Engage students through **Case Based-PBL** lessons in the Secondary Education Classroom

*by integrating* Literacy, Scientific Inquiry and Technology *through real world and relevant learning experiences*

Kathy Hoppe
Interrupted Case Based Learning

Create a story or scenario that will intentionally “hook” students

Implement various strategies
- Pre-assessment
- Building background knowledge
- Literacy Strategies
- Modeling
- Inquiry

Culminate the CBL/Case with students determining a solution to the problem
What led to my classroom transformation to case based instruction?

FIRST
The traditional program was resulting in poor student performance, high failure rate and behavior management issues.

SECOND
Case Based learning is fun and engaging. Students are involved in their own learning so they manage their own behavior.
What needed to be considered?

national standards

NYS core standards
Who is involved in case based learning?
What did this change require?

a new approach

student centered
What needed to happen?

program development
teacher buy in
What followed naturally?

**instructional change**

**student engagement**
Resulting in Growth for teachers and students
Goals of Engagement

Experience An Interrupted Case

High Interest
Real World Integration
Inquiry
Participate in a CBL

Teacher T Chart

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Experience a Case Study

Who’s the Daddy?

PBL 1: Who’s the Daddy?

Read aloud and Highlight or use post-it notes to identify important information (pg. 2)
Work on Your Own
Record 3 Facts
and 3 Questions
CBL Groups

• You will be given a group card

• Move to CBL (Case Based Learning) groups by going to the picture on your group card
CBL Group Roles Read the role cards and assign roles to each group member. You will work together to brainstorm facts and questions.

- Secretary
- Recorder
- Spokesperson
Brainstorm Guidelines

• Take Turns and Call out ideas
• Record ideas as stated (verbatim)
• Strive for quantity
• Resist evaluation of ideas
• Encourage all ideas
• Piggy-back on other ideas
CBL Group Brainstorming

CREATE 2 POSTERS

→ BRAINSTORM *Facts and Questions*

→ Record the *initials* of each team members fact or question on the poster
What do you know?  What do you want to know?

Facts and Questions
Who’s the Daddy?

• Building DNA
  – Building DNA Model (p. 6-8)
What is DNA?

Building the DNA Model
Who’s the Daddy?

- Who’s the Daddy
  - DNA Extraction (pg. 9-13)
  - DNA Explorer (pg. 14-15)
- Part 3: Research
  - Vocabulary Survey Chart (pg. 16)
  - Technical Information DNA Analysis (p. 17-22)
How do they get the DNA from Jake?
What are some of the tools that can be used to improve literacy skills?
Who’s the Daddy?

• Part 4: PBL 2 Who’s the Daddy
  – PBL Story (p. 23-24)
  – Bioethical Decision Making (p. 26-27)
  – Simulated Gel Electrophoresis (p. 27-31)
Who is the Daddy?

Gel Electrophoresis Lab
STUDENT CENTERED

TEACHER FACILITATED
HELP STUDENTS INTERACT WITH THE CONCEPTS

Case Based Learning and PBL
Teacher Comments

• “It takes care of my discipline issues.”
• “Students are involved.”
• “They seem to enjoy science more.”
• “They really like the PBL’s….Do you have any more for….?”
• “I’m surprised at how well they did.”
• “Science seems to make more sense to them.”
Student Comments

- “I feel like a real scientist.”
- “This is a fun way to learn this stuff.”
- “You’re kidding, this is real?”
- “Can we do more of these?”
- “Jenny doesn’t have the disease.”
- “Hey, look at my results!”