

Appendix A: Pre-Deliberative Democracy Group Worksheet

What is the PROBLEM(S) that this policy proposal is trying to solve?

QUESTIONS/INFORMATION NEEDED	POSSIBLE SOURCES TO CONSULT	WHO WILL OBTAIN? (initials)		SCIENTIFIC?

ROLE	LAST NAME	FIRST NAME	Brief comment on how you found your role today:
LEADER: keep group on task, keep focus and move forward, wrap up at end			
FACILITATOR: make sure everyone speaks, single view doesn't dominate			
DEVIL'S ADVOCATE: make sure minority views kept alive; "think out of the box"			
SUMMARIZER: pulls together discussion, identifies "big themes"			
RECORDER: fills out form WITH HELP OF ALL GROUP MEMBERS			
SPOKESPERSON: presents group ideas/process during break-out			

What is the group's CURRENT STANCE on this policy proposal?

Note: In groups with more than 6 students present, students decide which roles can be shared.

Appendix B: Final Deliberative Democracy Group Worksheet

SOLUTION: Consensus statement we can all agree on:

Remaining points of agreement/disagreement, with reasons:

What information/sources were most helpful and important to your group in reaching consensus?

Vital Information:	Specific Source	Criteria for Validity	Science?

ROLE	LAST NAME	FIRST NAME	Brief comment on how you found your role today:
LEADER: keep group on task, keep focus and move forward, wrap up at end			
FACILITATOR: make sure everyone speaks, single view doesn't dominate			
DEVIL'S ADVOCATE: make sure minority views kept alive; "think out of the box"			
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Appendix C: Pre/Post Content Test

1. Water is an example of a molecule that is:
 - a. hydrolyzed
 - b. iodized
 - c. polarized
 - d. ionized
2. Approximately what percent of human body weight comes from water?
 - a. 5 %
 - b. 30%
 - c. 60%
 - d. 85%
3. Where is the energy stored in a carbohydrate?
 - a. Bonds between the C , H and O atoms
 - b. Hydrophobic bonds
 - c. Lipid molecules
 - d. The bonds of the nitrogen bases
4. Which of the following pairs belong to the same group of macromolecules?
 - a. Testosterone and starch
 - b. Estrogen and the wax on a duck's feathers
 - c. Estrogen and sucrose
 - d. Testosterone and sucralose
 - e.
5. Which characteristics are shared by all living organisms?
 - a. A nucleus containing DNA in each cell
 - b. The ability to generate energy from the sun
 - c. A plasma membrane surrounding all cells
 - d. Bilateral symmetry
6. Why does penicillin fight off bacteria but leave your own bodily cells intact?
 - a. Only prokaryotes have cell walls
 - b. Only mammalian cell membranes can bind to penicillin
 - c. Hydrophobic interactions between penicillin and the cell membrane kill bacteria
 - d. Bacteria have a lower pH and penicillin is only active at that pH
7. You have 8 oz. portions of butter, meat, and sugar. Why do you consume more calories if you eat the butter than the sugar or the meat servings?
 - a. Butter has more ATP than meat or sugar
 - b. Fats are more easily digested than proteins or carbohydrates
 - c. The butter contains less fiber than the other foods

- d. There are more chemical bonds in the same serving size of butter than in meat or sugar
8. Which of the following is true of saturated fats:
- a. Saturated fats have only single bonds in their fatty acid chains so they lay flat
 - b. Saturated fats have double bonds along their fatty acid chains that cause them to bend or kink
 - c. Saturated fats have twice the calories of unsaturated fats
 - d. Cholesterol is an example of a saturated fat
9. You want to lose weight. Which of the following combinations would likely work best?
- a. Avoid nuts, eat whole wheat bread, and sleep less than 7 hours per night
 - b. Avoid nuts, eat refined bread, and sleep 7-8 hours per night
 - c. Eat nuts and whole wheat bread, and sleep for 7-8 hours per night
 - d. Eat nuts and refined bread, and sleep less than 7 hours per night
10. Which reaction does not take place in the production of yogurt?
- a. Glycolysis
 - b. Electron transport chain
 - c. Fermentation
 - d. Lactic acid synthesis
11. For a neighborhood located near the base of one of the Great Lakes, how would you expect its overall air temperature to compare to a neighborhood located higher up on a hillside overlooking the lake?
- a. There will not be much temperature difference between the two neighborhoods
 - b. The neighborhood next to the lake will be warmer year round
 - c. The neighborhood next to the lake will be cooler in the winter and warmer in the summer than the hillside neighborhood
 - d. The neighborhood next to the lake will be warmer in the winter and cooler in the summer than the hillside neighborhood
12. If you want to increase the amount of CO₂ removed from the atmosphere in an ecosystem, you should:
- a. Replace slow-growing trees with fast-growing grasses
 - b. Replace C₄ and CAM plants with C₃ plants
 - c. Plant a lot of trees instead of grasses
 - d. Clear the trees and let the land regenerate itself
13. Which of the following is true about gametes and somatic cells?
- a. The gametes from one person all have a different genetic makeup, while the somatic cells from that person are all genetically identical
 - b. Gametes have twice the number of chromosomes as somatic cells

- c. Gametes are produced by mitosis
 - d. The somatic cells of a parent contribute the genetic makeup of the offspring
14. A mammogram detects a growth in a patient's breast, and the biopsy shows that it is cancerous. After the growth is removed, surgeons also check the lymph nodes of the patient. No cancerous cells are found. It is most likely that the cancer:
- a. Will not recur
 - b. is now benign
 - c. did not metastasize
 - d. was not malignant
15. Tumors are the result of:
- a. Normal cell division
 - b. Cells that fail to divide
 - c. Cysts
 - d. Unregulated cell division
 - e.
16. You are looking at a cell under the microscope. It appears that the sister chromatids are separating and pulling apart toward opposite ends of the cell. The cell is in:
- a. metaphase
 - b. anaphase
 - c. telophase
 - d. prophase
17. A person's entire set of genes is known as their:
- a. nucleus
 - b. chromosome
 - c. genome
 - d. DNA
18. Which of the following is true:
- a. on average, a person with shorter telomeres will live longer
 - b. on average, a person with longer telomeres will live longer
 - c. no clear relationship exists between telomere length and lifespan
 - d. telomere length has not been compared to length of life
19. You have white cochin hens in your yard, and one black cochin rooster. One day a clutch of their eggs hatches, and all the cochin chicks are gray. What is the most likely genetic explanation?
- a. the black and white alleles are incompletely dominant
 - b. your neighbor's gray rooster got into the yard
 - c. there is a recessive gray allele in the population
 - d. the gray color likely comes from a mutation
20. A family has 4 children, all with the same biological parents. The children's blood types are O, AB, B and A. What are the possible genotypes of the parents?

- a. AO and AB
 - b. AB and OO
 - c. BO and AB
 - d. BO and AO
21. Dizygotic twins are likely to be:
- a. genetically identical if they are the same sex
 - b. phenotypically identical but genotypically different
 - c. phenotypically different but genotypically identical
 - d. no more genetically alike than two siblings born at different times
22. If a man with one dominant gene for Huntington's Disease has a child with a woman who has no genes for the disease, what is the probability that the child will have the disease?
- a. 0%
 - b. 25%
 - c. 50%
 - d. 100%
23. One of the functions of the human microbiome is to
- a. Produce antibiotic compounds to kill pathogens entering our airways
 - b. Increase the genetic diversity of our offspring
 - c. Strengthen the cell membranes in our intestines
 - d. Add fiber to our digestive tract
24. Babies born by Cesarean section are more likely to suffer from:
- a. Skin infections
 - b. Cognitive issues
 - c. Reduced organ size
 - d. Gum infections