

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

School Code	H
Practitioner Code	H14
Curriculum Area(s)	Science and Literacy
Level	First
Stage(s)	Pr 3
Specific subject (if applicable)	

**Experiences and Outcomes:**

By investigating forces on toys ~~and other objects~~, I can predict the effect on the ~~shape or~~ motion of objects. **SCN 1-07a**

By considering the type of text I am creating, I can select ideas ~~and relevant information~~, organise these in a logical sequence and use words which will ~~be interesting and/or~~ useful to others. **LIT 1-26a**

**Learning Intentions:**

- To investigate forces on toys
- To predict the effect on the motion of objects
- To organise these in a logical sequence
- To use words which will be useful to others

**Success Criteria:**

- I can use apparatus to investigate which car travels the furthest
- I can choose the car which I predict will travel the furthest
- I can record my investigation in a logical sequence
- I can use appropriate Science language
- I can conduct a fair test

Briefly outline the context and range of quality learning experiences that have been provided making reference to the chosen design principles.

Lesson 1

- I explained to the children that we were going to have a competition to see which car would go the furthest. We discussed the Learning Intentions and Success Criteria that were displayed on the interactive board (see boxes above)
- From a selection of 60 cars the children had to choose the car they felt would go the furthest. (See photograph 1)
- They were put into small teams and were asked to find out which car went the furthest along the classroom floor. (See photograph 2)
- They independently tested which car went the furthest but soon discovered it was not as easy as they thought. The children, when asked how they were getting on testing which car would go the furthest, quickly understood that they were not organised and it was not a fair test. (See the comments in dialogue 1).
  
- As a class we discussed their findings.
  1. The children decided that pushing the car was not fair as different children would use different amounts of force. They agreed to use the ramps and let gravity pull the car down the ramp as this would make it fair.
  2. The children agreed that we needed to make the angle of the ramp a sensible angle. As a class we tested the ramp at 90 degrees but they were able to identify that the car would crash as the wheels would not be able to work at this angle. They decided to use a chair to rest the ramp on, as this was a more sensible angle. They agreed it would make it a fair test if they all used the same height of chair. (see photograph 3)

Lesson 2

The children had never written a full investigation before so the children were shown by the teacher how to lay out an investigation, using the correct Science vocabulary in their jotter. Please refer to the investigation the child has written throughout this lesson.

- We discussed again the Learning Intentions and Success Criteria on the interactive to focus the children's learning.
- Children decided on a suitable aim for their investigation and recorded it down.
- They then chose a car from the selection and decide why it will go the furthest. When asked why they chose that car they could explain their choice (see dialogue box 2).
- In their hypothesis they explained why they chose that car.
- The children discussed what apparatus they would need and agreed as a class what instructions they would follow when investigating. The teacher recorded this on the interactive board and they copied it into their jotter, ensuring they were laying it out correctly.
- In their groups, they independently set up the apparatus (see photograph 3) and started to investigate which car in their group went the furthest (see photographs 4 and 5).
- Once they had tested several times, they stood on their chalk mark to see which car went the furthest (see photograph 6).
- In their jotters, under the heading of results, they recorded their names and which position they came.
- We then tested the winning car in each group to find out which car went the furthest overall.
- We recorded our conclusion using all this information and discussed the investigation as a class.

Record the range of assessment evidence that was gathered to meet the success criteria (Say, Write, Make, and Do) considering breadth, challenge and application.

Say - Child's comments are indicated in dialogue box 1 and 2. In dialogue box 1, he showed his understanding that he was not doing a fair test and in dialogue box 2, he showed he could predict why he thought his car would travel the furthest.

Write - The child recorded his investigation in a logical sequence showing good use of appropriate Scientific language.

Do - The photographs show the child working in a group. He is using apparatus to conduct a fair investigation.

Did the learner successfully attain the outcomes? YES

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

Child was given written feedback on his work. He was praised (as part of his group) for conducting an investigation properly, showing good team work and for making sure they were doing a fair test.

Next steps

The class will be investigating magnetism next and will be conducting an investigation on the strength of magnets. The child showed a good understanding of the scientific process and will be placed in a group with similar children who will be working independently on the task with minimal teacher support.

Pupil Voice:

What have you learned?

"I learned that you can't tell how far a car will go by looking at it and that the ramp cannot be too steep cause the car will crash."

How did you learn?

"We set up the ramps and put the car at the top and we let it go. When the car stopped, we marked chalk on the floor so we could tell who won. We wrote it down in our jotter."

What skills have you developed?

"I can write an investigation and do a good test."

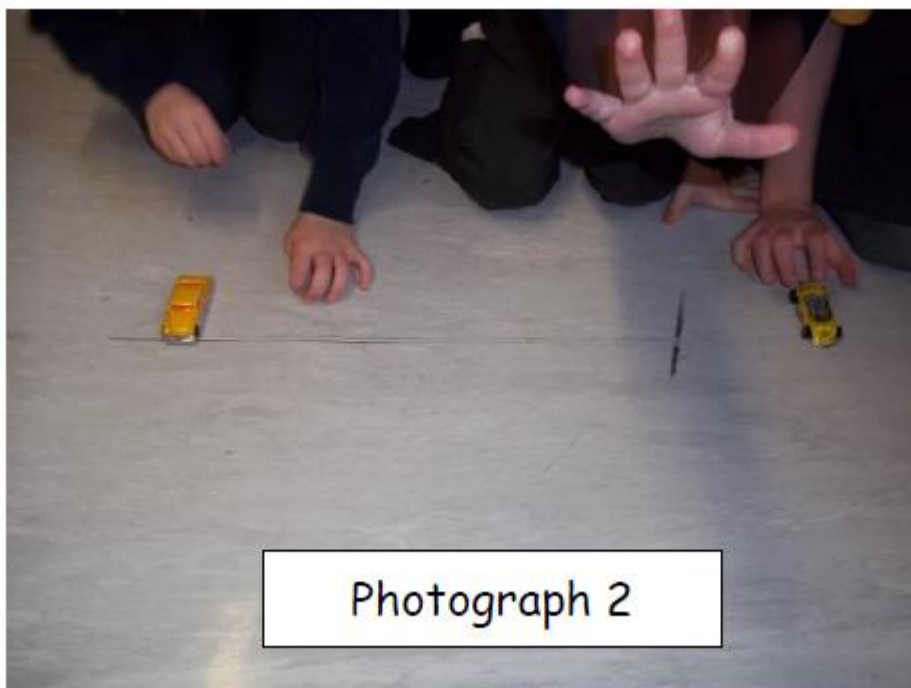
## *Learner Evidence*

### Information Sheet

#### Lesson 1

#### Previous learning

Through their Forces topic, the children have learnt about pushing and pulling (using their bodies and toys) and buoyancy (through floating and sinking activities).



Dialogue 1

We are not all pushing the same.

Child's comment

We cannot measure properly

There is not enough space

Lesson 2

Dialogue box 2

I think my car will go the furthest because...

it looks like it will go the furthest.

it is light.

Child's comment

when I rode it on my hand, the wheels kept on spinning.

it has fast wheels.



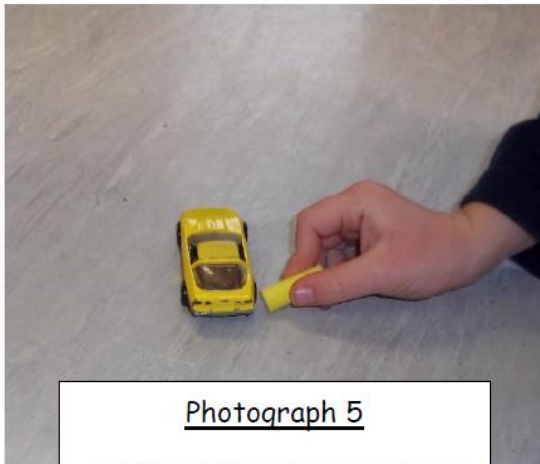
Photograph 3

Ramp set up



Photograph 4

Child is holding the car at the top of the ramp, ready to let go.



Photograph 5

Child is marking stopping point of car with chalk.



Photograph 6

Children standing on chalk lines to see whose car went the furthest.



Child's investigation

Child has a clear aim (Learning intention)

Child has included all the sections and has clearly labelled all the apparatus

Child has recorded all the relevant instructions

Child has discussed and recorded what order they came in

Child has answered the Aim

Teacher has given written feedback

18.11.15 Ramps

Aim To discover which car goes the furthest.  
I think my car will go the furthest.

Method Apparatus

Instructions

1. Place car on top of ramp and let go
2. When it stops, mark its position with chalk.

Result

Name	Position
No. [redacted]	3rd
A. [redacted]	4th
O. [redacted]	1st
J. [redacted]	5th
B. [redacted]	3rd
N. [redacted]	2nd

conclusion In my group, O. [redacted] car went the furthest. In our class, J. [redacted] went the furthest because it went in a straight line and did not roll over.

Well done No. [redacted], you laid out your investigation properly. You conducted a fair test too.