

**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	CC4
Curriculum Area(s)	Science/Technology
Level	Early
Stage(s)	Nursery
Specific subject (if applicable)	

Experiences and Outcomes:

By investigating how water can change from one form to another, I can relate my findings to everyday experiences. SCN 0-05a

I enjoy taking photographs or recording sound and images to represent my experiences and the world around me. TCH 0-04b

Learning Intentions:

To investigate how water can change

To discuss the changes in water

To take photographs to show that changes in water

Success Criteria:

I can make simple predictions

I can discuss what happened to water in fridge

I can discuss what happened to water in freezer

I can observe ice melting and talk about changes

I can photograph ice melting using an ipad

I can order a set of photographs of the ice melting

The context was a science fortnight in Nursery where the children was exposed to a variety of science opportunities covering a range of different Es and Os
Activity 1 setting up the investigation by leaving water trays in the fridge and the freezer.
We began with an empty jug and explored the concept of the water cycle.

children filled the jug and from here, I introduced the key question for our learning - *Can we change the water in this jug into something else?*

(Identify initial K&U and which question is to be explored. SCN 0-05a)

The children took part in a discussion about how we could change water into ice. Some suggested putting the water in the fridge would change it to ice and others said the freezer. This resulted in our *Learner Led Success Criteria*. We investigated both ways. The children left one tray of water on the fridge shelf and put some in the freezer.

Activity Two Observing and discussing the results. Key learning is understanding that the differing temperatures cause the changes in the water.

After a brief recall of yesterday's investigation, the children returned to their water trays. Discussions took place about the difference between the cold water tray in the fridge and the ice block from the freezer.

The children predicted how long they thought it would take for the ice block to melt. The children were shown a simple chart and supported to complete it. I showed the children the little timer and we discussed the numbers on it and what it was for. We agreed that we would set the timer to ring in 10 minutes and we would all come back to see the changes to the ice. The ice was timed over a period at ten minute intervals. The children took turns to use the iPad to take a photograph of the ice melting. These pictures would be used for our third activity the following day.

Activity Three Ordering a set of the pictures taken with the iPad the day before which showed the ice block melting. Making simple chart with numbers 1-5.

Recalling the work of the last two days, we discussed the two changes that we had witnessed:

1. Water -----> Ice
2. Ice -----> Water

I selected the five best photographs showing significant changes to the ice block melting. Each child had the opportunity to put the photographs in order starting with the large block of ice and ending with the pool of water in the tray. The children then added numbers 1 to 5 beside each picture and made a simple chart for organising their numbers and photographs, using paper, pencil and ruler.

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

Feedback was mainly oral. Harry was praised for his good ideas and for volunteering answers. We talked about what we were learning and discussed the key question we had set out to answer, 'Can we change the water in the jug into something else?' The key point of learning here was that it was the change in temperature that caused the two changes witnessed, *water to ice* then *ice to water*. Harry's descriptions throughout the tasks demonstrated that he was aware of the reasons for the changes, he even used the word 'temperature' more than once, 'The temperature was low.'

We talked about finding out more about ice melting. With support, we discussed the idea of setting up new investigations to see if we could make the ice melt faster/slower.

Practitioner Moderation Template

Learner Evidence

Pupil Voice:

1.What have you learned? 2.How did you learn? 3.What skills have you developed?

1. "It is very cold and freezing at the top of the fridge. It's called the freezer. It changes to ice. The water changes to ice. The ice melted in the room because it was hot. If you put it back in the freezer it will be ice. "
2. "I was thinking in my body. I remembered. I had to look."
3. "Making ice. Looking and listening."

Did the learner successfully attain the outcomes? YES/NO

Learner Evidence

Evidence for Success Criteria 1

- I can make simple predictions about what might happen.

ACTIVITY ONE

(After the discussion about where water comes from etc.)

Teacher's Voice in red bubbles.

Ben's voice in purple bubbles.

Can we change the water into something else?

Water can change into ice.

Charlie 'You have to put the water somewhere cold.'

Joe 'You have to put it in the freezer to freeze it.'

Where else do we see ice?

Charlie 'Dad's car.'

What time of year do we see ice on cars?

Winter

Joe 'Autumn'

Why do we get ice in winter?

Too cold! It's freezing outside.

How could we make ice in nursery?

Charlie 'In the fridge.'

Joe 'To turn it to ice.'

What a great word Harry! Good work!

Put it in the freezer. Temperature in the room is much warmer.

Practitioner Moderation Template

Learner Evidence

Where will we get a freezer?

Charlie 'Freezer is really cold.'

| Kevin 'Ice in freezer.'

Joe 'The kitchen.'

The children talk about their own freezers at home and what goes in them. The children then choose containers and we go along to the kitchen to find a fridge and a freezer. The children explore the variety of machines in the kitchen then Charlie finds at the fridge.

Put your hand into the fridge. How does it feel?

Feels cold.

Kevin 'Cold'

If we leave our tray in the fridge will it change to ice?

No. The freezer is cold enough.

Charlie 'No.'

Kevin 'Yes.'

Joe 'No'

Can you tell us more Ben?

Ice will come in the freezer.

That's right. Who can find the freezer?

Me!

Charlie 'Me!'

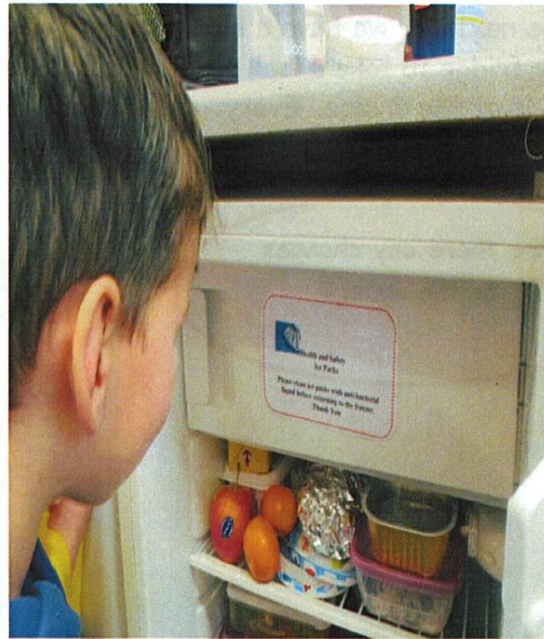
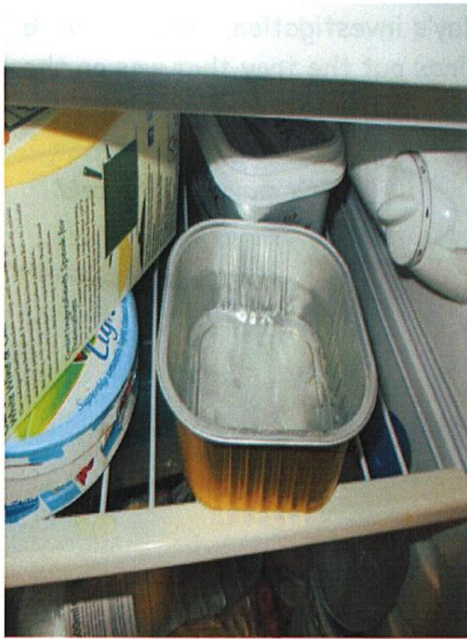
The children open the freezer door and put their hands inside.

*Wow! That's very cold!
Like an ice giant!*

Charlie 'So cold!'

Joe 'Super cold!'

Children leave their containers on the shelf and in the freezer box for 24 hours.



Well done everyone! We are just like real scientists today setting up an investigation!
Thank you for all your good ideas.
Tomorrow we will come back and see if we can find any changes to the water trays.

Evidence for Success Criteria 2 and 3

- I can talk about what happened to the water in the fridge. (Learner led success criteria.)
- I can talk about how the water changed in the freezer.

ACTIVITY TWO

The next day we have a quick recall of yesterday's investigation. We return to the fridge to take a look at our results. Ben brings out the tray that was on the shelf of the fridge. Everyone puts their fingers in the water.

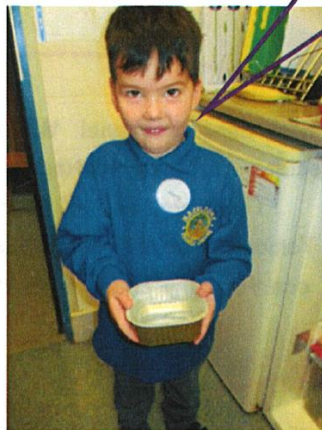
Are there any changes to the water?

It's moving! It's cold.



Has it changed into ice on the shelf?

No. Fridge isn't cold enough.



Practitioner Moderation Template

Learner Evidence

Ben opens the freezer door and brings out his container.

What has happened?
Are there any changes?

That's right. The water has changed to ice.

How does it feel?

Why did the water change to ice?

Is the water moving?

Ice! The temperature was low.

Charlie and Joe 'Its ice.'

Hard.

It's freezing cold!

Joe 'Slippery and stony.'

No. It's stuck!



The children take the blocks of ice back to the playroom.

Wow!

Evidence for Success Criteria 4 and 5

- I can observe the ice melting and talk about the changes.
- I can photograph the ice melting using an iPad.

We took the ice out of the containers and the children had the chance to feel the large block of ice in their hands and rub their fingers over the ice.



Why is it going to melt in here Ben?

Because it's hot.

Charlie 'There's bubbles trapped inside it.

Joe 'The water is dripping out.

Kevin 'My hands are cold!' Its melting.

What does melting mean?

It's water again.

The children begin to make guesses about how long they think it will take to melt. They write down their names and their guess times in a simple chart.

How long do you think it will take to melt Ben?



The children are shown the timer. We talk about where and when it is used. The children set up their next investigation in the playroom, observing the melting over periods of ten minutes. Every ten minutes the alarm rings and the children return to observe the changes. They take turns to set the timer.



These are Ben's observations over the period of melting.

It's got bubbles trapped inside.

After 10 minutes.

I can see water at the bottom of the tray.



The ice is getting smaller and the water is getting bigger.

After 20 minutes.

Why is there more water Ben?

Because it's hot in here.

Take the picture when you are ready.



After 30 minutes. Ben uses the iPad.

Ben runs his fingers through the tray and says,

It's like the sea.

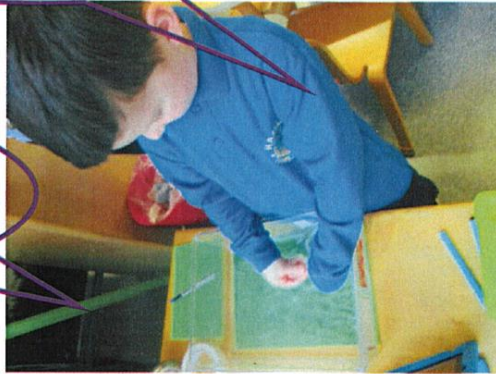
After 40 minutes.

Lots and lots of water!

After 50 minutes

It's cracked! More smaller!

I've broke it in half!



After 60 minutes.

It's melted lots. It's gone.

Well done Ben! You are right. It has completely melted now. The ice has changed again! What has it changed to?



Changed to water.

You have to put it back in the freezer again and then it will turn to ice again.

Please note. Sometimes the children saw the ice better when we slipped a piece of green paper underneath the tray.

Evidence for Success Criteria 6

- I can order a set of photographs of the ice melting.

ACTIVITY THREE

The photographs were printed and laminated. A set of five were shown to the children as part of our discussion of the melting ice blocks from the previous day.

Look at the photographs. Can you find the one of the ice block when we came back from the kitchen?



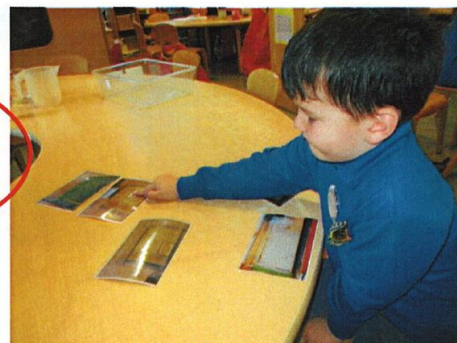
Well done! I like the way you are taking your time to look at all the photographs.

Is it that one?



Yes. Great work! Now have a good look. Would it help to find the picture that comes at the very end?

Good! Now you just have three left to sort out. Look carefully at the size of the ice block. That will help you.



Practitioner Moderation Template

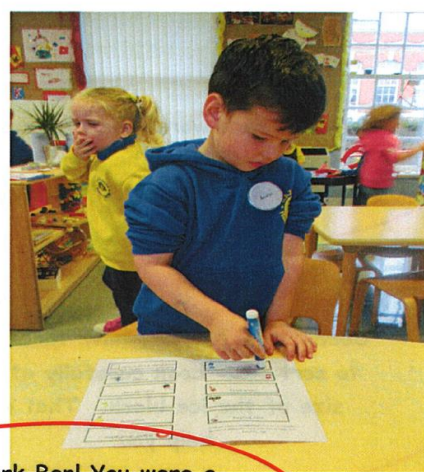
Learner Evidence

Fantastic work! You have put the photographs in the right order!
What could we do with these numbers?

Ben didn't say very much at this point. He was looking carefully and then moved the numbers to match with the pictures.

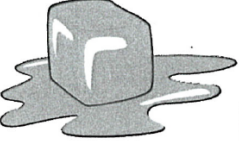


One of the other children had made a chart on the computer with the teacher to use with the photographs. Ben made his own chart.



Good work Ben! You were a great scientist! Stamp your booklet for the water investigation.

L E P	1	E
	P	
	E	
	A	
M a t h P H A N N Y (Ben)	5	

Name	Guess how long it will take for the  ice block to melt.
AD	55 minutes
HARRY (Ben)	15 minutes
Ally	"melt"
Kathryn	5
Matthew	5
A d d d	2
N o a	2

