for the lesson and their learning objectives.	Every student is clear on the overall goal for the lesson and their learning objectives.

UDL Principle	UDL Teaching Method	Not Yet Evident	Emerging	Intermediate	Advanced
Multiple means of representation	Provide multiple examples	Students are only given one example of skills needed to complete the assignment.	In preparation for a lesson, the teacher has few examples that identify skills and concepts needed to complete the assignment.	In preparation for a lesson, the teacher creates some examples to find and identify skills and concepts needed to complete the assignment.	In preparation for a lesson, the teacher and students create multiple examples of finding and identifying skills and concepts needed to complete the assignment.
Multiple means of representation	Highlight critical features	Teacher provides critical information for the lesson through only one modality.	Teacher provides critical information for the lesson through only two modalities.	The teacher provides critical information for the lesson through oral and visual presentation and highlights critical features in written and visual form, then monitors students to check their focus on important features of the lesson.	The teacher provides critical information for the lesson through oral and visual presentation and highlights critical features in written and visual form, then monitors students to check their focus on important features of the lesson. Additionally, by having texts available in digital format, the teacher or students could literally highlight critical features of the text while preparing the lesson assignments.

Appendix C

1:1 Pilot Rubric

SECTION I - One-to-One Observations: Classroom use of the technology (used by teachers and administrators)

	Not evident	Emerging	Proficient	Advanced
1. UDL in action: <i>seeing/hearing or hearing about examples of UDL</i>	There is no evidence of UDL being applied	One or two of the principles are touched upon during the lesson	The principles of UDL can be identified within the lesson	The principles of UDL drive the presentation of the lesson
2. Cramming: <i>bringing computers into the classrooms but sustain current practices and pedagogies</i>	Computer use in class is limited to note taking and/or doing worksheets	Computer use in class includes note taking, reading articles and/or surfing the net	Computer use in class is a companion to discussion groups	Computer use in the classroom is clearly connected to 21 st century skills (e.g., critical thinking, analysis and communication)
3. Access to on-line resources and system safety/integrity: <i>access to on-line resources</i>	Teachers are denied access to on-line resources due the school system's firewall	Teachers can request access to on-line resources but can still be denied	Teachers can request access to on-line resources and receive permission	Teachers can access any on-line resource
4. Teaching non-consumers*: <i>engaging students who historically disconnected themselves from learning</i>	No strategies are used to engage the non-consumers	Few strategies are used to engage the non-consumers	Occasional strategies are used to engage the non-consumers	There are clear and evident strategies to engage the non-consumers
5. Going around and underneath: <i>allowing for and encouraging innovation creates change</i>	Pure instructional focus on a standardized measurement	Majority of instructional focus on standardized measurement	Evidence of innovation and creativity while addressing standards	Application of innovation and creativity while addressing standards
6. Nuts and Bolts: <i>learning when technology fails</i>	When technology fails the lesson is cancelled	When technology fails, part of the lesson is taught	When technology fails, the majority of the lesson is taught	When technology fails, the entire lesson is taught in a different way

*Non-consumers: for this observation sheet, non-consumers are students who are present in the classroom but who are not engaged.

Appendix D 1:1 Pilot Application

Personal Information

1. Name
2. School

Instructional Focus

Project abstract:

Please include the # of students, type(s) of device(s), # of devices, web-based applications, additional hardware, and/or other information that would support student learning.

1. What are the essential questions you will address through this pilot? (FAQ)
2. What are your professional driving questions (what will drive how you implement the devices)? (FAQ)

Learner Focus

Using the principles and guidelines of UDL to frame your description (see www.cast.org):

1. Demonstrate how the use of the devices will enhance student learning
2. Demonstrate how the students will engage with and express higher order thinking
3. Demonstrate how the students will engage and express the habits of mind
4. Demonstrate the acquisition of 21st century skills by the students
5. How will you foster student ownership of learning?

Deployment

1. How will you use web applications to support the learning you expect to take place?
2. How will you foster a culture of responsibility? (FAQ)
3. Are you familiar with the devices you are proposing to use?
4. Does your device usage require the use of a separate server?
5. Are there any policy, rules, or regulations that will need to be addressed if your pilot is chosen? (FAQ)
 - a. What will they be?
6. How will you measure your pilot? (consider student outcomes, rate of device use, how teacher friendly is the use of the devices, is it easy is your pilot to replicate within your discipline and across disciplines?)

Professional Development

1. Pilot participants are expected to share lessons created using the technology to be shared with other BCSC teachers. Please check if you acknowledge this.
2. Pilot participants are expected to be interviewed and possibly recorded (tape or video) for in-house trainings of other staff members. Please check if you acknowledge this.
3. Pilot participants are expected to participate in a professional learning community. Please check if you acknowledge this.

Appendix E

2012 BCSC Secondary Science Adoption Rubric - Technology

	Weak	Emerging	Advanced
TECHNOLOGY	<ul style="list-style-type: none"> <input type="checkbox"/> Technology options do not align with performance standards and applications <input type="checkbox"/> School network is in not able to support technology options <input type="checkbox"/> Staff and/or students cannot use collaboration through technology as part of regular classroom practice <input type="checkbox"/> Technology is not aligned with UDL <input type="checkbox"/> Technology does not allow for agility within the curriculum to take advantage of change & updates in research/discovery <input type="checkbox"/> Training is not provided for the technology <input type="checkbox"/> Materials cannot be accessed at home or by parents <input type="checkbox"/> Technology resources have unreasonable cost to both the school and student 	<p>In addition to the “Weak” criteria:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Technology options do align with current performance standards and applications <input type="checkbox"/> IT support is sufficient to support computer and network infrastructure <input type="checkbox"/> Staff and students can regularly collaborate through technology <input type="checkbox"/> Technology is somewhat aligned with UDL <input type="checkbox"/> Technology allows for some agility within the curriculum to take advantage of changes or updates in research and discovery <input type="checkbox"/> Initial training is provided for the use of technology <input type="checkbox"/> Material can be accessed at home and by parents <input type="checkbox"/> Technology resources are somewhat reasonable cost to both the school and the student 	<p>In addition to the “Emerging” criteria:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Technology resource is fast, stable, reliable, and provides individual and shared storage space for staff and students <input type="checkbox"/> Company support provides robust support and is very responsive to issues as they arise <input type="checkbox"/> Resources would be heavily used by staff and students as a communication and collaboration tool (within and between schools). And can be widely used to support the teaching methodology and inter-school sharing <input type="checkbox"/> Technology is completely aligned with UDL <input type="checkbox"/> Technology supports an agile curriculum to take advantage of current research and discovery <input type="checkbox"/> Extended training is provided for the use of technology <input type="checkbox"/> Resources allow other digital and online tools to support student engagement and instruction <input type="checkbox"/> Technology resources have a reasonable cost to both the school and the student