





## A Potpourri of Classroom Comparisons

A 1st grader uses a magnifying glass to identify the critical attributes of coins.

				
Name of Coin	penny	nickel	dime	quarter
Color	copper	silver	silver	silver
Shape	circle	circle	circle	circle
Size	medium	large	small	largest
How Edges Feel	smooth	smooth	bumpy	bumpy
Year	1991	1975	1967	1990
President on Front	Lincoln	Jefferson	Truman	Washington
Picture on Back of Regular Coin	building	building	torch plants	eagle
Picture on Back of NJ Coin	X	X	X	crossing Delaware
Value	1¢	5¢	10¢	25¢

A 3rd grader analyzes the structure of two fables.

"The Tortoise and the Hare"	Criteria	"The Tortoise and the Antelope"
A tortoise A hare	Characters	A tortoise Antelope
Because the hare makes fun of the tortoise	Why they decide to race	Because they argue who can go faster
The hare goes to sleep by accident	How the tortoise wins	The tortoise and some friends trick the antelope
"slow and steady wins the race"	Lesson	"Teamwork works"

DINOSAURS WERE NOT REALLY REPTILES

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**Socially** friendly vocalizations  
- travelled in herds  
- courting ritual to attract mate  
- good parents - raise & protect

**Structurally** Internal fertilization.  
- Keep skin  
- Body adornment to attract

**Survival** - Herds  
- Physical environment incidental

**Socially** short bursts of activity then napped  
- attend to young/eggs

**Structurally** Drop eggs and go.  
- Shed skin  
- Body adornment to apal

**Survival** - Camouflage, armor & poison

A group of middle school students use words and images to distinguish reptiles from dinosaurs.

**ANAEROBIC**  
 high intensity exercise for short time

- sprints, isometrics, weight-lifting
- uses PCr to breakdown glucose (energy)
- energy from ATP and CPA
- increases power and builds stronger muscles and bones

**AEROBIC**  
 low/moderate intensity exercise for more than 90 seconds

- brisk walk, slow run, light weight repetition
- uses  $O_2$  to breakdown glucose (energy)
- energy from carbohydrates and fats
- increases endurance and cardiovascular function

**SIMILARITIES**

- both burn calories
- both improve body function and lead to a healthy body
- both produce energy through glycolysis
- almost all types of sports and training activities involve both types of exercise

A high school student creates a T-Shirt Organizer to identify the similarities and differences between anaerobic and aerobic exercise.

Volume	Surface Area
Volume is the measurement of space a three-dimensional figure occupies.	Surface area is the sum of all the surfaces of a three-dimensional figure.
Always involves multiplying area of the base by height of the figure.	Always involves adding up the areas of the individual surfaces.
Expressed in cubic units	Expressed in square units
Often used to figure out how much containers can hold (e.g., water in a swimming pool)	Often used to figure out how much covering is needed (e.g., paint or wrapping paper)
<b>Similarities</b>	
Both apply to three-dimensional shapes.	
Both require you to know how to find two-dimensional area.	

A middle school student creates a Top Hat Organizer to summarize and review critical similarities and differences between volume and surface area.

A high school student compares the educational philosophies of Booker T. Washington and W. E. B. Du Bois on a Y Organizer.

<p><u>Booker T. Washington</u></p> <ul style="list-style-type: none"> <li>• believed in education in agriculture and industry</li> <li>• wanted to help blacks become self-reliant and competent tradespeople</li> <li>• willing to accommodate current views on race; didn't want to "rock the boat"</li> <li>• created the Tuskegee Institute in 1881 to train African Americans in trade and agriculture</li> </ul>	<p><u>W.E.B. Du Bois</u></p> <ul style="list-style-type: none"> <li>• believed in education in the liberal arts and higher education</li> <li>• wanted to develop more black leaders and intellectuals</li> <li>• advocating directly confronting issues of segregation and racism</li> <li>• helped found the NAACP in 1909</li> </ul>
<p><u>Similarities</u></p> <ul style="list-style-type: none"> <li>• both were great leaders</li> <li>• both were concerned about limited opportunities for blacks</li> <li>• both believed education was the best way to achieve equality</li> </ul>	

A 5th grader draws conclusions about renewable and nonrenewable energy.

The most important difference between renewable energy and nonrenewable energy is that renewable energy won't run out, while nonrenewable energy will eventually run out.

Possible cause(s) for this difference is/are renewable energy comes from sources like wind, the sun, and plants that come back and that can't run out. Nonrenewable energy comes from sources like coal and fossil fuels that don't come back after they're taken.

Possible effect(s) of this difference is/are The U.S. and other countries are trying to find new ways to develop renewable energy sources because people will need renewable energy in the future when nonrenewable sources run out.

A 2nd grader creates a Flip Strip to show how frogs and toads differ.

