

**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.

School Code	
Practitioner Code	M6
Curriculum Area(s)	Science; Technologies
Level	1 st
Stage(s)	P3
Specific subject (if applicable)	Magnets

Experiences and Outcomes:

By exploring the forces exerted on magnets by other magnets and magnetic materials, I can contribute to the design of a game.

SCN 1-08a

I explore materials, tools and software to discover what they can do and how I can use them to solve problems and construct 3D objects which may have moving parts.

TCH 1-12a

Learning Intentions:

1. To explore the forces of magnets on magnets
2. To explore the forces of magnets on different materials
3. To investigate the strength of different magnets
4. To contribute to the design of a game that uses magnets
5. To create a 3D game from my design

Success Criteria:

1. I can use the terms repel and attract to describe the forces of magnets
2. I can state which materials are magnetic or not
I can list three magnetic metals
I can state that not all metals are magnetic
3. I can create a fair test
I can order magnets from strongest to weakest
4. I can contribute my ideas to a group game design
I can include magnets within my game
I can apply my knowledge of magnets and magnetic forces to select suitable materials for my game
I can list all the materials I need to construct a game
5. I can use my materials to construct a game based on my design
I can test my game to check it uses magnetic forces

Practitioner Moderation Template

Learner Evidence

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

1. Children will:
 - a. explore magnetic forces with a range of magnets by putting them together in different ways
 - b. watch a video
 - c. use the terminology 'repel' and 'attract'
2. Children will:
 - a. test different materials with magnets
 - b. test different metals with magnets
 - c. record their results in a table
 - d. understand that not all metals are magnetic
3. Children will:
 - a. design a fair experiment to test the strength of different magnets
 - b. carry out the experiment and record their results
4. Children will:
 - a. decide what type of game they want to create (fishing or racing)
 - b. discuss the design and rules of their games in groups
 - c. record their designs as a diagram with a list of materials they will need
5. Children will:
 - a. collaborate to construct their games, testing that the magnetic element of them is working
 - b. evaluate one another's games

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

1. Written description of the forces of magnets (write)
2. Results grid from experiment (write); transcript of class discussion (say)
3. Experiment report (write); Magnets in strongest to weakest order - photograph (do)
4. Design sheet (write); discussion transcript (say)
5. Game – photo (make); evaluation sheets (do; write)

Did the learner successfully attain the outcomes? **YES/NO**

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

Feedback explained that pupil had met all success criteria and had been successful in attaining the experiences and outcomes. Next steps and context were provided on IDL skills such as designing and evaluating work and conducting a fair test. As this was the conclusion to the experiences and outcomes on magnets, no next steps were given on magnetic forces.

Pupil Voice:

What have you learned? How did you learn? What skills have you developed?

See annotated lessons.

Learner Evidence

Experiences and Outcomes

By exploring the forces exerted on magnets by other magnets and magnetic materials, I can contribute to the design of a game. SCN 1-08a

I explore materials, tools and software to discover what they can do and how I can use them to solve problems and construct 3D objects which may have moving parts

Context for Learning

Children explored magnetic forces with a range of magnets by putting them together in different ways. They watched a video that explained how poles in magnets work. They wrote 3 facts about magnets including the terms repel and attract. The children tested a variety of objects to see if they were magnetic. They then wrote a short blurb outlining what they had discovered.

Teacher Voice

Pupil was motivated to learn about magnets and contributed enthusiastically to class and group discussions. Pupil was able to convey that not all materials are magnetic, initially the pupil articulated that only metals are magnetic, however after the experiment it was understood that not all metals are magnetic. After watching the video the pupil understood that



Success criteria

- I can state which materials are magnetic or not
- I can list three magnetic metals
- I can state that not all metals are magnetic
- I can use the terms repel and attract to describe the forces of magnets

Pupil Voice

<- See written blurb
 In thumbs formative assessment at the end of the lesson the child gave themselves a thumbs up for each of the success criteria.
 "When magnets attract they go towards each other. What they repel they go away from each other."

Experiences and Outcomes

By exploring the forces exerted on magnets by other magnets and magnetic materials, I can contribute to the design of a game. SCN 1-08a

I explore materials, tools and software to discover what they can do and how I can use them to solve problems and construct 3D objects which may have moving parts

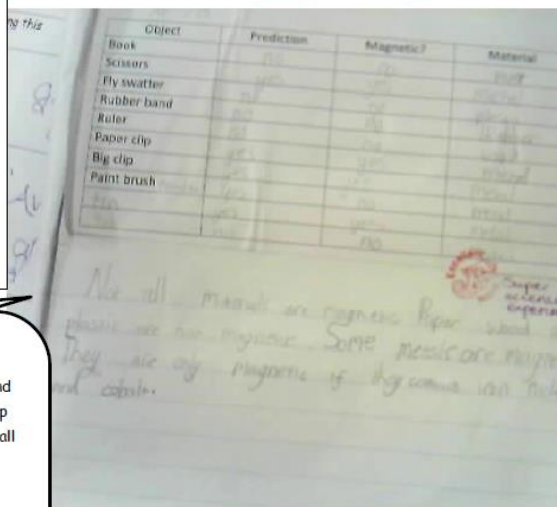
Context for Learning

Children explored magnetic forces with a range of magnets by putting them together in different ways. They watched a video that explained how poles in magnets work. They wrote 3 facts about magnets including the terms repel and attract. The children tested a variety of objects to see if they were magnetic. They then wrote a short blurb outlining what they had discovered.

Teacher Voice

Pupil was motivated to learn about magnets and contributed enthusiastically to class and group discussions. Pupil was able to convey that not all materials are magnetic, initially the pupil articulated that only metals are magnetic, however after the experiment it was understood that not all metals are magnetic. After watching the video the pupil understood that iron, nickel and cobalt are some of the magnetic metals.

Early/First/Second Level		Lesson number 1 + 2	
Evidence of learning			
SAY	MAKE	WRITE	DO



Success criteria

- I can use the terms repel and attract to describe the forces of magnets
- I can state which materials are magnetic or not
- I can list three magnetic metals
- I can state that not all metals are magnetic

Pupil Voice

<- See written blurb
 In thumbs formative assessment at the end of the lesson the child gave themselves a thumbs up for each of the success criteria.

Practitioner Moderation Template

Learner Evidence

Experiences and Outcomes

By exploring the forces exerted on magnets by other magnets and magnetic materials, I can contribute to the design of a game. SCN 1-08a

I explore materials, tools and software to discover what they can do and how I can use them to solve problems and construct 3D objects which may have moving parts

Context for Learning

Pupils were involved in a whole class discussion about how we could design a fair experiment to test the strength of different magnets. After designing the experiment as a whole class the children then carried out the experiment and recorded their results. After the experiment the children arranged the magnets from the strongest to the weakest.

Teacher Voice

The pupil had an excellent understanding of why a science experiment had to be fair. "If it is not fair then the results won't be good". The child was able to come up with some good ideas of how we could test the strength of the different magnets. Her initial idea was to put paperclips on the table and hold the magnets up high, gradually get the magnet closer to the paperclip and measure how high above the desk the magnet was when the paperclip was attracted.

Early/First/Second Level		Lesson number 3	
Evidence of learning			
SAY	MAKE	WRITE	DO

Magnet	test 1	test 2	test 3
Small red magnet	2	2	2
Small black magnet	5	5	5
Big magnet	2	2	2
Big red magnet	2	2	2
Long magnet	2	2	2
Ball magnet	2	2	2

Results: Number of Paperclips

The small red magnet held 2 paper clips and the small black magnet held 5 paper clips. The big red magnet was the weakest and the small black magnet was the strongest in our experiment and good report.

Success criteria

I can create a fair test
I can order magnets from strongest to weakest

Pupil Voice

In response to question, "what did we do to ensure our experiment was fair?"

"We did it three times and used paperclips on all of the magnets. We had to use the same thing on all of the magnets to make it fair."

Experiences and Outcomes

By exploring the forces exerted on magnets by other magnets and magnetic materials, I can contribute to the design of a game. SCN 1-08a

I explore materials, tools and software to discover what they can do and how I can use them to solve problems and construct 3D objects which may have moving parts

Context for Learning

Children worked in mixed-ability groups to design a two-player game which used magnets. They decided what type of game they want to create (fishing or racing) and discussed the design and rules of their games in groups. They then recorded their designs as a diagram with a list of materials they required. The groups worked collaboratively to create a set of instructions to go with their game, this was done during a writing lesson.

Teacher Voice

This pupil worked extremely well in the group, she contributed her ideas but was very mindful of letting other children share their suggestions too. The group choose to make a fishing game and came up with the idea to use paperclips on each part of their game so that the magnets had something to attract.

Early/First/Second Level		Lesson number 4	
Evidence of learning			
SAY	MAKE	WRITE	DO

The Sea of Water!!!

- 1. fish
- 2. wheels
- 3. compass for pins
- 4. magnets
- 5. quaternary cards

1. You get your fish
2. put the fish on a table
3. like the fish and go put in the fish
4. Fish = 1p
5. Shark = 1p
6. points 10p/11
7. jelly fish's take all your points
8. when a half your points
9. marked a double point
10. Shark = 5p
11. At you catch the point you take the fish
12. The point take the fish and comes back the points

Success criteria

I can contribute my ideas to a group game design

We can include magnets within our game (shown in design)

We can apply my knowledge of magnets and magnetic forces to select suitable materials for our game (shown in design)

We can list all the materials I need to construct a game

We can write a set of clear instructions for our game

Pupil Voice

"I love that idea, let's make each thing have different points, that will make the game so fun!"

"We will need paperclips or something to put on the sharks and stuff so the magnets will pick it up."

Experiences and Outcomes

By exploring the forces exerted on magnets by other magnets and magnetic materials, I can contribute to the design of a game. SCN 1-08a
 I explore materials, tools and software to discover what they can do and how I can use them to solve problems and construct 3D objects which may have moving parts.

Context for Learning

Children worked in their groups to construct their games, testing that the magnetic elements of them were working. They then played another group's game and evaluated it against the success criteria.

Teacher Voice

This pupil successfully worked collaboratively to construct her game with her group. After testing that the game's magnetic elements were working, her group successfully evaluated a different game using a sheet.

See comment on evaluation sheet.

Evidence of Learning

SAY	MAKE	WRITE	DO
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Success criteria

- I can use my materials to construct a game based on my design
- I can test my game to check it uses magnetic forces
- I can evaluate other's work

Magnet Game Evaluation

Name of Game: <i>Fun on wheels</i>	Traffic light
• The game is suitable for two players	●
• The team have made clear and easily understood instructions	●
• The game uses magnets	●
• The team have worked together to create their game	●
• We enjoyed playing this game	●

Star rating: *4 stars*

great because it was fun

Overall Comment: *Well done game. "Sea of Islands" you have achieved all of the success criteria! You all worked together to create your game. You used magnets very effectively and had lots of fun playing your game!*

Awesome

great

Pupil Voice

"The magnets are working. The paperclips stick to them"

See evaluation sheet.