Introduction to Multiplication Observation Notes
1/21/03

“Students”
- 8 students

**Opening** (Something in equal rows)

Answers:
- ceiling tiles (because of lights, some are not equal)
- pockets in pocket chart
- stickers – same # in each row, same # of rows
  ( – kids had good reasoning for inequality – rational answers that made sense)
- desks – decided they’re not equal
- bookshelves – same height, same # in rows
- calendar – every square, not just squares with #s (some squared are not filled)
- lines on star student poster – student measured with a pencil to check for equality
- tiles on floor – same # in each row
- job chart – 6 card in each row. – This one is not equal because bottom row has extra –
  we could take extra cards out to make equal rows.

**Part I**

Jar with chips
- 16 chips – 4 chips = “12” chips; We will be working with 12 chips
  Put 12 chips in equal rows
  Math vocab – look while I’m writing (Cody off task – chewed on fingers)
  Equal rows = Array
  Cody had Anna fold sheet – went back to chewing on fingers.
  Partners helped each other fold paper.
  8 sections on the folded paper; partners put name on paper

  Partners put 4 on a lid (Cody looked at other group to see what they were doing – he
  followed suit.

What is an Array – Equal rows
☆ Great Wording! ➔ (“Who is sure that they know the answer?”)

After you make array – then draw – (Do you understand?)
  “Yes” (student response)
  After one array – do another

Kristy and Amy – looked at other groups to see what they did – they had an “aha”
  moment after watching Jordan and Luke. Caught on “I get it” – 4 rows/3, 2 rows/6
  (“6 in a row – 6 rows???”)

Luke and Jordan – 2 rows of 6 – Luke drew. Jordan “I drew that also, but the other way–
  Oooh – I drew 6 rows of 2!” (Jordan – discovery)
**Part II** (How many arrays can you come up with to put 16 cubes in rows?)

★ Show me first before you draw)
    All groups got right down to business this time – seemed to want to race to draw all of the ways. (Good understanding)

Matt and Emily ➔ (Comment from Angie, “good teamwork”)

Sharing Arrays
    (While one group was sharing – other groups sometimes played with blocks) – “Please set your blocks down (good comment)

★ Kids knew which pictures matched which array – excellent!
    (“I think you’ve got them all. Thumbs up.”)

**Part III** (Homework Assignment)

    Make some arrays on your paper.
    As many arrays as you can – can be different numbers
    Use as many stickers as you can
    Write how many rows and how many in each row.
    (Rows go across!)

    (“What is your job?”)
    Amy – put stickers in arrays – write blank rows of blank
    Jordan – you can make as many arrays as you would like
    Emily – Use as many stickers as you can