

**East Renfrewshire Council: Education Department
Practitioner Moderation Template**



Prior to the moderation exercise, please complete the following information and submit it to your facilitator with assessment evidence from one learner that you judge to have successfully attained the Es and Os.

Practitioner Code	S63
Curriculum Area(s)	Mathematics and Technologies
Level	Second Level
Stage(s)	Primary 6

Experiences and Outcomes:

I have carried out investigations and surveys, devising and using a variety of methods to gather information and have worked with others to collate, organise and communicate the results in an appropriate way. **MNU 2-20b**

I can extend and enhance my knowledge of digital technologies to collect, analyse ideas, relevant information and organise these in an appropriate way. **TCH 2-01a**

Learning Intentions:

We are learning to:

- Carry out investigations and surveys
- Organise and display results of our surveys in an appropriate way
- Extend our knowledge of digital technologies to collect information and organise in appropriate way.

Success Criteria:

Please list SC and give brief detail on how learners were involved in their creation

After sharing the learning intention and experiences to the children they were able to devise the success criteria in small groups

We will be able to:

1. Consider what information is needed for a survey or investigation to take place.
2. Create a survey or investigation.
3. Complete a survey or investigation.
4. Identify what makes a good graph
5. Name and label the x and y axis appropriately and give the graph a suitable title to display the results
6. Consider the scale of the graph
7. Transfer relevant information into an excel document.
8. Create an appropriate style of graph.
9. Add relevant information to graph to show results in a clear way (axis titles, labels, key)?

Briefly outline the context and range of quality **learning experiences** that have been planned making reference to the chosen design principles. Make specific reference to **breadth, challenge & application**.

Lesson 1 -LI: We are learning to carry out investigations and surveys

Begin lesson with asking children “Put your hand up if your favourite colour is red?” “Put your hand up if your favourite colour is blue?” etc.

Prior to the teaching taking place the children will be asked to consider what investigations and surveys are. From their answers/previous knowledge they will mind map the kinds of things we can investigate/survey. The children will be taught to consider the number of participants, what relevant answers should be included in their survey/investigation and

begin to plan then carry out their survey/investigation in pairs (Challenge is provided as children are required to demonstrate increasing responsibility and independence in learning).

Lesson 2 – LI: We are learning to organise and display results of our surveys/investigation in an appropriate way.

The children will explore a range of graphs (poor and good quality graphs) and discuss what information we can obtain from them (Breadth is applied here as they will explore a range of graphs). They will consider if there are any that are easier to read information from and why? From this discussion the children will be asked to create their own graph to display their findings from the previous investigation/survey. They will need to consider what information to include on their graph and what style of graph will best represent their findings.

Lesson 3 - LI: We are learning to extend our knowledge of digital technologies to collect information and organise in appropriate way.

The children will learn how to create a graph on Microsoft excel after researching the average rainfall in Glasgow for 2018 (Application is applied here as the children are creating graphs to display new information using a different method). This will still require the children to select a suitable graph to display the results of the investigation and they will need to consider acceptable scales, labels and titles for the x and y axis and an overall title for the graph.

Record the planned assessment that will be gathered to meet the success criteria (Say, Write, Make, and Do) considering **breadth, challenge and application**.

Say – what makes a graph effective/ineffective (Breadth)

Say – suggested x and y axis titles and graph titles on ineffective graphs (Breadth)

Make – a survey and hand drawn graph of their survey results. (Challenge)

Make - an electronic graph using excel. (Application)

Briefly outline the oral/written **feedback** given to the pupil on progress and **next steps**, referring to the learning intention and success criteria.

Please see evidence for oral and written feedback on progress and next steps.

Pupil Voice:

What have you learned?

Child Response: I have learned about all the things you need to think about before you carry out a survey. You need think about the question, the options of answers, how you are going to collect the results, who you are going to ask, how many people you are going to ask and lots of other things. I also learned about why it is important to include good titles and axis titles so people can understand what they are reading. My scale wasn't very good because people were reading the wrong information but I fixed it on my next graph. I was also taught how to use Microsoft Excel better. It was so much quicker to make a graph on this."

How did you learn?

Child Response: We learned by doing things practically. We got to plan and decided what our survey would be about then actually asked the children in the school.

What skills have you developed?

Child Response: My ICT skills have got better because I can now make different types of graphs on Microsoft Excel and can add information to them to make them more detailed and easier to read information on them. I think I would be able to carry out lots of surveys and investigations out now and show their results.

Did the learner successfully attain the outcomes?

YES

Moderation Evidence

Evidence 1

Question: How do you usually travel to school?

Participants: P1-7 pupils of Thornliebank Primary School

Results:

How do you usually travel to school?	Number of Children
Walk	 Total = 78
Car	 Total = 31
Bike/Scooter	Total = 0
Bus	Total = 0
Train	 Total = 2
Taxi	 Total = 2
Park and Stride	 Total = 22
Other	Total = 0

Lesson 1

Success Criteria

We will be able to:

- Consider what information is needed for a survey or investigation to take place.
- Create a survey or investigation.
- Complete a survey or investigation.

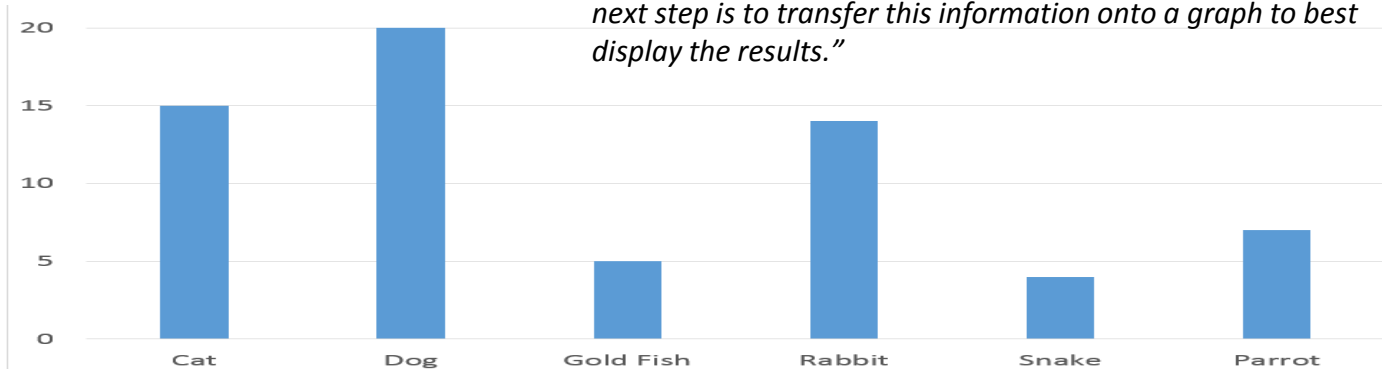
This child has planned, created and carried out a survey shown in evidence 1. They have decided to link their survey with our current topic of transport and they wanted to find out the different ways children travel to school. When planning their survey the pupil was asked by the class teacher why she has decided the participants to be P1-7 pupils at Thornliebank Primary School they responded with: "It is easy for me to ask the children in the school by going around the classes. I would need a lot more time and people to help if I was to ask lots of other children at other schools too." This shows the child understands the need for the participants to be achievable and easy to reach. Verbal feedback from the class teacher after the child had completed the survey.

Class teacher: "Well done, this looks like a well planned survey. I like that you have used a table to display the results clearly. Can I ask why you used tally marks instead of just writing the number?"

Child: "I used them because it was easy just to keep adding them on with every class I went to. Then I just had to count in 5s to find the total."

Class teacher: "Yes, you have saved yourself some time, if you had written a total in every class then you would have had to complete a calculation for each method of transport at the end of your survey. You have successfully carried out a survey now your next step is to transfer this information onto a graph to best display the results."

Evidence 2



Lesson 2

Success Criteria

We will be able to:

- Identify what makes a good graph

The children were asked if the graph above (evidence 2) was a good quality graph or a poor quality graph. The majority of the children voted that it was poor quality. When asked why they thought it was a poor quality graph the child responded with: "Well we can guess that is been something to do with animals because of the labels on the x-axis but there is no title on the graph so we don't know if its been favourite animals, least favourite, animals you own. There is also no title on the x or y-axis so we don't know if it's the number of pets they own, the number of children that voted or anything else."

Class teacher: "Great, we now know what could be added to this graph to make it better."

Lesson 2

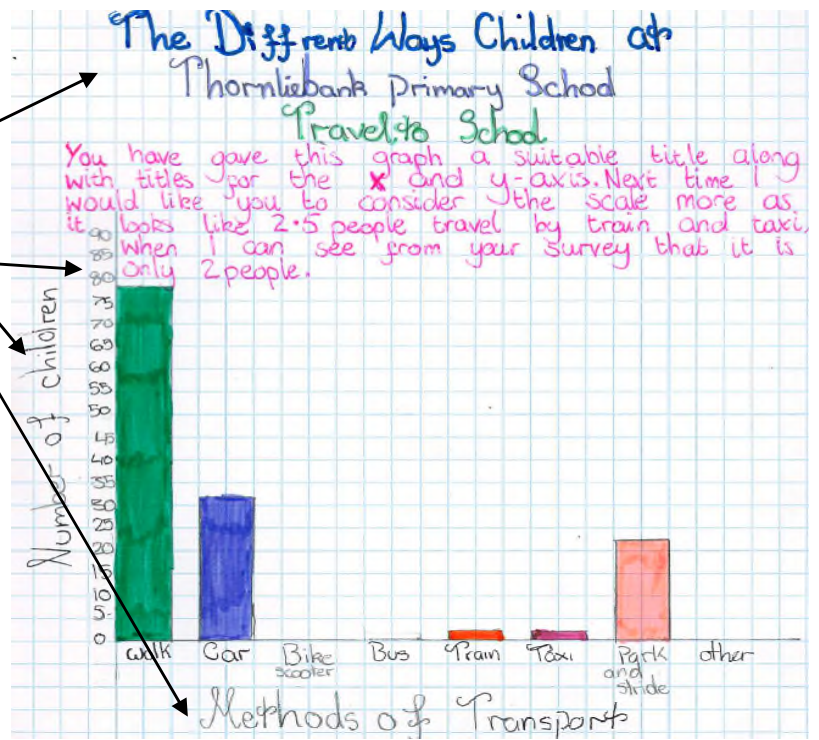
Success Criteria

We will be able to:

- Name and label the x and y axis appropriately and give the graph a suitable title to display the results.
- Consider the scale of the graph.

This child has created a graph well to show their results from the survey. Like the written feedback states (Evidence 3), the scale has allowed for some misinterpretation to take place and perhaps more consideration could be given in future graphs to ensure the correct results can be displayed accurately. This has provided some next steps for the following lesson in order to meet this success criteria.

Evidence 3



Evidence 4

Lesson 3

Success Criteria

We will be able to:

- Transfer relevant information into an excel document.

Evidence 4 shows how the child has organised their information after researching the average rainfall in Glasgow.

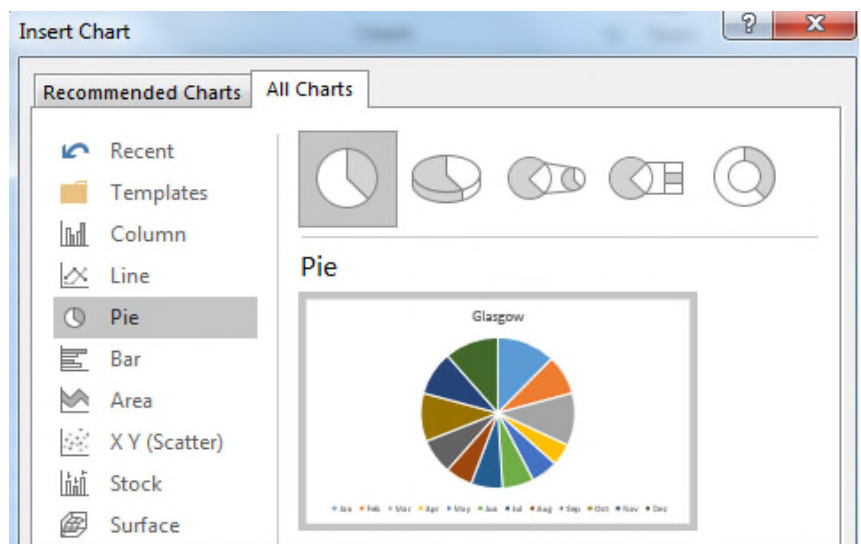
Evidence 5 shows the child considering different styles of graphs to display their results. When asked by the teacher if they would use a pie chart to display their results they responded with: "No, I'm not going to use the pie chart as it doesn't show me clearly which month had the most rain or how much rain there was because there is no scale on it. I find it too tricky to read."

Class Teacher: "So would you say a pie chart isn't appropriate and there is a better style you will choose?"

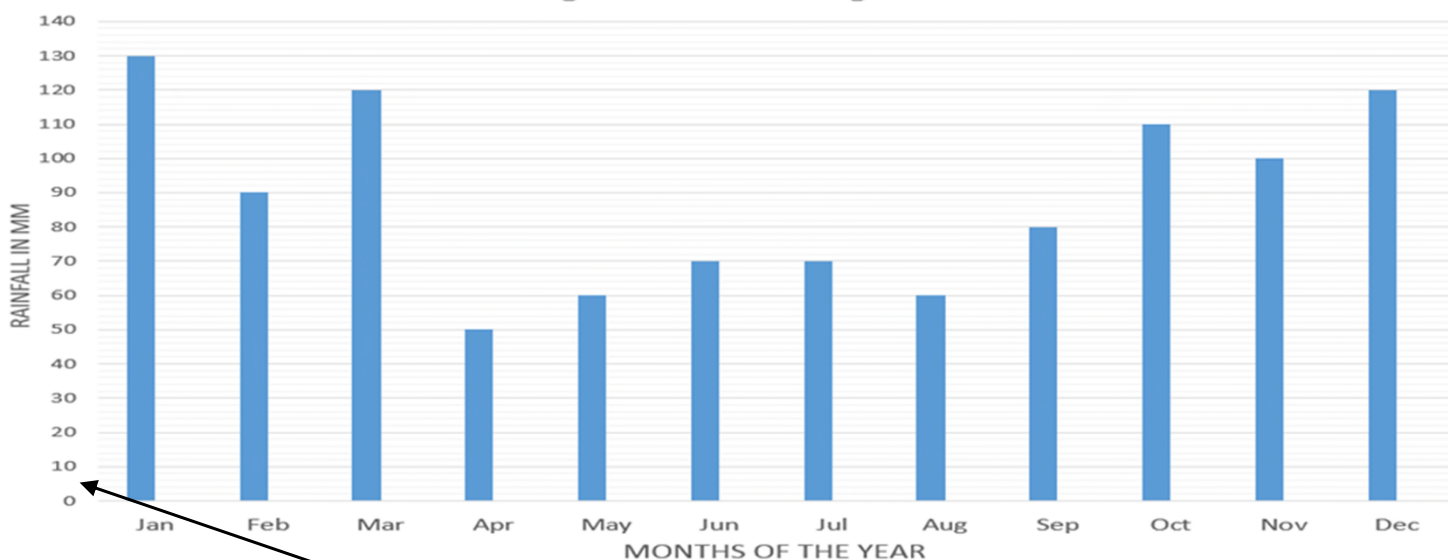
Child: "Yes, I'm going to use either a column or bar graph to show my results."

	A	B
1	Month	Glasgow
2	Jan	130
3	Feb	90
4	Mar	120
5	Apr	50
6	May	60
7	Jun	70
8	Jul	70
9	Aug	60
10	Sep	80
11	Oct	110
12	Nov	100
13	Dec	120

Evidence 5



The Average Rainfall in Glasgow in 2018



Lesson 3

Success Criteria

We will be able to:

- Create an appropriate style of graph.
- Add relevant information to graph to show results in a clear way (title, axis titles, labels, scale).

Evidence 6 shows the final graph produced by the child using excel.

Class Teacher: "Do you think you have met the success criteria?"

Child: "Yes, I managed to find the information on the internet and was able to organise it on the spreadsheet like a table. I looked at the different charts I could use and decided that the column graph was the best one. After you explained and showed us how to add different information to the graph I was able to put all the titles on and I even changed the scale."

Class Teacher: "What did you change the scale from?"

Child: "The scale went up in 20s before I changed it. It now goes up in 2s and the y-axis labels are going up in 10s".

Class Teacher: "Well done, it is very easy to obtain information from your graph as you have picked a suitable scale. You have been able to use digital technology to organise and display your information well."