

## A GOOD OLD COLLEGE TRY

A “good old college try” refers to making a stab at an answer no matter how little you know. Most cynically, this is in order to get SOME credit on an exam (or at least a bit of credit for chutzpah if your teacher has a sense of humor). I also call this attitude of confidence and healthy ego a "good young college try." Research shows it is by far a more successful way to approach a test, within reason. *See resilience literature, especially as analyzed and applied by Dr. Peter Murrell, as well as G & T literature (ALPL "Creativity and LD).*

Let's say you told one group to give an exam "a good old college try" and one not to guess at the answers. Who would do better? Why? Who tends not to do this? Why? What happens?

In a typical "good old college try," the person thinks like a so labelled "gifted" person tends naturally to do - excited to know what they don't know, to research on one's own, or, if not gifted or supporting in believing one is, can learn to do this process. They will know the value of describing how they will proceed to figure this out and the background information they may need to acquire / become familiar with --

For example, for Question 2, below:

“I don’t recall if a mineral must be able to be a rock on its own that you find or if it can be mixed with other minerals and has to be extracted... I am sure that they can be mined or chipped out of its surroundings. I don’t know if minerals and elements are the same things... I know that geologists have ID’d all the minerals and elements and that at least some are the same...

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It fascinates me that the first release of English Language Arts test-items for the state tests of the federal Common Core knowledge framework from No Child Left Behind act [Texas?] included questions in re: an article “What’s the Scoop on Soil,” illustrating a major shift from less emphasis on analysis of literature to analysis of nonfiction work...

## **A GOOD OLD COLLEGE TRY**

Here is a Massachusetts (pre-Common Core) knowledge strand that you are familiar with from "What Could Annie Know?"

### **MCAS KNOWLEDGE STRAND      Question from 2009**

#### **Science, Technology/Engineering**

#### **Earth and Space Science – Grade 3-5 level**

*Standard: 2 - Identify the physical properties of minerals (hardness, color, luster, cleavage, and streak), and explain how minerals can be tested for these different physical properties.*

The following are Universal Standards / Test Questions that are designed to incorporate both ways of approaching science in an ELA test using the principal of the Good Old College Try.

### **HERE IS A SYNTHESIS OF MANY SUCH STANDARDS FROM MANY LIKE CURRICULA /KNOWLEDGE FRAMEWORKS/UNIVERSAL KNOWLEDGE TOMES (alpl)**

All minerals have the physical properties of hardness, color, luster, cleavage, & streak. Geologists have standard ways of testing these properties in minerals, and standard scales for stating them. For instance, the hardness of one particular mineral is tested using a file and/or, if one want to compare two materials, one can rub them together and which scratches which determines which is harder. Geology labs and field workers have a testing kit in which are ten minerals determined to be evenly spaced from softest to hardest (talc, gypsum, calcite, fluorite, apatite, feldspar, quartz, topaz, corundum, diamond). The softest, talc, is given the value 1, and the hardest, diamond, is given the value 10. This is called the Mohs scale. If one has a mineral that is scratched by all of the others, it is talc. If one has a mineral that is scratched by topaz, but not by feldspar, it has a hardness of 7.

See last pages for very detailed, "high-standard" standards re: Common Core standards.

## A GOOD OLD COLLEGE TRY

*Answer the following on your own:*

1) What do you know for sure about minerals?

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2) What do you think might be true about minerals?

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3) Thinking as a scientist, and assuming many are available to you,  
what would you do to find out about minerals?

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## A GOOD OLD COLLEGE TRY

Answer the following using any resources you want:

4) This is Annie (a Whaling Child). Can you spot any rocks or minerals she might be a bit familiar with?



[For instance] She wore a thin gold index finger ring.



## A GOOD OLD COLLEGE TRY

She wore a cloisonné pendant and a gold chain and cross.



What might she know about rocks? About minerals?

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5) Tell a story about a mineral (feel free to think about/imagine such things as what Annie might know; books you have read like The Gold Bug, from your actual experience, in an imaginary story you write or know was real (of journey, of discovery, of war, of when your Great Uncle actually went to Argentina to prospect for gold and ended up owning miles of orange groves [see What Could Sam Cota Know?):



**A GOOD OLD COLLEGE TRY**



**A GOOD OLD COLLEGE TRY**

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6) Let's say there is only one country. What minerals would we all need to survive? What might happen if we couldn't share evenly? If we could?

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7) Select the five minerals you would like to have on a desert island. Why did you choose these?

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8) If your boss, Dr. Science, told you to tell her everything you could about 10 minerals, in 10 seconds, what would you say? In ten minutes?

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9) When setting up an experiment, a good scientist: (choose one)  
makes sure she knows what the answer should be, so that, if it doesn't come out that way, she will know the experiment failed.

## **A GOOD OLD COLLEGE TRY**

never repeats the experiment, as that will only make the results confusing if they are not the same

does not make a prediction about what the answer might be so as not to prejudge anything

predicts what may happen so as to have something to disprove

### **Draft Scale for answers to the above:**

#### **Question One:**

- 4: Substantially correct/precise/accurate, nuanced, detailed, no mistakes indicating fundamental flaws in knowledge, willingness to make educated guesses while making this clear
- 3: Quirky, with some correct, and a “good college try”
- 2: Many incorrect and/or incomplete, doesn’t explore
- 1: Most incorrect or incomplete
- 0: all incorrect and/or incomplete

#### **Question Two:**

- 4: Makes intelligent, creative, and/or scientific-style analyses, reaches some correct and/or reasonable ideas
- 3: displays some scientific-style analyses, reaches a few correct and/or reasonable ideas
- 2: doesn’t explore self for possibilities/
- 1: very literal answers like: "nothing"



## A GOOD OLD COLLEGE TRY

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### **Related Common Core standards:**

English Language Arts Standards » Grade 6-8 » 4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*. <http://www.corestandards.org/ELA-Literacy/RST/6-8>

### THE EARTH SCIENCES REPORTING CLUSTER

The following 13 California content standards are included in the Grade 5 Earth Sciences reporting cluster and are represented in this book by 14 test questions. These questions represent only some ways in which these standards may be assessed on the California Grade 5 Science Standards Test.

### CALIFORNIA CONTENT STANDARDS IN THIS REPORTING CLUSTER

#### Earth Sciences Grade 5 Standards

##### 5ES3.

Water on Earth moves between the oceans and land through the processes of evaporation and condensation. As a basis for understanding this concept:

##### 5ES3.a.

Students know most of Earth's water is present as salt water in the oceans, which cover most of Earth's surface.

##### 5ES3.b.

Students know when liquid water evaporates, it turns into water vapor in the air and can reappear as a liquid when cooled or as a solid if cooled below the freezing point of water.

##### 5ES3.c.

Students know water vapor in the air moves from one place to another and can form fog or clouds, which are tiny droplets of water or ice, and can fall to Earth as rain, hail, sleet, or snow.

##### 5ES3.d.

Students know that the amount of fresh water located in rivers, lakes, underground sources, and glaciers is limited and that its availability can be extended by recycling and decreasing the use of water.

## **A GOOD OLD COLLEGE TRY**

5ES3.e.

Students know the origin of the water used by their local communities.

5ES4.

Energy from the Sun heats Earth unevenly, causing air movements that result in changing weather patterns. As a basis for understanding this concept:

5ES4.a.

Students know uneven heating of Earth causes air movements (convection currents).

5ES4.b.

Students know the influence that the ocean has on the weather and the role that the water cycle plays in weather patterns.

5ES4.c.

Students know the causes and effects of different types of severe weather.

5ES4.d.

Students know how to use weather maps and data to predict local weather and know that weather forecasts depend on many variables.

5ES4.e.

Students know that Earth's atmosphere exerts a pressure that decreases with distance above Earth's surface and that at any point it exerts this pressure equally in all directions.

The Common Core states added testing in sciences. Here is what was considered appropriate physical science knowledge for

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### **THE PHYSICAL SCIENCES REPORTING CLUSTER**

The following nine California content standards are included in the Grade 5 Physical Sciences reporting cluster and are represented in this booklet by 13 test questions. These questions represent only some ways in which these may be assessed on the California Grade 5 Science Standards Test.

#### **CALIFORNIA CONTENT STANDARDS IN THIS REPORTING CLUSTER**

Physical Sciences – Grade 5 Standards

5PS1.

Elements and their combinations account for all the varied types of matter in

## A GOOD OLD COLLEGE TRY

the world. As a basis for understanding this concept:

5PS1.a.

Students know that during chemical reactions the atom in the reactants rearrange to form products with different properties.

5PS1.b.

Students know all matter is made of atoms, which may combine to form molecules.

5PS1.c.

Students know metals have properties in common, such as high electrical and thermal conductivity. Some metals, such as aluminum (Al), iron (Fe), nickel (Ni), copper (Cu), silver (Ag), and gold (Au), are pure elements; others, such as steel and brass, are composed of a combination of elemental metals.

5PS1.d.

Students know that each element is made of one kind of atom and that the elements are organized in the periodic table by their chemical properties.

5PS1.e.

Students know scientists have developed instruments that can create discrete images of atoms and molecules that show that the atoms and molecules often occur in well-ordered arrays.

5PS1.f.

Students know differences in chemical and physical properties of substances are used to separate mixtures and identify compounds.

5PS1.g.

Students know properties of solid, liquid, and gaseous substances, such as

sugar (C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>)  
water (H<sub>2</sub>O),  
helium (He),  
oxygen (O<sub>2</sub>)  
nitrogen (N<sub>2</sub>),  
and carbon dioxide (CO<sub>2</sub>).

5PS1.h.

Students know living organisms and most materials are composed of just a few elements.

5PS1.i.

Students know the common properties of salts, such as sodium chloride (NaCl).

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**Standards in this Common Core strand:**

## A GOOD OLD COLLEGE TRY

- [CCSS.ELA-Literacy.RST.6-8.1](#)
- [CCSS.ELA-Literacy.RST.6-8.2](#)
- [CCSS.ELA-Literacy.RST.6-8.3](#)
- [CCSS.ELA-Literacy.RST.6-8.4](#)
- [CCSS.ELA-Literacy.RST.6-8.5](#)
- [CCSS.ELA-Literacy.RST.6-8.6](#)
- [CCSS.ELA-Literacy.RST.6-8.7](#)
- [CCSS.ELA-Literacy.RST.6-8.8](#)
- [CCSS.ELA-Literacy.RST.6-8.9](#)
- [CCSS.ELA-Literacy.RST.6-8.10](#)

### Key Ideas and Details

- [CCSS.ELA-Literacy.RST.6-8.1](#) Cite specific textual evidence to support analysis of science and technical texts.
- [CCSS.ELA-Literacy.RST.6-8.2](#) Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.
- [CCSS.ELA-Literacy.RST.6-8.3](#) Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

### Craft and Structure

- [CCSS.ELA-Literacy.RST.6-8.4](#) Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.
- [CCSS.ELA-Literacy.RST.6-8.5](#) Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.

## **A GOOD OLD COLLEGE TRY**

- [CCSS.ELA-Literacy.RST.6-8.6](#) Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.

## **Integration of Knowledge and Ideas**

- [CCSS.ELA-Literacy.RST.6-8.7](#) Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
- [CCSS.ELA-Literacy.RST.6-8.8](#) Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.
- [CCSS.ELA-Literacy.RST.6-8.9](#) Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.

## **Range of Reading and Level of Text Complexity**

- [CCSS.ELA-Literacy.RST.6-8.10](#) By the end of grade 8, read and comprehend science/technical texts in the grades 6–8 text complexity band independently and proficiently.