# Speed

How fast can I go? How far can I get? How long will it take me to get there?

# SAILS inquiry and assessment unit overview

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| **Name** | Speed |
| **Key content/concepts** | * Velocity, speed * Measurement (accuracy of measurements) |
| **Level** | * Lower second level * Upper second level |
| **Inquiry skills assessed** | * Planning investigations * Forming coherent arguments * Working collaboratively |
| **Assessment of scientific reasoning and scientific literacy** | * Scientific reasoning (collection of scientific data; identifying variables) |
| **Assessment methods** | * Classroom dialogue * Teacher observation * Peer-assessment * Student-devised materials (investigation report) |

Table 1: Proposed rubric for the assessment of planning investigations

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| --- | --- | --- | --- |
| **Inquiry skill** | **1** | **2** | **3** |
| **Plan an investigation to test a prediction** | The student suggests how an investigation might be designed, but not in detail. | The student suggests how an investigation might be designed, but the design is incomplete in some respect.  The design can, with some revisions, be used for systematic investigations. | The student plans an investigation where the design includes which variables to change and which to be held constant, in which order to perform different parts of the investigation and which equipment is to be used. |
| **Design and conduct an investigation** | The student carries out an investigation from the beginning to end, but needs constant support by the teacher, peers or detailed instructions.  The student uses equipment, but may handle equipment in a way that is not always safe.  The student sporadically documents the investigation in writing and with pictures. | The student carries out an investigation from the beginning to end, but sometimes needs support by the teacher, peers or detailed instructions.  The student uses equipment safely.  The student documents the investigation in writing and with pictures, but the documentation may be incomplete or lack in accuracy. | The student carries out an investigation from the beginning to end, either alone or as an active participant in a group.  The student uses equipment safely and appropriately.  The student accurately documents the investigation in writing and with pictures. |
| **Interpret results and draw conclusions** | The student draws conclusions, but only uses a limited amount of the results from the investigation.  The student compares the results from the investigation with the hypothesis. | The student draws conclusions based on the results from the investigation.  The student compares the results from the investigation with the hypothesis. | The student draws conclusions based on the results from the investigation.  The student relates the conclusions to scientific concepts (or possible models and theories).  The student compares the results from the investigation with the hypothesis.  The student reasons about different interpretations of the results. |