

## High School CIA Jan 28, 2008 Business and PD (questioning)

- Announcements:

Quarterly Assessments:

some data at <http://data>

some data at [newhavenscience.org/test](http://newhavenscience.org/test)

(SCIENCE is the KEY to the future)

NOT ALL DATA IS GOOD :(



## Quarter Two Assessments

- Scantrons due MON am Feb 4
- 13 MC and 3 essays (instead of 10, 4)??
- Content and Inquiry Skills
- IDEAS and QUESTIONS WELCOME!!



## CURRICULUM

- Continue to follow pacing, curriculum found at [newhavenscience.org](http://newhavenscience.org)
- High School Curr meeting Feb 4th Chem/Physics
- New High School Reform feedback welcome



## TEACHING

- PLAN, PLAN, PLAN lessons
- Science skills (labs) and content
- TALK to your administrators about expectations. (renewal/tenure)
- PREPARE students for CAPT in SCIENCE grades 9,10,11,12!



## CAPT PREP

- CAPT Prep: 9th grade: Practice test available
- 10th grade:
- Review of ninth grade standards (powerpoint) after break
- Review of experimentation skills/embedded tasks
- REQUIRED Practice test for class discussion and review
- 11th grade: Identify students who have not met GOAL for possible retake. Non Proficient students REQUIRED to retake, non goal students encouraged.
- Review ninth grade standards/10th grade biology as appropriate
- Review of experimentation skills/embedded tasks
- Practice test for class discussion (academic/general level Chem/Anatomy)



## SUPPLIES

- ASK your principals!!!
- Check your books!

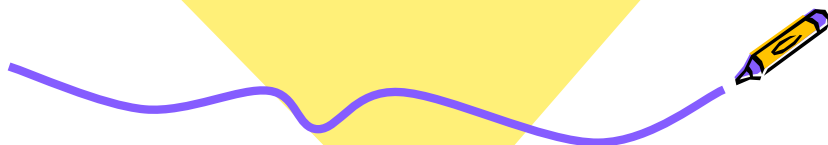


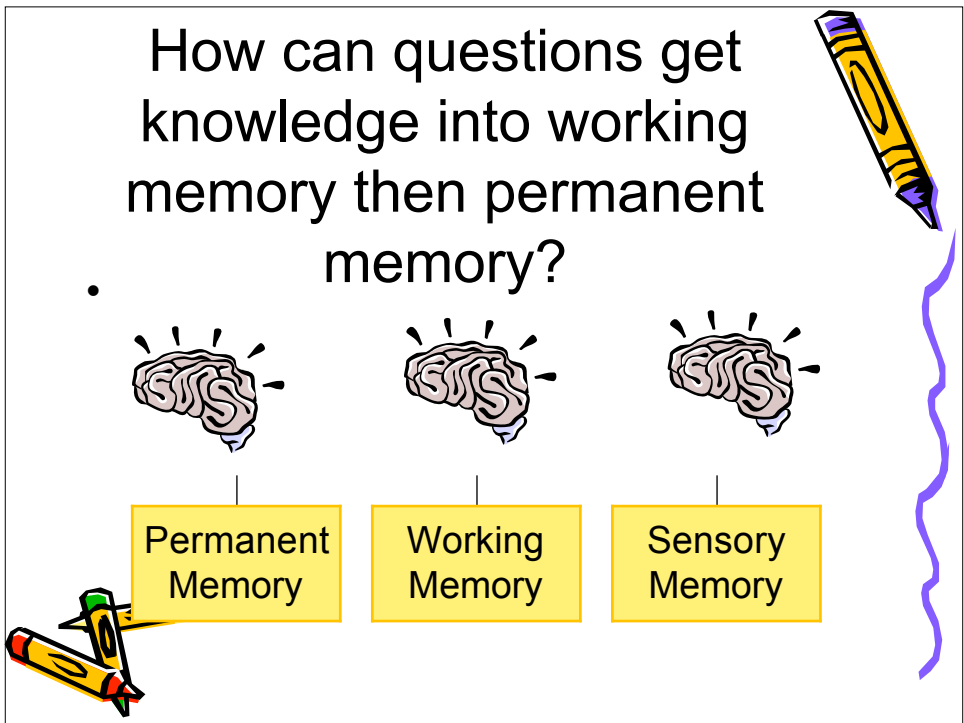
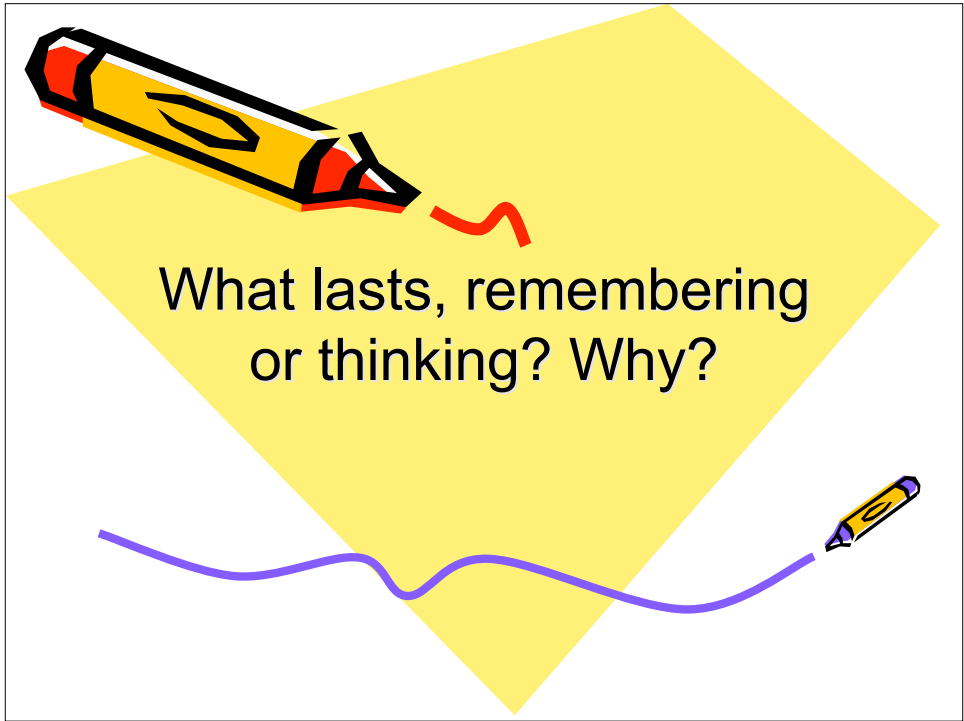
## OTHER

- PD coming up Summer 08
- Yale NH TI relating to curriculum
- Quinnipiac Teacher Quality Grant 2 HS teachers
- Science Fair Books out, see website for preview



WHY ask Questions?



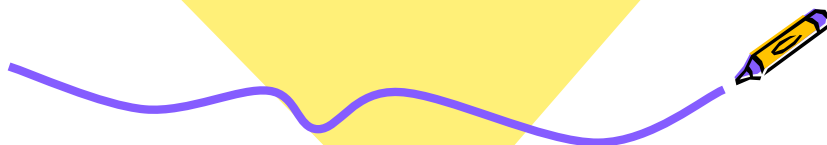


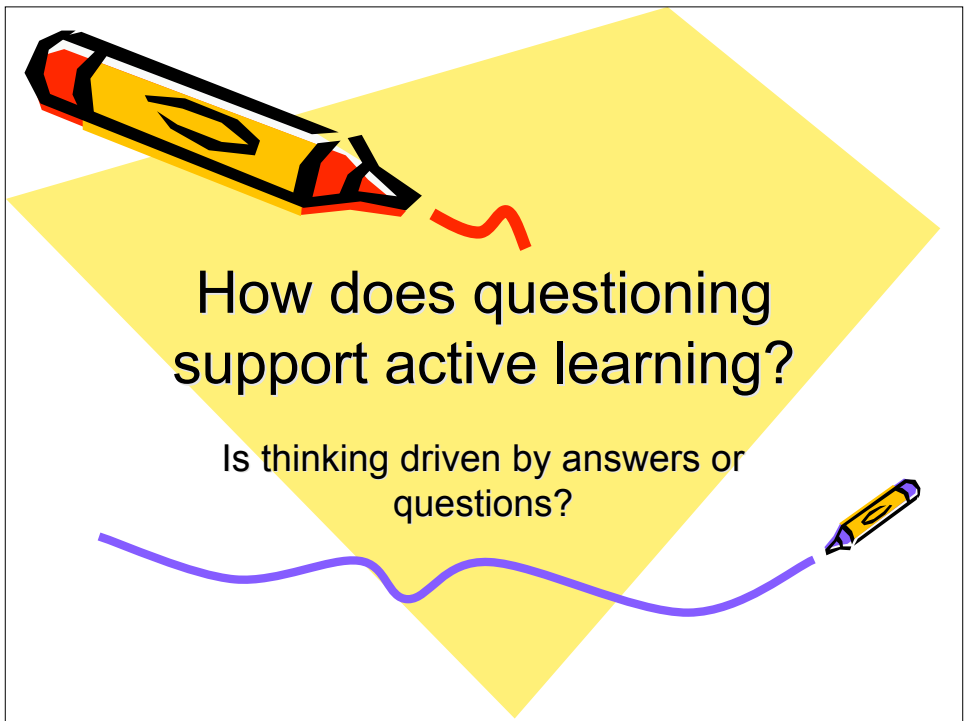
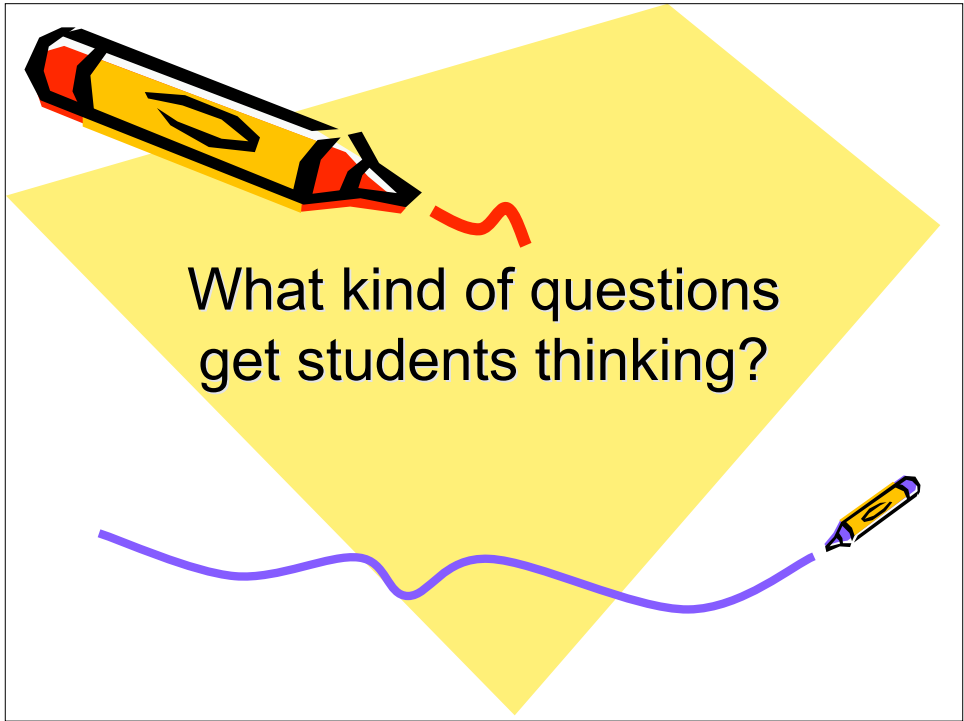
## How can questions find out misconceptions?

- What causes the seasons?



How much of a typical lesson is questioning?



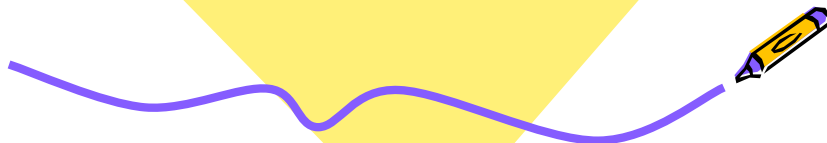


## Which question is better?

- What did you learn from the reading?
- What are the five most important facts from the reading and why?



Should questions have a purpose?

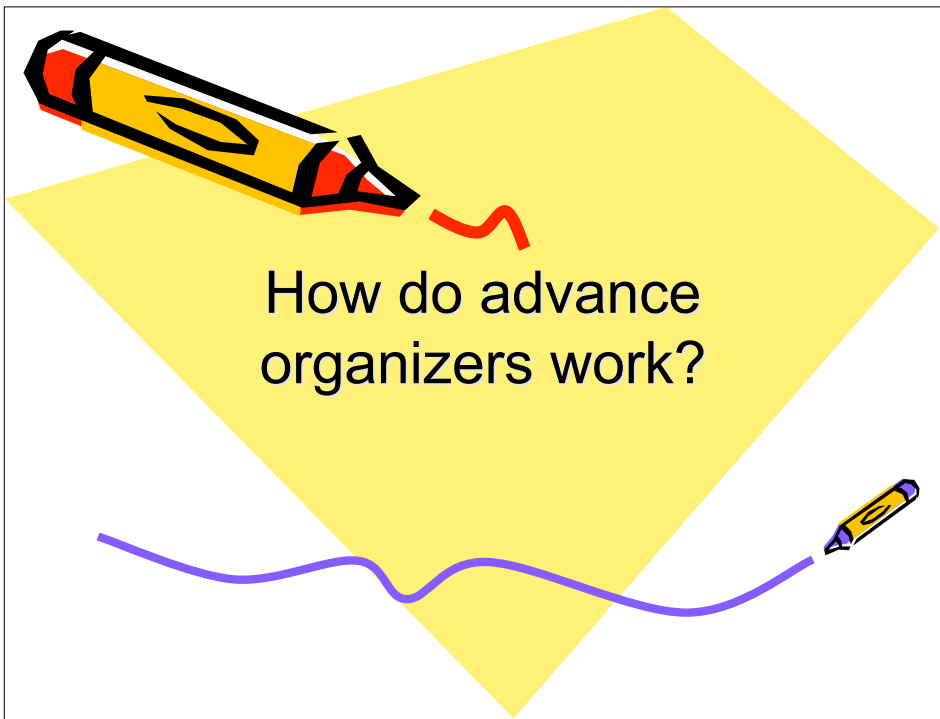


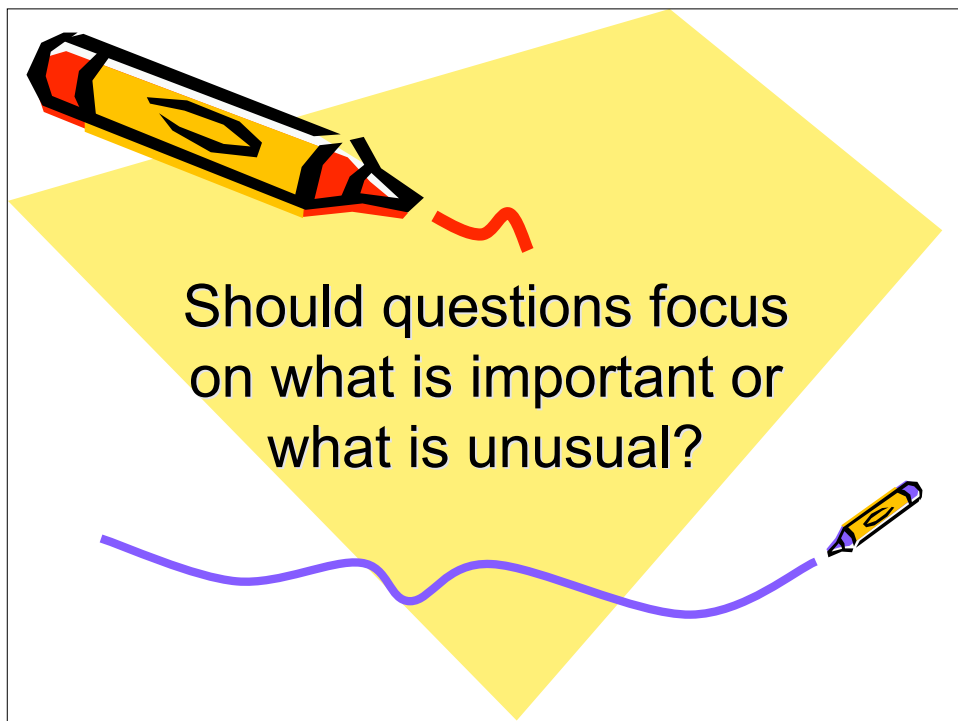
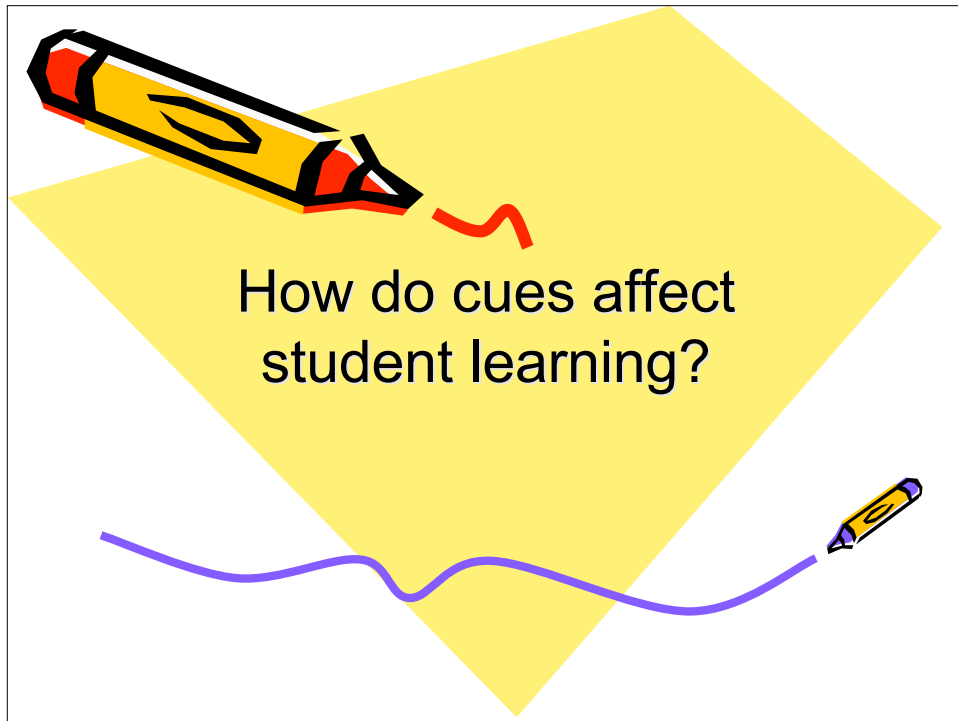
## What types of questions do we use in teaching?

- What are advance organizers?
- What are cues?
- What are input/focusing questions?
- What are discussion questions?
- What are summary questions?



How do advance organizers work?





## Why doesn't just giving the vocabulary and definition work?

- Are students just linguistic learners?
- Do students understand new words as descriptions or definitions?
- How do students make their own meaning of new ideas and concepts?



## What are good comprehension questions?

- What is the author really saying?
- Why is this important?



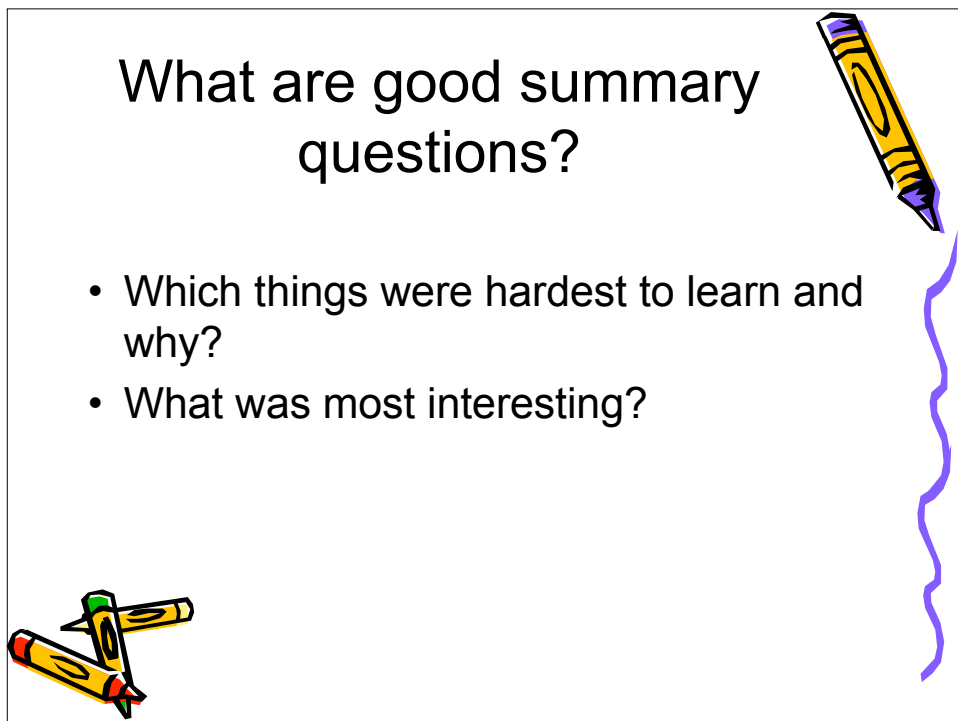
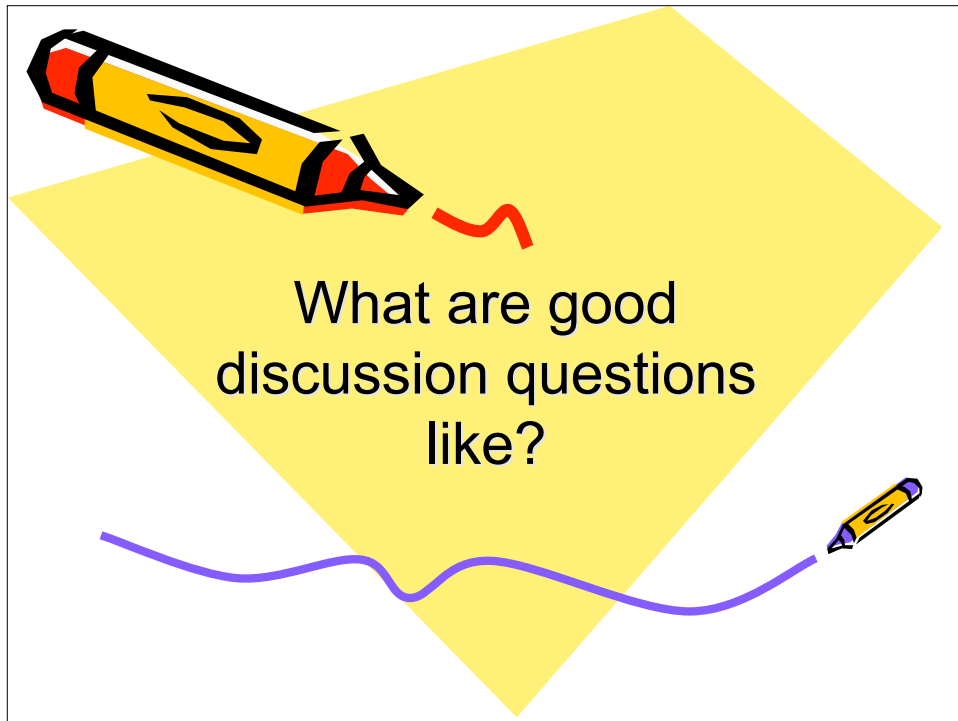
## What are good connecting questions?

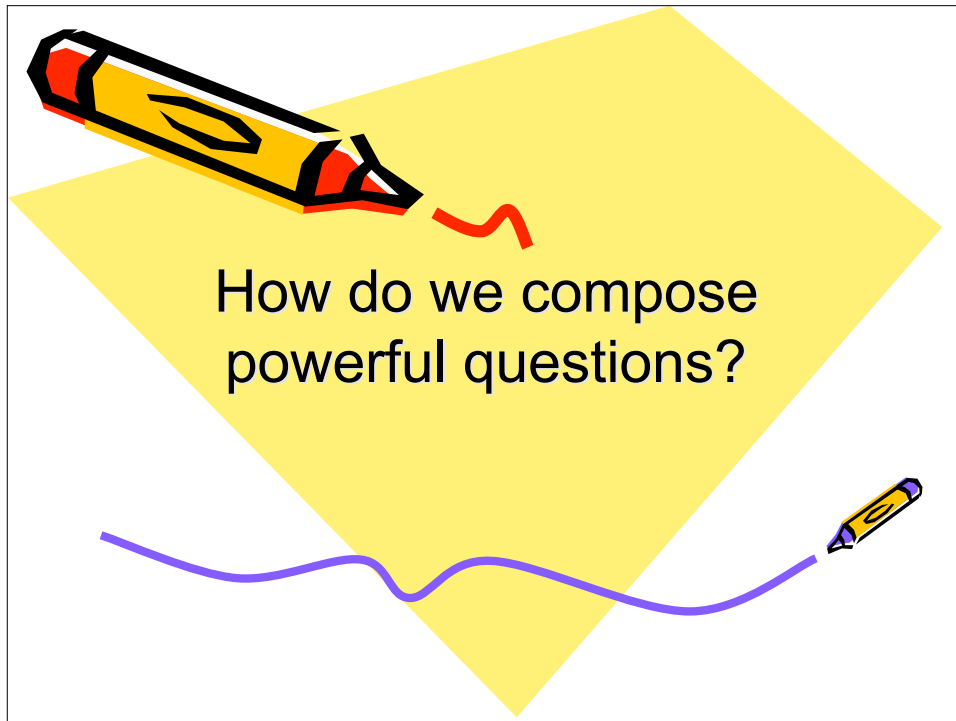
- How are this and that similar?
- How could this be used to do that?
- How does this tie in with that?
- How is this a model of that?



How does interpretive talk support learning better than descriptive talk?









What if all questions were “hypothetical”?

- What if the moon didn't exist?
- What would Wizard of Oz be like from the witch's POV?
- What if we could only speak in future tense?
- What if there were no curves?
- What if cells had no nuclei?



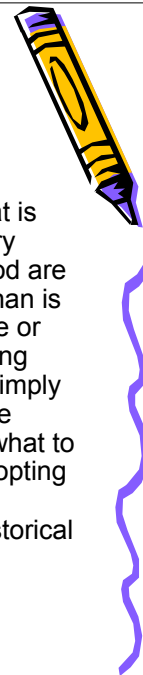
## What does a class with all questions look like?

- Why do things move?
- Why is friction important?
- How do we measure friction?



## Could we really use Socratic questioning?

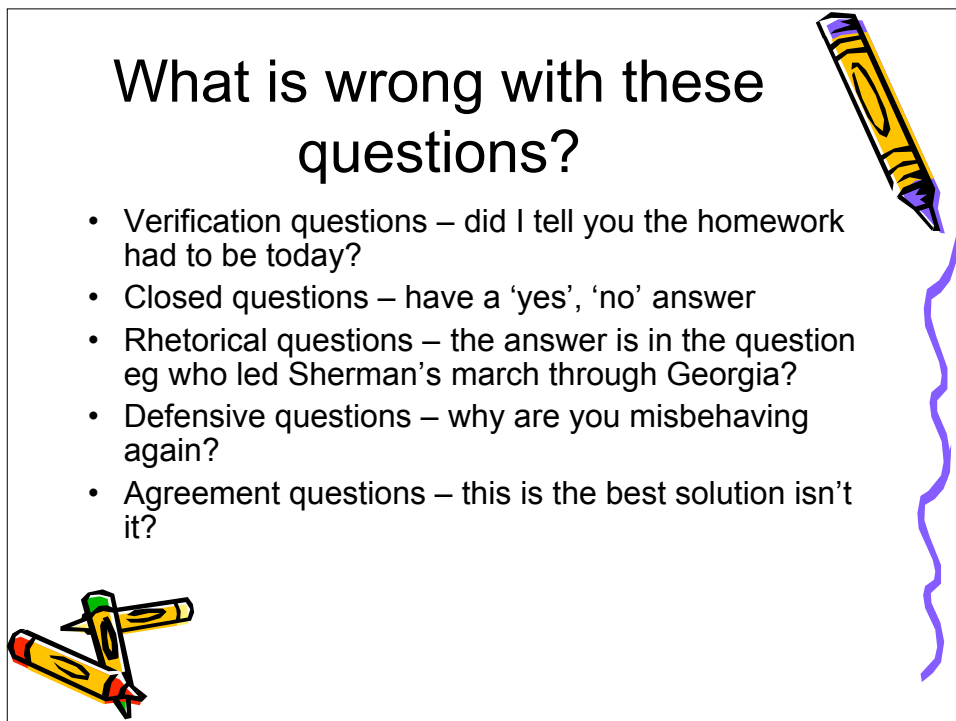
- What is history? -> What do historians write about? -> What is the past? • Is it possible to include all of the past in a history book? -> How many of the events during a given time period are left out in a history of that time period? -> Is more left out than is included? -> How does a historian know what to emphasize or focus on? -> Do historians make value judgments in deciding what to include and what to leave out? -> Is it possible to simply list facts in a history book or does all history writing involve interpretations as well as facts? -> Is it possible to decide what to include and exclude and how to interpret facts without adopting a historical point of view? -> How can we begin to judge a historical interpretation? • How can we begin to judge a historical point of view?





## What is wrong with these questions?

- Verification questions – did I tell you the homework had to be today?
- Closed questions – have a ‘yes’, ‘no’ answer
- Rhetorical questions – the answer is in the question eg who led Sherman’s march through Georgia?
- Defensive questions – why are you misbehaving again?
- Agreement questions – this is the best solution isn’t it?

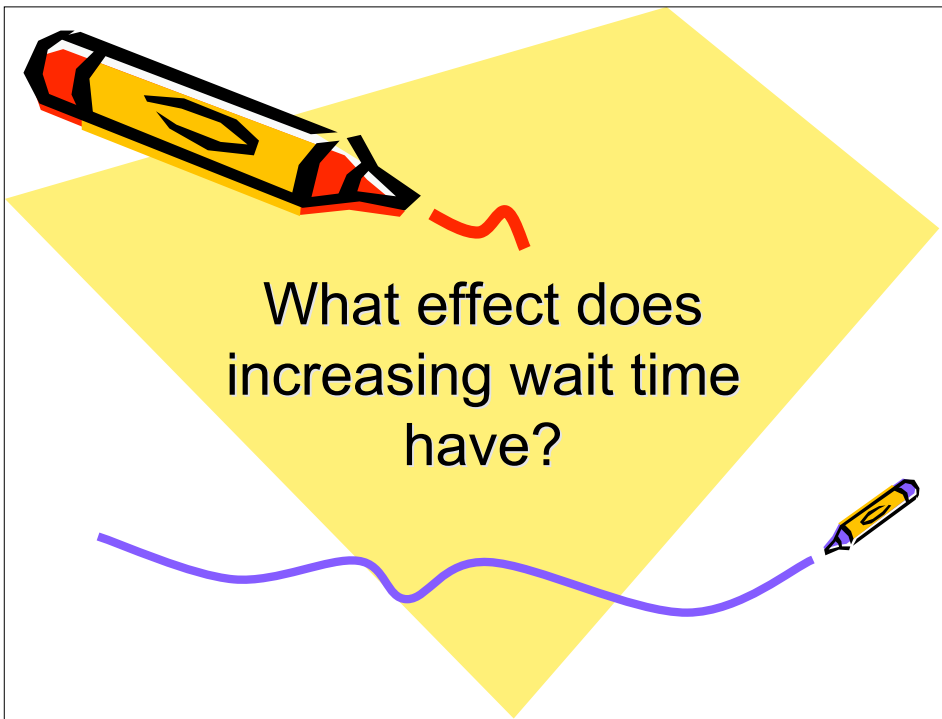


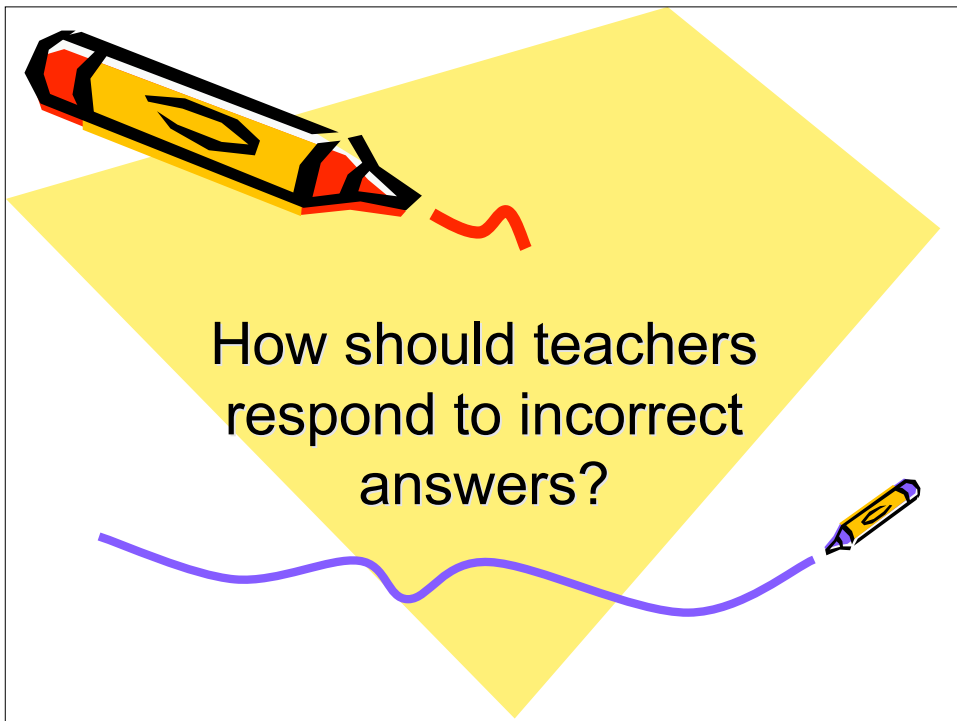
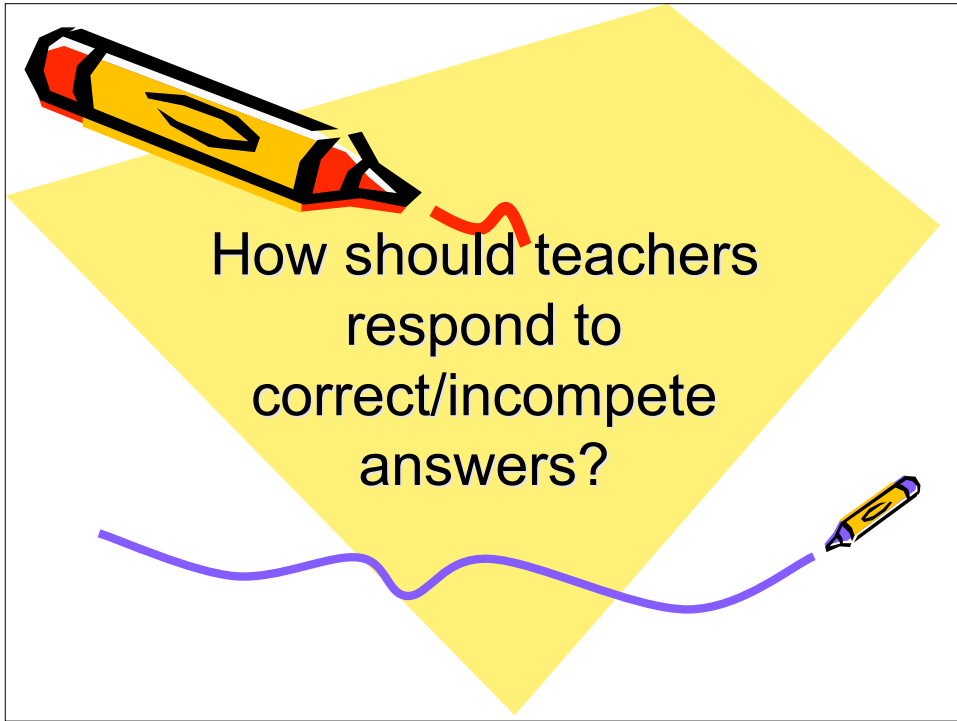
## What's the best way to ask questions?

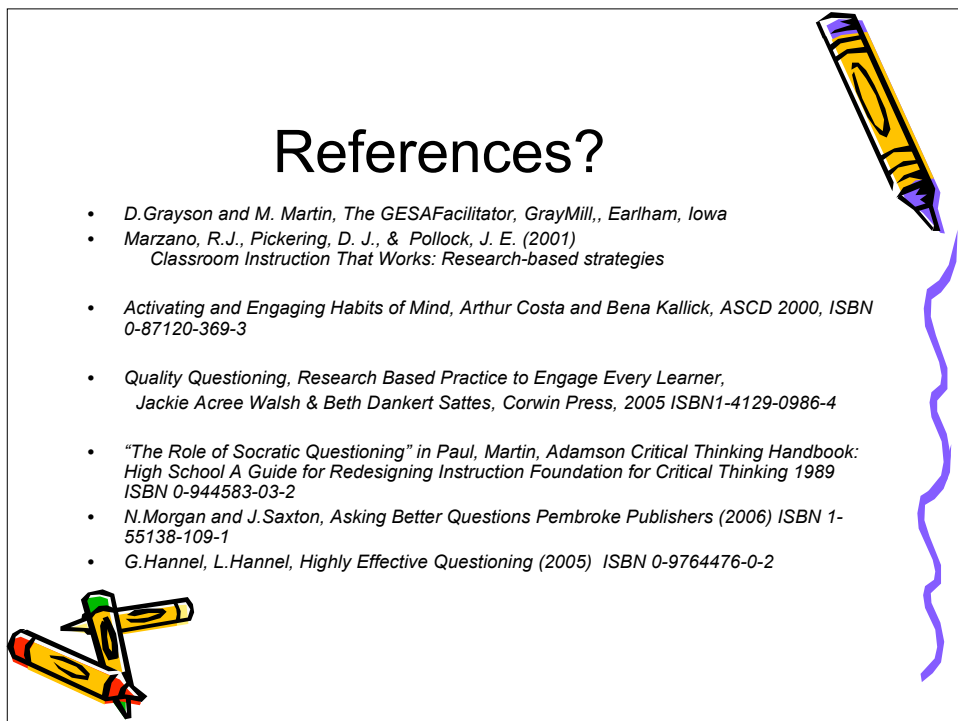
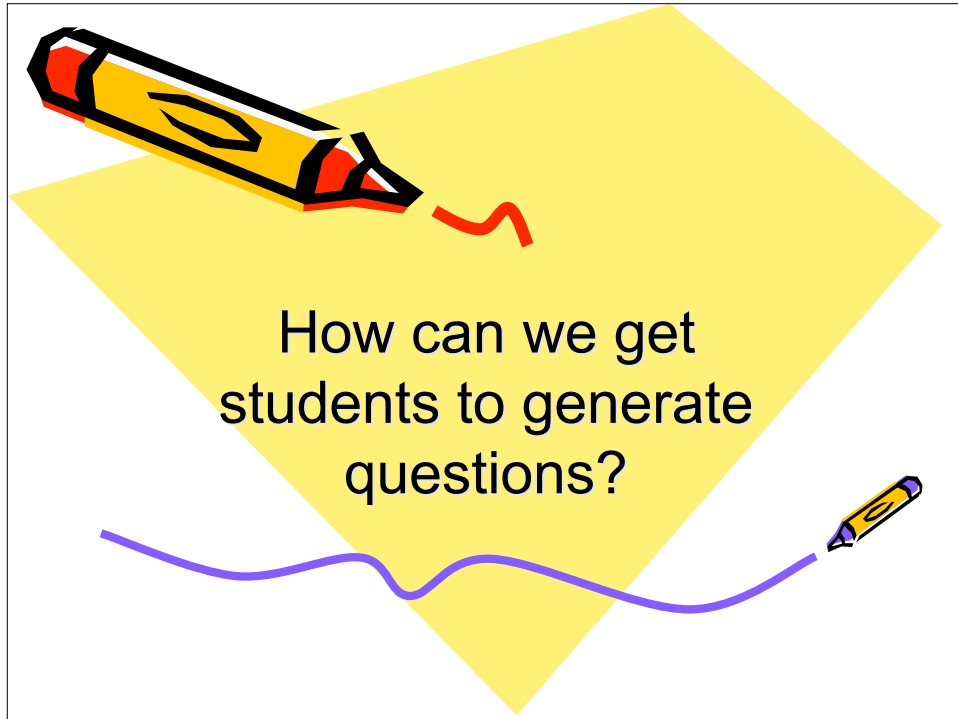
- How should you ask?
- Whom should you ask?
- How should you listen?
- How should you respond?





What effect does increasing wait time have?









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- Deep questions drive our thought underneath the surface of things, force us to deal with complexity.
  - Questions of purpose force us to define our task.
  - Questions of information force us to look at our sources of information as well as at the quality of our information.
  - Questions of interpretation force us to examine how we are organizing or giving meaning to information and to consider alternative ways of giving meaning.
  - Questions of assumption force us to examine what we are taking for granted.
  - Questions of implication force us to follow out where our thinking is going.
  - Questions of point of view force us to examine our point of view and to consider other relevant points of view.
  - Questions of relevance force us to discriminate what does and what does not bear on a question.
  - Questions of accuracy force us to evaluate and test for truth and correctness.
  - Questions of precision force us to give details and be specific.
  - Questions of consistency force us to examine our thinking for contradictions.
  - Questions of logic force us to consider how we are putting the whole of our thought together, to make sure that it all adds up and makes sense within a reasonable system of some kind.

## Your Task

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- For the next unit or next lesson:
  - (9Resources/Landfills), (10Evolution, Populations), 11Chem Reactions, 12Energy
  - Share/Come up with 5 “class size” essential questions that will be both anticipatory and evaluative.....