

# Mathematics CFA Template

## Pre-Instruction

1. List the Standard. Underline the nouns (what students will know) and highlight the verbs (what student will do):

6.SP.4-**Display** numerical data in plots on a number line, including dot plots, histograms, and box plots.

### 2. Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

### 3. I Can Statements – Put learning targets in student friendly terms.

1. I can use a set of data to display dot plots, histograms and box plots.
2. I can analyze data using number lines, dot plots, histograms and box plots.

Depth of Knowledge of the standard (Highlight the Level of the Learning Target):

**Level 1 Recall; Level 2 – Skill/Concept; Level 3 – Strategic Thinking; Level 4 – Extended Thinking**

### 4. List the skills students need to know in order to begin this standard:

1. Vocabulary-number line, dot plots, histograms, box plots

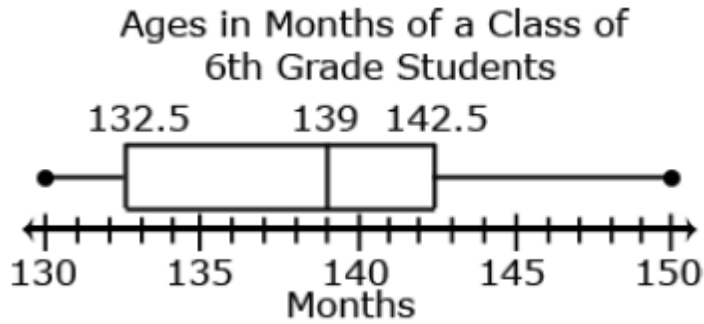
5. What type of assessment am I going to write? [selected response (m/c, t/f, y/n, matching, fill in \_\_\_) **or** constructed response (**short:** word, phrase, sentence, single problem; **extended:** multi-step operations in math, problem solving)] List the assessment questions.

Exit Tickets-Vocabulary and skills-matching- Working understanding of terminology  
Constructive response-short; few questions

1. Nineteen students completed a writing sample that was scored using the six traits rubric. The scores for the trait of organization were 0, 1, 2, 2, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 5, 5, 5, 6, 6. Create a data display. What are some observations that can be made from the data display?
  
2. Grade 6 students were collecting data for a math class project. They decided they would survey the other two grade 6 classes to determine how many DVDs each student owns. A total of 48 students were surveyed. The data are shown in the table below in no specific order. Create a data display. What are some observations that can be made from the data display?

130	130	131	131	132	132	132	133	134	136
137	137	138	139	139	139	140	141	142	142
142	143	143	144	145	147	149	150		

3. Using the box plot, list the minimum, maximum, quartile 1, median, and quartile 3. Then, explain the box plot.



#### 6. Scoring Guide

**Exceeds Expectations:** Student answered 3 out of 3 using the correct, detailed display of data (all items labeled).

**Proficient:** Student answered 3 out of 3 using the correct display of data.

**Approaching Proficiency:** Student answered 2 out of 3 using a form of data display.

**Not Proficient:** Student answered less than 2 using no data display.



**6.SP.4 – Formative Assessment**

- Nineteen students completed a writing sample that was scored using the six traits rubric. The scores for the trait of organization were 0, 1, 2, 2, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 5, 5, 5, 6, 6. Create a data display. What are some observations that can be made from the data display?
  
- Grade 6 students were collecting data for a math class project. They decided they would survey the other two grade 6 classes to determine how many DVDs each student owns. A total of 48 students were surveyed. The data are shown in the table below in no specific order. Create a data display. What are some observations that can be made from the data display?

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