Overview of the Curriculum Research & Development Group
CRDG Vision and Mission

• Vision
  – CRDG, a learner-centered community of educators—recognized locally, nationally, and globally for quality research, design, and curriculum—that inspires dynamic teaching and learning.

• Mission
  – The Curriculum Research & Development Group (CRDG), with its associated Laboratory School, is an organized research unit in the College of Education at the University of Hawai‘i Mānoa that contributes to the body of professional knowledge and practice in teaching and learning, curriculum development, program dissemination and implementation, evaluation and assessment, and school improvement. CRDG conducts research and creates, evaluates, disseminates, and supports educational programs that serve students, teachers, parents, and other educators in grades PreK–20.
University Laboratory School

- CRDG–ULS partnership
- A laboratory for improving education
- Diverse student body by
  - Ability
  - Family Income
  - Ethnicity
- ~ 420 students K–12
- Comprehensive, challenging curriculum for all
- Exemplary Charter School
Our Roots

1896–1931 Territorial Normal and Training School serves as site for preparing teachers

1939–1948 University Laboratory School expands to intermediate and then to high school

1951 First class graduates from University High School

Our Roots


1966  ULS becomes part of a new entity, the Hawaii Curriculum Center, a joint operation of the Hawai‘i Department of Education and the University of Hawai‘i to develop curriculum and materials for schools. Arthur R. King becomes Director.

1969  Curriculum Research & Development Group (CRDG) is established under the direction of Dr. Arthur King, as the Hawai‘i Curriculum Center is phased out.

1996  CRDG, along with other research units, reorganizes under the UH Office of the Senior Vice President for Research.
Our Roots

2000 CRDG merges with the College of Education. ULS applies for charter school status.

2001 ULS becomes a charter school and is renamed the Education Laboratory: A Hawai‘i New Century Public Charter School (aka University Laboratory School).

CRDG continues to operate the school as a laboratory for curriculum research and development.

2010 CRDG established a partnership agreement with the Local School Board of the University Laboratory School. The school serves as an experimental site for researching and developing innovations in teaching, learning, and assessment in grades K-12.
CRDG–ULS Partnership

CRDG

R&D
- Exploration
- Development
- Evaluation
- Dissemination

ULS

Laboratory for
- Experimentation
- Assessment
Demonstration Site
- Visitors
- COE
- Innovative practices
Dissemination
Process of Research & Development at CRDG

- **Exploratory**
  - Review existing theories & research
  - Identify research base/gaps
  - Create potential framework
  - Develop research protocols
  - Laboratory School invention & preliminary testing

- **Developmental**
  - Pilot testing HI/Mainland
  - Evaluation of impact
  - Revision/Retesting/Revision

- **Publication & Dissemination**
  - Field Testing
  - Ongoing evaluation of impact
Inquiry-Based Teaching & Learning

Habits of Mind

– Careful observation
– Thoughtful analysis
– Open mindedness
– Healthy skepticism
– Logic & Imagination
– Curiosity & Creativity
– Collaboration
– Creating sound and coherent predictions and explanations
– Honesty & Ethics
Essential Features of CRDG Products

• A general theory of the knowledge base
• A theory of instruction
• Set of student, teacher, & support materials
• Course of professional development
• Support services, including multimedia support
• Impact evaluation—relevant research, evaluation, & reports
• A system of publication & dissemination
CRDG Programs
Science

• Foundational Approaches in Science Teaching (FAST)
• Hawai‘i Nature Study (HNS)
• Fluid Earth/Living Ocean
• Developmental Approaches in Science, Health and Technology (DASH)
• Teaching Science as Inquiry-Aquatic
• Physics, Physiology and Technology (PP&T)
U.S. and International Use

Science programs used in
• 36 States
• Russia
• Slovakia
• Japan
• New Zealand
• Australia
• Pacific Islands
• International/ American Schools
Mathematics

• A Modeling Approach to Algebra
• Reshaping Mathematics for Understanding
• Measure Up
• Math Teachers Circle
Social Studies

A History of Hawaiʻi

The Rise of Modern Japan

CHINA: Understanding Its Past
English

- Secondary English Project (SEP)
- Performance English
  - Golden Triangle
  - Comedy Hour
  - Suspense Theater
  - (Going Solo)
- Literature of the Americas
- Growing Up Local
Awards & Recognitions

- American Historical Association
- American Association for State and Local History
- American Educational Research Association
- Association for Asian Studies
- Hawai‘i Book Publishers Association
- National Science Foundation
- National Staff Development Council
- U.S. Department of Education
  - Expert Panel on Mathematics and Science Education; Program Effectiveness Panel; *Catalog of School Reform Models*
Major Projects 2004–2013

- GK-12 (in science)
- Pihana Na Mamo
- Archimedes
- Measure Up
- Summer Programs
- East Asia texts
- Cross Currents (website)
- Gender Study in Math (NSF)

- Physics, Physiology, & Technology (PP&T)
- Arts Education Evaluation
- Foundational Approaches in Science Teaching (FAST)
- Developmental Approaches in Science, Health and Technology (DASH)
- Preparation for FAST Scaling-Up (NSF)
Major Projects 2004–2013 (continued)

- Embedded Assessment in FAST
- Arts Education Evaluation
- Nutrition Needs Assessment
- Invention Factory and Makery
- Elementary Science—Climate Change Education in the Pacific
- Formative Assessment in the Networked math Classroom (NSF)
- Fluid Earth/Living Ocean (Marine Science)
- Ka Wana series
- Evaluation of 21st Century Learning Centers
- Reflections of Honor: The Untold Story of a Nisei Spy
Major Projects 2004–2013 (continued)

- GEAR UP evaluation
- Teaching Science as Inquiry-Aquatic (online curriculum and PD)
- Military Survey Project
- Streamlining State Content Standards Project
- Technology for Untapped Talent
- Professional Development Design Guide
- Google for Educators
- Youth Risk Behavior Surveys
- Youth Tobacco Survey
- Hawai‘i Nature Study
- ACE 21/Runbook
Major Projects 2004–2013 (continued)

• Science Education in the Pacific (PEARLS)
• Indigenous Methods in Evaluation
• Internet Safety
• Inquiry in Early Childhood Education
• A Modeling Approach to Algebra
• Developing Algebra Resources for Teaching
• History of Hawai‘i textbook
• Reshaping Mathematics for Understanding
• Math Teachers Circle
Current Projects

- Hawai‘i School Health Surveys
- Youth Risk Behavior Survey
- DASH in Russia
- A Modeling Approach to Algebra
- Access Learning/Runbook
- Voice of the Sea
- Piha Pono & Pihana Hou
- Hawai‘i Instructional Support Academy
- Math Teachers Circle
- Pacific Islands Climate Change Education
- Ethnomathematics evaluation
- Technology for Untapped Talent
Current Projects (continued)

- History of Hawai‘i revision
- Korea
- Developmental mathematics (community college)
- Fluid Earth/Living Ocean revisions
- Hawai‘i Nature Study
- Physics Practices and Technology
- Teaching Science as Inquiry-Aquatics curriculum
- Internet Safety
- Research on evaluation & assessment
- Journal editorship
- Laboratory School technology initiatives
- Summer Programs
Types of Employees – 2006
(full and part time total = 100)

- APT: 41%
- UHPA Faculty: 15%
- UHPA Lecturers: 16%
- RCUH: 16%
- GA: 3%
- Casual: 3%
- Clerical: 3%
- Other: 3%

Does not include:
- Student Help: ~28
- Coaches: ~40
Types of Employees – 2015
(full and part time total = 55)
Curriculum Research & Development Group
– CRDG –

Researching, creating, evaluating, disseminating, and supporting quality educational programs for all students and teachers, preschool through grade 20