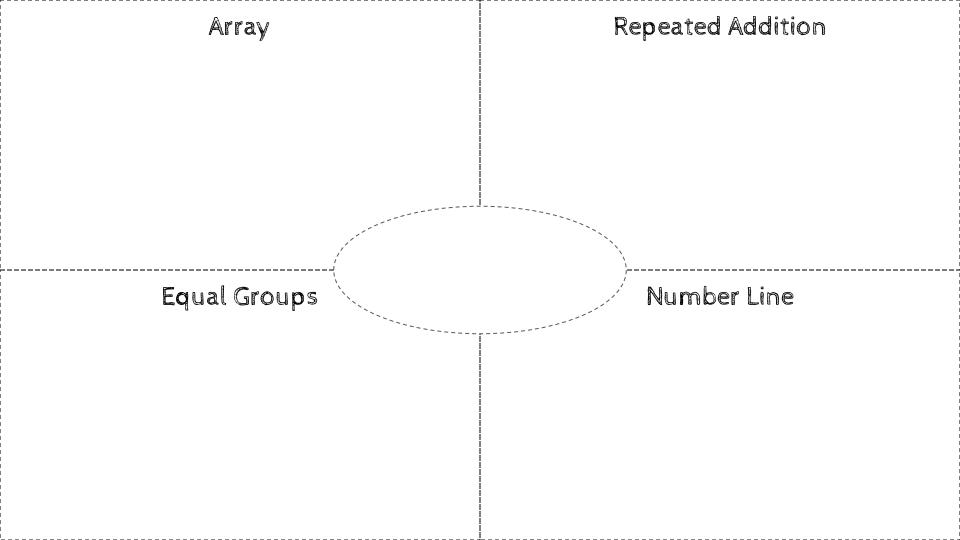


TODAY we will represent multiplication facts with **arrays**.



Whole Group Small Group Check In Independent Check In



> TODAY we will represent multiplication facts with **repeated addition**.



whole Group Small Group Check In Independent Check In

TODAY we will represent multiplication facts as **equal groups**.



Whole Group Small Group Check In Independent Check In

TODAY we will represent multiplication facts using **number lines**.



Whole Group Small Group check In Independent Check In

TODAY we will demonstrate all the ways we have learned to represent multiplication.



Whole Group Work Time Check In Work Time Share Out

Representing Multiplication Knowledge Application

MA.3.1.2.c Using drawings, words, arrays, symbols, repeated addition, equal groups, and number lines to explain the meaning of multiplication.

| | J | | · · · · · · | | • | |
|-------------|---|---|---|---|---|---|
| | Array | Repeated Addition | Equal Groups | Number Line | Creativity & Neatness | Presentation |
| BEGINNING | The array does not represent any multiplication sentence. | The addition used is not adding the same amount each time. It does not represent any multiplication sentence. | The groups do not contain the same amount. It does not represent any multiplication sentence. | The number line does not use equal moves. It does not represent any multiplication sentence. | The models were arranged in a sloppy order. The information was not clear and did not display any creativity. | The student did not accurately discuss how each model related to multiplication. The information was not represented clearly |
| PROGRESSING | The array did not represent the multiplication sentence being used, but did represent multiplication | The addition is repeating, but it does not match the multiplication sentence being modeled. | The groups contain the same amount, but they did not match the multiplication sentence being modeled. | The number line does use equal groups but it does not match the multiplication sentence being modeled. | The models were arranged somewhat neatly. The presentation was legible, but the information was not colorful or eye catching. All models did not include a multiplication sentence. | The students understood how each model related to multiplication but it did not speak clearly and was not understood. |
| PROFICIENT | The array accurately represents the multiplication sentence being used. | The addition is repeating and matches the multiplication sentences being modeled. | The groups contain the same amount and represent the multiplication sentence being modeled. | The number line does use equal moves and represents the multiplication sentence being modeled. | The models and presentation were neat. Students used an original display in a colorful, eye catching way. All models included multiplication sentences. | The students accurately discussed how each model related to multiplication The student spoke clearly and stood with good posture. |