

Described scale for IBT Science	
9	Identify factors affecting experimental outcomes, and provide likely explanations for unexpected results in sophisticated experiments. Use complex diagrams, graphs and tables to interpret scientific data. Show an awareness of conservation of energy in increasingly complex interactions. Understand the role of natural selection in developing species diversity. Demonstrate an understanding of how electrical currents flow through circuits.
8	Have a well-developed understanding of the enquiry strategies used in investigations. Understand relationship between independent and dependent variables. Use Punnet squares to demonstrate the transmission of heritable characteristics from one generation to the next. Have a developed understanding of plate tectonics and the formation of different rock types. Demonstrate an intuitive understanding of Newton's three laws. Identify factors driving environmental adaptations in plants. Demonstrate a knowledge of key features of the periodic table. Use scientific formulae to calculate expected results.
7	Outline reasons for choosing a particular experimental method or enquiry strategy. Use evidence to identify adaptations that assist in species survival. Understand how 'greenhouse' heating of the Earth's atmosphere takes place, and understand the changing positions of the planets in the solar system. Have an understanding of the geology and forces within the Earth's crust. Have a sophisticated understanding of the laws of reflection and refraction.
6	Identify conditions that must be invariable in a scientific experiment. Predict changes in plant and animal populations as habitats change. Understand the way nutrients cycle in ecosystems. Understand the difference between elements and compounds. Predict the effect of unbalanced forces on an object. Know the basic relationships of bodies in the solar system. Understand the cause of seasons and eclipses. Identify energy transformations in many common contexts. Recognise some of the factors inherent in reflection and refraction of light.
5	Understand the need for replication and controls in investigations, and draw conclusions based on observational data. Understand the water and carbon cycles. Show an awareness of dependence between components in ecosystems and adaptations for survival. Recognise differences in plant and animal cells. Understand the concept of conservation of mass in simple reactions. Identify phases of the Moon and have a basic understanding of the force of gravity. Identify the properties of conductors and insulators. Understand the formation of fossils.
4	Interpret simple tabular data to make inferences. Indicate the conditions for changes in physical states of matter. Explain the relationships involved in food webs, and recognise life cycle stages in insects. Understand the conditions for current flow in simple circuits. Show awareness of safety issues in the use of laboratory equipment.
3	Search for specific data in column graphs. Understand that heat can be transferred by conduction. Follow a sequence in a food chain and understand the role of insects in plant reproduction. Show awareness of some of the elementary properties of light e.g. shadow formation, reflection from surfaces. Show a basic awareness of the relationships between Earth, Moon and Sun
2	Identify the characteristics of living things, and group objects on the basis of observable features. Predict outcomes for plant growth when given a very simple set of conditions. Distinguish between naturally occurring objects and artificial ones. Recognise changes of physical state and obvious sources of energy.
1	Sometimes extract limited information from simple column graphs and read the scales of simple instruments. Visually identify the components of objects and of living things and make obvious comparisons. Apply basic and limited scientific knowledge in very familiar situations.

A student at the top of a band is likely to have demonstrated all of the skills in that band, and all of the skills in the bands below. A student in the middle of a band is likely to have demonstrated half of the skills in that band, and all of the skills in the bands below.