

**Evaluation rubric.**

	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>
<b>Distinguishing aspects of Ernest Rutherford's atomic model</b>	Student notes that Rutherford proposed a nuclear atomic model that suggested that positively charged particles are located in the center of the atom, introduced the nucleus concept, and discovered that the atom is mostly empty space.	Student notes that Rutherford proposed a nuclear atomic model that suggested that positively charged particles are located in the center of the atom, and introduced the nucleus concept.	Student notes that Rutherford proposed a nuclear atomic model.	Student does not note distinguishing aspects of Rutherford's model.
<b>Link to nature of science (NOS) aspects</b>	Student correctly relates Rutherford's study to NOS aspects, namely inference, observation, empirical basis, and tentativeness.	Student relates Rutherford's study to only one or two NOS aspects.	Student relates NOS aspects to Rutherford's study; however, he or she makes some incorrect links between Rutherford's study and NOS.	Student does not relate Rutherford's study to NOS aspects.
<b>Comparison of Rutherford's atomic model with John Dalton's and J.J. Thompson's atomic models</b>	Student compares the three atomic models in terms of parts of the atom, subatomic particles, and volume of the atom and nucleus.	Student compares the three atomic models in terms of one or two of the points, namely parts of the atom, subatomic particles, and volume of the atom and nucleus.	Student compares the three atomic models; however, the comparison includes some incorrect information.	Student does not compare the models.