



iPrep.math

2013-2014

PROFESSIONAL LEARNING
COMMUNITY (PLC)

SESSION I

re.IMAGINE

EDUCATIO

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PROFESSIONAL LEARNING COMMUNITIES (PLCs)

WHAT?

“Ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve.”

PROFESSIONAL LEARNING COMMUNITIES (PLCs)

WHO?

- Group of educators focused on achieving a common goal
- Grade-Level Teaching Team
- Department Team
- District / Regional Team

PROFESSIONAL LEARNING COMMUNITIES (PLCs)

Elements

- **A Focus on Learning** – Embracing high levels of learning for all students, provide interventions for struggling students, extend and enrich learning
- **A Collaborative Culture** – members work interdependently to impact their classroom practice to yield better results for their students
- **Collective Inquiry into Best Practices and Current Reality** – build shared knowledge, develop new skills and capabilities

DuFour, Dufour, Eaker & Many. (2010). Learn by Doing.

PROFESSIONAL LEARNING COMMUNITIES (PLCs)

Elements (continued)

- **Learn by Doing**
- **A Commitment to Continuous Improvement** – gather evidence of current levels of student learning, develop, implement, and analyze strategies and ideas to build on strengths and address weaknesses
- **Results Orientation** – initiatives are assessed by results

DuFour, Dufour, Eaker & Many. (2010). Learn by Doing.

PROFESSIONAL LEARNING COMMUNITIES (PLCs)

Types of Protocols

- Project Zero
- Descriptive Review
- Student Work

PROFESSIONAL LEARNING COMMUNITIES (PLCs)

Descriptive Review

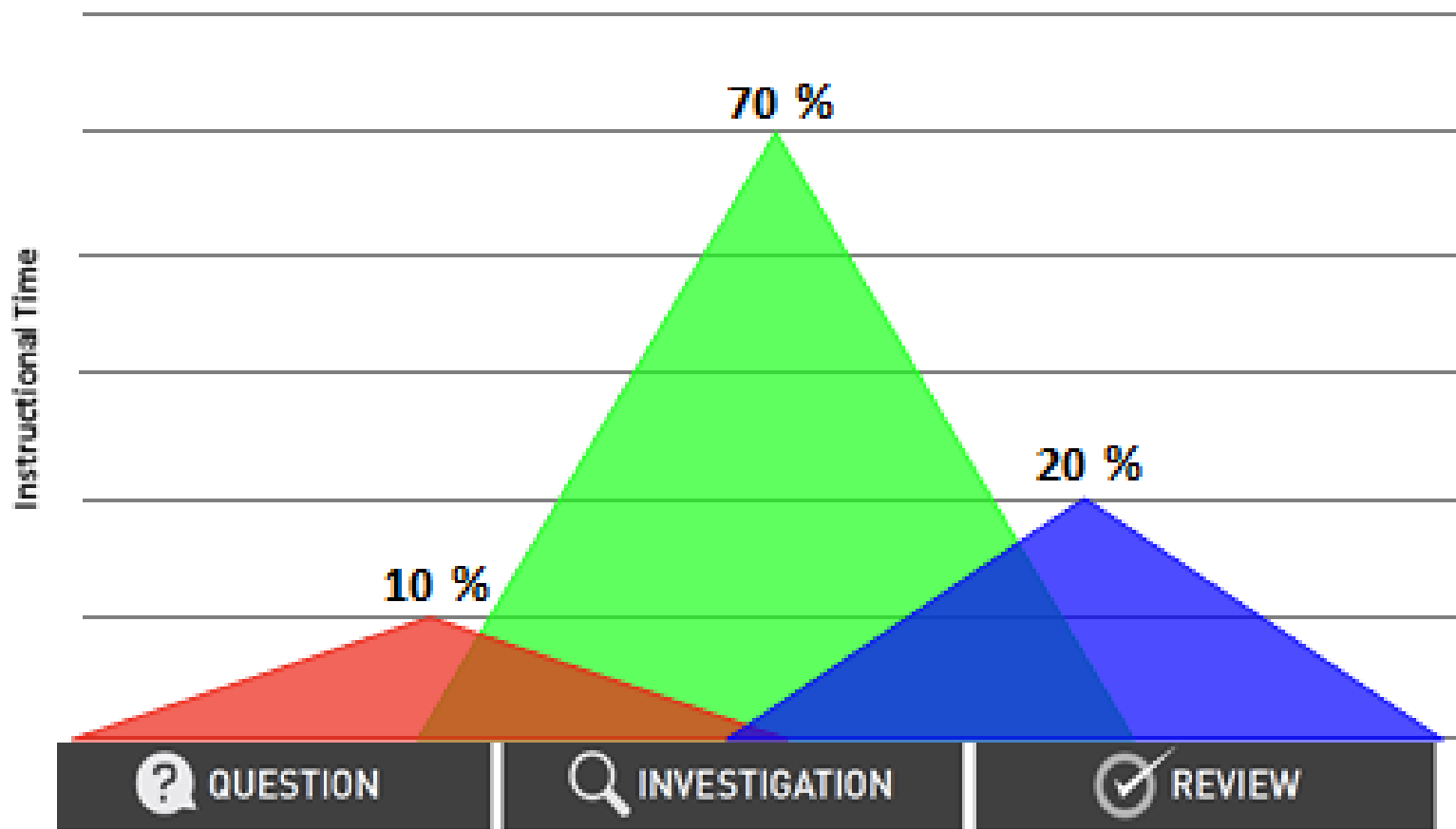
Steps:

- **Introduction**
- **Teacher Presentation** – Members review presented information by presenter (no questions or concerns can be asked during this time)
- **Clarifying Questions** – Members may ask presenter questions but not in a discussion form
- **Feedback** – Members provide feedback to presenter
- **Reflection** – Presenter makes adjustments to new ideas
- **Debrief** – Team leader solicits feedback regarding team's perception

DuFour, Dufour, Eaker & Many. (2010). Learn by Doing.



Instructional Framework



INSTRUCTIONAL TIME



? QUESTION

- Driven by a relevant essential question.
- Aligned to the district's pacing guide and NGSSS/CCSS.
- Embedded in the module to guide student investigation.
- Generate interest by offering a creative grabber or hook using images, videos, music, etc.

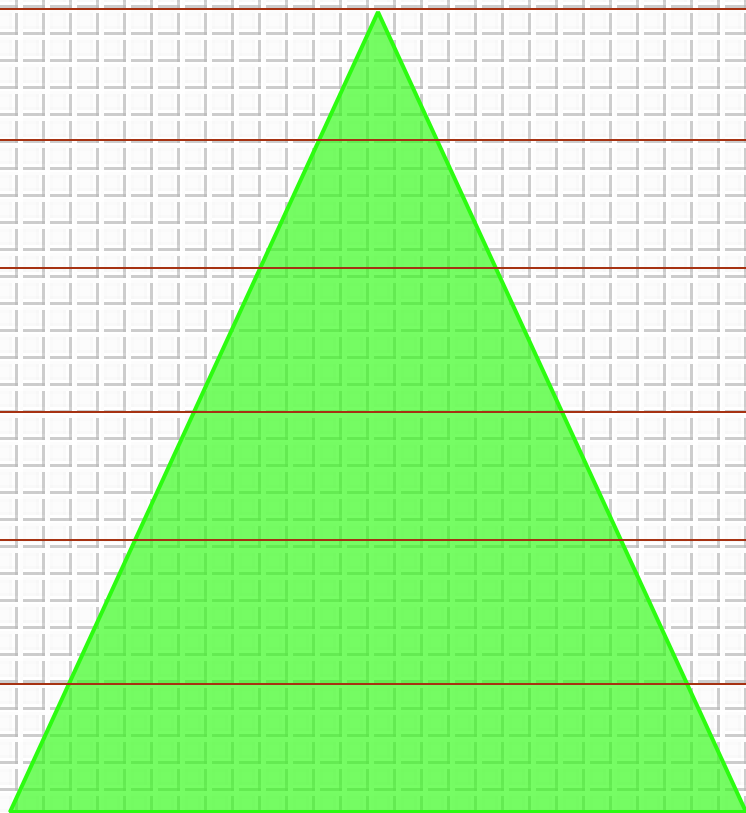
10%

A red triangle is positioned below the '10%' text. The triangle's height is approximately 10% of the total height of the grid area shown. The grid is composed of small white squares on a light gray background.

INSTRUCTIONAL TIME



70%



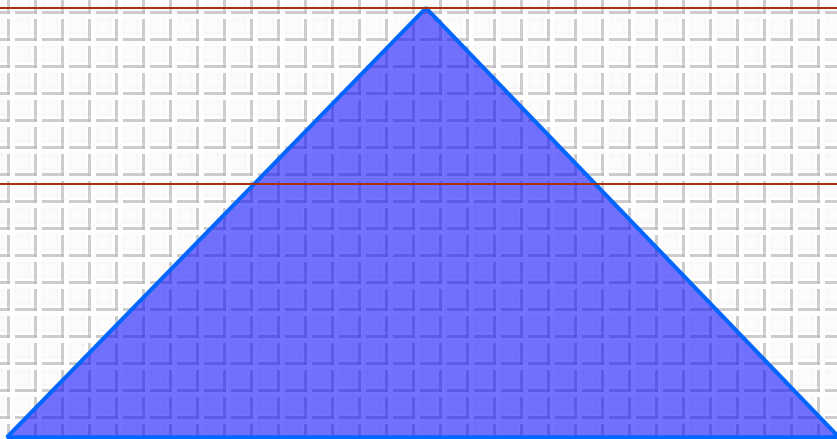
INVESTIGATION

- **Let the learning begin!** Students work individually or in collaborative groups to find answers online to the essential question and teacher selected, rigorous, real-world problems.
- Students take part in Project Based Learning (PBL) activities in order to demonstrate a deeper understanding of the content.
- Teachers are facilitators and “roaming conductors” available to guide students when needed.
- Students request a workshop with the teacher(s) in order to further personal or group understanding.

INSTRUCTIONAL TIME



20%



REVIEW

- Students reflect and review the day's progress with the teacher(s).
- Teachers facilitate a discussion about the essential question and the student's investigation process.
- Teachers engage students in their own review by asking questions such as: What would they do differently next time, both individually and as a group? What did they think they or others did really well?
- Teachers gain qualitative data from these debriefs to guide future student tasks, assignments, and if needed remediation or acceleration.

CLOSED SORT:



INSTRUCTIONAL FRAMEWORK

Complete the Closed Sort (envelopes found at the Supply Hub):

- **In groups of six (three team teaching pairs), sort the strips under the corresponding Instructional Framework components (Question, Investigation and Reflection / Review).**

Collaborative Structure: Pencil Talk



Steps:

1. Present question(s) / topic(s) to be discussed by all group members.
2. During the discussion, place pencils inside a designated container (NO writing allowed).
3. After sufficient time has been provided, call out “Pencil Talk” – have all group members grab a pencil and begin writing about question(s) / topic(s) discussed (NO talking allowed).

DIGITAL INSTRUCTIONAL TOOLS

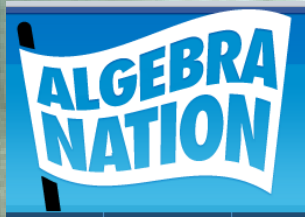
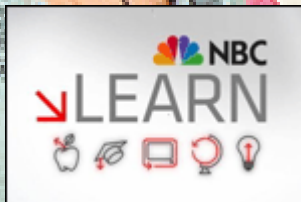
Explicit Teaching Embedded in iModules Through:



LearnZillion



KHANACADEMY



Math Open Reference

Freeing up the three teachers to:

- *Provide personalized, data-driven small group instruction.
- *Probe student understanding.
- *Lead student requested workshops.

IMPLEMENTATION FIDELITY RUBRIC



IMPLEMENTATION FIDELITY RUBRIC		LIMITED	EMERGING	EFFECTIVE	Comments and Evidence
ID	Subdimensions	Little to No Evidence of Implementation of iPrep Math Program Components	Some Evidence of Implementation of iPrep Math Program Components	Strong Evidence of Implementation of iPrep Math Program Components	
		1	2	3	
1	Classroom Environment and Culture	<ul style="list-style-type: none"> Tools and materials are accessible and not utilized. Tools and materials are not available. Few routines and procedures are established to facilitate student responsibility, ownership, and independence. Physical classroom arrangement supports teacher-directed, with some student-to-student interactions (e.g., teacher rarely moves around the room to observe and confer with students). Students have little to no access to learning hubs (e.g., students are arranged in rows or assigned seats, student collaboration is not promoted or evidenced). Teachers do not have access to all students (e.g., student-to-teacher ratio is high). 	<ul style="list-style-type: none"> Appropriate tools and materials are accessible and used by some students to support learning. Some routines and procedures are established to facilitate student responsibility, ownership and independence. Physical classroom arrangement intermittently supports student-to-student interactions and teacher-to-student workhubs as needed (e.g., teacher sometimes moves around the room to observe and confer with students). Students have limited access to all learning hubs. Teachers have limited access to all students. 	<ul style="list-style-type: none"> Appropriate tools and materials accessible and used by all students to support learning and independent work. Clear and consistent routines and procedures are established to facilitate student responsibility, ownership and independence. Physical classroom arrangement allows for flexibility in accommodating each student and their learning needs and supports both student-to-student interactions and teacher-to-student workhubs as needed (e.g., teacher moves around the room to observe and confer with students). Students have access to all learning hubs and teachers have access to all students. 	
	Standards, Learning Targets and Teaching Points	<ul style="list-style-type: none"> Teachers are not on track to complete course expectations (according to district pacing and state standards). During instructional time, teacher has difficulty with compressing the following: Modules, Project-Based Learning (PBL) activities, adaptive software, rigorous test, complex problem solving and instructional technology resources (e.g., the learning targets and tasks are not clearly articulated, linked to standards, embedded in instruction, nor understood by students). Little preparation for lesson and materials. Criteria for success is not clear to students and/or no evidence that students are able to understand and apply learning in context. 	<ul style="list-style-type: none"> Teachers are somewhat on track to complete course expectations (according to district pacing and state standards). Instructional time includes some of the following: Modules, Project-Based Learning (PBL) activities, adaptive software, rigorous test, complex problem solving and instructional technology resources (e.g., the learning targets and tasks are clearly articulated, linked to standards, embedded in instruction, and understood by some students). Some preparation for lesson and materials, but the criteria for success is not clear to all students and/or some evidence that students are able to understand and apply learning in context. 	<ul style="list-style-type: none"> Teachers are on track to complete course expectations (according to district pacing and state standards). Instructional time is maximized to meet the lesson objectives and includes all of the following: Modules, Project-Based Learning (PBL) activities, adaptive software, rigorous test, complex problem solving and instructional technology resources (e.g., the learning targets and tasks are clearly articulated, linked to standards, embedded in instruction, and understood by all students). Prepares lesson and materials in advance with attention to intervention and enrichment/adancement activities with clear criteria for success and evidence that students are able to understand and apply learning in context. 	
	Curriculum	<ul style="list-style-type: none"> Students spend less than 1.5 hours in a two week period on the Carnegie Learning adaptive software. Instructional materials and tasks are not always appropriately challenging and supportive for students, aligned with the learning targets and content area standards, and are not culturally and academically relevant. Teacher provides instruction to the learner and understands that the learner is dependent on them to support their learning (e.g., Teacher determines how and what students learn). 	<ul style="list-style-type: none"> Students spend 1.5 - 2.5 hours in a two week period on the Carnegie Learning adaptive software. Most instructional materials and tasks are appropriately challenging and supportive for students, aligned with the learning targets and content area standards, and are culturally and academically relevant. Teacher provides instruction to the learner, but supports groups of learners who are reliant on them to support their learning (e.g., Teacher determines what students learn, but learner is given a choice on how to demonstrate their learning). 	<ul style="list-style-type: none"> Students spend 2.5 or more hours in a two week period on the Carnegie Learning adaptive software. All instructional materials and tasks are appropriately challenging and supportive for students, aligned with the learning targets and content area standards, and are culturally and academically relevant. Learner develops their own learning and develops the skills to build a network of peers and teachers to guide and support their learning. (e.g., Learner is given choices on how and what they learn based on their academic needs). 	
Student Collaboration	<ul style="list-style-type: none"> As students work collaboratively, they rely on frequent teacher prompting and re-direction to questions. Groups / pairs focus on the completion of the task as they work together, with students showing reliance on teacher. 	<ul style="list-style-type: none"> Students use peers as collaborators with some need for teacher direction and clarification. Most groups / pairs focus on mathematics as they work together, with some students showing reliance on others. 	<ul style="list-style-type: none"> Students use peers as collaborators with little need for teacher direction and clarification. All groups / pairs focus on mathematics as they manage their own learning, with each student taking an active role. 		

IMPLEMENTATION FIDELITY RUBRIC (IFR)

Activity

- **In your assigned group (according to your number), identify key ideas for the Dimension (Classroom Environment and Culture, Purpose, Curriculum and Pedagogy, Assessment for Student Learning, Student Engagement) assigned to your group.**

Collaborative Structure: Numbered Heads / Jigsaw

Collaborative Structure: Numbered Heads

- Count off students (e.g., 1 to 5)
- Divide questions All 1s will



EFFECTIVE CLASSROOM ENVIRONMENT AND CULTURE

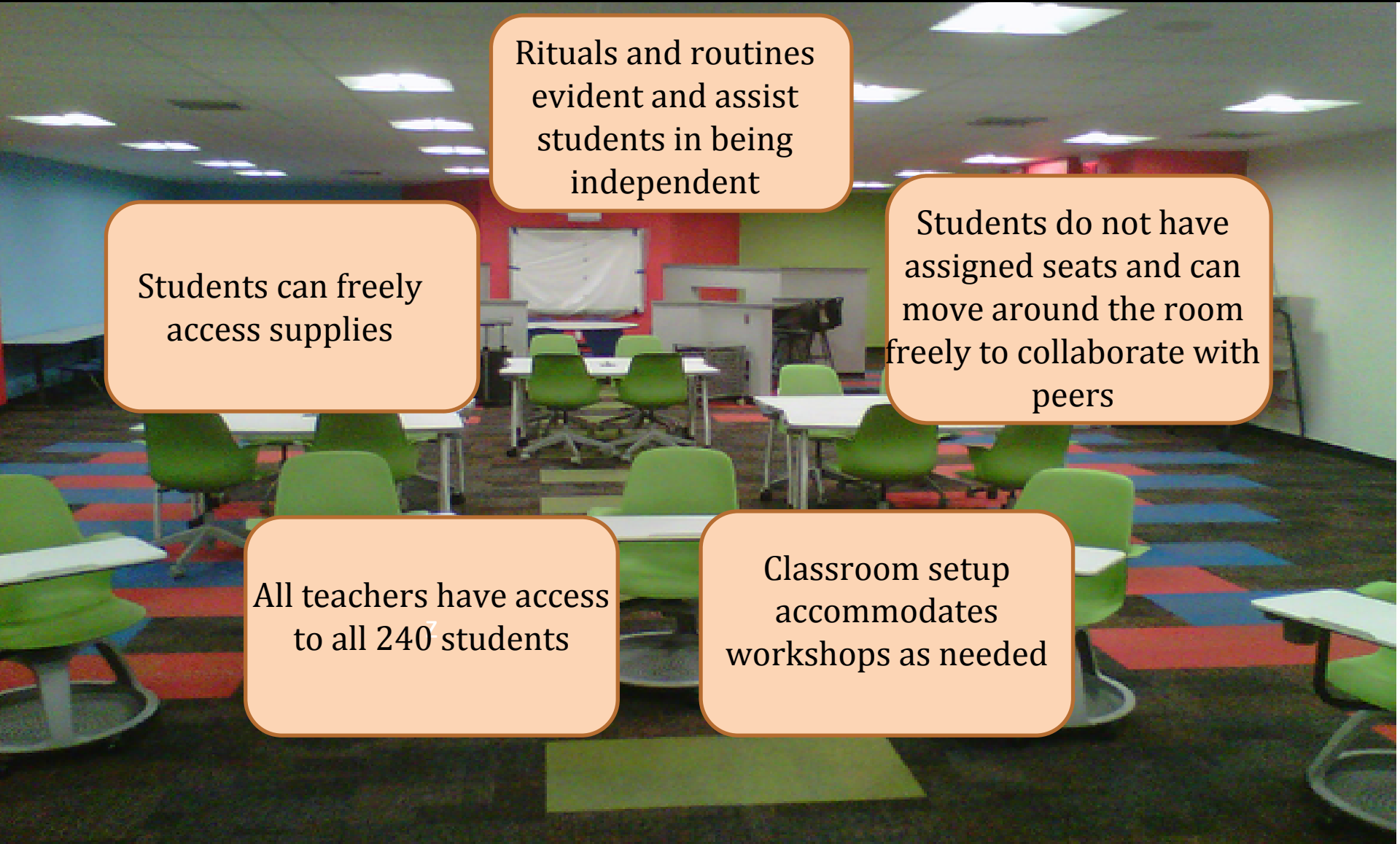
Rituals and routines evident and assist students in being independent

Students can freely access supplies

Students do not have assigned seats and can move around the room freely to collaborate with peers

All teachers have access to all 240 students

Classroom setup accommodates workshops as needed



EFFECTIVE PURPOSE

Intervention and enrichment activities are planned for in advanced

Instructional time is maximized to meet lesson objectives

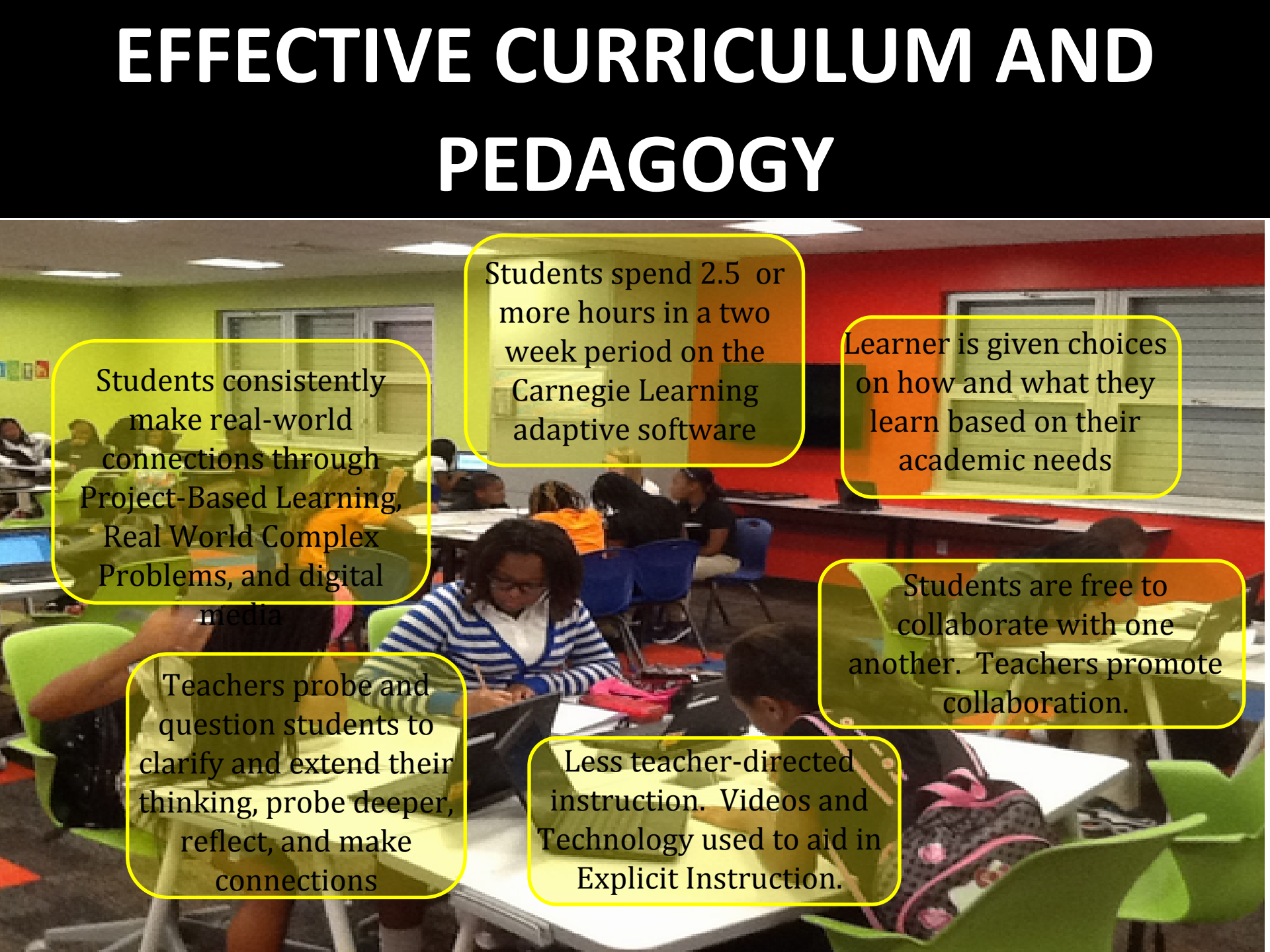
Teachers are on track to complete course expectations (according to district pacing and state standards).

iModules include:
Project-Based Learning (PBL) activities, adaptive software, rigorous text, complex problem solving and instructional technology

iModule objectives and tasks are clear to students

resources

EFFECTIVE CURRICULUM AND PEDAGOGY



Students consistently make real-world connections through Project-Based Learning, Real World Complex Problems, and digital media

Students spend 2.5 or more hours in a two week period on the Carnegie Learning adaptive software

Learner is given choices on how and what they learn based on their academic needs

Teachers probe and question students to clarify and extend their thinking, probe deeper, reflect, and make connections

Students are free to collaborate with one another. Teachers promote collaboration.

Less teacher-directed instruction. Videos and Technology used to aid in Explicit Instruction.

EFFECTIVE ASSESSMENT FOR STUDENT LEARNING

Teachers probe and question students to clarify and extend their thinking, probe deeper, reflect, and make connections

Student Learning is constantly assessed using a variety of tools: Mathia data, topic test data, exit tickets, reflections, PBLs, teacher-made assessments

Teachers give timely, specific feedback to students to aid in independent learning

Assessments are aligned to the rigor of the state standards.

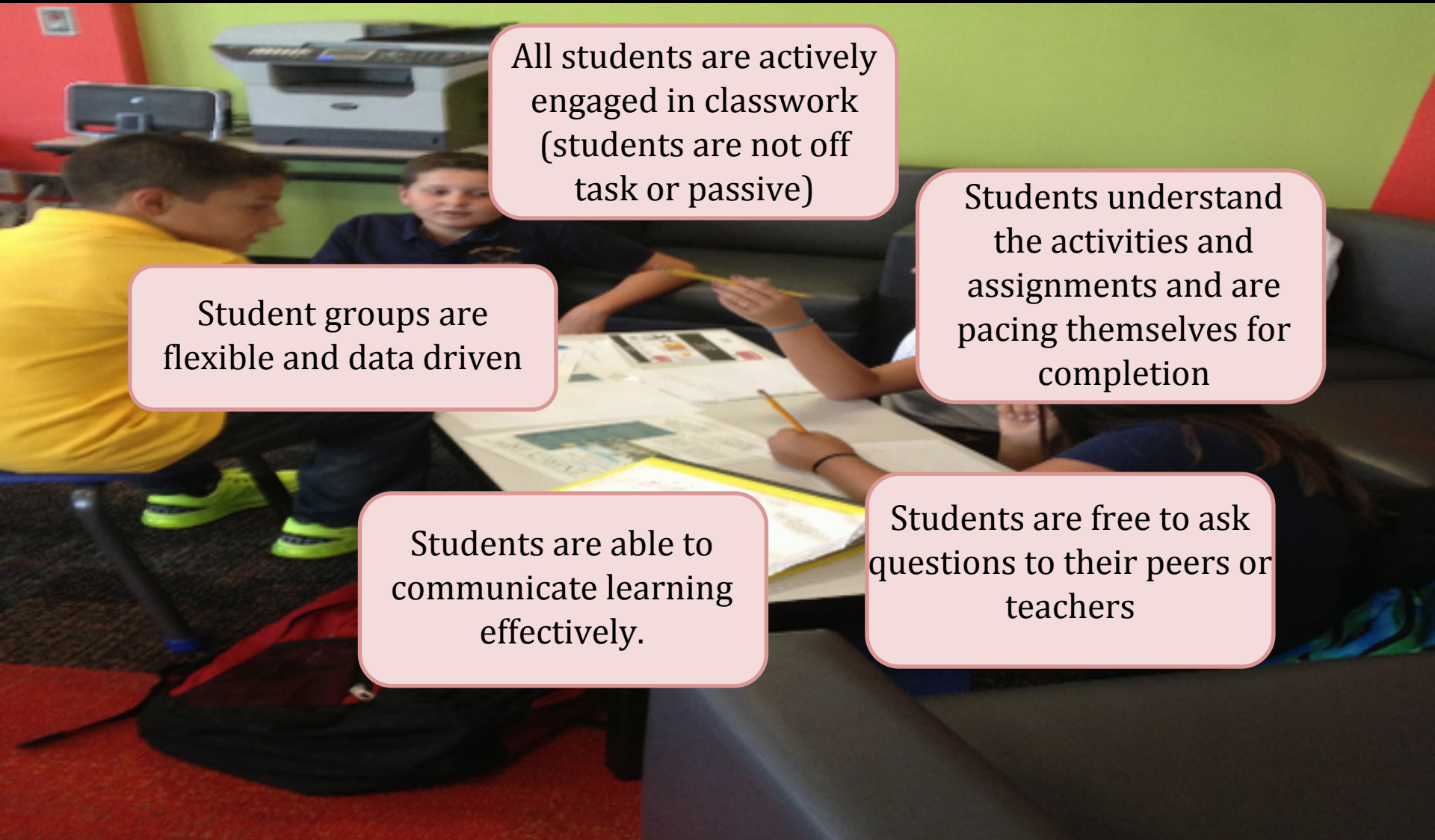
Students are free to request a workshop with the teacher

Evidence of data collection and data disaggregation.

Teachers and Students have access to data tracking forms (WWW)

Teachers pull individual students and small group workshops based on student data

EFFECTIVE STUDENT ENGAGEMENT



All students are actively engaged in classwork (students are not off task or passive)

Students understand the activities and assignments and are pacing themselves for completion

Student groups are flexible and data driven

Students are able to communicate learning effectively.

Students are free to ask questions to their peers or teachers

QUESTIONS???





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