

Draft Junior Cycle Science Statements

The following pages contain draft JCSP statements developed with input from a number of practicing Science teachers in JCSP schools. They are offered as one possible model that teachers may use to approach the teaching, learning and assessment of the learning outcomes in the Curriculum Specification for Junior Cycle Science. They will be adjusted over time based on feedback from teachers in JCSP schools.

The Science specification may be accessed in full at www.curriculumonline.ie. In addition, professional supports for teaching Junior Cycle Science may be accessed through the Science section of the Junior Cycle for Teachers (JCT) website, at www.jct.ie/science/science

It is important to note that the statements below offer a sample approach for the creation of Junior Cycle Science statements. They have been drafted from the unifying strand, 'The Nature of Science' strand. They do not cover all of the learning outcomes which are expected to be taught in the new Junior Cycle course. It is envisaged that students would be given opportunities to experience rich learning through engaging with aspects of the Nature of Science learning outcomes in all of their classes.

Teachers are encouraged to engage with these statements as a possible approach to creating Science statements for their own students. Students' teachers are best placed to develop statements which will support their own students in their own particular class and school context.

December 2017

I can investigate in Science

Science

Statement code no. SJC1

Student:

Class:

I can:

I have begun	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	I am working on this	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	I can	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
This has been demonstrated by my ability to:					
1. Design and carry out an investigation using the scientific method	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Understand that a scientist can investigate through experiments and research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Understand that a scientist should ask a question first before they commence their work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Make a hypothesis (a temporary scientific explanation) that can be tested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Recognise that testing my hypothesis involves a number of steps, through researching, conducting an experiment, calculating, analysing, evaluating reporting and concluding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Explain that there are different ways of testing the same hypothesis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Design and carry out an investigation to test my hypothesis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Indicate the risks involved in carrying out my investigation and describe the steps that can be taken to reduce the risks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Listen to the views of other group members when planning out an investigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Follow the safety procedures necessary to avoid any incidents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Use the required equipment in a correct manner in the science laboratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Reflecting on my learning...

One thing I did well...

One thing that I might improve...

I really enjoyed.....because...

I can collect Data

Science

Statement code no. SJC2

Student:

Class:

I can:

I have begun	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	I am working on this	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	I can	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
This has been demonstrated by my ability to:					
1. Understand that all science involves evidence					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2. Understand that I must be able to test my hypothesis					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3. Describe how I collected data in a reliable and accurate manner when investigating by experiment					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
4. Create a research question from a topic I am researching					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5. Reference correctly the work carried out by others					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6. State the difference between good and bad sources of information					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7. Use my skills to find trustworthy information from many sources					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
8. Use a variety of sources such as internet, newspapers, scientific journals, books, etc. to find trustworthy information					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
9. Measure the quantity (or amount) of something and the quality (or kind) of something in my investigations and record these as data					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
10. Record all results accurately					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
11. Record results using different methods					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
12. Record my data in a table					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Reflecting on my learning...

One thing I did well...

One thing that I might improve...

I really enjoyed.....because...

I can communicate in Science

Science

Statement code no. SJC3

Student:

Class:

I can:

I have begun | I am working on this | I can

This has been demonstrated by my ability to:

1. Draw a graph from the data provided
2. Carry out calculations
3. Use the correct units in my answers
4. Organise my data and present my results in a way that is easy to understand
5. Explain what is meant by the term outlier on a graph
6. See a pattern/trend in a graph
7. Check for reliable sources of data within media
8. Present my research investigation with keywords
9. Explain my findings

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Reflecting on my learning...

One thing I did well...

One thing that I might improve...

I really enjoyed.....because...

I can demonstrate knowledge and understanding

Science

Statement code no. SJC4

Student:

Class:

I can:

I have begun	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	I am working on this	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	I can	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
This has been demonstrated by my ability to:					
1. List the strengths of an investigation					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2. Recognise what I need to change in order to improve my investigation					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3. Explain how reliable and accurate my results are					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
4. Answer questions about my investigation					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5. Go over my results and make a conclusion					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6. Explain why unusual results such as outliers occur					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7. Decide if my hypothesis has/has not been supported in the investigation					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
8. Understand the work of a scientist					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
9. Understand that science research and scientific discovery help make the world around me better					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
10. Form an opinion based on evidence from my research					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
11. Give research evidence and explain how and why it is suitable					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
12. Make a connection between the conclusions of my investigation and the world around me					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
13. Give suitable reasons, based on evidence, to support/justify my opinion					<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

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