Intellectual Standards
What standards do you think are important when evaluating your students reasoning (writing, speaking, reading)?

In other words, what criteria do you use when evaluating an essay or article?

Join with the person sitting next to you and make a list of the standards you think are important when evaluating the quality of a person’s reasoning?
The Underlying Principles of Critical Thinking

The Standards
- clarity
- precision
- accuracy
- significance
- relevance
- completeness
- logical
- fairness
- breadth
- depth

must be applied to

The Elements
- purposes
- inferences
- questions
- concepts
- points of view
- implications
- information
- assumptions

as we develop

Intellectual Traits
- intellectual humility
- intellectual perseverance
- intellectual autonomy
- intellectual integrity
- confidence in reasoning
- intellectual courage
- intellectual empathy
- Fair-mindedness
System 2: **Red Thinking:** Higher order executive functioning. Thinking that analyzes, assesses and improves green Thinking.

System 1: **Green Thinking:** Instinctive, automatic, spontaneous thinking. Unconsciously guided.
Green Thinking

Unconscious Mixture Of High Quality
And Low Quality Thinking

Spontaneous  Subconscious  Uncontrolled
Impulsive    Self protecting  Unanalyzed
Reflexive    Self validating

Includes ideas that are valid, as well as nonsense, confusion, stereotypes, prejudices. The key is that we cannot distinguish the difference between high and low quality thought in green thinking mode.

Green thinking goes without assessing itself.
Red Thinking stops and assesses itself before going forward.

Disciplined  Seeks the truth  Self assessing
Critical Thinking  Self correcting  Probing

In red thinking mode, we actively work to eliminate prejudices, biases, dysfunctional thinking from our thinking. We actively work on our thinking.

We rigorously apply intellectual standards to our thinking.
Understanding Intellectual Standards
One of the most fundamental goals in teaching

Accurate and consistent student self assessment
Standards of Reasoning

Clarity: Understandable, the meaning can be grasped

Accuracy: Free from errors or distortions, true

Precision: Exact to the necessary level of detail

Relevance: Relating to the matter at hand

Depth: Containing complexities and interrelationships

Breadth: Involving multiple viewpoints

Logic: The parts make sense together, no contradictions

Significance: Focusing on the important, not trivial

Fairness: Justifiable, not self-serving (or egocentric)
| Clarity          | Could you elaborate further?  
|                 | Could you give me an example?  
|                 | Could you illustrate what you mean? |
| Accuracy        | How could we check on that?  
|                 | How could we find out if that is true?  
|                 | How could we verify or test that? |
| Precision       | Could you be more specific?  
|                 | Could you give me more details?  
|                 | Could you be more exact? |
| Relevance       | How does that relate to the problem?  
|                 | How does that bear on the question?  
|                 | How does that help us with the issue? |
| Depth           | What factors make this a difficult problem?  
|                 | What are some of the complexities of this question?  
|                 | What are some of the difficulties we need to deal with? |
| Breadth         | Do we need to look at this from another perspective?  
|                 | Do we need to consider another point of view?  
|                 | Do we need to look at this in other ways? |
| Logic           | Does all this make sense together?  
|                 | Does your first paragraph fit in with your last?  
|                 | Does what you say follow from the evidence? |
| Significance    | Is this the most important problem to consider?  
|                 | Is this the central idea to focus on?  
|                 | Which of these facts are most important? |
| Fairness        | Do I have any vested interest in this issue?  
|                 | Am I sympathetically representing the viewpoints of others? |
CLARITY

1. **State:** give a brief explanation
2. **Elaborate:** expand on your explanation
3. **Exemplify:** give a concrete example
4. **Illustrate:** use metaphor, analogy, picture
Clarify the concept of critical thinking

- Critical thinking is...
- In other words...
- For example...
- To illustrate...
Clarify the Standards

I would define intellectual standards in the following way…

In other words…

For example…

To illustrate…
Taking initial ownership of the standards

Working in pairs using *Concepts and Tools* guide – pp. 8-9, 10

Person A – clarity, accuracy, precision, relevance

Person B – depth, breadth, logic, fairness

Read in order to teach your concepts to your partner. When teaching, be prepared to point out how each standard applies to your work.
Discuss your understanding of the standards. Then answer these questions:

- Why and how are these standards important in teaching?
- Why and how are they important in human life?
- How do they relate to your content?
- What can you do to better foster student use of these standards, to help students construct them into their thinking and regularly use them?
Intellectual Standards and Teaching

Make a list of the standards that are used in your discipline.

Then make a list of ways in which you can better bring the intellectual standards into instruction.
What is Your Philosophy of Education?

- B Questions C
  A observes

- C Questions A
  B observes

- A Questions B
  C observes
What is the difference/relationship between education and the concepts of socialization, indoctrination, and training?

- C questions A
  B observes

Focus questions on depth and clarity.
Focusing on a key concept in your course

Explain in writing the most fundamental concept in one course you teach.
State, elaborate, exemplify
Focus on a key concept in your course.

- A Questions
- B
- C observes
Instead of Intellectual Standards, what are the standards people most often use in their thinking?
Standards Typically Used in Thinking

“‘It’s true because I believe it’” (innate egocentrism)

“‘It’s true because we believe it’”
(innate sociocentrism)

“‘It’s true because I want to believe it’”
(innate wish fulfillment)

“‘It’s true because I have always believed it.’”
(innate self-validation)

“‘It’s true because it is in my selfish interest to believe it.’” (innate selfishness)
More Non-intellectual Standards

- It’s true because someone in a position of perceived power (or authority) said it is true.

- It’s true because it’s beyond my (our) ability to fully understand it.
Non-Critical Thinking Standards

- Fun
- Exciting
- Feels good
- Attention-getting
- Popular
- Patriotic
- free

- Chic
- Spontaneous
- Advantageous
- Easy
- Beneficial to me
- Deeply moving/felt
Typical student beliefs.

- Learning should be fun.
- Learning should be easy.
- If I do what the teacher says, that’s all that matters.
  - Learning means doing what the teacher says.
- All I need to do is the absolute minimum to get the grade.
- I shouldn’t have to waste my time learning anything I can’t use.
  - I believe that learning biology is a waste of my time.
- Cheating to get by is fine because all I need is the piece of paper (the college degree) to get a job anyway.
Intellectual Standards represent possible questions

- See handout
Clarification/Precision

Is welfare justifiable?

Is it ethically justifiable for the government to provide goods and services to persons who have not earned them, and by so doing, taking resources from those who have earned them?

Do citizens of a community have an ethical responsibility to provide for the basic needs of people in the community who are unable to meet those needs themselves?

If we provide free goods and services to people, will we discourage them from learning to provide for themselves?
Clarification/Precision

Should I declare bankruptcy?

Given my financial condition, what are the short and long term implications of declaring bankruptcy, or deciding against it?

What will my family and friends think of me if they find out I have declared bankruptcy?

Do I have an ethical responsibility to avoid declaring bankruptcy?
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To clarify means to ask questions to understand something when I don't understand something someone says I can ask questions like, could you repeat that hear you could you repeat that I couldn't 3 could you explain that differently 4 could you give me an example
Skilled Learner

Can I have more?
Yes!

Honey, are you reading?
Yes.
What is happening is she is not reading during reading. The implications are she can't be able to read signs when she's in class.

Alissa
2-21-01
Unskilled Learner

Teacher

- she is fake reader