


CBiRC
NSF Engineering Research
Center for Biorenewable Chemicals

Keep Your Lessons Off The Chopping Block

**Maureen Griffin &
Eric Hall**

Iowa State University and the
Des Moines Public Schools



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Welcome



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Where do you usually find yourself?



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We're from Iowa!



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How many years?



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- A place for your thinking
- References & Resources
- Today's Agenda

Guest Check


BUYER	DATE	AMOUNT	CHECK NUMBER
		758400	
Children's Museum & Zoo			
2015 New Year Calendar			
2015 New Year TSP Framework			
2015 New Year Chopping Block			
2015 New Year Must Staps			



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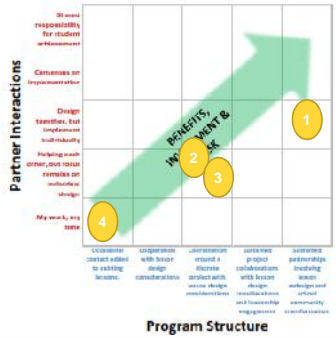
Framing Question

How does the structure of your program and the interactions of the teachers and scientists support your partnership?



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- GK12
- High School RET
- Middle School Summer Academy
- STEM Speaker's Bureau




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Table Discussion

Consider your partnership.

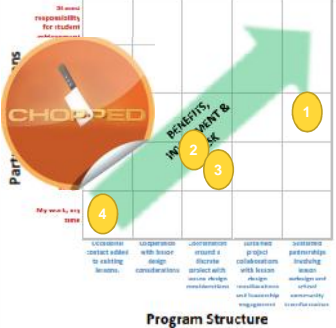
Where do you fall on the TSP Framework?



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<http://4.bp.blogspot.com/zxyQ2TWgAE/T4RKXV5rOZ/AAAAAAAAACIM/XFW9JWTKQ/gf600/chopped-allstars-1.jpg>



http://img.foodnetwork.com/FOOD/2013/06/04/ST_Star-Kitchen-Pantry_s4x3_lg.jpg




http://blog.foodnetwork.com/tn-dish/files/2011/03/CHOPPED_Ep4.jpg





Winners & Losers


- ✓ **Chopped Rules**
 - ✓ Multiple rounds
 - ✓ Each round, teams develop 1 lesson plan using the information contained in the **Mystery Basket & pantry**
 - ✓ Using the lesson plan rubric, other teams (or a panel of judges) will critique the lesson plans and decide who will be chopped




Your Pantry of Ingredients

- ✓ Skills & Practices
- ✓ Strategies*
- ✓ Engagement techniques*
- ✓ Curriculum & Standards
- ✓ Table towers





Let's look at the example plan



TSP Lesson Plan Template

Subject Area & Topic: (e.g., "Math: Fractions")	What do we expect kids to know/DO? (S.O.B.A.): Identify and explain the function of a variety of cell organelles using a model.	Value Beyond School: Learning how cells function can help us understand a variety of health issues.
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Entry: Thinking/Doing or NGV's Practice addressed:
 Investigating and using models.

LESSON OVERVIEW The students will... <ul style="list-style-type: none"> • Learn about cell organelles using a variety of sources • Create a cell model • Show their models with other students • Produce their own model and enter in the Science Fair the previous day 	The teacher/parent will... <ul style="list-style-type: none"> • Provide knowledge for student research • Make the classroom space to accommodate student knowledge use and collaborative learning • Provide a gallery walk during which to discuss their cell models
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How will we know students are learning? Formative assessment (peer quiz, self quiz) will be done at several points during the project.

How will we respond when students don't learn, or they're already "mastery of the learning?" Small group re-teaching will be done after the initial formative assessment. Additional peer re-teaching will be offered as needed.

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**Who are these kids
and why are they
taking up so much
space on my lesson
plan template?**



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It's Your Turn!



TSP Lesson Plan Template

Subject Area & Topic: _____ What do we expect kids to know/do? _____ Value Beyond School: _____

Critical Thinking/Soft Skill or NGSS Practice addressed: _____

LESSON OVERVIEW

The students will... _____ The teacher/partner will... _____

How will we know students are learning? _____

How will we respond when students don't learn, or they've already mastered the learning? _____

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Mystery Basket

Subject Area & Topic

- General science, experimental design

What do we expect kids to know/do?

- Students will plan and carry out an investigation that involves collection and analysis of data. (NGSS Framework S3,S4)



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It's Your Turn!



TSP Lesson Plan Template

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Another Tool








POWERFUL PARTNERSHIPS IN STEM

Notes for discussion prior to your first classroom presentation.

CONTRIBUTIONS

What are your strengths and how do you plan to use them in the classroom?
What are your weaknesses and how do you plan to address them in the classroom?
What are your goals for the classroom and how do you plan to achieve them?

CLASSROOM CONDITIONS

What are the conditions of the classroom (e.g., size, lighting, noise, etc.) and how do you plan to address them?
What are the resources available in the classroom (e.g., equipment, materials, etc.) and how do you plan to use them?
What are the challenges you face in the classroom and how do you plan to overcome them?

THE TEACHER'S ROLE

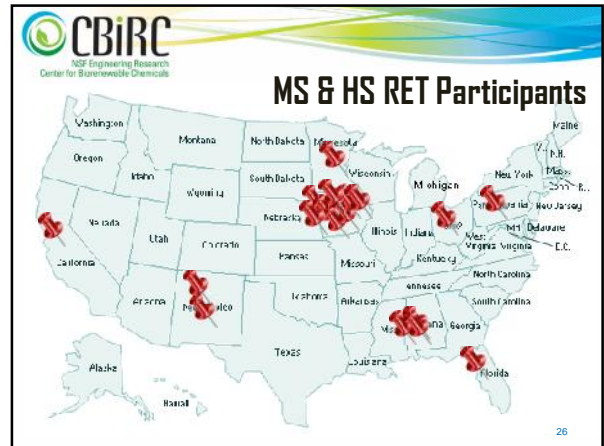

What is the teacher's role in the classroom and how do you plan to support them?
What are the teacher's expectations for the classroom and how do you plan to meet them?
What are the teacher's challenges in the classroom and how do you plan to address them?

WHAT WILL YOU DO?

What will you do in the classroom to engage the students?
What will you do in the classroom to assess the students' learning?
What will you do in the classroom to provide feedback to the students?

CONSENTING TO THE CLASSROOM

What are the conditions of the classroom (e.g., size, lighting, noise, etc.) and how do you plan to address them?
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What are the challenges you face in the classroom and how do you plan to overcome them?

So many people to thank 😊

Adah Leshem, Pre-College Education Program Director
 Stacy Renfro, Program Assistant
 Diana Loutsch, Program Assistant
 Brent Shanks, CBiRC Director

Cynthia Flesch, Hoover HS Principal

