Overall Expectations:

KIV.01 analyse technologies that apply concepts related to kinematics, and assess the technologies' social and environmental impact;
KIV.02 investigate, in qualitative and quantitative terms, uniform and non-uniform linear motion, and solve related problems;

Specific Expectations:

KI1.01 analyse, on the basis of research, a technology that applies concepts related to kinematics [IP, PR, AI, C];
KI2.01 use appropriate terminology related to kinematics, including, but not limited to: *time*, *distance*, *position*, *displacement*, *speed*, *velocity*, and *acceleration* [C];
KI2.02 analyse and interpret position-time, velocity- time, and acceleration-time graphs of motion in one dimension (e.g., use tangent slopes to create velocity-time graphs from position-time graphs and acceleration-time graphs from velocity-time graphs; use the area under the curve to create position-time graphs from velocity-time graphs and velocity-time graphs from acceleration-time graphs) [AI, C];
KI2.03 use a velocity-time graph for constant acceleration to derive the equation for average velocity and the equations for displacement, and solve simple problems in one dimension using these equations [AI];
KI2.04 conduct an inquiry into the uniform and non-uniform linear motion of an object [PR];
KI2.06 plan and conduct an inquiry into the motion of objects in one dimension, using vector diagrams and uniform acceleration equations [IP, PR, C];
KI2.07 solve problems involving uniform and non-uniform linear motion in one and two dimensions, using graphical analysis and algebraic equations [AI, C].