Appendix A

Pupil 1

- Played with ruler.
- Willing to answer ~~ge~~ questions
- Completed main activity quickly.
- Distracted and talking to others on table when teacher wasn't present.
- Showed willingness to check ~~their~~ our work.

Appendix B

Pupil 3

- Looks engaged with ruler.
- Willing to answer questions.
- Used ruler incorrectly.
- Rushed work and finished fast.
- Swinging on chair.
- Indecisive on which objects to measure.
- Marked estimations correct, without measuring
- Measured objects incorrectly.
- Gazed out of window, appeared distracted.

Pupil 2

- Engaged with introduction.
- Willing to answer questions.
- Answered a question with 'I know! I know!'
- Asked teacher questions.
- Finished work proficiently.
- Chatted to others on table after teacher walked away.
- Showed enthusiasm when measuring objects around
- the class - Clarified which objects they can measure.
- Chatting to peers.
- Asked 'can I go now?' on completion of the task.

Appendix C

Tick if Observed	Pupil 1	pupil 2	pupil 3
1) Low Activity			
2) A Frequently Interrupted Activity			✓
3) Mainly Continuous Activity			✓
4) Continuous Activity with Intense Moments	✓	✓	
5) Sustained Intense Activity			

1) **Low Activity**
Activity at this level can be simple, stereotypic, repetitive and passive. The child is absent and displays no energy. There is absence of cognitive demand. The child characteristically may stare into space. N.B. This may be a sign of inner concentration.

2) **A Frequently Interrupted Activity:**

The child is engaged in an activity, but half of the observed period includes moments of non-activity, in which the child is not concentrating and is staring into space. There may be frequent interruptions in which the child is not concentrating and is staring into space. There may be frequent interruptions in the child's concentration, but his/her involvement is not enough to return to the activity.

3) **Mainly Continuous Activity:**

The child is busy at an activity, but it is at routine level and the real signals for Involvement are missing. There is some progress, but energy is lacking and concentration is at a routine level. The child can be easily distracted.

4) Continuous Activity with Intense Moments:

The child's activity has intense moments during which activities at Level 3 can come to have special meaning. Level 4 is reserved for the kind of activity seen in those intense moments and can be deduced from the involvement signals. This level of activity is resumed after interruptions. Stimuli, from the surrounding environment, however attractive cannot seduce the child away the activity.

5) Sustained Intense Activity:

The child shows continuous and intense activity revealing greatest involvement. In the observed period not all the signals for involvement need to be there, bu the essential ones must be present; concentration, creativity, energy and persistence. This intensity must be present for almost all the observation period.

Appendix D

Questions for Interview

- **Pupil X**
- **Pupil Y**
- **Pupil Z**

1. What did you think was good about the lesson?
   - Good, I liked it
   - I liked it
   - I like measuring

2. What did you learn during the lesson?
   - Can't think
   - Measuring
   - Measuring height

3. What did you think of the main activity?
   - I liked the writing
   - I liked measuring them
   - I liked the writing

4. Did you complete the main activity?
   - Yes
   - Yes
   - Yes

5. Which parts of the activity did you complete/ not complete? Why?
   - N/A
   - N/A
   - N/A

6. Did you want to do the extension task?
   - Yes, because it was fun
   - Yes, because it was fun
   - Yes

7. Why did you want/not want to do the extension task?
   - Because it was fun
   - Like measuring
   - Because it was fun

Appendix E

8. What did you think of the extension task?
   - I really liked it
   - I liked it
   - I liked it - fun

9. Did you complete the activity?
   - Yes
   - Yes
   - Yes

10. Which parts of the activity did you complete/not complete? Why?
   - N/A
   - N/A
   - N/A

11. Which methods did you use during the lesson? (Choices to be given to pupils)
   - Did not answer
   - Did not answer
   - Books and measuring tapes

12. How did you feel during the lesson/activity? Why?
   - Happy
   - Excited
   - Happy

13. What did you like best about the two activities? Directed at all three pupils individually.
   - Measuring
   - Measuring
   - Measuring

Appendix F

Lesson 2 - Observation

Pupil X

Introduction - Quiet, not offering any answers, or putting their hand up.

Main body -

Copying others guesses

Not participating - only when prompted

Low energy during task (2)

Slow with sticking of sheets.

(went to move away)

Extension Task -

lack of interest in extension task.

'Can I go choose now?' - repeated

distracted

Needs continuous prompting

'can I go play now?'

Appendix G

Lesson 2 - Observation

Pupil Y

Introduction -

looking around (unfocused)

willing to put hand up ~~when~~ during questioning

Celebrated when extension task was introduced.

Excited to start main activity, rushed to table.

Main body -

Very happy to participate - displays signs of enjoyment during task.

- Smiling.

Continuous high energy throughout.

Extension Task -

Remains engaged in extension task, helps others.

Continued to practice skills (extension task) after it was necessary.

Appendix H

Lesson 2- Observation

Pupil 2

Introduction -

Shows continued engagement - giving teacher eye contact and looking at the board when necessary.

puts hands up during questioning.

looks pleased with main body / extension.

Main body -

Settles quickly

rushes ahead with the task.

displays low energy - not ~~and~~ asking questions - looking away, swinging on chair.

remains generally on task.

Extension Task

Excited to start main activity

Remains engaged throughout the extension task

works well with group.

continued to complete extension task after teacher declared necessary.

Appendix I

Tick if Observed	Pupil X	pupil Y	pupil Z
1) Low Activity			
2) A Frequently Interrupted Activity	✓		
3) Mainly Continuous Activity			
4) Continuous Activity with Intense Moments		✓	✓
5) Sustained Intense Activity			

1) **Low Activity**

Activity at this level can be simple, stereotypic, repetitive and passive. The child is absent and displays no energy. There is absence of cognitive demand. The child characteristically may stare into space. N.B. This may be a sign of inner concentration.

2) **A Frequently Interrupted Activity:**

The child is engaged in an activity, but half of the observed period includes moments of non-activity, in which the child is not concentrating and is staring into space. There may be frequent interruptions in which the child is not concentrating and is staring into space. There may be frequent interruptions in the child's concentration, but his/her involvement is not enough to return to the activity.

3) **Mainly Continuous Activity:**

The child is busy at an activity, but it is at routine level and the real signals for Involvement are missing. There is some progress, but energy is lacking and concentration is at a routine level. The child can be easily distracted.

4) Continuous Activity with Intense Moments:

The child's activity has intense moments during which activities at Level 3 can come to have special meaning. Level 4 is reserved for the kind of activity seen in those intense moments and can be deduced from the involvement signals. This level of activity is resumed after interruptions. Stimuli, from the surrounding environment, however attractive cannot seduce the child away the activity.

5) Sustained Intense Activity:

The child shows continuous and intense activity revealing greatest involvement. In the observed period not all the signals for involvement need to be there, bu the essential ones must be present; concentration, creativity, energy and persistence. This intensity must be present for almost all the observation period.

Appendix J

Questions for Interview

- **Pupil 1**
- **Pupil 2**
- **Pupil 3**

1. What did you think was good about the lesson?
   - Yes I liked it, I like maths
   - Yes I liked it - like measuring things
   - Yes, I liked that we could measure things.

2. What did you learn during the lesson?
   - Learned how to measure
   - Different things are different sizes
   - How to measure.

3. What did you think of the main activity?
   - Amazing
   - I liked measuring them
   - Good

4. Did you complete the main activity?
   - Yes
   - Yes
   - Yes

5. Which parts of the activity did you complete/ not complete? Why?
   - N/A
   - N/A
   - N/A

6. Did you want to do the extension task?
   - Yes
   - Yes
   - Yes

7. Why did you want/not want to do the extension task?
   - Because it was fun, you could know different things
   - Thought it was fun
   - I like measuring.

Appendix K

8. What did you think of the extension task?
   - I was hard but good
   - It was hard but good
   - It was a bit easy.

9. Did you complete the activity?
   - Yes
   - Yes
   - Yes

10. Which parts of the activity did you complete/not complete? Why?
   - N/A
   - N/A
   - N/A

11. Which methods did you use during the lesson? (Choices to be given to pupils)
   - Ruler
   - The ones I thought I needed
   - The ones I needed, like the window.

12. How did you feel during the lesson/activity? Why?
   - Happy, because I like maths.
   - Happy, because I like maths its good because now I now know how to measure things
   - Happy, because I like measuring.

13. What did you like best about the two activities? Directed at all three pupils individually.
   - Measuring the door (during the extension) , I know it is 250cm
   - Measuring - both tasks
   - Measuring the table in the extension task.

Appendix L

Description: ***What happened?*** *We looked at the use of an extension task on pupil's motivation towards learning during the main activity and extension task. The main activity included pupils using a ruler to measure pieces of ribbon up to 15cm. The extension task involved pupils estimating whether objects would be longer or shorter than 30cm.*
Feelings: ***What were you thinking and feeling?*** *I thought that pupils found the first task to be relatively easy compared to the ability group below them, this meant they moved onto the extension task quickly. Pupils were happy to carry out the extension task.*
Evaluation: ***What was good and bad about the experience?*** *Pupils showed a good understanding of the task and completed the activity to a high standard. During the extension task some pupils seemed to rush the activity whilst others took their time.*
Analysis: ***What sense can you make of your situation?*** *Pupils 1 and 2 showed a good motivation throughout the task, with only small periods of low motivation. Further reading surrounding this will allow us to make conclusions.*
Conclusion: ***What else could have been done?*** *Pupils main activity could have been extended if time had allowed for this and been adapted to be more challenging for MAT learners.* *As a result of further reading, we will be introducing an extension task which gets pupils working colleboratively.*
Action Plan: ***If it arose again what would you do?*** *If I were to the lesson again, I would look at using lines within the table created for pupils to follow. I would look at reiterating the point of items in the classroom being the main focus of the task. I could bring items into the classroom for pupils to make guesses on.*

Appendix M

Description: ***What happened?*** *We looked at the use of an extension task on pupil's motivation towards learning during the main activity and extension task. The main activity included pupils making estimations on the length of a polar bear (worksheet). The extension task included pupils looking at heights of pupils in the classroom and recording this.*
Feelings: ***What were you thinking and feeling?*** *I think throughout the lesson 2 pupils showed continued engagement with only small moments of distraction, whilst pupil X displayed lack of motivation needed prompted and was more interested in free choice. We have discussed how this may be down to a lack of interest in the topic.*
Evaluation: ***What was good and bad about the experience?*** *I think that pupils dealt well with the main activity, pupils X and Z in the group had low energy levels. A possible solution may be to have used different animals within the worksheet. Pupils however completed the task and moved onto the extension. Two of the pupils were very engaged in the extension task whilst the other was looking to move onto free choice.*
Analysis: ***What sense can you make of your situation?*** *Pupil X showed lack of interest and involvment throughout the lesson and was observed copying answers during the main body of the lesson. Further reading on this will suggest as to why.*
Conclusion: ***What else could have been done?*** *Pupils main activity could have been adapted to use different animals to keep pupils on task. This could be done thorugh pupils voice prior to the lesson where the teacher asked the pupils their favourite animal.*
Action Plan: ***If it arose again what would you do?*** *If I was to carry out this lesson again, I would re-iterate to pupils that the nature of the task will mean pupils will make mistakes and that this is OK. If circumstances allowed this could have been done effectively by grouping pupils into mixed ability pairings.*