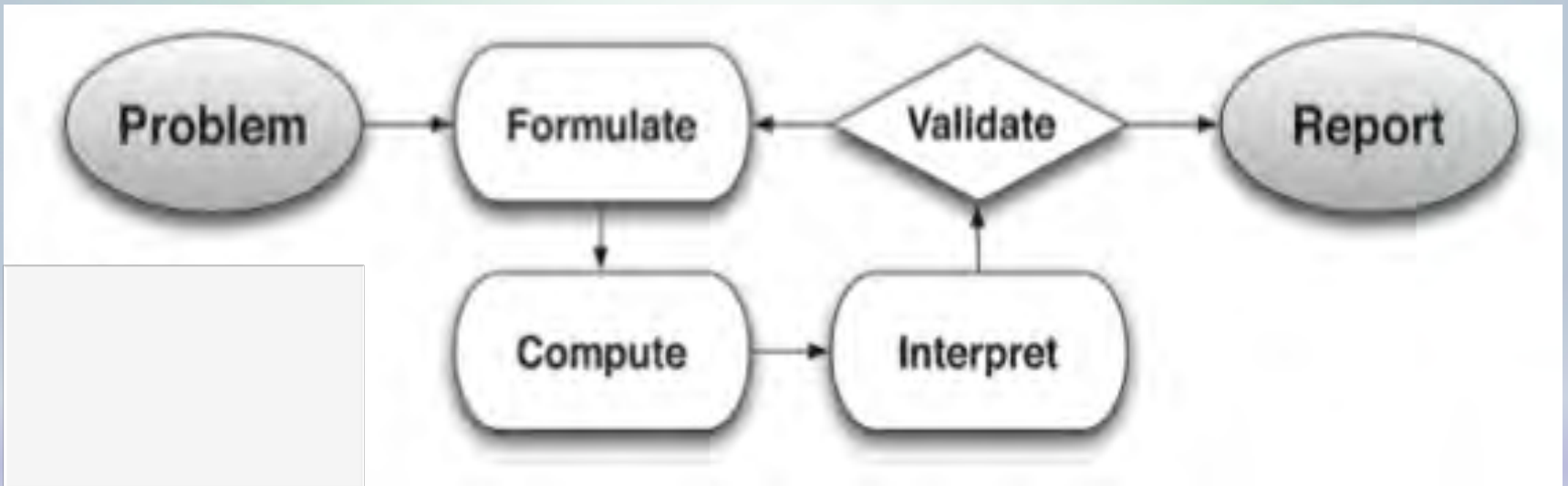


*RAMP-A

June 25, 2014

*Happy Wednesday



*Modeling
..Modeling

- *The basic modeling cycle is summarized in the diagram. It involves
- * (1) identifying variables in the situation and selecting those that represent essential features,
- * (2) formulating a model by creating and selecting geometric, graphical, tabular, algebraic, or statistical representations that describe relationships between the variables,
- * (3) analyzing and performing operations on these relationships to draw conclusions,

* **Modeling**

- * (4) interpreting the results of the mathematics in terms of the original situation,
- * (5) validating the conclusions by comparing them with the situation, and then either improving the model or, if it is acceptable,
- * (6) reporting on the conclusions and the reasoning behind them.

* **Modeling**

* Enrico Fermi was an Italian physicist who became famous for his ability to make good estimations with little or no actual data. Problems of this nature are known as Fermi problems.

* How many pets are in Spokane County?



* **FERMI Pets**

*Questions? Assumptions?

*A.S.P.C.A.

<http://www.aspca.org/about-us/faq/pet-statistics.aspx>

*U. S. Census

<http://www.census.gov/statab/freq/99s0436.txt>

*U. S. Census Quick Facts

<http://quickfacts.census.gov/qfd/states/53/5374060.html>

***Attacking the Problem**

- * Questions posed with limited information.
- * Questions that require students to answer other questions.
- * Questions that demand communication.
- * Questions that utilize estimation.
- * Questions that emphasize process rather than “the” answer.
- * Answers within an order of magnitude.

* Fermi Questions

*These Questions

- *Give purpose to collaborative learning.
- *Demand problem solving.
- *Reinforce quality estimation skills.
- *Teach the modeling standard.
- *Promote number sense.

*What was the most valuable aspect of experiencing the Modeling process? What do you still want to learn?

*Reflection



*Break!
..Break!

Goal:

Examine student work to determine what students knew and could do.
Critique a lesson plan and revise it to meet a purpose.

 **Growing Rectangles**

- * Consider student work in light of the way you set up and implemented the task:
 - * What important ideas did students seem to use without your help? (give evidence)
 - * What important ideas do students still need to work on? (give evidence)

*** Examine student work**

Imagine giving this task to your students on the first day of school without any pre-teaching or review:

- *What could your students do?
- *What could be your purpose in using it?

*Discuss

- * Critique the lesson while discussing
 - 1) What mathematics the teacher intends students to learn,
 - 2) The way the teacher helps students learn the mathematics, and
 - 3) How the lesson is structured or flows to accomplish the lesson goal.

* Critique a Lesson Plan

- * Divide the four parts of the lesson so that each person in your PLC has one part: Warm-up, Anticipated work of the main task, Discussion 1 of the main task, and Discussion 2 of the main task.
- * Compare the ideas in the plan on your assigned part with your own ideas about that part. What changes would you make and why?

*** Examine one part**

- * Working in groups of 2-3, write a brief Task Dialogue (anticipated conversation that could occur) between teacher and student(s) or students to students for one of the parts of the lesson.
- * Modify the lesson plan as necessary to meet your goals.

*** Create a Task Dialogue**

*Revise the lesson plan and fill in any details to complete the lesson plan.

***Revise and finish**

Reflection:

Discuss in your groups, then write your thoughts individually:

In what ways are the Paskal HS teachers' ideas about what it means to teach mathematics and what teachers do to help students learn with understanding different from and/or the same as your own?

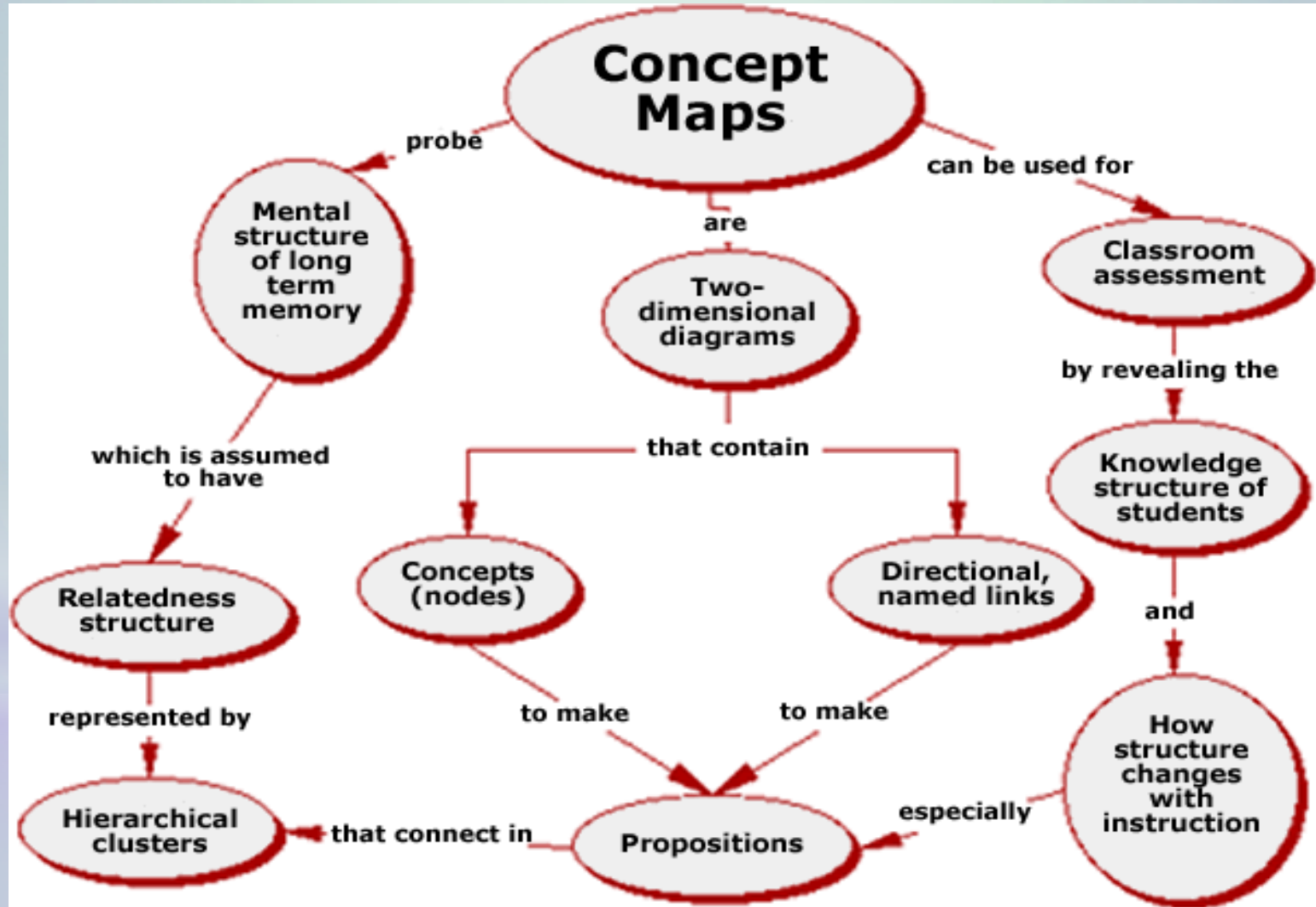
 **Reflection**
.. REFLECTION

*What is Transfer?

- *Read and discuss the article during lunch.
- *How does your metaphor for learning address learning for transfer?
- *In what ways would an observer see evidence of teaching for transfer in your teaching?



Concept Map Of Concept Maps (Kathy Schrock)



*In your PLC, create a concept map of the knowledge that you think a student with a deep, connected understanding of the mathematics in Growing Rectangles would have.

***Concept Mapping**

*Year 2 Evaluation

*PLC Interviews

***RAMP-A Learning**

- * Increased teacher content knowledge
- * Increased teacher pedagogical content knowledge
- * New ideas evident in most teachers' classrooms
 - * Increased climate of respect for student's ideas, questions, and contributions
 - * Encouraging and valuing active participation of all students
 - * Increased intellectual rigor, constructive criticism, challenging of ideas
- * Room for more growth

* **Year 2 Evaluation: Teacher Change**

- * RAMP schools have higher percentage than non-RAMP schools of students reaching EOC-1, 8th grade math standards
- * RAMP students retaining more interest in math over the course of the school year than non-RAMP students.
- * Room for more growth

* **Year 2 Evaluation: Student Change**

- *Support of individual learning and growth, change
- *Development of common resources
- *Concerns and suggestions

* PLC Interviews: Value of collaboration

* PLC Growth

* Stages:

- * **Learning** how to be a team and what is expected
- * **Coordinating** common plans, lessons, assessments, analyzing student results
- * **Collaborating** to take collective responsibility for all students' learning and designing instructional approaches to meet all students' needs

Individual	PLC
Strengths	Strengths
Room for growth	Room for growth
Goals	Goals
Ways to support individual growth AND PLC growth	Ways to support individual growth AND PLC growth

* Foci for PLC Self-Assessment

- * Complete the self-assessment
- * Discuss your perceptions and thoughts
 - * Identify goals and strategies for PLC growth
 - * Identify goals and strategies to support individual growth
 - * Copy the last 4 answers and give them to us.

* PLC Self-Assessment

- *What individual and PLC directions for future growth will have the most effect on your students' learning?
- *How will this growth be experienced by your students?

*Reflection

Clock hours

Tentative dates for next year
(Friday and half of a Saturday):

- *Sept. 26 & 27
- *Nov. 14 & 15
- *February 6 & 7
- *May 1 & 2

***Details, details, details**

* Reflection

