Physics Video Analysis Proficiency Rubric

Newton's Laws, force analysis, and group collaboration

Beginning awareness of Newton's Laws and force concepts

- Submits work more than 3 days late, uses incorrect file formats
- Identifies basic forces with teacher support but struggles with free-body diagrams
- Omits most textbook references (page numbers, equation numbers)
- Participates inconsistently in group work, missing meetings

Works independently with solid conceptual understanding

- Submits on time with proper formatting and communicates about delays
- Creates accurate free-body diagrams, applies all three Newton's Laws, identifies action-reaction pairs
- Consistently cites textbook pages and equation numbers with complete step-by-step solutions
- Actively fulfills role responsibilities, coordinates effectively with team

Growing understanding with occasional guidance needed

- Submits 1–2 days late or requests last-minute extensions
- Applies Newton's Second Law in basic scenarios; creates simple free-body diagrams
- Includes some textbook references but misses equation numbers or page citations
- Contributes to group discussions, though coordination needs improvement

Sophisticated understanding with real-world applications

- Submits quality work ahead of deadlines with clear communication
- Synthesizes multiple force concepts for complex motion scenarios; evaluates alternative approaches
- Produces exceptionally detailed citations with context; creates professional diagrams
- Leads role coordination, facilitates peer understanding, ensures integrated delivery