LDC: An Improvement Network in Action

Applying Improvement Science to Develop Teacher Skill and Standards-Aligned Instruction

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Literacy Design Collaborative
(April 3, 2018)

LDC: A National Community of Practice

Goals of Presentation

- LDC: Example of An Improvement Network That Addresses Educator Problems of Practice Through User-Centered, Agile Development Cycles of Teacher Learning

- Participate in a mock school district PDSA cycle -- review the product of a PDSA test, analyzing collected data to make iterative instructional decision in improvement cycle
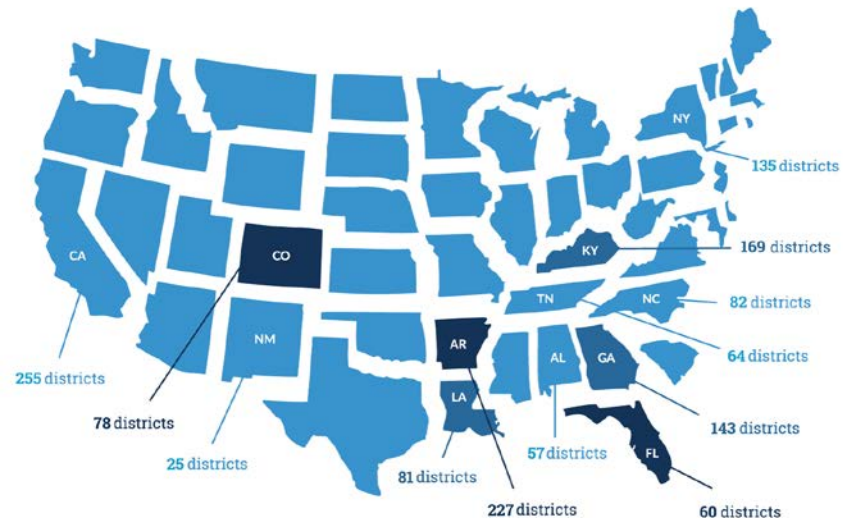
LDC Community of Practice: An Improvement Network in Action

- **Common Aim**: LDC facilitates a national, networked community of practice to reach a common aim: improved student outcomes through teacher skill development and rigorous standards-aligned curriculum

  - teachers, administrators, school district and State staff
  - professional development providers
  - subject area experts, academicians, & psychometricians

LDC: A National Community of Practice

LDC CoP by the Numbers

- ~70,000 teachers logged in to LDC's CoreTools online platform
- Teachers in all 50 states
- Teachers from over 3000 different school districts
- More than 50 partner organizations engaged in LD

135 districts
169 districts
82 districts
64 districts
143 districts
60 districts
227 districts
81 districts
25 districts
57 districts
78 districts
255 districts

More Skilled Teachers/More Rigorous Curriculum:

Research Centerpiece to How LDC Engages its National CoP

At the core of the How as well as all LDC PDSA cycles is a deep research basis the community of practice leverages:

Elmore: Task Predicts Performance
SCALE: Measure standards rigor in tasks
Measure standards rigor in teacher instruction
Measure standards rigor in teacher skill development

LDC Improvement Model

Primary Problems of Practice LDC Tackles:

- PD, Curricula, Assessment

- LDC Mechanism: User Centered problem ideation→ design → testing → data collection → repeat

# Example of how LDC Improvement Works: Addressing Disciplinary Literacy Challenge

Problem of Practice Identified:
Need for STEM/Literacy Resources

The LDC organization heard a steady drumbeat: one of the most pressing challenge of many partners was helping teachers with the unique demands of teaching literacy in the disciplines: e.g. Science, Social Studies (and yes, ELA).

This struggle was particularly acute with respect to STEM courseware.

Free STEM modules
Grades 6-8

FREE STEM LESSON #86
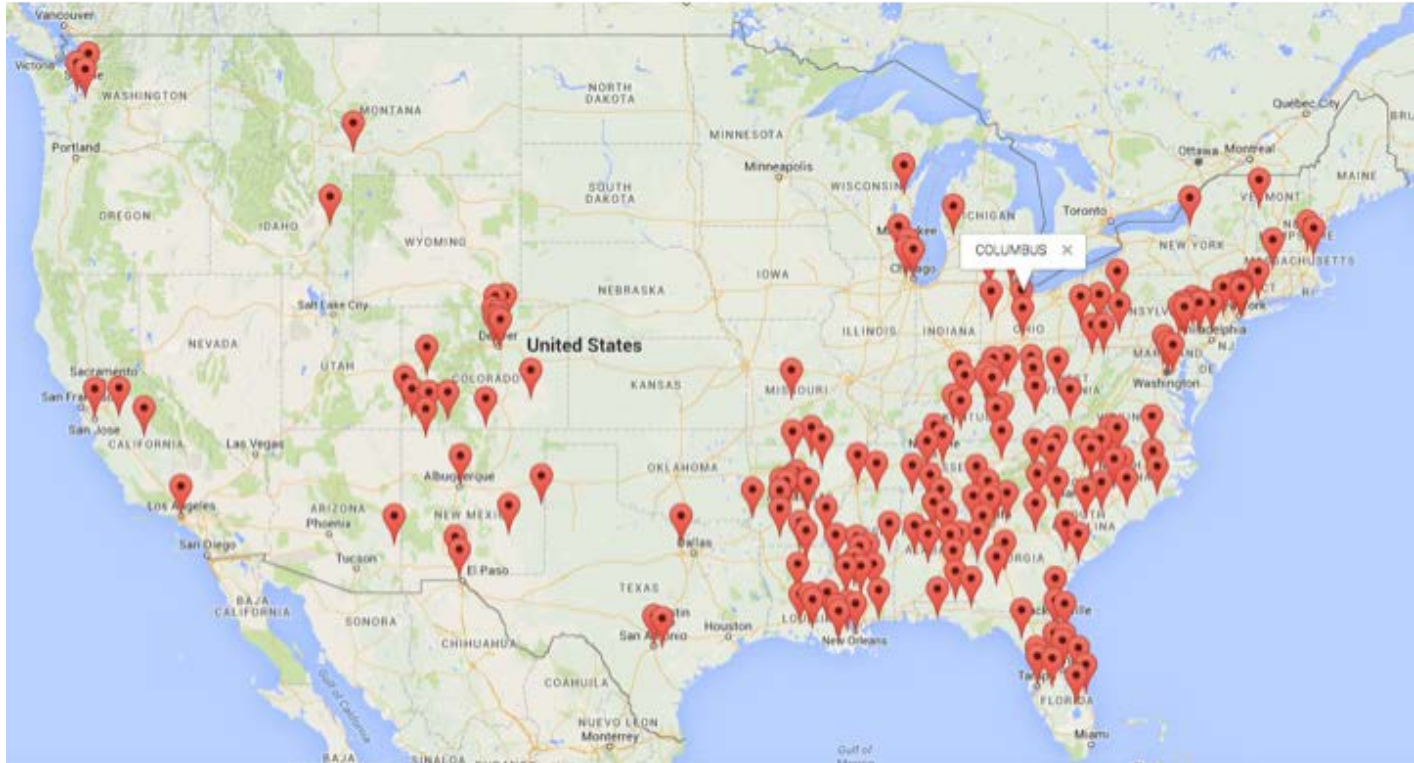Build Mealworm Habitats

LDC Improvement Model: Organizing Around Instructional Problems of Practice
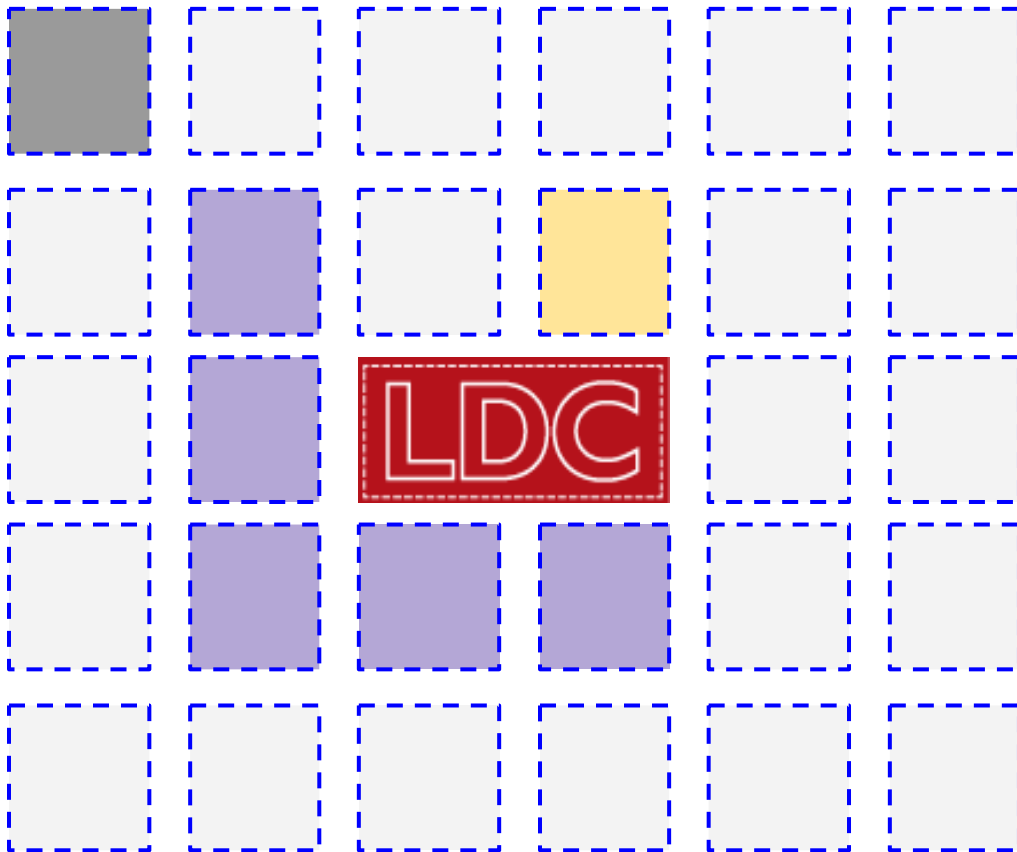
LDC = LDC National Organization

= LDC Partner

= LDC Partner w/ Problem

= LDC Expert Partner
(Develops solution based on expertise)

= LDC Partners Piloting Solution

LDC: Community of Practice "Enabler"

Within two weeks of LDC releasing LDC-Battelle Stem curricula and templates, teachers in 31 states and DC had downloaded the content for use.

LDC Improvement Model

2013 Problems of Practice Tackled: *Measurement*

- ▪ ***Student rubrics*** for argumentative and informational writing
- ▪ Student rubric ***scoring system and protocol***
- ▪ Sets of calibrated, ***scored student work***
- ▪ ***Curriculum-design rubric***
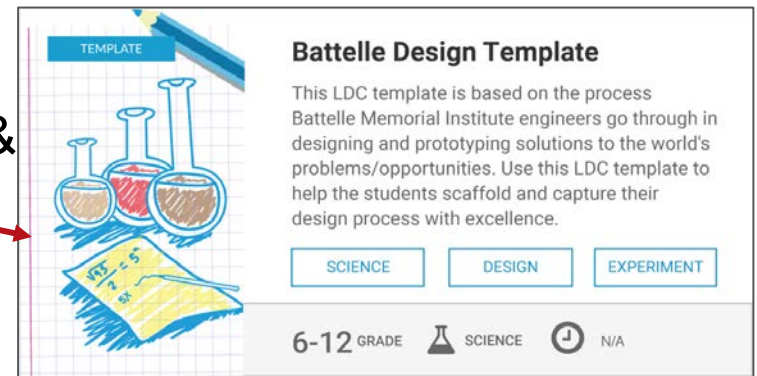- ▪ Curriculum-design ***scoring system and protocol***

LDC Improvement Model

2014 Problems of Practice Tackled:

- Launch of **free LDC CoreTools CCRS design studio**

- 270 grade level standards-aligned templates

- Release of **free online libraries of CCRS unit and lesson plans**

LDC Improvement Model

2015 Problems of Practice Tackled:

- American Museum of Natural History and Battelle STEM Science Template & Units

- Facing History Lesson collection

- 3.0 curriculum design template revision

- Release of 20 CCRS Teacher Competencies

- Beta Release of Flipped, Hybrid Teacher PD courses

TEMPLATE

Battelle Design Template
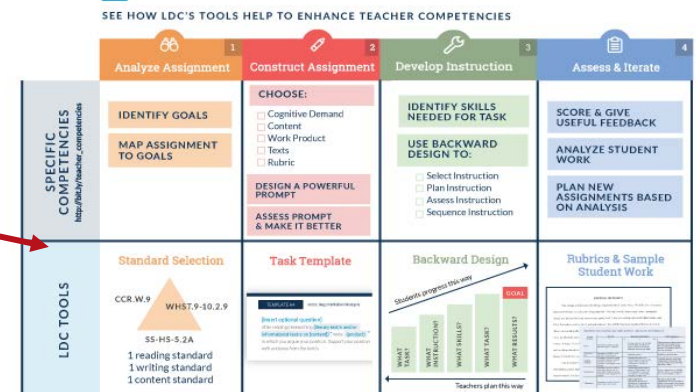
This LDC template is based on the process Battelle Memorial Institute engineers go through in designing and prototyping solutions to the world's problems/opportunities. Use this LDC template to help the students scaffold and capture their design process with excellence.

SCIENCE   DESIGN   EXPERIMENT

6-12 GRADE   SCIENCE   N/A

SEE HOW LDC'S TOOLS HELP TO ENHANCE TEACHER COMPETENCIES

LDC Improvement Model

2016 Problems of Practice Tackled:

- First Release of Yearlong Flipped, Hybrid Teacher Learning Toolkit

- Launch of Coach Certification Process

- Beta Testing of a Curriculum Design & Alignment Process

Certified Coach Badge

LDC Improvement Model

2017 Problems of Practice Tackled:

- Curriculum Audit Process and Curriculum Scope & Sequence Development

- Efficacy and efficiency of PLC-based teacher learning sequences

- Student Work collection

From the 2016-17 UL-SCALE created LDC student work rubrics

LDC Improvement Model

2018 Problems of Practice Tackled:

- Quicker Teacher Learning/ Motivation via Iterated Online, Flipped Educator Learning Processes

- Yearlong Curriculum Anchors for Full Course Curriculum

- Innovative Performance Assessment System

- AI scoring solution to student and teacher work

- Instructional Leadership Development Tools

LDC Improvement Model

- LDC drives PDSA cycles at every system level:
  - in the classroom
  - teacher learning
  - school learning
  - district learning
  - state/system learning
- Agile design & continuous improvement lead to system transformation, no matter the level
- *Online educator learning results in real-time, clickstream data validation*

LDC Improvement Model

i3 User-Centered Design Lab Sites: NYC and LAUSD

- Hundreds of teachers per year using LDC's flipped, hybrid professional learning model

- Clickstream data analysis on what online skillful actions reflect teacher skill growth

LDC Improvement Model

District Challenge:

How do you have confidence in a curriculum scope and sequence and ensure equity across classrooms, schools, and zip codes?

How do you ensure that *every* student leaves the district with adequate practice in the most critical content & literacy standards?

LDC Improvement Model

Example: Lake County Florida

The district decided to use PDSAs to test a three-pronged approach.

LDC Improvement Model

1. PLAN

1. Curriculum Audit
2. Add curriculum anchors based on gaps in scope & sequence\
3. Use SCALE / LDC quality vetting to ensure rigor

LDC Competency-Based Coach Certification with evidence-based Badges

LDC LEARN used in PLCs facilitated by district coaches
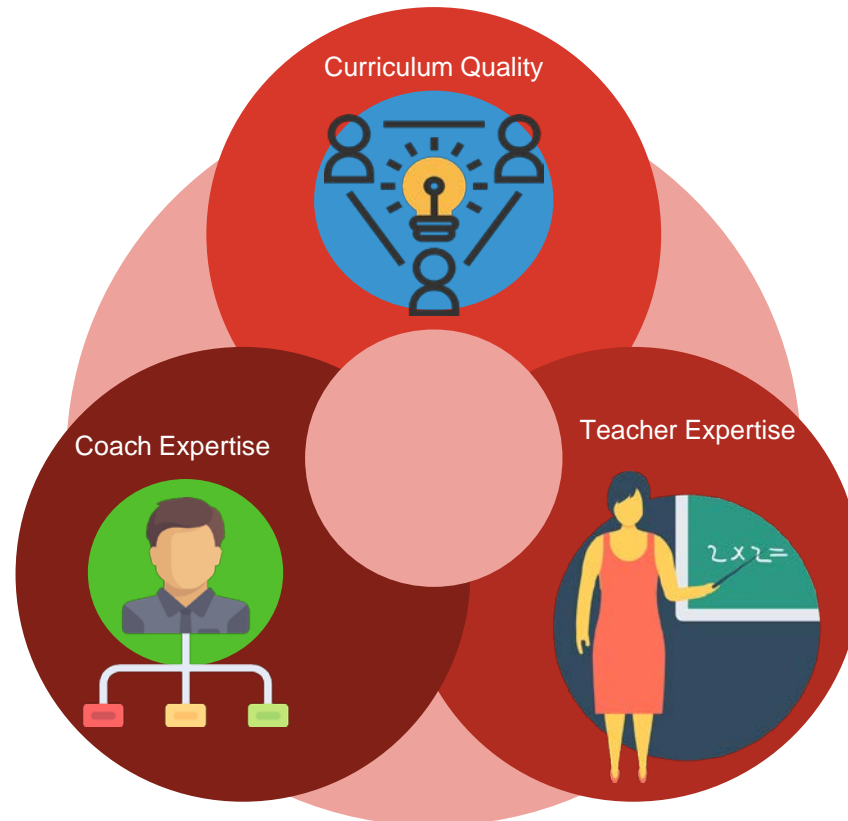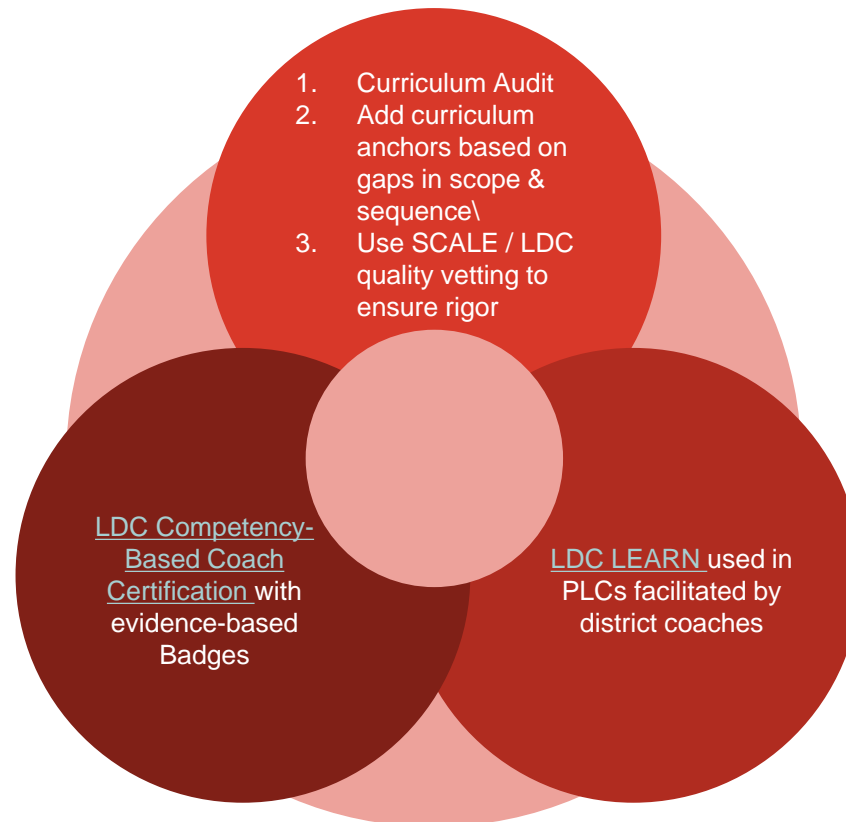
LDC Improvement Model

1. PLAN   *Instructional PDSAs will anchor the three areas: curriculum, coach expertise, teacher expertise*

- Coaches & teachers use curriculum anchors that are filling in standards gaps in the scope & sequence.
- Curricula is vetted by national quality review (SCALE/ LDC)
- Coaches & teacher develop specific competencies while finalizing curriculum anchors.

Plan assignments and instruction

Teach assignments

Analyze evidence in student work

Reflect on students' strengths & miscues

Revise plan & decide what to teach next

INSTRUCTIONAL CYCLE
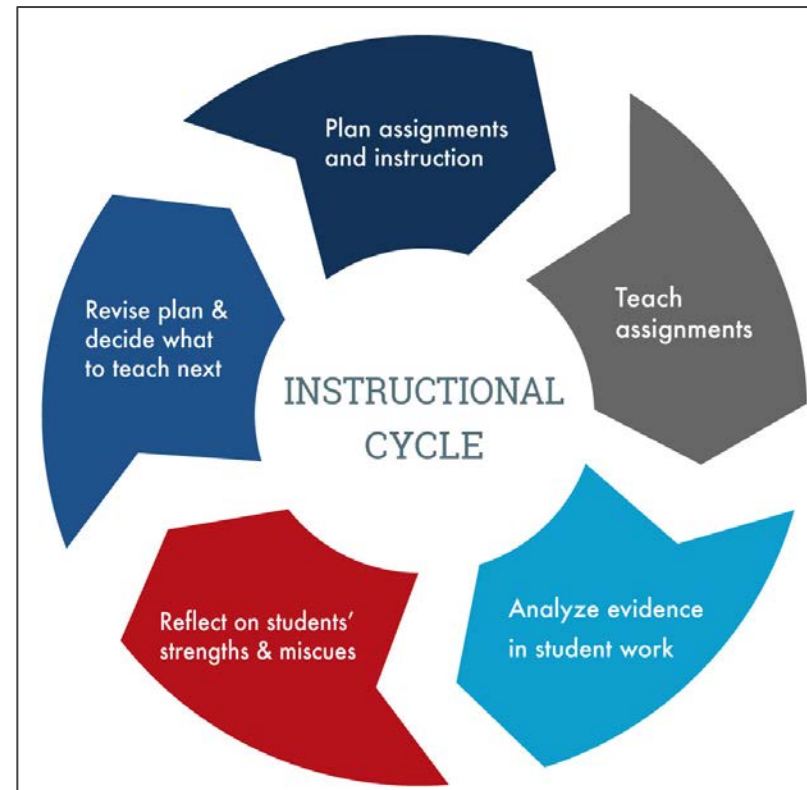
LDC Improvement Model

1. PLAN

District decides on a roll out model for the first set of field testing

Subject	Teachers	Students
3rd Grade Science	158	2663
8th Grade US History	40	2934
9th Grade English I	35	3192
10th Grade World History	41	3125

274 Teachers

11,914 Students

LDC Improvement Model

2. DO

The teams begin the work--planning & finalizing the curriculum anchors determined by the audit. The anchors fit into the existing scope & sequence--these are not additional to the curriculum.

Curriculum
Lake County 2017-18 Module Map

Course
8th Gr US History Blueprint

Unit
Quarter 2 Unit Map

Lesson
Road to Revolution Module

Student
Essay
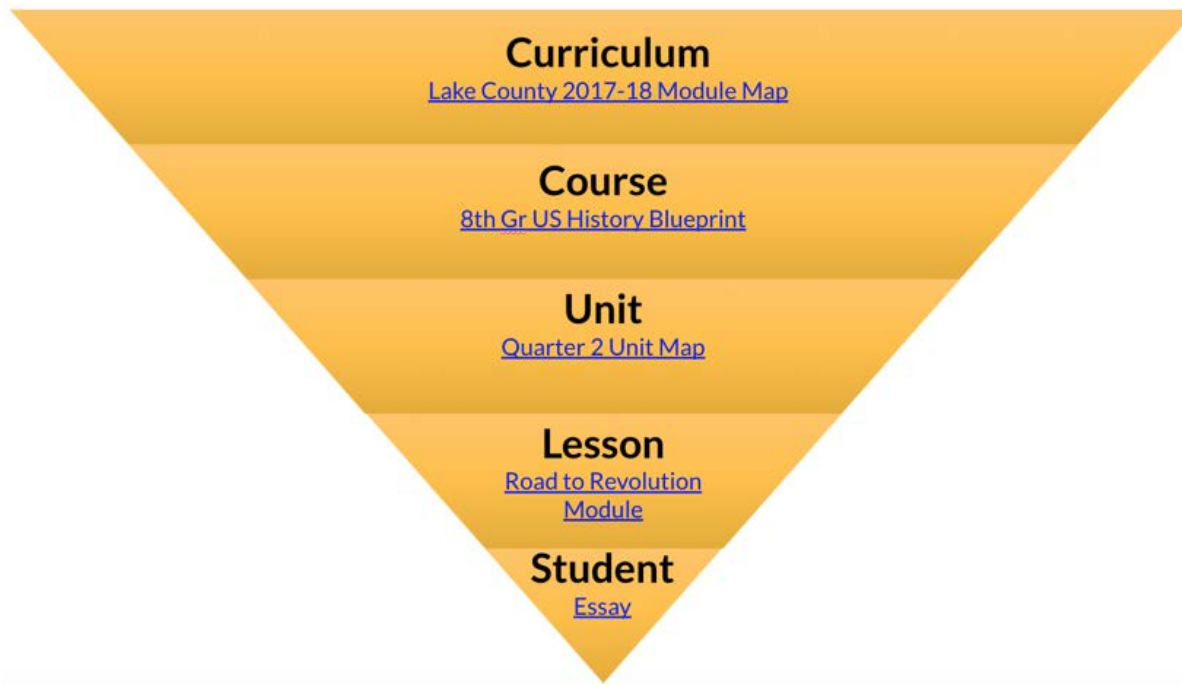
LDC Improvement Model

1. **PLAN**

District decides to use at least 3 Instructional PDSA cycles testing standards coverage (to fill in gaps)
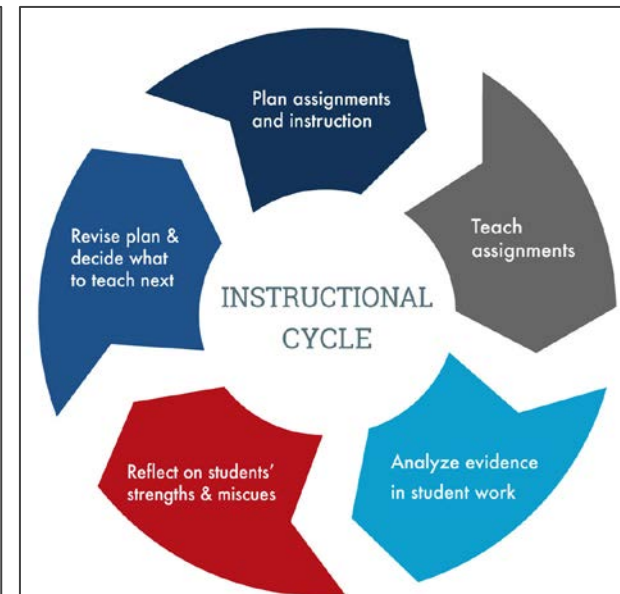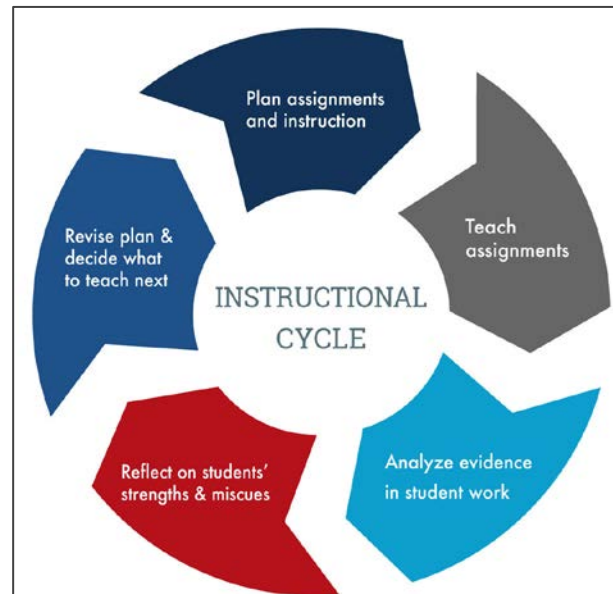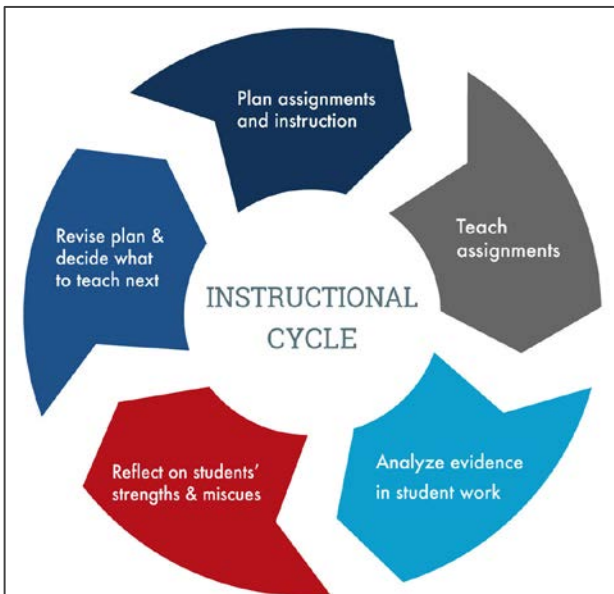
LDC Improvement Model

2. DO--IC1
The teams begin the work--planning & finalizing the curriculum anchors determined by the audit. Teachers teach the first curriculum module.

Unit III: The Road to Revolution

SS.8.A.3: Examine the causes, course, and consequences of the American Revolution

Unit Week 1	Unit Week 2	Unit Weeks 3-4	Transition to Unit IV
Process New Content Content Standards 3.1, 3.2, 3.4, 3.5 Students study primary & secondary sources and refer to the textbook to respond to essential questions about key events like the Stamp Act, Battle of Lexington, Boston Massacre	**Review Content** Content Standard 3.2, 3.3 Students review the colonists' response to British tax policies and the events leading up to the writing of the Declaration of Independence and the motivations of Thomas Jefferson & other signers	**LDC Module: Practice Skills and Deepen Knowledge through Authentic Literacy** Content Standards 3.6, 3.7 Literacy Standards R.2.5, W.1.1 Students evaluate the structure of the Declaration of Independence and evaluate how effectively the document's structure supports the colonists' arguments for independence, explaining how each section of the document contributes to the argument.	**Bridge to New Knowledge** Content Standard 3.8 Students transition to study of the war itself, including the changing political and social motivations for the war (e.g., from addressing specific grievances to forming a new nation

INSTRUCTIONAL CYCLE: Plan assignments and instruction — Teach assignments — Analyze evidence in student work — Reflect on students' strengths & miscues — Revise plan & decide what to teach next
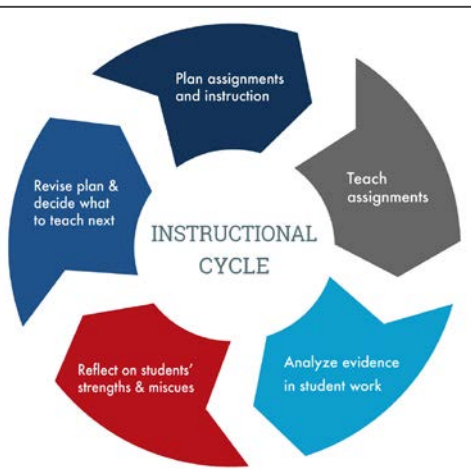
- Teachers spend 8 weeks on Instructional Cycle 1.
- Student work is analyzed using the SCALE/ LDC Disciplinary Rubrics.

LDC Improvement Model

3. STUDY--IC 1

District and school coaches and leaders analyze the data from Instructional Cycle 1 for patterns and trends using the Teacher Learning Report

- Design and Editing Activity
- Badges/ Certificates
- Collaboration with colleagues and/or coaches
- Student work uploaded after analysis and scoring using the SCALE/ LDC Disciplinary Rubrics

Module Activity   Comment   Review   Student Work   Badge/Certificate Earned

Oct '17   Dec

26

LDC Improvement Model

2. ACT/ DO--IC2
The teams complete Instructional Cycle 2 with modifications based on data study
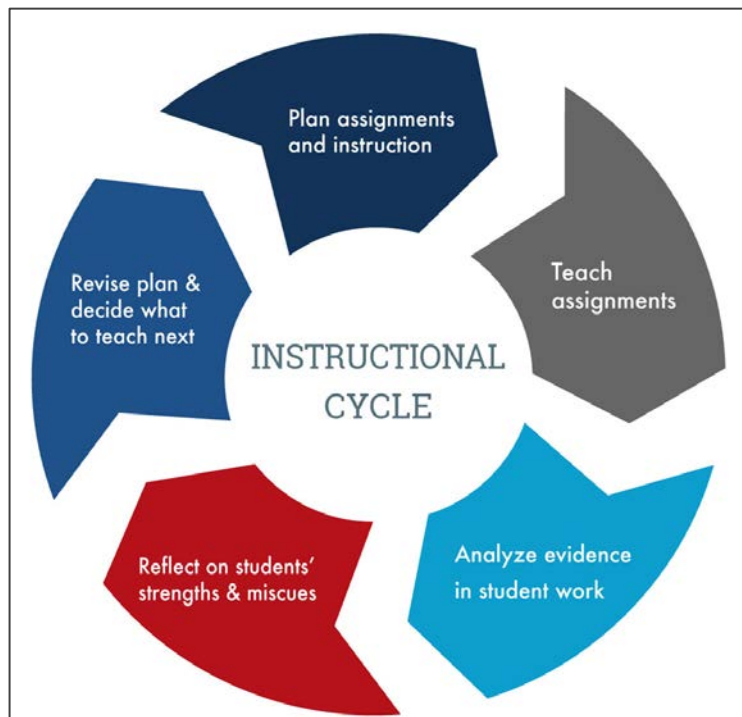
Teachers spend 8 weeks on Instructional Cycle 2.

Student work is analyzed using the SCALE/ LDC Disciplinary Rubrics.

LDC Improvement Model

3. STUDY--IC2

District and school coaches and leaders analyze the data from Instructional Cycle 2 for patterns and trends using the Teacher Learning Report

- Design and Editing Activity
- Badges/ Certificates
- Collaboration with colleagues and/or coaches

- Student work uploaded after analysis and scoring using the SCALE/ LDC Disciplinary Rubrics

Module Activity   Comment   Review   Student Work   Badge/Certificate Earned

Dec '17   Feb '18
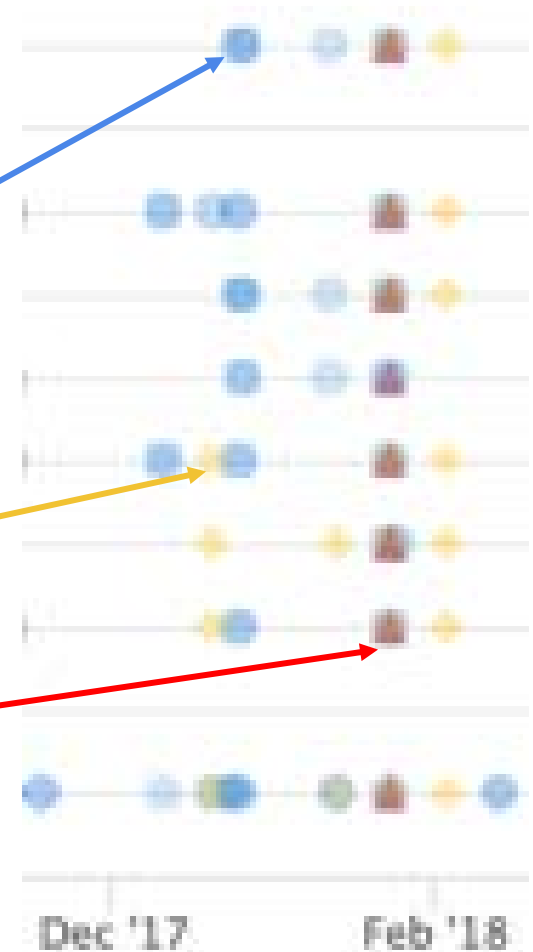
LDC Improvement Model

2. ACT/ DO--IC3

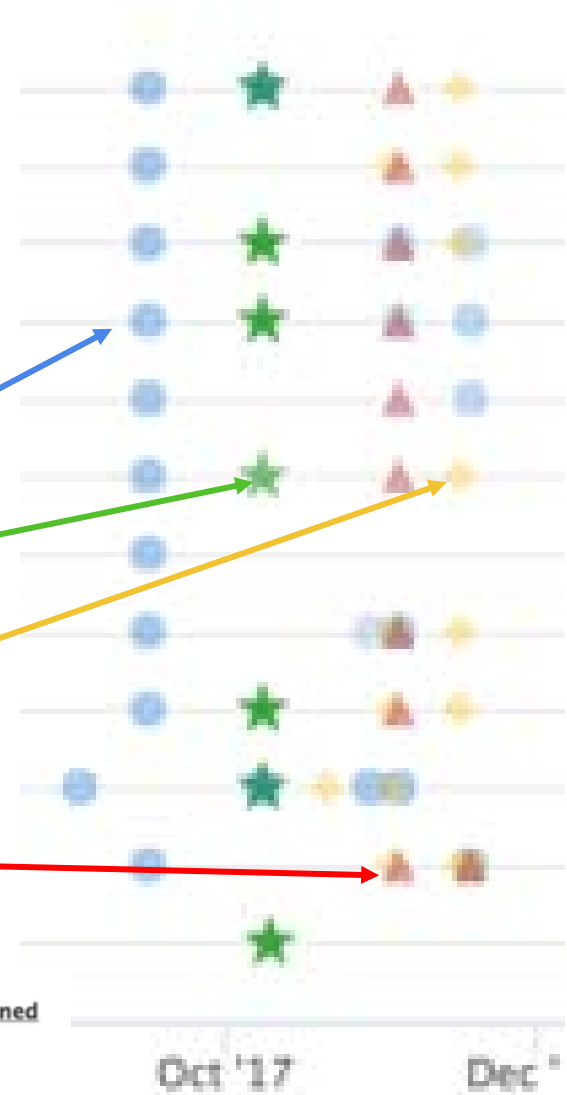The teams begin Instructional Cycle 3 (April 2018) with modifications based on data study

Teachers will spend 8 weeks on Instructional Cycle 3.

Student work is analyzed using the SCALE/ LDC Disciplinary Rubrics.

LDC Improvement Model

3. STUDY--IC3

District and school coaches and leaders analyze the data from Instructional Cycle 3 for patterns and trends using the Teacher Learning Report

- Design and Editing Activity
- Badges/ Certificates
- Collaboration with colleagues and/or coaches
- Student work uploaded after analysis and scoring using the SCALE/ LDC Disciplinary Rubrics
- Coaches use SCALE/ LDC Curriculum Alignment Rubric to evaluate quality of curricula. Curricula is submitted to national LDC Curriculum Alignment Review

Feb '18   Apr '18

● Module Activity   ◆ Comment   ■ Review   ▲ Student Work   ★ Badge/Certificate Earned

LDC Improvement Model

Your Turn!

Take a look at sample data from Teacher Learning Reports from each Instructional Cycle in LDC LEARN.

What do you notice in terms of development, change, improvement from cycle to cycle?

What can the district learn from your analysis?

- **Design and Editing Activity**

- **Badges/ Certificates**

- **Collaboration with colleagues and/or coaches**
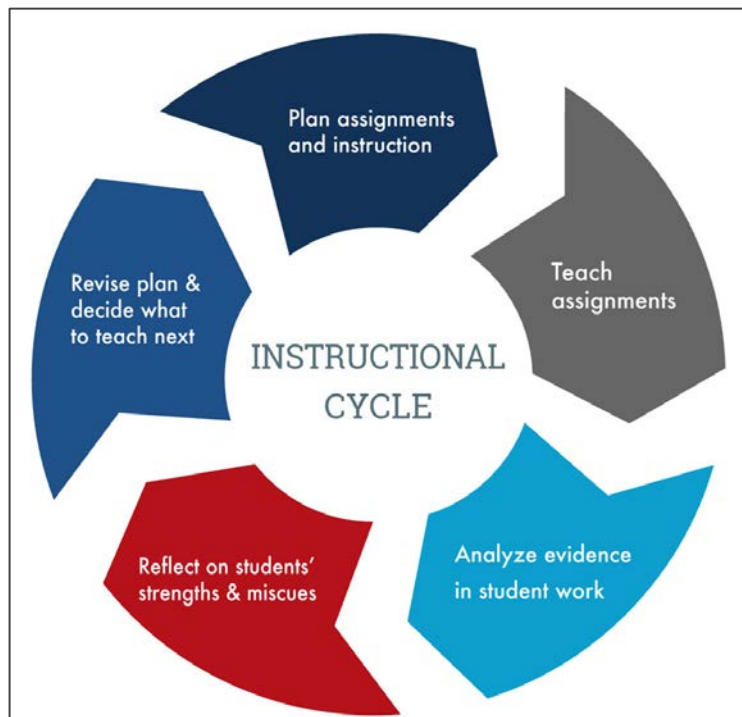
- **Student work uploaded after analysis and scoring using the SCALE/ LDC Disciplinary Rubrics**

- **Coaches use SCALE/ LDC Curriculum Alignment Rubric to evaluate quality of curricula. Curricula is submitted to national LDC Curriculum Alignment Review**

● Module Activity   ◆ Comment   ■ Review   ▲ Student Work   ★ Badge/Certificate Earned

LDC Improvement Model

And has resulted in the implementation of vetted curricular modules that is ensuring equity across multiple classrooms, disciplines, grade levels, schools, and zip codes. All Lake modules have been added to the OER LDC Libraries and are available for any district to use.

Lake County Schools: Curriculum Anchors Added to Scope & Sequence 2017-18

	ELA & Intensive Reading	Science	Social Studies
Grade 3	The Giving Tree	Hurricanes Matter! Classification Systems in the Animal Kingdom	Civic Virtues
Grade 4	Character- Robin Hood	Various States of Matter - Water SC.4.P.8.2	Battle of Olustee Comparing the Calusa and Tequesta Native American Indians Celebrate Freedom Week!
Grade 5	A Long Walk to Water Voices in the Park (adapted) Flipped Point of View	Forces and Motion Interpreting Tree Rings Scientific Method Human Body Systems	
Grade 6	Fears/Phobias		Arguing Egypt's Greatest Achievement Mongol Expansion Influence of Alexander the Great Chinese Dynasties & Their Impact

2018 | Literacy Design Collaborative (Feb 2018) | Based on Lake County School District Curriculum Blueprints

	ELA & Intensive Reading	Science	Social Studies
Grade 8	Culture and Belonging: Text Dependent Questioning		Colonial Impact on Native American Population Structure of the Declaration of Independence Women's Suffrage Movement Historical Reflections on the Second Great Awakening The View and Education of an American Slave
Grade 9 - 10	Building Ideas & Making Connections: "Monkey See, Monkey Do" Evaluating Arguments in Presidential Speeches Complex Characters in Romeo and Juliet How Authors Use Structure to Develop Ideas (Intensive Reading) Analyzing "The Open Window" (Intensive Reading) Character & Theme in The Necklace (Intensive Reading) Night Literary Analysis Evaluating Arguments: First Amendment Character Analysis in Macbeth	Murder She Wrote Effectiveness of the Periodic Table Gravimetric Analysis of Metal Carbonate Human Evolution (adapted) Food Webs	Atlantic Revolutions Comparing and Contrasting Cultural Exchanges in Post-Classical Networks (AP World History) AP European History: Models of Political Sovereignty and their Effectiveness: 1648-1815 (AP European History) Globalization: Characteristics and Consequences (AP World History) Comparing Feudalism in Europe & Japan

2018 | Literacy Design Collaborative (Feb 2018) | Based on Lake County School District Curriculum Blueprints

	ELA & Intensive Reading	Science	Social Studies
Grade 11 - 12	English 3: Poetry Analysis Whitman and Hughes Rhetorical Analysis: A Modest Proposal (English III Version) Rhetorical Analysis: A Modest Proposal (AP Lang version) Frederick Douglas Module	Phonological Awareness for Preschoolers (CTE: Early Childhood Education) Teaching Preschool Mathematics (CTE: Early Childhood Education)	

LDC Improvement Model

How is Lake Addressing the District Challenge?

How do you have confidence in a curriculum scope and sequence and ensure equity across classrooms, schools, and zip codes?

How do you ensure that *every* student leaves the district with adequate practice in the most critical content & literacy standards?

LDC Improvement Model

Impact in Lake Co

Guarantee for 12,000 students--25% of district total: necessary standards practice for career and college readiness. PDSA testing paved the way to reach full impact for all 41,000 students in the district.

PDSA cycles using LDC LEARN, Coach Certification, and Curriculum Services support the district in progress monitoring and evaluate impact.

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3rd Grade Science	158	2663
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274 Teachers

11,914 Students

#DestinationLake

1. Curriculum Audit
2. Add curriculum anchors based on gaps in scope & sequence\
3. Use SCALE / LDC quality vetting to ensure rigor

LDC Competency-Based Coach Certification with evidence-based Badges

LDC LEARN used in PLCs facilitated by district coaches
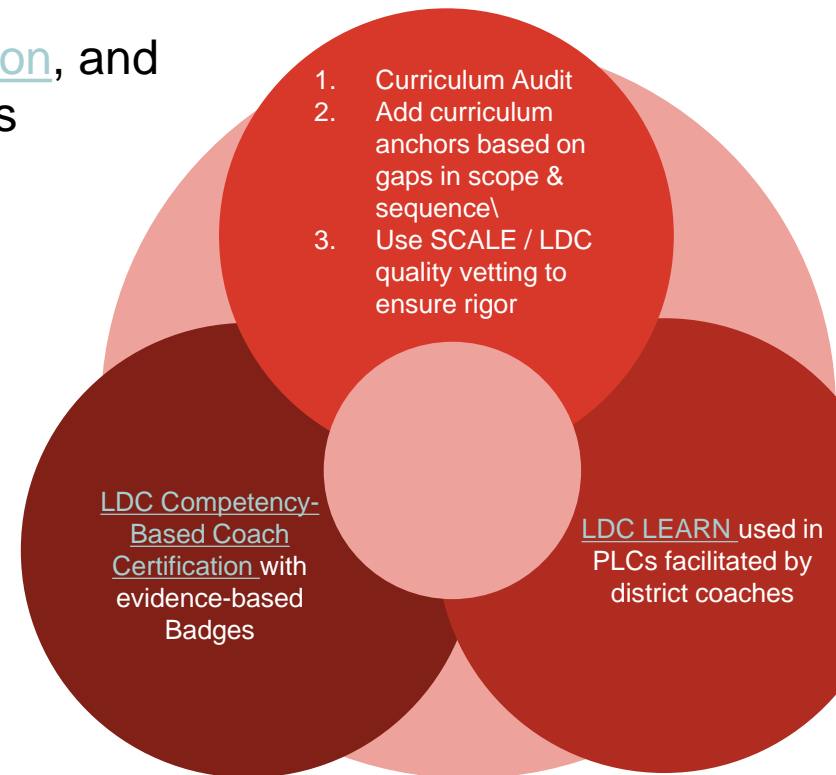
LDC Improvement Model

Other districts use other roll out models to ensure quality and equity in curriculum, instruction, and professional learning across the system. The combination of LDC LEARN, Coach Certification, and Curriculum Services changes based on the needs of the district.

MODULE ROLL OUT

2015-2016
HS Civics
HS Chemistry
HS U.S. History
6th gr Science
6th gr S.S

2016-2017
HS Geography
HS Earth Science
8th gr Science
8th gr S.S.
7th gr Science
7th gr S.S.
5th gr Science
4th gr S.S.

2017-2018
HS Biology
HS Physics
HS World History
5th gr S.S.
4th gr Science
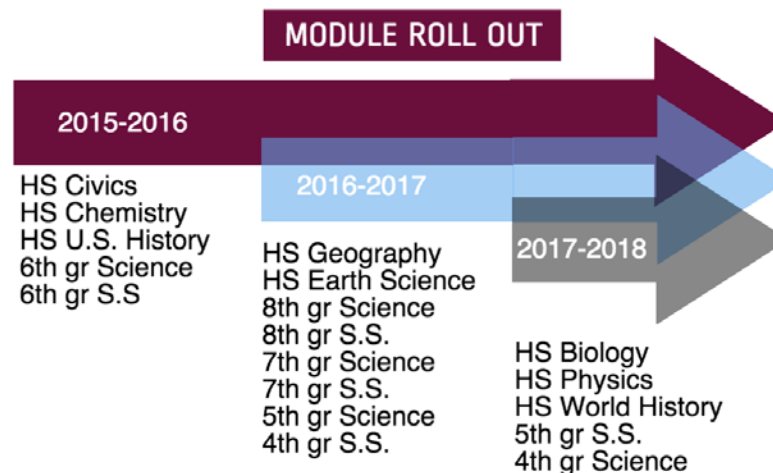
selected modules will be piloted each year

LDC Improvement Model

District Impact:

As of Fall 2016:

- 49 secondary schools
    - Up from 43 in 2015
    - 100% schools returned for Year 2

- 38 elementary schools
    - Common Modules offered only in 4th grade social studies
    - 10 schools piloting 5th grade science

- 30,000 plus students using modules
    - 25,728 in print
    - +9 schools using digitally

As of Fall 2017:

- 47 secondary schools
    - 24 high schools
    - 23 middle schools

- 52 elementary schools
    - Common modules now in 4th and 5th grade social studies and science

- 36,000 plus students using modules

LDC Improvement Model

LDC resources take the guesswork out of instructional efficacy.

Use the LDC LEARN platform (@ https://coretools.ldc.org/) to find tested and vetted instructional plans.

- **Daily lessons**
- **10-15 hour unit plans**

LDC Improvement Model

For more information or a quick productive conversation about how to use LDC to strengthen your continuous improvement, contact us!
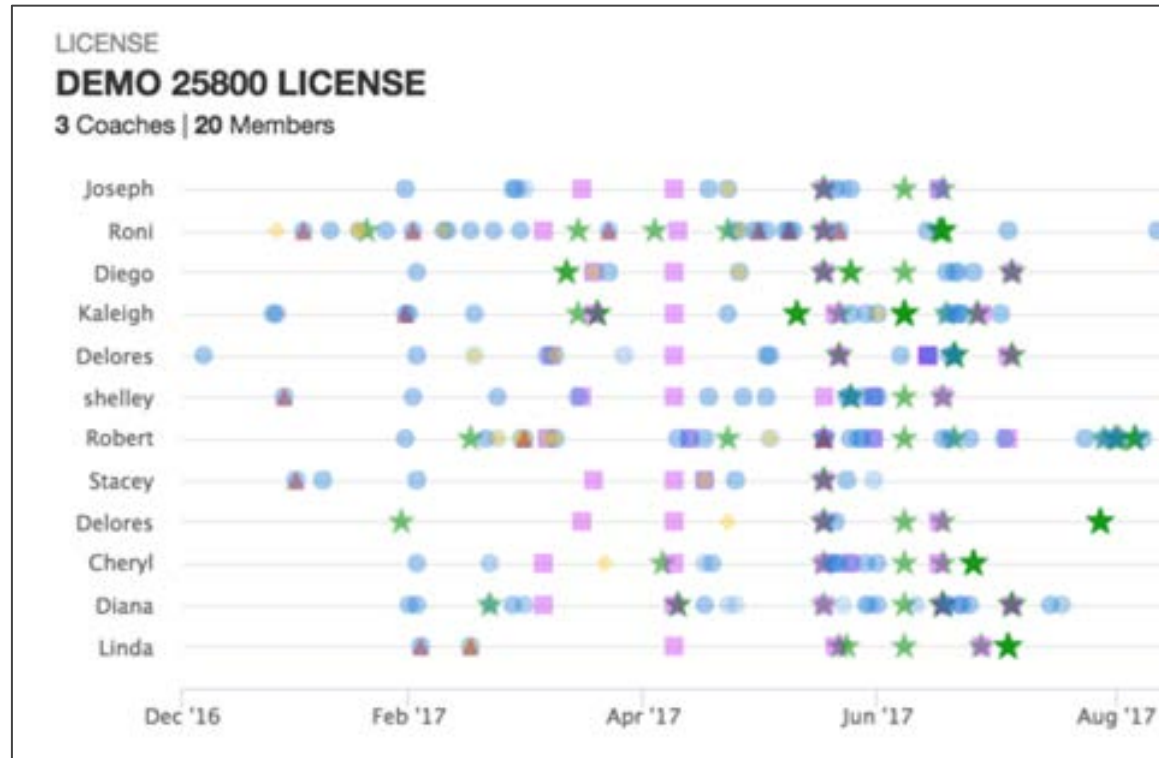
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www.ldc.org
coretools.ldc.org

LDC Improvement Model

Sample Report:
Progress on job-embedded work and professional learning courses.

Includes data on:

1. Instructional planning work (Module Activity)

2. Collaboration with coach and/or colleagues (Comment)

3. Use of nationally validated SCALE Curriculum Alignment Rubric during instructional planning (Review)

4. Implementation of units in classrooms (Student Work)

5. Acquisition of competency-based Badges and completion certificates (Badge/Certificate Earned)

LICENSE
DEMO 25800 LICENSE
3 Coaches | 20 Members

Members: Joseph, Roni, Diego, Kaleigh, Delores, shelley, Robert, Stacey, Delores, Cheryl, Diana, Linda

Timeline: Dec '16, Feb '17, Apr '17, Jun '17, Aug '17

Legend: ● Module Activity ◆ Comment ■ Review ▲ Student Work ★ Badge/Certificate Earned

39