00:00:55 Michael: is looking at the paper and does not say anything. **Passive participation**

Romina: is also looking at the paper for the first part of the segment without saying anything. **Passive Participation** and then says “Isn’t it like anyway you go- ” **Communication improvement**

Jeff: is also looking at the paper for the first part of the segment. **Passive Participaton**; and then asks the researcher “You have to stay on the lines, right? Those would be streets?” **Guidance: Researcher Discussion; Clarifying the Problem**

Brian: is looking at his paper and does not say anything for most of the segment, **Passive Participation**; and then at the very end of the segment says “Pretty much” in agreement and answering Romina’s question. **Checking Answer**

00:01:40 Michael: tapping his pen on the grid along intersection points and is not saying anything. **Working Individually**

Romina: begins the clip finishing her statement “As long as you don’t go past it.” And then asks “Don’t they all come out to be the same blocks” **Checking answer**

Jeff: begins to draw and then says “Five?” in response to Brian answering Romina and then clears up that he and Romina are looking at the red one. He also says “ All right, I mean pretty much” **Checking Answer**

Brian: is tracing the routes above the problem sheet with a black marker in his right hand while saying “You can go all the way down and go over, and go down three and go over, and then down two.” **Presentation: Informal** Brian responds by saying “Five” to Romina’s question about “Don’t they all come out to be the same blocks” **Checking answer**. At the very end of the clip, Brian says “So, let’s prove it” **Informal Leadership**

00:02:10 Michael: is not saying anything but is seen counting paths quietly. **Working individually.**

Romina: looks toward the researcher’s question about “Is there more than one shortest route?” and responds “Yeah” **Guidance: Researcher questioning, Checking Answer**

Jeff: also responds to the researcher’s question about “Does somebody want to tell me what you think you understand the problem to be asking?” and Jeff responds by saying “What’s the shortest route from there to here staying on the streets, right? **Guidance: Researcher questioning, clarifying the problem**

Brian: also responds to the same researcher’s question by saying “Yes” **Checking answer**

00:02:35 Michael: is seen at the beginning of the clip tapping his pen counting on the grid along intersection points but is still not saying anything. **Working individually**

Romina: Brian says “Let’s do blue” and Romina begins to count the paths on her paper not talking until the very end when she says “I have five” **Checking Answer**

Jeff: clarifies the problem by discussing with the researcher and saying “How many different shortest routes are there?” **Guidance: Researcher Discussion, Clarifying the Problem**

Brian: At the beginning of the clip Brian says “Let’s do blue” **Informal Leadership** Then, Brian says “ Blue’s got five” to which the Researcher responds that the students are going to have to convince them and Brian agrees. **Guidance: Researcher Questioning, Checking Answer**

00:02:55 Michael: is not visible for most of it. There was one second the segment shows of him looking towards Jeff. **Passive Participation**

Romina: originally wanted to count the blue, but Brian said he already did so she decided to count the red.**Informal Leadership** She is later seen counting the paths to the red by tapping her pen on her paper to count**. Checking answer**

Jeff: asks for markers, asks which ones the others are doing, and says “I’ll go to red.” **Collaboration** and then begins counting paths to the red point by writing on the grid and then asks at the very end of the clip “So why is it the same every time**? Checking Answer**

Brian: Brian asks in the beginning why Jeff wants the markers and also says that “I’ve got blue.” Brian’s paper shows the three points and Brian says ”Just count them and make sure you know how you got them.” **Informal Leadership**

00:03:50 Michael: is responding to Jeff’s question about why they are all the same. **Communication improvement**

Romina: is also answering Jeff’s question. **Communication improvement**

Jeff: is simply agreeing with Romina and Mike **Checking Answer**

Brian: makes two comments in the beginning of the clip saying “the shortest route only if you go forward” and later on “like plus and” and at the very end asks “Are there seven possibilities though?” **Communication improvement**

00:04:40---------------------------------------------

01:25:15 Michael: requests that the researcher asks the question again and then tells Romina to do the six one. **Guidance: Researcher questioning, Informal Leadership**

Romina:begins to say “ Now we just picked any point. Let’s say we picked this point. No matter how you get to this point” **Presentation: Formal**

Jeff: has left – not visible

Brian: is not saying anything. **Passive Participation**

01:25:45 Michael: is building off Romina’s ideas as she explains. **Communication improvement**

Romina: is explaining to the group and the researchers to answer the researcher’s question **Presentation: Formal**

Jeff:has left-not visible

Brian: not saying anything but he is briefly shown on the video in the beginning of the clip. **Passive Participation**

01:26:20 Michael: says in the beginning “That’s nothing” **Checking Answer**

Romina: is explaining the work **Presentation: Formal**

Jeff:has left-not visible

Brian: not visible or audible

01:27:05 ---------------------------------------------------

**Coding Count for Verification Study Segment 3**

**Group Engagement Type Count**

|  |  |
| --- | --- |
| **Behavior** | **Count** |
| Administrative discussion |  |
| Argumentation |  |
| Assessing progress |  |
| Checking answer | 12 |
| Clarifying the problem | 3 |
| Communication improvement | 4 |
| Constructing |  |
| Collaboration | 2 |
| Noncollaboration |  |
| Passive participation | 7 |
| Emotions related to math |  |
| Extrapolation |  |
| Group solution |  |
| Off-task |  |
| Participating in class discussion |  |
| Nonparticipation in class discussion |  |
| Working during class discussion |  |
| Informal leadership | 5 |
| Presentation: Informal | 1 |
| Presentation: Formal | 3 |
| Refining concept |  |
| Guidance: Research er Discussion | 2 |
| Guidance: Researcher Questioning | 4 |
| Using tools/manipulatives |  |
| Verifying completion |  |
| Working individually | 3 |