

CRITICAL THINKING ACTIVITY GRID

TOPIC: Matter

Grade: 8

Name: Judy Campbell

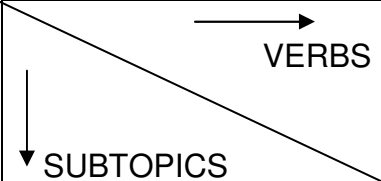
	ASSUME	INFER	ANALYZE	PRIORITIZE	JUDGE
History	What assumption would you make about a person trying to turn objects into gold?	What can you infer about the shifting origins of chemical symbols for elements?	Analyze the conflict between Newton and the Church of England?	Prioritize our list of scientists based on greatest contribution to society.	Judge the societal impact of Alfred Nobel's invention of dynamite.
Elements	What assumption can you make about the difference between the number of elements and the number of types of substances on Earth?	What can you infer about CaCO_3 ?	Analyze the design of Mendeleev's Periodic Table.	Prioritize the ten most common elements in our universe based on importance to life.	Judge the phrase "all natural" and its use in advertising.
Phases of Matter and Energy Flow	What can you assume about an object changing from one phase to another?	Infer the flow of energy in the given scenario.	Analyze the transition of a sample of water through solid, liquid, and gas phases.	Prioritize the importance of ten solids, liquids, and/or gases in your daily life.	Judge the quality of your "Keep It Cool" design.
Mixtures and Solutions	What can we assume about a solution?	Infer the best method to separate the given mixture into its original components.	Analyze the steps in the formation of a solution.	Prioritize the value of these clues in determining the nature of a solution.	Judge the identity of the two substances which make up your Mystery Mixture.
Chemical Reactions	What can you assume about the products of a chemical reaction?	What can you infer about why antacids contain chalk?	Analyze the chemical reactions that are the basis of the limewater test for CO_2 .	Prioritize the necessity of 8-10 chemical reactions in your body.	Judge which form of transportation is the safest for volatile/hazardous chemicals.

CREATIVE THINKING ACTIVITY GRID

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 VERBS SUBTOPICS	BRAINSTORM	CONNECT	CREATE	ELABORATE
History	Brainstorm your top ten immediate feelings/thoughts upon hearing that you have been invited to lunch by a famous scientist.	Connect struggling against accepted thought to a rhinoceros, North Korea, a hammer, and you.	Create a time period equivalent to a bumper sticker to support Newton's scientific endeavors.	Elaborate on the rewards of studying science.
Elements	Brainstorm new, more descriptive names for the first 10 elements.	Connect an element of your choice to a ladybug, Hawaii, ABC gum and you.	Create an advertisement to market your selected element to the general public.	Elaborate on the task of designing an organizational tool.
Phases of Matter and Energy Flow	Brainstorm ways to make your energy about an idea flow into someone else. (Hook)	Connect the process of phase change to a moth, Los Angeles, a ping-pong ball, and you.	Create a unique textbook graphic to illustrate at the particle level the flow of energy between two objects.	Elaborate on the benefits and drawbacks of insulation.
Mixtures and Solutions	Brainstorm suggestions for the best "trailmix"ure. (Hook)	Connect a saturated solution to a bee, NYC, a violin, and you.	Create a contraption/method to separate a 3-part mixture of your choice.	Elaborate on the necessary existence of both mixtures and solids.
Chemical Reactions	Brainstorm fortunate/unfortunate 4-person lab partnerships within this class. (Hook)	Connect a chemical reaction to a squirrel, Saturn, an avalanche, and you.	Create symbolic representations of 6 different types of chemical reactions.	Elaborate on the importance of chemical reactions.