

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

Reflecting on my learning...

One thing I did well...

One thing that I might improve...

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

Area of Experience: Science

Science

At Junior Certificate level the student can:

- | | |
|---|--|
| 1 The Non-Living Environment | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Describe the characteristics and structures of different materials and explain how they change under different conditions | |
| 2 The Living Environment | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Describe a range of plant and animal life and explain their connection with the wider environment | |
| 3 The Human Body | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Describe some of the major systems of the human body and explain their links with health | |
| 4 Energy and Control | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Name sources of energy and describe ways in which energy can be transferred and used | |
| 5 Human Biology | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Describe some of the major systems of the human body and have an understanding of food and health | |
| 6 Physics 1 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Understand the concept of measurement of Force, Energy and Heat | |
| 7 Chemistry 1 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Recognise different substances and carry out separation techniques | |
| 8 Chemistry 2 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Understand some of the key principles of the chemistry of air and water | |
| 9 Plant Biology | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Understand and identify the structure, functions and processes of a typical flowering plant | |
| 10 Physics 2 | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| Understand the concepts of magnetism, electrical conduction and the main properties of light | |

Work begun ☒☐☐ | Work in progress ☒☒☐ | Work completed ☒☒☒

Area of Experience: Science

Science

At Junior Certificate level I can:

11 Chemistry 3

Recognise different substances and carry out separation techniques

☐☐☐

12. Chemistry 4

Recognise different substances and carry out separation techniques

☐☐☐

13. Chemistry 5

Recognise different substances and carry out separation techniques

☐☐☐

14 Environmental Biology

Describe a range of plant and animal life and explain their connection with the wider environment

☐☐☐

15 Human Biology 2

Describe some of the major systems of the human body and explain their links with health

☐☐☐

16 Human Biology 3

Describe some of the major systems of the human body and explain their links with health

☐☐☐

17 Human Biology 4

Describe some of the major systems of the human body and explain their links with health

☐☐☐

18 Plant Biology

Understand and identify the structure, functions and processes of a typical flowering plant

☐☐☐

19 Physics 3

Understand the concepts of Energy and Energy Conversions

☐☐☐

20 Physics 4

Understand the concepts of Heat, Light and Sound

☐☐☐

21 Physics 5

Understand the concepts of Magnetism , Electricity and Electronics

☐☐☐

Work begun

☒☐☐

Work in progress

☒☒☐

Work completed

☒☒☒

The Non-Living Environment

Science

Statement Code no: 1

Student:

Class:

At Junior Certificate level the student can:

Describe the characteristics and structures of different materials and explain how they change under different conditions

Date Commenced: / /

Date Awarded: / /

Learning Targets - This has been demonstrated by your ability to:

- | | |
|--|--|
| 1 Follow instructions promptly and carefully | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Do an experiment to change ice to water, water to ice, water to steam and steam to water | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 Draw a labelled diagram of a thermometer. Use a thermometer to measure and record | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Do an experiment to find suitable liquids which will dissolve different solids | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Separate mixtures using filtration, evaporation and distillation | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Name some common acids, alkalis and neutral substances and use simple indicators to show the difference between them | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Place some household liquids correctly on a pH chart | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Name six different metals. Describe them and say how each one is used in everyday life | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 Draw the fire triangle. Name the different fire types and say how to extinguish each type. List the safety rules for dealing with fire | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 Draw and label a diagram of the water cycle. Describe how water is treated to make it safe for drinking | |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education.

Work begun ☒ ☐ ☐ | Work in progress ☒ ☒ ☐ | Work completed ☒ ☒ ☒

The Living Environment

Science

Statement Code no: 2

Student:

Class:

At Junior Certificate level the student can:

Describe a range of plant and animal life and explain their connection with the wider environment

Date Commenced: 00/00/00

Date Awarded: 00/00/00

Learning Targets: Select any 10 objectives to work on

- This has been demonstrated by your ability to:

- | | | |
|----|--|--|
| 1 | Name and recognise the leaves of five common Irish trees and five common flowers | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 | Draw and label the parts on a simple plant: stem, root, leaf and flower | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 | Describe the functions of a stem, root, leaf and flower | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 | Explain how leaves make food and discuss the importance of this | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 | Germinate some seeds and describe what happens during the germination | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 | Name and identify five common creatures from any two of the following groups: birds, insects, domestic animals and wild animals | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 | Name the different types of habitat of three different Irish plants and animals, giving examples of each | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 | Explain how a plant or animal is adapted to its habitat | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 | Name some of the plants and animals which provide food for humans and are important in agriculture, business, medicine and leisure | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 | Explain the idea of food chains, giving examples of where different animals and plants fit in | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 11 | List and give the function of different soil parts. Do two simple experiments on soil | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 12 | Suggest ways in which humans can improve or harm the environment and suggest some ways of protecting it | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 13 | Name the three types of micro-organism. State the main uses and/or harmful effects of bacteria, viruses and fungi to living things | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 14 | Discuss risks and benefits of vaccination on small babies | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 15 | Visit a habitat, make observations and measurements, collect samples and report your findings | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 16 | Use the microscope correctly to examine a number of samples | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 17 | Do one experiment to show how micro-organisms are used in the making of foods such as: yoghurt, beer, bread, cheese etc. | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education.

Work begun ☒ ☐ ☐ | Work in progress ☒ ☒ ☐ | Work completed ☒ ☒ ☒

The Human Body

Science

Statement Code no: 3

Student:

Class:

At Junior Certificate level the student can:

Describe some of the major systems of the human body and explain their links with health

Date Commenced: / /

Date Awarded: / /

Learning Targets - This has been demonstrated by your ability to:

- 1 Measure one of the following: heartbeat, lung capacity, body temperature, pulse before and after activity; or show the presence of carbon dioxide in exhaled breath ☐ ☐ ☐
- 2 Name each of the five sense organs and give their functions ☐ ☐ ☐
- 3 Describe how the skeleton and muscles support, protect and move the body ☐ ☐ ☐
- 4 Understand the importance of the breathing system, its parts and their functions ☐ ☐ ☐
- 5 Name the major parts of the breathing system ☐ ☐ ☐
- 6 Label a diagram of the heart and say how it works ☐ ☐ ☐
- 7 Explain the functions of blood and blood vessels ☐ ☐ ☐
- 8 Label a diagram of the kidneys and explain how they work ☐ ☐ ☐
- 9 Explain what a balanced diet is and its importance for physical health ☐ ☐ ☐
- 10 Name and list some good sources of the five food types ☐ ☐ ☐
- 11 Explain the effects of lifestyle on physical health (smoking, drugs etc.) ☐ ☐ ☐
- 12 Discuss risks and benefits of vaccination on small babies against diseases such as polio, whooping cough, measles etc. ☐ ☐ ☐

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education.

Work begun ☒ ☐ ☐ | Work in progress ☒ ☒ ☐ | Work completed ☒ ☒ ☒

Energy and Control

Science

Statement Code no: 4

Student:

Class:

At Junior Certificate level the student can:

Name sources of energy and describe ways in which energy can be transferred and used

Date Commenced: / /

Date Awarded: / /

Learning Targets - This has been demonstrated by your ability to:

- | | | |
|----|---|--|
| 1 | Explain the difference between renewable and non-renewable sources of energy. Give three examples of each | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 | Identify ways in which energy is used in the home, explain how they work and say which (if any) is used in your home for heating | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 | Name three ways in which heat can be transferred, explain how they work and give examples of each | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 | Suggest ways of conserving energy in the home. Describe the different methods of using insulation | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 | Study a copy of an ESB bill and show how to calculate the total bill amount | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 | Set a simple circuit showing the flow of electricity | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 | Wire a plug. Make a labelled sketch of the inside of a wired plug showing the correct colours of wire | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 | Name two metals that are attracted by magnets and two that are not. Describe what happens when two magnets are brought near each other. Draw a compass and explain how it works | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 | Do an experiment to show that light travels in a straight line | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 | Recognise and understand the dangers shown by the basic hazard warning symbols | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 11 | Handle safely all equipment and substances | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education

Work begun ☒ ☐ ☐ | Work in progress ☒ ☒ ☐ | Work completed ☒ ☒ ☒

Human Biology

Science

Statement Code no: 5

Student:

Class:

At Junior Certificate level the student can:

Describe some of the major systems of the human body and have an understanding of food and health

Date Commenced: / /

Date Awarded: / /

Learning Targets - This has been demonstrated by your ability to:

- | | | |
|----|--|--|
| 1 | Recall that a balanced diet has six nutrients: carbohydrates, fats, proteins, vitamins, minerals and water | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 | Describe a food pyramid and give examples of each type of food recommended in a balanced diet | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 | Carry out food tests for starch, sugar and fat | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 | Read and interpret the energy values indicated on food product labels and compare the energy content per 100g of a number of foods | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 | Identify and locate the major parts of the digestive system including the mouth, food pipe, stomach, small intestine, large intestine and know their functions | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 | Identify molars, premolars, canines and incisors and describe their functions | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 | Investigate the action of the enzyme in saliva on starch | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 | Understand the release of energy from food | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 | Describe the function and composition of blood | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 | Demonstrate the effect of exercise and rest on pulse and breathing rate and understand that a balance of each promotes good health | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 11 | Recall that the average pulse rate for an adult at rest is 70 b.p.m., and explain why exercise results in increased pulse and breathing rates | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 12 | Recall that the normal temperature of the human body is 37 degrees centigrade, and understand that illness may cause a change in body temperature | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education.

Work begun ☒ ☐ ☐ | Work in progress ☒ ☒ ☐ | Work completed ☒ ☒ ☒

Physics 1

Science

Statement Code no: 6

Student:

Class:

At Junior Certificate level the student can:

Understand the concept of measurement
of Force, Energy and Heat

Date Commenced: / /

Date Awarded: / /

Learning Targets - This has been demonstrated by your ability to:

- | | | |
|----|--|--|
| 1 | Measure length, area, mass and time using the correct instruments | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 | Measure the volume of regular and irregular objects | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 | Perform an experiment to show that the air has mass and occupies space | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 | Investigate examples of friction and the effects of lubricants using practical everyday examples | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 | Name six sources of energy | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 | Classify sources of energy into renewable and non-renewable | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 | Investigate experimentally the expansion of solids, liquids and gases when heated | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 | Use a thermometer to measure and record different temperatures | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 | Carry out experiments that involve changes of state: from solid to liquid and liquid to solid, and from liquid to gas and gas to liquid. | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 | Identify six examples of energy conversion from everyday experience | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education.

Work begun ☒ ☐ ☐ | Work in progress ☒ ☒ ☐ | Work completed ☒ ☒ ☒

Chemistry 1

Science

Statement Code no: 7

Student:

Class:

At Junior Certificate level the student can:

Recognise different substances and carry out separation techniques

Date Commenced: / /

Date Awarded: / /

Learning Targets - This has been demonstrated by your ability to:

- | | | |
|----|--|--|
| 1 | Follow instructions with accuracy and care | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 | Perform an experiment to demonstrate knowledge of the three states of matter | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 | Perform an experiment to show the solubility of substances in water | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 | Separate mixtures using filtration | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 | Separate mixtures using evaporation | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 | Separate mixtures using distillation | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 | Separate colours using paper chromatography | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 | Grow crystals using alum or copper sulphate | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 | Use litmus or a universal indicator to test a variety of solutions and classify these as acidic, base or neutral | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 | Investigate the pH of a variety of materials using the pH scale | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education.

Work begun ☒ ☐ ☐ | Work in progress ☒ ☒ ☐ | Work completed ☒ ☒ ☒

Chemistry 2

Science

Statement Code no: 8

Student:

Class:

At Junior Certificate level the student can:

Understand some of the key principles of the chemistry of air and water

Date Commenced: / /

Date Awarded: / /

Learning Targets - This has been demonstrated by your ability to:

- | | |
|--|--|
| 1 Understand that air is a mixture of gases and show some knowledge of it's make-up | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Demonstrate and describe what happens when (i) a wooden splint and (ii) a piece of magnesium are burned in air | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 Investigate the ability of oxygen to support combustion | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Describe how a sample of oxygen is prepared, naming chemicals and apparatus used | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Describe how a sample of carbon dioxide is prepared, naming chemicals and apparatus used | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Carry out simple tests to show the presence of carbon dioxide using limewater or candles | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Test a sample of water for hardness | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Test a sample to show the presence of dissolved substances in water | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 Draw the water cycle and describe the key stages in the treatment of water to make it suitable for drinking | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 Carry out an experiment to show that oxygen and water are required for rusting | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education.

Work begun ☒ ☐ ☐ | Work in progress ☒ ☒ ☐ | Work completed ☒ ☒ ☒

Plant Biology

Science

Statement Code no: 9

Student:

Class:

At Junior Certificate level the student can:

Understand and identify the structure, functions and processes of a typical flowering plant

Date Commenced: / /

Date Awarded: / /

Learning Targets - This has been demonstrated by your ability to:

- | | |
|---|--|
| 1 Draw one example of a plant cell, identifying the nucleus, cytoplasm and cell wall and indicate the position of the cell membrane | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Identify and understand the functions of the main parts of a microscope and use it to examine a plant cell | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 Prepare a slide from plant tissue and sketch the cells under magnification | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Identify the main parts of a typical flowering plant and their functions; the root, stem, leaf and flower | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Locate and identify the main parts of the flower: sepals, petals, carpel and stamen | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Understand how to use a simple key to identify plants | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Describe, using a word equation, how plants make their own food through photosynthesis | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Show that starch is produced by a photosynthesising plant | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 Investigate the growth response of plants to light | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 Investigate the conditions necessary for germination | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education.

Work begun ☒ ☐ ☐ | Work in progress ☒ ☒ ☐ | Work completed ☒ ☒ ☒

Physics 2

Science

Statement Code no: 10

Student:

Class:

At Junior Certificate level the student can:

Understand the concepts of magnetism, electrical conduction and the main properties of light

Date Commenced: / /

Date Awarded: / /

Learning Targets - This has been demonstrated by your ability to:

- | | | |
|----|--|--|
| 1 | Identify north and south poles of a magnet by simple experiments | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 | Carry out experiments to show attraction and repulsion between magnets | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 | Test a variety of materials for magnetism | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 | Show understanding of the term magnetic field and plot the magnetic field of a bar magnet | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 | Test electrical conduction in a variety of materials, and classify each material as a conductor or an insulator | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 | Describe how to wire a plug correctly and explain the safety role of a fuse or circuit breaker in domestic electric circuits | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 | Understand that light is a form of energy, which can be converted to other forms of energy | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 | Show that light travels in straight lines and explain how shadows are formed | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 | Investigate the reflection of light by plane mirrors | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 | Demonstrate and explain the operation of a simple periscope | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 11 | Understand that white light is made up of different colours, by producing a spectrum of white light using appropriate apparatus and list the colours of the spectrum | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education.

Work begun ☒ ☐ ☐ | Work in progress ☒ ☒ ☐ | Work completed ☒ ☒ ☒

Chemistry 3

Science

Statement code no. 11

Student:

Class:

At Junior Certificate level I can:

Apply my knowledge of substances

Date Commenced:

Date Awarded:

Learning Targets I can...

- | | |
|---|--|
| 1 Name the 3 states of matter | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Perform simple experiments to investigate changes of state | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 Separate mixtures using at least 3 of the following techniques
Filtration
Evaporation
Distillation
Chromatography | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Grow crystals using alum or copper sulphate | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Draw a solubility curve | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Classify materials as elements or compounds using the periodic table | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Use the periodic table to identify metals and non-metals | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 List two properties of a metal and of a non-metal | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 Investigate the conditions necessary for rusting and prevention of rusting | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 Name two alloys and give one use for each | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education, Maths

Work begun



Work in progress



Work completed



Chemistry 4

Science

Statement code no. 12

Student:

Class:

At Junior Certificate level I can:

Apply my knowledge of the applications of Chemistry

Date Commenced:

Date Awarded:

Learning Targets I can...

- | | |
|---|--|
| 1 Test solutions and classify these as acidic, basic or neutral | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Investigate the pH of a variety of materials using a pH indicator | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 State the names and formulae of three laboratory strong acids and bases | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Carry out an experiment to show that salt and water are produced when an acid neutralises a base | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Name the compounds that cause hardness in water and outline a simple test for hardness in water | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Describe the process of water treatment and give a reason for each step | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Recall the formula for water and investigate this using electrolysis | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Draw the structure of an atom | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 Complete a table describing protons, neutrons and electrons under the following headings: charge, location and mass | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 Give two differences between ionic and covalent bonding | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education, Maths

Work begun



Work in progress



Work completed



Chemistry 5

Science

Statement code no. 13

Student:

Class:

At Junior Certificate level I can:

Apply my knowledge of Atmosphere and Gases

Date Commenced:

Date Awarded:

Learning Targets I can...

- | | |
|--|--|
| 1 Name the different gases present in air | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Show that one fifth of the air is made up of oxygen | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 Prepare a sample of oxygen and draw a labelled diagram of the test for Oxygen using a glowing splint | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Prepare a sample of Carbon Dioxide and draw a labelled diagram of the process | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Test for Carbon Dioxide using limewater | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Show that CO ₂ does not support combustion | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Name 2 fossil fuels and name two products of burning fossil fuels | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Describe the effect of acid rain | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 Describe two advantages and two disadvantages of non-biodegradable plastics | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education, Maths

Work begun



Work in progress



Work completed



Environmental Biology

Science

Statement code no. 14

Student:

Class:

At Junior Certificate level I can:

Apply my knowledge of Environmental Biology

Date Commenced:

Date Awarded:

Learning Targets I can...

- | | |
|---|--|
| 1 List the seven characteristics of living things | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Draw a labelled diagram of an animal cell and a plant cell as seen under the light microscope | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 Identify the main parts of a microscope and give the function of each part | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Prepare a slide from plant tissue and draw a sketch of the cells under magnification | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Use a simple key to identify plants and animals | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Use a quadrat to estimate the frequency of a named plant in a habitat | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 List three pieces of equipment used to collect small animals /insects. Draw a sketch of each piece and describe briefly, how each can be used | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Identify a producer, a consumer and a decomposer in a food chain | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 Investigate the presence of micro-organisms in soil and air | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 Give one use of biotechnology in industry and medicine | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education, Maths

Work begun



Work in progress



Work completed



Human Biology 2

Science

Statement code no. 15

Student:

Class:

At Junior Certificate level I can:

Apply my knowledge of Food Digestion and Excretion

Date Commenced:

Date Awarded:

Learning Targets I can...

- | | |
|---|--|
| 1 Identify three foods that are a good source of each of the following: carbohydrate, fat and protein | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Carry out tests for fat, reducing glucose, starch and protein | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 Use the food pyramid as a guide to a balanced diet | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Read the energy values of food levels and compare the energy content Per 100g of a number of foods | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Investigate the simple conversion of chemical energy in food to heat energy | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Identify and label the major parts of the digestive system and give a function to each | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Identify and give the function of incisors, canines, premolars and molars | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Investigate the action of amylase on starch | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 Explain excretion. List the main organs and products of excretion | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 Label the major parts of the urinary system on a diagram and give the functions of each part | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education, Maths

Work begun



Work in progress



Work completed



Human Biology 3

Science

Statement code no. 16

Student:

Class:

At Junior Certificate level I can:

Apply my knowledge of Breathing , Respiration and Circulation

Date Commenced:

Date Awarded:

Learning Targets I can...

- | | |
|--|--|
| 1 Label the major parts of the breathing system | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Describe the exchange of gases between the lungs and the blood | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 Carry out an experiment to compare the amount of carbon dioxide in inhaled and exhaled air | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Give a word equation for aerobic respiration | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Name four parts of the blood and give a function of each | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Label and give the function of the blood vessels carrying blood to and from the heart | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Name the parts of the heart and explain the function of each part | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Describe one cause of heart disease and one way of preventing it | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 Recall the average pulse rate for an adult at rest | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 Investigate the effect of exercise on pulse rate and /or breathing rate | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education, Maths

Work begun



Work in progress



Work completed



Human Biology 4

Science

Statement code no. 17

Student:

Class:

At Junior Certificate level I can:

Apply my knowledge of Movement, Sensitivity,
Reproduction and Genetics

Date Commenced:

Date Awarded:

Learning Targets I can...

- | | |
|---|--|
| 1 List the functions of the skeleton | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Identify and locate the major bones of the skeleton: the skull, vertebrae, ribs, collar bone, shoulder blade and pelvis | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 Name the three types of joint and describe the type of movement they allow | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 List the five senses and name the organs associated with each | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Label a diagram of the human eye and give a function of each part | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Give one difference between a sensory nerve and a motor nerve | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Label the main parts of the male and female reproductive and give the function of each parts | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Describe the menstrual cycle | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 Define fertilisation and say where it normally occurs | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 List two genetic characteristics | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education, Maths

Work begun



Work in progress



Work completed



Plant Biology 2

Science

Statement code no. 18

Student:

Class:

At Junior Certificate level I can:

Apply my knowledge of flowering plants

Date Commenced: /

Date Awarded: /

Learning Targets I can...

- | | |
|---|--|
| 1 Label the main parts of a flowering plant on a diagram and give the function of each part | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Investigate the transport of water in plants and show the path of water through the plant | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 Investigate the transpiration stream in plants | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Describe the process of photosynthesis | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Give a word equation for photosynthesis | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Show that starch is produced by a photosynthesising plant | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Investigate the growth responses of plants to light | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Identify and name the main parts of a flower | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 List two methods of seed dispersal and give an example of each | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 Investigate the conditions necessary for germination | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education, Maths

Work begun



Work in progress



Work completed



Physics 3

Science

Statement code no. 19

Student:

Class:

At Junior Certificate level I can:

Apply my knowledge of Energy and Energy Conversions

Date Commenced: /

Date Awarded: /

Learning Targets I can...

- | | |
|---|--|
| 1 Define work in scientific terms and state its unit of measurement | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 State the difference between work and power and name the unit of measurement of power | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 List 7 different types of energy and give an everyday example in each case | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Give 3 examples of energy conversions in the home and name the energy types involved | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Trace energy conversions back to their primary source | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Show by experiment the conversion of chemical energy to electrical energy to heat energy | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Show by experiment the conversion of electrical energy to magnetic energy to kinetic energy | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Show by experiment the conversion of light energy to electrical energy to kinetic energy | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 List three energy sources and give one advantage and disadvantage of each | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 Give 3 examples of how energy could be conserved in the home | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education, Maths

Work begun ☒ ☐ ☐ | Work in progress ☒ ☒ ☐ | Work completed ☒ ☒ ☒

Physics 4

Science

Statement code no. 20

Student:

Class:

At Junior Certificate level I can:

Apply my knowledge of Heat, Light and Sound

Date Commenced:

Date Awarded:

Learning Targets I can...

- | | |
|---|--|
| 1 Investigate the effect of heating and cooling on solids, liquids and gases | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Determine the temperatures at which ice melts and water boils | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 Carry out experiments that involve changes of state | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Investigate how heat is transferred by conduction, convection and radiation | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Compare the insulating properties of different material | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Demonstrate that light travels in straight lines | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Disperse white light into its different colours and name the colours of the viable spectrum | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Demonstrate the reflection of light using mirrors | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 Show that sound is a form of energy and is caused by vibrations | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 Tell which is faster, the speed of sound or the speed of light and explain the time difference between seeing and hearing the same event | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education, Maths

Work begun



Work in progress



Work completed



Physics 5

Science

Statement code no. 21

Student:

Class:

At Junior Certificate level I can:

Apply my knowledge of Magnetism, Electricity and Electronics

Date Commenced:

Date Awarded:

Learning Targets I can...

- | | |
|--|--|
| 1 Show the attraction and repulsion between magnets and test different materials for magnetism | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 2 Create a static electricity charge using simple materials and demonstrate the effect of earthing charged objects | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 3 Perform a test to see if an object is an insulator or conductor of electricity using an electrical circuit | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 4 Distinguish between direct current (DC) and alternating current (AC) and state the type of current and the voltage of the mains electricity supply | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5 Calculate the cost in euros of running an electrical appliance using the power rating of the appliance, the duration of use and the price of mains electricity | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 6 Wire the plug of an electrical device correctly and identify the locations of the live, neutral and earth wires | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 7 Describe how a fuse in an electrical circuit works as a safety measure against overheating | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 8 Explain the importance of a circuit breaker or fuse board in the home | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 9 Set up a simple circuit using switches, LEDs, resistors and buzzers | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 10 Give an example of the use of LEDs and LDRs in everyday life | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

Refer also to: Art, Home Economics, Personal and Social Development, Physical Education, Maths

Work begun



Work in progress



Work completed

