

## **Mean, Median and Mode Lesson Plan**

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### **Strand:**

Number

### **Grade Level:**

Three

Students will be able to view how a tipi raising is performed.  
Students will be able to create estimations based on their observations of the tipi raising video clips.

### **Materials:**

Tipi-raising videos, graph paper, pencils, math logs/duo tangs/journals

### **Video Clips:**

As the teacher you may choose to use the video clips that demonstrate the tipi-raising done with Elder Glen Anaquod using a Saulteaux perspective. Or you may choose the video clips that demonstrate the tipi raising done with Tim Haywahe using a Nakota perspective. Depending on your area, it may be appropriate to choose one over the other. If time permits, showing them both tipi raisings is a good opportunity to compare and contrast different traditions and teachings.

### **Introduction:**

As a class, you are going to show the students the tipi raising videos. Start with showing them the clip that demonstrates them measuring the first poles on the canvas. As they are viewing the videos, have students make estimations to how many people they think could fit comfortably in this tipi? They should record this in their math logs/duo tangs/journals.

### **Step Two:**

Play the next clips. Pause the clip when the canvas is  $\frac{1}{2}$  to  $\frac{3}{4}$  around the poles. Allow students to re-think their estimation. Do they still want to go with their original estimation or make a new estimation? Have them record their estimation and state whether it is new or if it remained the same.

### **Step Three:**

Watch the remainder of the videos and pause the last slide where the students can see the complete tipi. This is their last opportunity to either keep their estimation, or create a new one, and record.

Introduce or review what mean, median and mode are with your students. Choose five students' numbers to work with and record these on the board (students should have recorded three numbers each). Have students work individually to determine what the mean, median and mode are of those numbers. Review as a class.

### **Mean:**

Average

### **Median:**

Arrange the numbers from lowest to highest and the median is the middle number

### **Activity:**

On construction paper, have students trace their hand (fingers together and thumb close in) and then cut it out. This will be used as a non-standard measuring tool for items around the classroom. If you have cultural items available to measure, great, but if not this can be used for basically anything. For example, if you have a rain stick in your classroom have students measure how many handprints long it is. Remember to share background on the meaning of the rain stick so they understand its significance. Other items you can measure are things like their desks, tables, drawers, windows, and etcetera.

You can set up stations for this activity so that students are not trying to measure the same thing all at the same time, also so that you can take anecdotal records on the way they measure items\*, behaviors, other.

\*Do they measure items with the hand vertically or horizontally, do they use the width of their hand cut-out or the length of it?

**Mode:**

the number that occurs most often

**Optional Activities:**

Have the students do some graphing with this information. Students can create a line or bar graph. Have them note where they see the most common guesses. Have the class make a consensus on how many people can fit into this tipi.

Find a place outdoors around the school where you can measure a diameter of anywhere for 10 to 25 feet using broken branches, or other objects Mother Nature provides us with (to represent the tipi) to explore their estimations. You can also use masking tape if needed. Have students sit inside the circle, how many fit comfortably?

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