
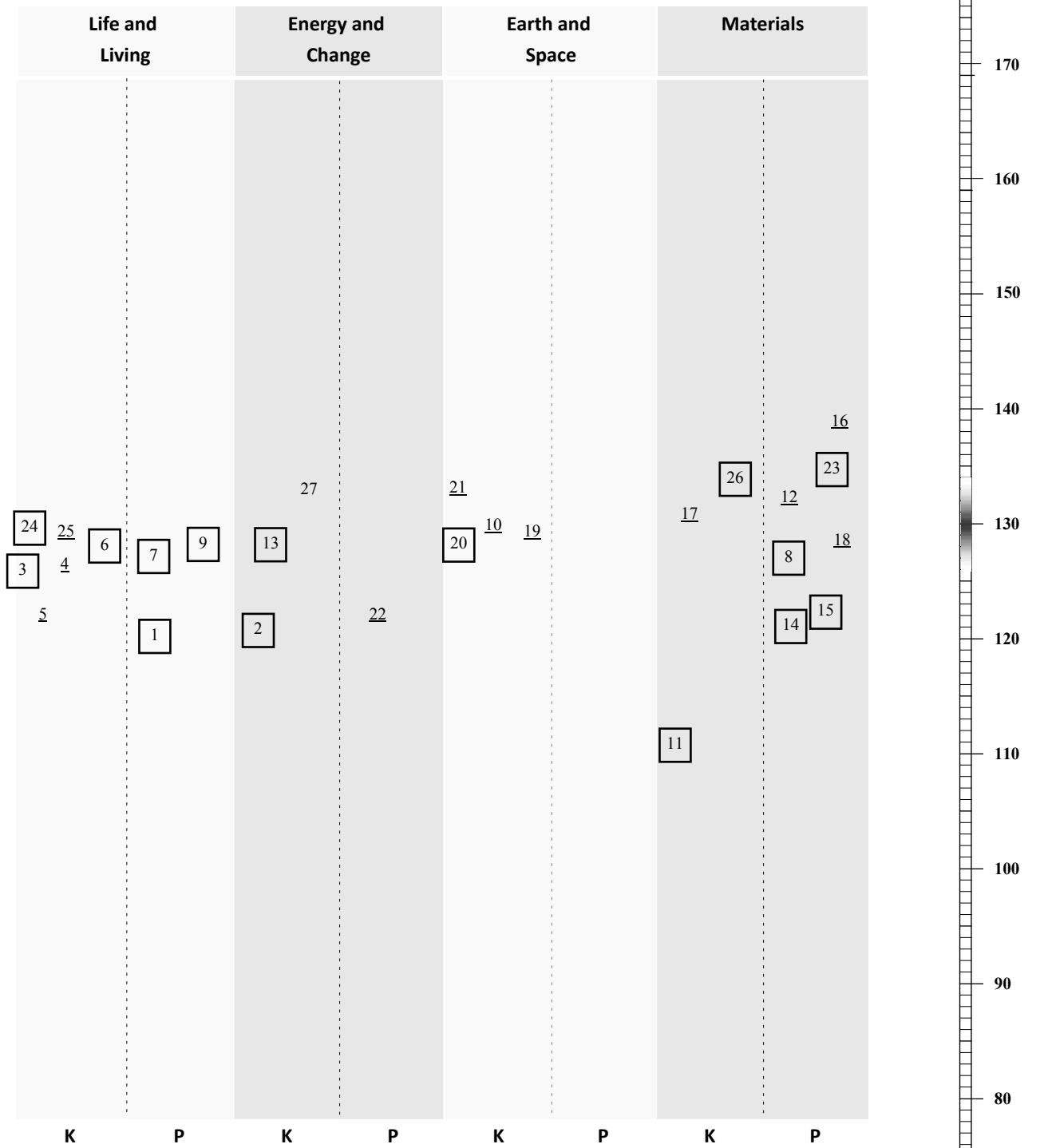


Key		 PATScience scale score with error range
1	correct	
<u>1</u>	incorrect	
1	not attempted	
K	Concepts, knowledge	
P	Process, method	

Test Booklet: 7
Year Level: 9
PATScience Score: 130
Percentile Rank on National Norms: 62
Stanine on National Norms: 6



This graph shows the relative difficulty of the questions in the test. The questions are mapped by their scale scores, shown on the vertical ruler. The easiest questions are at the bottom and the most difficult questions are at the top. The greater the vertical distance between the questions the greater the difference in difficulty.

PATScience Test Booklet 7 - Sample School

Kaeden Banderas

PATScience Score: 130

A general description of the skills and knowledge areas pertinent to the PATScience tests are listed here. A student scoring in a particular band can be expected to have some proficiency in that band and be progressively more proficient with the science skills and concepts outlined in lower bands.

Band	Descriptor
Above 135 Patsci	Students scoring in this band can explain energy changes in a variety of contexts; construct qualitative explanations of relationships between force, mass and movement; use models to generate explanations of complex events; understand the properties of various types of experimental equipment and extract relevant data from complex tables.
130-134	Students scoring in this band can explain the properties of materials in terms of atomic and molecular models; balance chemical equations for a number of reaction types; understand the effects of electrostatic forces; recognise the complex relationships and the effect of change in food webs; discuss the origin and evolution of the universe; formulate hypotheses, plan investigations, and assess the relevance and reliability of data.
125-129	Students scoring in this band can understand the properties of elementary electrical circuits; recognise the relationship between body systems; understand how forces can be balanced; interpret, and predict from, diagrammatic and graphical information; recognise the variability in observations; draw evidence-based conclusions; understand controls in experiments.
120-124	Students scoring in this band can describe the structure, function and organisation of cells and the function of body systems of cells; explain the benefits and dangers of micro-organisms; describe and explain the features of simple machines and appliances used in everyday contexts and the forces acting and energy transformations involved; use simple models of phenomena in explanation, including the particle model; identify the features of fair testing; extract data from tables; use equipment accurately; assess the adequacy of data; evaluate experimental designs.
115-119	Students scoring in this band can identify the characteristics of physical and chemical changes; identify some properties of mixtures and solutions; use energy change, force size and direction in explanation; explain relationships in simple food chains; understand adaptation as a survival mechanism; recognise the impact of change on ecosystems; explain the construction of classification systems from observed characteristics; explain the relationships (including gravitational) between bodies in the Solar System; interpret keys; design simple experiments and comment on the reliability and accuracy of their data, along with the match between hypothesis and conclusion, and make predictions based on their investigations; measure accurately; safely use a range of instruments and procedures in experiments they design.
110-114	Students scoring in this band can indicate the requirements of living things for reproduction and growth; identify thermal transmission and insulation properties of materials; describe the effects of rotation on Earth, Moon and Sun; describe the composition and structure of the Earth and its atmosphere; explain how landscape features can be changed by environmental, geological and human factors; describe changes in motion in terms of the forces present; recognise some effects of human actions on their surroundings; plan and conduct simple experiments; draw conclusions from data and evaluate their experiments; explain simple models of phenomena; understand the purpose of controlling some variables.
105-109	Students scoring in this band can explain how identifiable features of animals can affect survival; explain the relationships involved in food chains; recognise the transformation of energy in everyday contexts, including simple electrical circuits; identify the actions of forces (pushes and pulls) and energy sources and receivers in experiential situations; create sound with vibrating objects; understand and use a number of scientific terms; suggest ways of testing in simple contexts; use simple measuring equipment.
100-104	Students scoring in this band can group objects on the basis of simple observable criteria; show an awareness of the differences between materials; identify some effects of forces and energy sources on objects in their personal environment; group and describe structural features of living things; identify variables in experiments and show an awareness of fair testing; draw conclusions from observations.
90-99	Students scoring in this band can identify some effects of forces and energy sources on objects in their personal environment; show an awareness of the obvious differences between plants and animals and group accordingly.
Below 90	Students scoring in this band can make inferences on the basis of simple observable criteria and recognise features of living things that help in their survival.