

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	B
Practitioner Code	B9
Curriculum Area(s)	Science and Literacy
Level	Second
Stage(s)	P6
Specific subject (if applicable)	

Experiences and Outcomes:

By exploring reflections, the formation of shadows and the mixing of coloured lights, I can use my knowledge of the properties of light to show how it can be used in a creative way.

SCN 2-11b

By considering the type of text I am creating, I can select ideas and relevant information, organise these in an appropriate way for my purpose and use suitable vocabulary for my audience.

Organising & Using Information

LIT 2-26a

Learning Intentions:

- To understand why a shadow is cast
- To explore the formation of shadows
- To identify the different sources of light
- To use my knowledge of the properties of light and show how it can be used in a creative way.
- To write a set of instructions

Success Criteria:

- I can explain the words transparent, translucent and opaque.
- I can give examples of transparent, translucent and opaque objects.
- I can create shadows using my body.
- I can categorize natural and man-made sources of light.
- I can write and follow a set of instructions to make an optical illusion.
- I can write instructions using an appropriate layout.
- I can write instructions in chronological order.
- I can use at least 5 time connectives.
- I can use at least 5 imperative verbs.

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

Science

Lesson 1

L.I – To understand why a shadow is cast

S.C - I can explain the words transparent, translucent and opaque.

I can give examples of transparent, translucent and opaque objects.

Discussion about sources of light and how some things will let light pass through and others will not.

Introduction of the words transparent, translucent and opaque and their meaning.

Pupils were given a note about the direction light can travel and what an object must be in order to create a shadow. Pupils independently highlighted the important words in the note and wrote the meanings of transparent, translucent and opaque in their own words.

Task – Pupils were given objects and hypothesised whether they were transparent translucent or opaque.

Pupils then tested the objects by shining a torch through the objects with different materials.

- Pupils concluded that only to objects they found to be opaque and translucent would show a shadow.

Lesson 2

L.I – To understand the different sources of light.

S.C - I can categorize natural and man-made sources of light.

Active Game – pupils categorized sources of light under the headings ‘natural’ and ‘man-made’. This was completed in partners one personal whiteboards and then discussed as a class. Lollipop sticks were chosen for pupils to drag sources on the Smartboard into the correct box (See evidence).

‘exploring the formation of shadows’ and ‘using [their] knowledge of the properties of light’ **SCN 2-11b**

Challenge and Enjoyment – ‘They should be active in their learning and have opportunities to develop and demonstrate their creativity’

Lesson 3

L.I – To explore the formation of shadows

S.C - I can create shadows using my body.

Recap of previous lesson. Pupils explained that an object has to be opaque or translucent in order to for a shadow. Pupils listed opaque and translucent objects, one of which was the body.

We went out into the playground and pupils were given the freedom to stand where they wanted. Pupils created shadows individually and in pairs. We also created a whole class shadow and drew round our silhouette.

‘exploring the formation of shadows’ and ‘using [their] knowledge of the properties of light to show how it can be used in a creative way’. **SCN 2-11b**

Pupil’s comments: ‘Let’s go to that side of the playground, there’s loads of sunlight there, we can block it with our bodies’.

Challenge and Enjoyment – ‘They should be active in their learning and have opportunities to develop and demonstrate their creativity. There should be support to enable children and young people to sustain their effort’.

Personalisation and choice – ‘It should give each child and young person increasing opportunities for exercising responsible personal choice’

Breadth ‘suitably weighted range of experiences’ ‘should be organised so that they will learn and develop through a variety of contexts’

Lesson 4

L.I - To use my knowledge of the properties of light and show how it can be used in a creative way.

S.C - I can write and follow a set of instructions to make an optical illusion.

Lesson focused on optical illusions. Discussed the accuracy of eyes and people with visual impairments.

Pupils used the skills they had learnt in writing lessons to write a coherent set of instructions on ‘How to make a Newtons Wheel’

‘knowledge of the properties of light to show how it can be used in a creative way’.

SCN 2-11b

'I can select ideas and relevant information, organise these in an appropriate way for my purpose and use suitable vocabulary for my audience'.

LIT 2-26a

Depth - drawing different strands of learning together, and exploring and achieving more advanced levels of understanding

Lesson 5

L.I – To write a set of instructions.

I can write instructions using an appropriate layout.

- I can write instructions in chronological order

- I can use at least 5 time connectives

Pupil learning to write instructions

Pupil chose to write instructions on how to play the game Pictionary

Lesson 6

L.I – To write a set of instructions

S.C – I can write instructions using an appropriate layout.

- I can write instructions in chronological order

- I can use at least 5 time connectives

Second attempt at writing instructions

'How to build a snowman'

Lesson 7

L.I – To write a set of instructions

S.C – I can write instructions using an appropriate layout.

- I can write instructions in chronological order

- I can use at least 5 imperative verbs

Third attempt at writing instructions

'How to make a fruit smoothie'

- Pupil made a fruit smoothie following their instructions

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:

- Class discussions. Hypothesising whether objects are transparent, translucent or opaque and considering whether they will create a shadow or not.

Evaluating and analysing findings, explaining why they were correct or incorrect.

Learners comments 'Let's go to that side of the playground, there's loads of sunlight there, we can block it with our bodies'

- Able to categorize natural and manmade sources of light (See evidence)

Learners comments 'A candle is hard because the candle is made by humans but fire can start naturally sometimes'

- Able to explain the meaning of transparent, translucent and opaque

Make: - Using the instructions they wrote, the class independently made a Newton's Wheel

- Made different shadows, individually and with partners.

Write: - Written instructions (How to make a Newtons Wheel) in Science jotter – Applying skills learnt in writing lessons to write coherent instructions explaining how to make an optical illusion.

- Written instructions in writing lessons in a variety of contexts. 'How to play.....' 'How to build a snowman' and 'How to make a fruit smoothie'

Do: - Pupils went outside and made different shadows independently and with peers. Pupils chose where to stand in the playground in order to make the best shadows.

- Experiment hypothesising whether an object is transparent translucent or opaque.

- Sorting activity – choosing if something is a manmade source of light or natural source.

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.

Written

2/3 stars and a wish in writing jotters – indicating areas of strength and next steps.

If / Which success criteria have been met.

What to work on in next piece of writing.

'How to play Pictionary'

L.I – To write a set of instructions

S.C – I can write instructions using an appropriate layout.

- I can write instructions in chronological order
- I can use at least 5 time connectives

Feedback

- * You have used an appropriate layout.
- * Your instructions are in chronological order.
- Be careful not to have 2 instructions in the one step.

'How to Build a Snowman'

L.I – To write a set of instructions

S.C – I can write instructions using an appropriate layout.

- I can write instructions in chronological order
- I can use at least 5 time connectives

Feedback

- * You have used an appropriate layout
- * Your instructions are in chronological order
- * You have used at least 5 time connectives
- Think about your punctuation when writing

'How to Make a Fruit Smoothie'

L.I – To write a set of instructions

S.C – I can write instructions using an appropriate layout.

- I can write instructions in chronological order
- I can use at least 5 imperative verbs

Feedback

- * All Success Criteria met!
- Think about your punctuation. Can you add any commas to your sentences?

How to Make a Newtons Wheel

L.I - To use my knowledge of the properties of light and show how it can be used in a creative way.

S.C - I can write and follow a set of instructions to make an optical illusion.

Feedback in Science jotter

Excellent work!

- Your layout is beautiful
- You have definitely thought about your SSC!

Oral

Discussions about hypothesis in experiment.

- How accurate are our eyes discussion – leading to optical illusions and Newtons Wheel lesson

Pupil Voice:

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

Pupil: I learned the meaning of transparent translucent and opaque.

Teacher: What do those words mean?

Pupil: Transparent is when something let's all light shine through it. Like a window, that kind of material. Translucent means that only some light will pass through, so like a jumper or something, cos there's wee holes in them so some light shines through it but some is blocked out. Opaque is when something is hard so no light can go through at all.

Teacher: Can you give me an example of an opaque object?

Pupil: Our body. That's why we have shadows, because we block out light from the sun.

Teacher: Tell me how you explored or investigated shadows.

Pupil: Ehhm well we went outside. I stood in front of the sun and we got to make different shadows. Oh we did it with partners as well, and we drew around the other person shadow... And then we did a whole class shadow and drew round them.

Also your presentation.

Teacher: What presentation?

Pupil: When we guessed what the different shadows were. There were animals, flowers, buildings – the Eiffel Tower

Teacher: Oh yes yes! Okay, what else did you do in your science topic?

Pupil: Ehhhmm, we looked at optical illusions. I didn't know that that's when your mind plays tricks on you because I think your brain and eyes are confused. We got to make our own as well.

Teacher: What was that called do you remember?

Pupil: A Newton Wheel

Teacher: What did you learn from doing that?

Pupil: That not everyone's eyes are the same so eyes aren't actually accurate.

Teacher: And what about the Newton Wheel itself? Tell me about that?

Pupil: Well it's a circle with the 6 colours of the rainbow, with a string that goes through the middle. When you spin it really fast it looks white even though there's colours on it. That's the illusion bit.

Teacher: Okay, excellent, if you think about the process that you went through to make the Newtons Wheel now, can you remember them?

Pupil: Yeah well we wrote instructions first and then I coloured a piece of paper in 6 colours and stuck it onto a circle bit of card and then just did what we had written on my instructions.

Teacher: And what kind of skills did you develop through doing that? Is there anything from other subject areas that you improved on by making that optical illusion?

Pupil: Instruction writing. We did instructions in writing, like 'how to build a snowman' and stuff.

Teacher: Can you be specific? What things did you learn in writing that you used in this piece of work?

Pupil: Ehhhmm well in these instructions (*points to science Newtons Wheel instructions*) there's imperative verbs. We learned that in writing. And like bullet points and things, we did that in writing, or you can number your instructions instead of bullet points, I like bullet points. And the 'Stable Success Criteria', they are all there.

Teacher: Quickly tell me your 'Stable Success Criteria', what are they?

Pupil: Use good VCOP. Make sure it makes sense. Use capital letters and full stops and.... Make sure you have good presentation. Always. In everything.

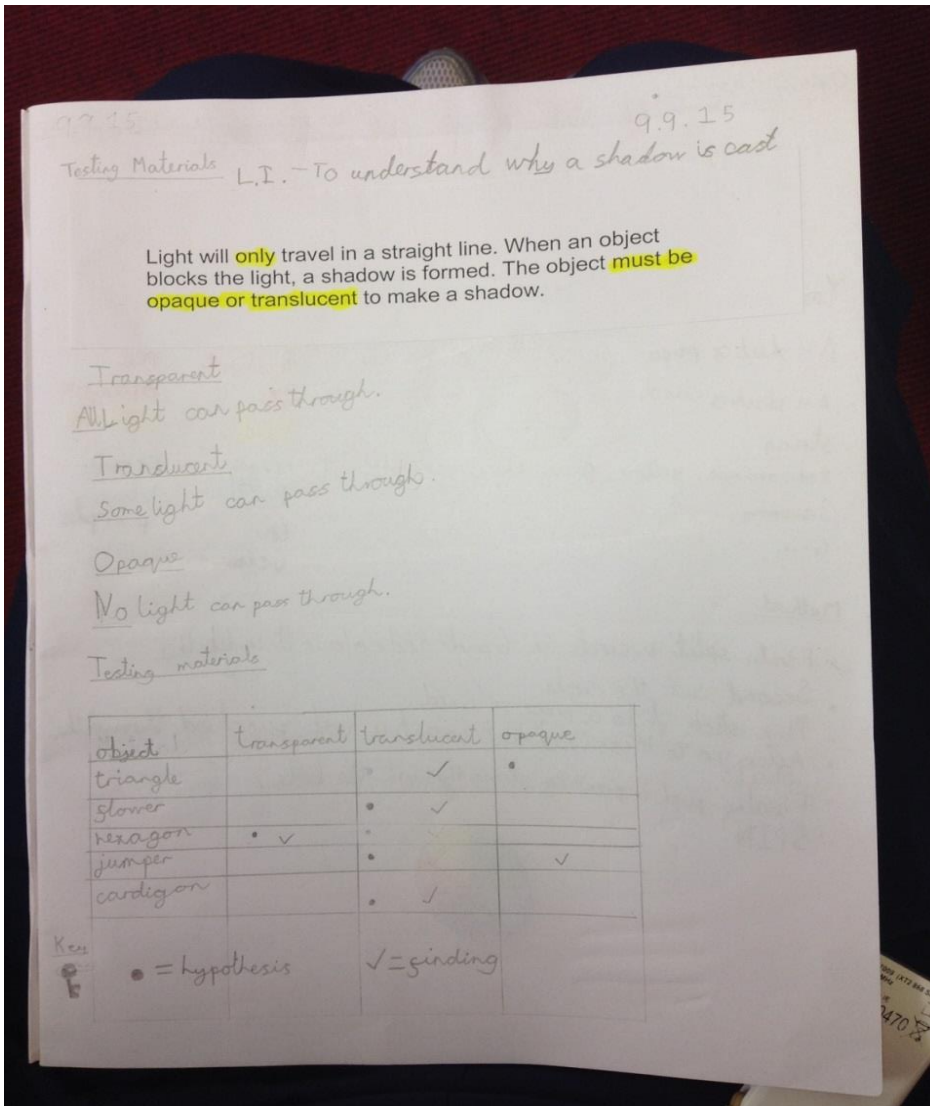
Teacher: And would you say that you've done all those things in these and achieved the success criteria?

Pupil: Yeah, my two stars are that I used a good layout and that was a S.C - so I think so.

Teacher: Is there anything you think you could work on then?

Pupil: Ehhh (*takes a minute to read teachers comments in writing jotter). My punctuation, im not very good at that. See you said it twice there. Maybe I could read it over a bit better. But I did it a bit better when I wrote the Newtons Wheel instructions; I've got an exclamation mark and commas there.

Learner Evidence



Pupil has highlighted the important words showing that they understand why a shadow is cast. Pupils tested different objects to see if they were transparent, translucent or opaque. We discussed their hypothesis before and after carrying out the experiment.

Pupil's comments: 'I thought the triangle would be opaque but you can actually see a bit of light through it'.

'So if we turn the light off we could shine the torch through the jumper and it would make a shadow on the wall'. '...I can use my knowledge of the properties of light...' **SCN 2-11b**

L.I To understand why a shadow is cast

S.C I can explain the words transparent, translucent and opaque.

I can give examples of transparent, translucent and opaque objects.



L.I – To explore the formation of shadows.

S.C - I can create shadows using my body.

Picture shows children ‘exploring the formation of shadows’ and ‘using [their] knowledge of the properties of light to show how it can be used in a creative way’. **SCN 2-11b**

We had a discussion about transparent, translucent and opaque objects prior to going outside. Pupils stated that translucent and opaque objects form shadows and listed different objects one of which was the body.

Pupils comment: ‘Let’s go to that side of the playground, there’s loads of sunlight there, we can block it with our bodies’.

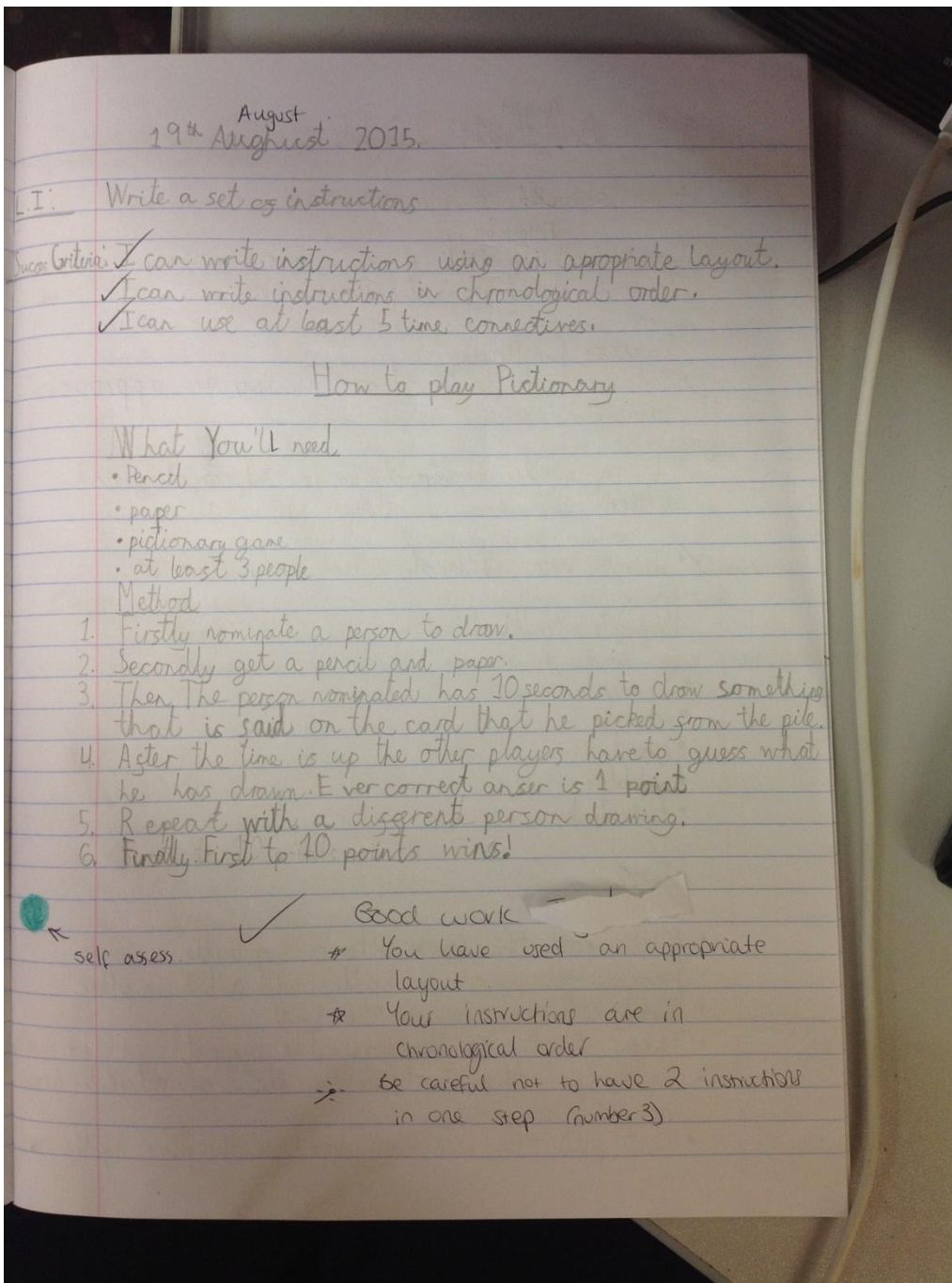


L.I To identify the different sources of light

S.C - I can categorize natural and man-made sources of light.

Able to categorize natural and man-made sources of light.

Pupil's comments: 'A candle is hard because the candle is made by humans, but fire can start naturally sometimes

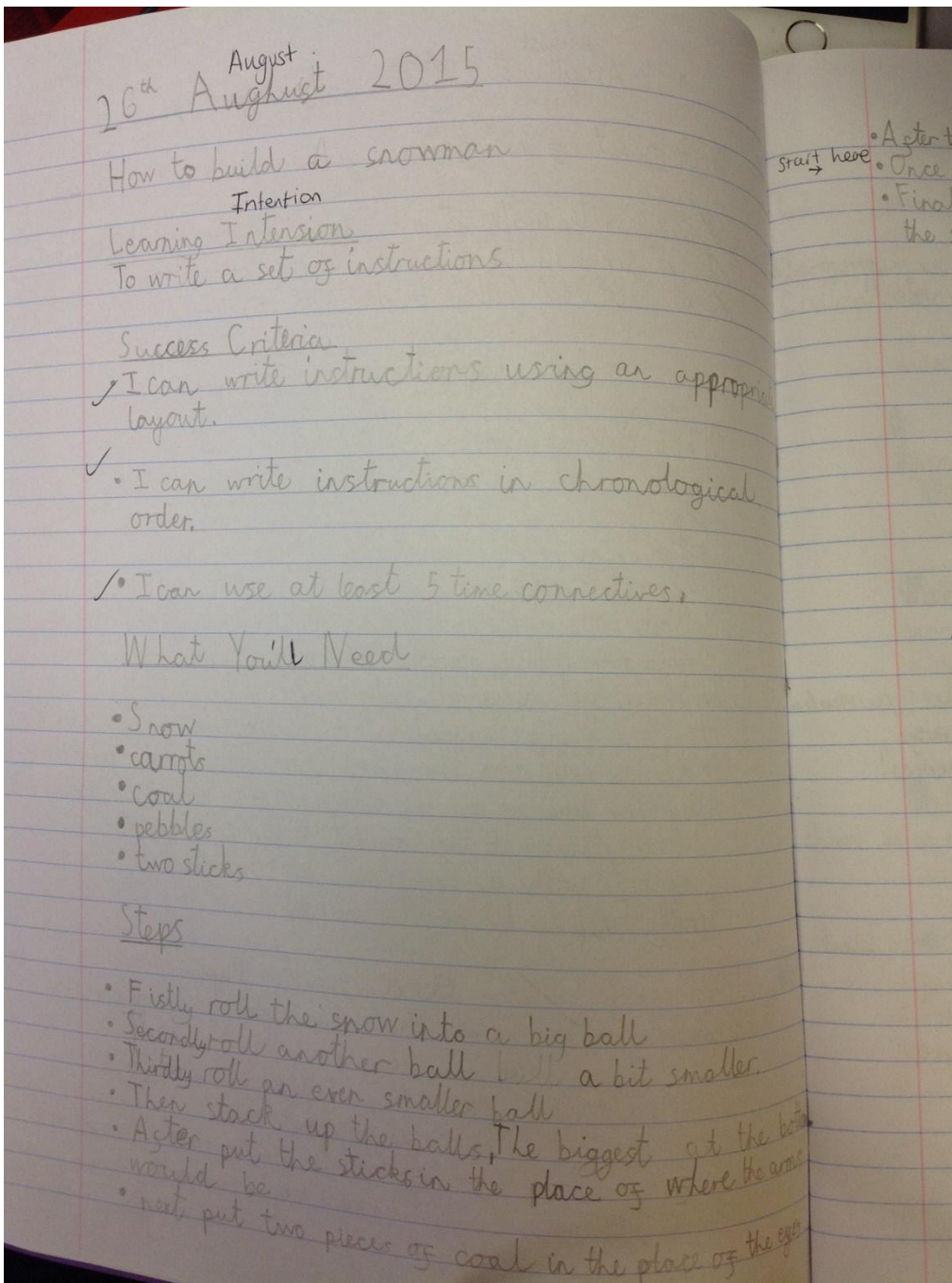


L.I – To write a set of instructions L.I is non-contextual
 S.C negotiated and agreed as a class.

First attempt at instruction writing, with the focus of the lesson being layout and features e.g sub-headings, bullet points/numbers, chronological order.

‘By considering the type of text I am creating, I can select ideas and relevant information, organise these in an appropriate way for my purpose...’

LIT 2-26a



Second attempt at instruction writing.

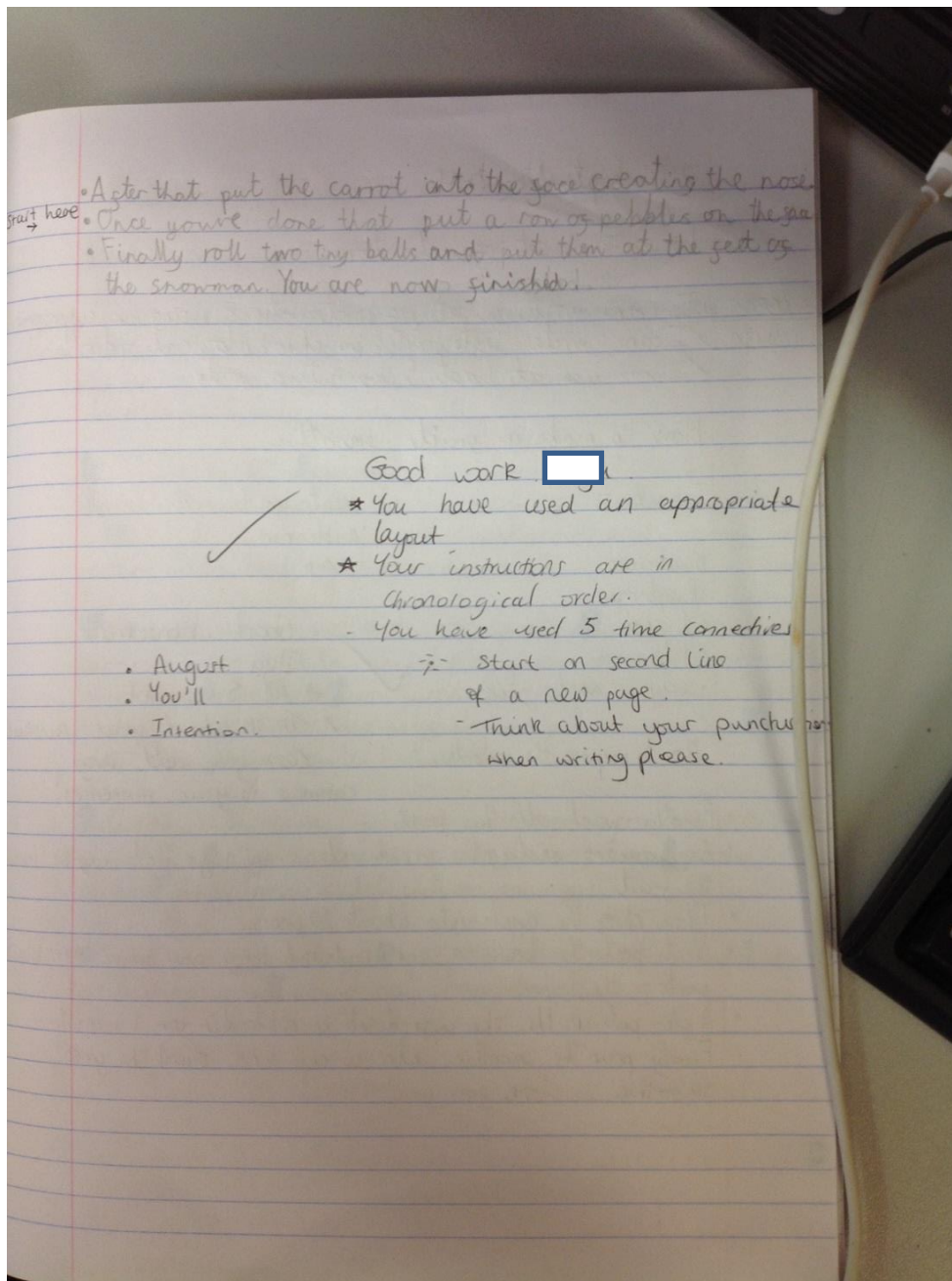
Focus of the lesson was how to link our steps together (time connectives)

L.I – To write a set of instructions L.I is non-contextual S.C negotiated and agreed as a class.

Pictures show pupil having achieved set Success Criteria (Firstly, Secondly, Thirdly, Then, After)

Next steps advised (wish) to think about punctuation.

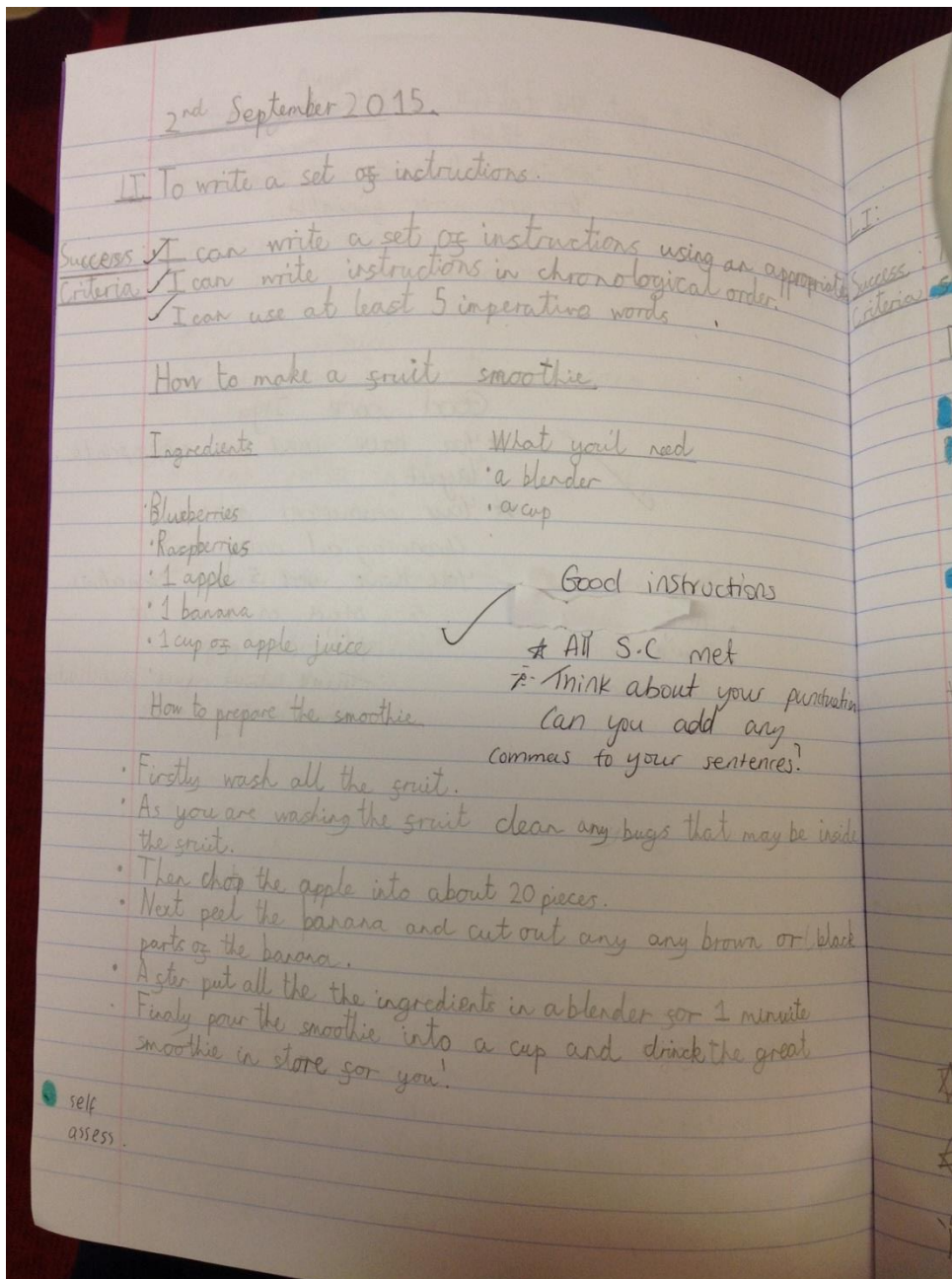
‘I can select ideas and relevant information, organise these in an appropriate way for my purpose and use suitable vocabulary for my audience’. LIT 2-26a



- After that put the carrot into the face creating the nose.
- Once you're done that put a row of pebbles on the face.
- Finally roll two tiny balls and put them at the feet of the snowman. You are now finished!

Good work [redacted]

- * You have used an appropriate layout
 - * Your instructions are in chronological order.
 - You have used 5 time connectives
 - Start on second line of a new page.
 - Think about your punctuation when writing please.
- August
 - You'll
 - Intention.



Third attempt at instruction writing.

This time the focus was on language and the type of words that should be found in instructions (imperative verbs)

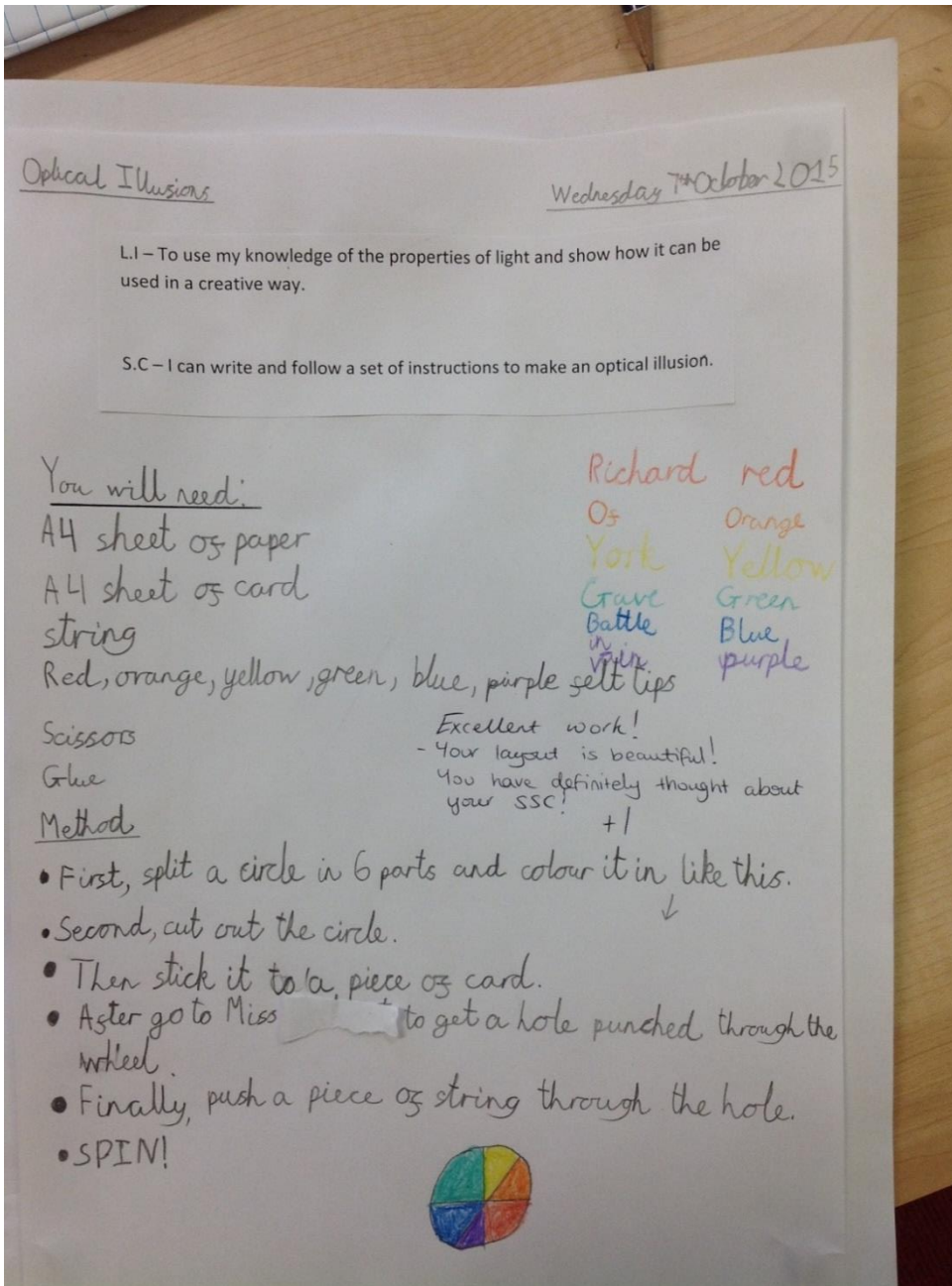
L.I – To write a set of instructions L.I is non-contextual S.C negotiated and agreed as a class.

Picture shows pupil having achieved set S.C however not taken on board comments from previous piece of work.

Pictures show pupil having achieved set Success Criteria (Firstly, Secondly Wash, chop, peel etc)

Next steps advised (wish) to think about punctuation.

'.... I can use suitable vocabulary for my audience....' LIT 2-26a



Picture shows: Science jotter

Pupil using skills in science which have been learnt in writing lessons e.g. the layout of instructions, chronological order, – ‘organise these in an appropriate way for my purpose’ **Organising & Using Information LIT 2-26a**

Pupil using vocabulary learnt in writing lessons e.g. imperative verbs (cut, split, push) and time connectives (First, Finally, After). – ‘I can use suitable vocabulary for my audience’ **Organising & Using Information LIT 2-26a**

Pupil using teacher feedback from writing jotter – punctuation is better.

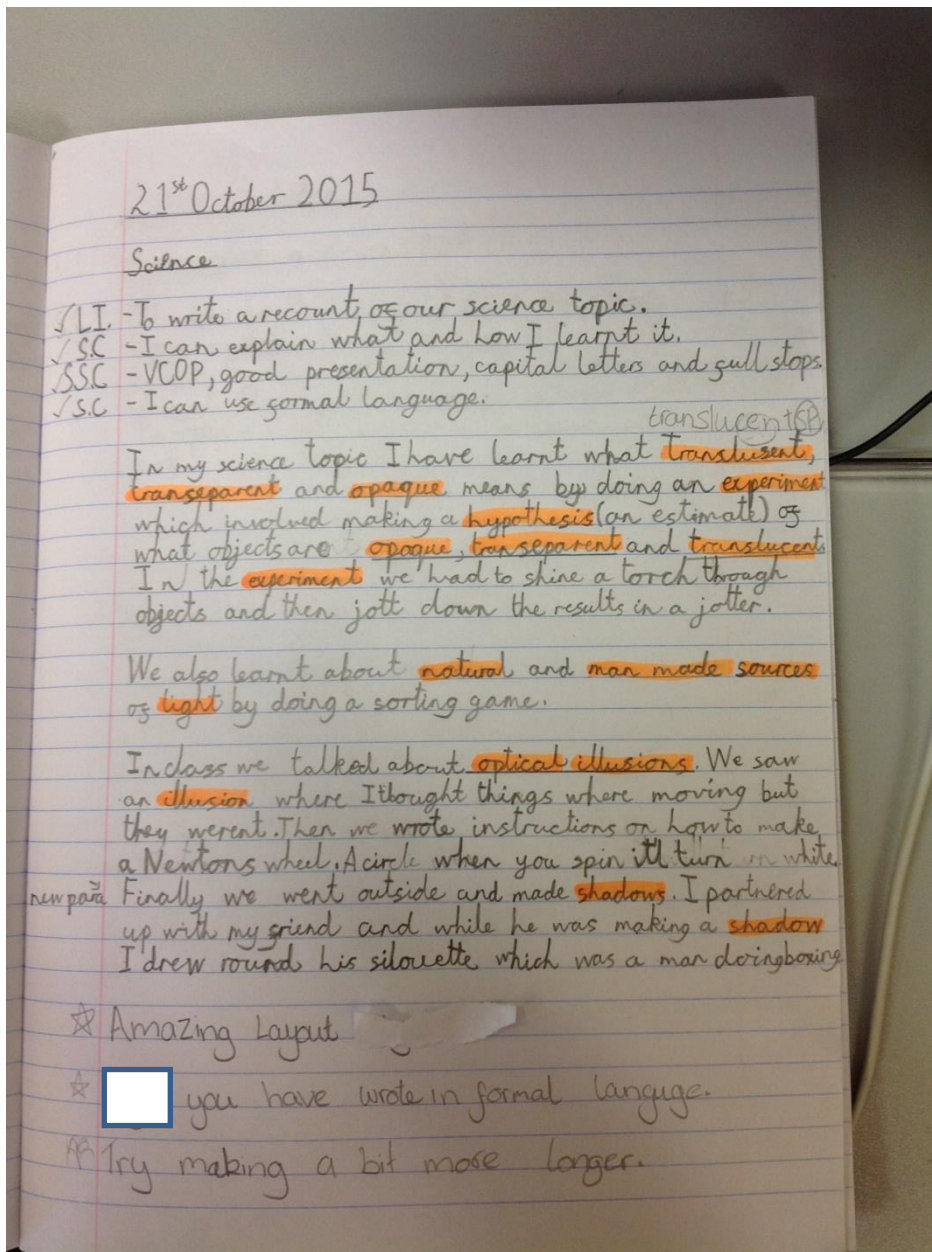
Pupil then followed instructions and successfully made a Newton’s Wheel

By exploring ... formation of shadows and the mixing of coloured lights, I can use my knowledge of the properties of light to show how it can be used in a creative way. **SCN 2-11b**



Picture shows children 'exploring the formation of shadows' and their 'knowledge of the properties of light to show how it can be used in a creative way'. **SCN 2-11b**

Picture referenced in 'Science Recount' writing – 'I drew round his silhouette which was a man doing boxing'.



Peer assessed.

Recount of Science topic