

Name: _____

Date: _____

Answer Key: Detective Kittens and the Case of the Logical Leap: 5th Grade Quiz

Students help solve a neighborhood mystery by separating evidence from guesses and spotting silly mistakes in cat-sized conversations.

1. If every cat in the neighborhood wears a bell, and Whiskers is a cat in the neighborhood, what must be true?

Answer: B) Whiskers wears a bell.

This is deductive reasoning. If the big rule applies to everyone, it must apply to Whiskers specifically.

2. True or False: If you see three students wearing red shirts today, you can be 100% certain that every student in the school is wearing a red shirt.

Answer: B) False

Seeing a small pattern (a few students) doesn't guarantee the pattern is true for the whole group.

3. Leo says, 'Either we play soccer or we sit inside and do nothing.' Since there are other choices like reading or tag, Leo is using a ____.

Answer: B) False Dilemma

A false dilemma happens when someone acts like there are only two choices when many more actually exist.

4. Maya tells her brother, 'You are too young to know which movie is good.' Which mistake is Maya making?

Answer: A) She is attacking the person instead of his argument.

This is an 'ad hominem' error, where someone ignores the facts and just attacks the person they are talking to.

5. True or False: To have a sound argument, your facts must be true AND your logic must make sense.

Answer: A) True

Logic is like a sandwich; you need good 'bread' (the logic) and good 'filling' (the facts) for it to be perfect.

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6. An argument is ____ if the conclusion **MUST be true because the starting facts are true.**

Answer: C) Valid

In logic, 'valid' means the structure of the argument works perfectly to reach a conclusion.

7. Sam says, 'I saw a squirrel eat a nut. Therefore, all squirrels only eat nuts.' What is wrong with Sam's reasoning?

Answer: B) His conclusion is based on too little evidence.

One observation isn't enough to make a rule for every squirrel in the world.

8. True or False: Reasoning is the process we use to draw conclusions from information we already have.

Answer: A) True

Reasoning is the 'thinking' part that connects what we know to what we decide.

9. If you say 'Since the playground was wet yesterday after it rained, it will probably be wet today if it rains,' you are using ____ reasoning.

Answer: C) Analogical

Analogical reasoning is when we compare two similar situations to guess what will happen.

10. Which of these is the best way to check if an argument is strong?

Answer: C) Check if the facts support the conclusion.

Critical thinking means looking at the evidence (facts) to see if it really proves the point being made.