**Backwards Design Project**

**Name of lesson/unit: Statistical Questioning and Application**

**Grade Level: 6th**

**Subject Area: Math**

**Stage 1:**

**Content standards:**

-6.SP.1: Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. For example, “How old am I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.

-6.SP.2: Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.

-6.SP.3: Recognize that measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how values vary with a single number.

**Understanding(s):**

Students will understand that a statistical question has data can be analyzed by its center spread, shape and variation.

**Essential Question:**

How many hours per week does each student on average spend on a mobile device?

**Stage 2: Acceptable Evidence**

**Performance Task(s)**

How do the students prove they understand the concept?

* Generate a graph that illustrates center spread, shape and variation using a dot plot, histogram or box plot.
* Create an informational commercial to articulate the results and analysis of the survey.
* Host a blog for students and teachers to collaborate and communicate the results and analysis of the survey.
* Produce a podcast announcement to communicate the results and analysis of the survey.
* Make a news report presenting the results and analysis of the survey using a video presentation i.e. iMovie, Movie Maker.

Other Evidence and Formative Assessment works:

* Compare original data to new data on an alternative age group, gender, etc.

**Rubric:**

**Stage 3: Learning Plan**

**Learning Activities:**

* **Direct instruction on developing dot plots, histograms and box plots.**
* **Instruction on means of central tendency.**
* **How to create an unbiased question and collect unbiased data.**
* **How to analyze and interpret the shape of a graph.**

**Lesson Contributors: Names and schools**

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