TAPS Plan for Focused Assessment of Science

Topic: Animals including humans	Year 6-7 Transition Age 10-12	Title: Reaction catches

Working scientifically **Plan:** ask questions and develop a line of enquiry	**Concept context** Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function

Assessment Focus

- Can children ask questions based on their observations and prior knowledge?
- Can children develop an enquiry to answer their question?

Activity *Today we will be neuroscientists*

Demonstrate reaction catch test in pairs with a 30cm ruler. Child A holds the ruler ready to drop, Child B positions hand at bottom of ruler ready to catch. Child A drops without warning. Child B records their 'catch distance'.
Discuss factors which could affect their reaction catches e.g. practice, handedness, seated/standing, length of arm, distraction (counting/reciting alphabet at same time) etc.
Pairs develop a range of questions and select one to investigate. Make predictions and carry out an investigation to answer their question. If time, they explore further questions.

Adapting the teaching

Support: Provide a question starter: 'What will happen to the reaction distance if….? Use a ruler with only cm markings. Provide recording format.

Extension: Compare with different groups. Test more people.

Other ideas: Explore different ways to test reaction times e.g. online reaction testers, touch numbers or dice in order, tap light or sound emitting device.
Linked scientist: Santiago Ramón y Cajal, founder of modern neuroscience.

Questions to support discussion

- What could affect the catching time?
- What questions could we ask?
- Which question have you selected to investigate?
- What are you doing to answer your question?
- How are you making a fair comparison?

Assessment indicators

Not yet met: Pupils put forward a range of ideas, but find it difficult to focus on one line of enquiry.

Meeting: Pupils generate a range of ideas and questions. They systematically investigate their chosen question. They collect sufficient data to answer their question before moving on to other questions.

Possible ways to go further: Pupils build on previous results to develop a coherent line of enquiry. They recognise the need to be hesitant when drawing conclusions to answer their questions, due to the small sample and many possible sources of error in the method.