Detective Brain: Case of the 4th Grade Logic Labyrinth

Your mind is a courtroom! Synthesize evidence and evaluate complex arguments through tricky dilemmas to see if a conclusion truly holds up under cross-examination.

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1. Scenario: Maya says, 'We should plant a garden to help the bees.' Leo replies, 'So you're saying we should spend all our play time digging in the dirt and never play tag again?' What error is Leo making?

    A.   Hasty Generalization

    B.   Straw Man Fallacy

    C.   Slippery Slope

    D.   Circular Reasoning

2. If an argument is 'valid,' it means the conclusion must be true even if the starting facts are totally made up.

    A.   True

    B.   False

3. Look at this pattern: 'The last five mystery books I read had a twist ending. Therefore, the next mystery book I read will likely have a twist ending.' This is an example of ____ reasoning.

    A.   Deductive

    B.   Inductive

    C.   Circular

    D.   Fallacious

4. The principal says: 'Either we cancel the field trip or we raise $500 by tomorrow.' What is the problem with this reasoning?

    A.   It is a False Dilemma because there might be other options.

    B.   It is an Ad Hominem attack on the students.

    C.   It is a valid Deductive proof.

    D.   It is an Analogical Comparison.

5. Analyze this argument: 'Anyone who wins the science fair gets a gold trophy. Sam won the science fair. Therefore, Sam got a gold trophy.' This conclusion is:

    A.   Weak and unlikely

    B.   A Straw Man fallacy

    C.   Logically certain (Deductive)

    D.   An Ad Hominem attack

6. When a person claims that a new video game must be great because 'everybody at school is playing it,' they are using a ____ fallacy.

    A.   Red Herring

B. Bandwagon

C. Slippery Slope

D. Moral Equivalence

7. If you argue that a scientist's idea about space is wrong simply because they are 'too young to know anything,' you are using an Ad Hominem fallacy.

A. True

B. False

8. Evaluating Evidence: Which of these sources would be the MOST reliable for an argument about why a local lake is polluted?

A. A funny video of a talking fish in the lake

B. A social media post from a student who lives nearby

C. A data report from the Environmental Protection Agency

D. An advertisement for a new water filter company

9. If 'All mammals have backbones' and 'A blue whale is a mammal,' then the _____ is that a blue whale has a backbone.

A. Premise

B. Fallacy

C. Inference

D. Counter-argument

10. A friend says: 'If you don't clean your room today, you'll never get into college.' Why is this argument weak?

A. It is a Slippery Slope; one small action won't lead to that extreme result.

B. It is a Circle Argument because it repeats itself.

C. It is a Sound Argument based on school rules.

D. It is an inductive pattern based on many examples.