Meeting Within a Meeting (MWM) 2021

The MWM program provides middle and high school mathematics and science teachers an opportunity to discuss and apply the data analysis, data science, and statistical concepts embodied in the NCTM *Catalyzing Change* books and the American Statistical Association's (ASA) *Guidelines for Assessment and Instruction in Statistics Education (GAISE) Pre-K-12 Curriculum Framework*. Teachers will examine the Mathematical Practices from a statistical point of view and study ways to assess student understanding of statistical concepts. Teachers will explore problems that require them to formulate statistical questions, collect, organize, analyze, and draw conclusions from data. The MWM program includes examining what students can be expected to do at the most basic level of understanding data analysis and what can be expected of them as their skills develop and experience broadens.

Program Chair: Katherine T. Halvorsen, Department of Mathematics & Statistics, Smith College

MIDDLE SCHOOL PROGRAM
Schedule for Grades 5-8 Workshops
Tuesday, July 13, 2021

10:30 – 10:45	Welcome by Trena Wilkerson (NCTM President), Bruce Binkowitz (2020 Chair of the ASA Biopharm Section), and Rebecca Nichols (ASA K-16 Education Coordinator)
11:00 - 12:30	Session 1: Christine Franklin and Kaycie Maddox Pre-K–12 GAISE II Report; Statistics Education for Teachers (SET) Report; and the data analysis, data science, and statistical concepts embodied in the NCTM *Catalyzing Change* books • The role of questioning • Introducing Mathematical Practices
12:30 – 2:00	Lunch Break
2:00 – 3:30	Session 2: Christine Franklin and Kaycie Maddox • Conceptual understanding of center and variability – the mean/MAD activity • Reasons for using MAD and transitioning to Standard Deviation

Wednesday, July 14, 2021

11:00 - 12:30	Session 1: Christine Franklin and Kaycie Maddox • Comparing distributions for quantitative data • Use of technology - CODAP
12:30 - 2:00	Lunch Break
2:00 - 3:30	Session 2: Christine Franklin and Kaycie Maddox • Using non-traditional data – photos as data

Thursday, July 15, 2021

11:00 – 12:30	Session 1: Christine Franklin and Kaycie Maddox • Association with two categorical variables • Conditional proportions • Two-way tables
12:30 – 2:00	Lunch Break
2:00 – 3:30	Session 2: Christine Franklin and Kaycie Maddox • Association of quantitative variables • Multi-variable thinking • Prediction and classification

HIGH SCHOOL PROGRAM
Schedule for Grades 9-12 Workshops

Tuesday, July 20, 2021

10:00 – 10:15	Welcome and plans for the week by Katherine Halvorsen, MWM Program Chair; Welcome from Ron Wasserstein, ASA Executive Director, Bruce Binkowitz, 2020 Chair of the ASA Biopharm Section, and Rebecca Nichols, ASA K-16 Education Coordinator
10:15 – 11:30	Session 1: Sharon Hessney: Explore together What's Going On in This Graph?, the weekly online collaboration of the ASA and NYTimes Learning Network. See how it incorporates the concepts of the Pre-K–12 GAISE II Report and Statistical Education for Teachers (SET) Report.
11:30 – 2:00	Lunch Break
2:00 – 3:30	Session 2: Katherine Halvorsen: Formulating statistical questions and recognizing the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.

Wednesday, July 21, 2021

10:00 – 11:30	Session 1: Catherine Case: Bivariate data analysis: strategies for exploring the relationship between two quantitative variables with an emphasis on statistical thinking and free classroom resources
11:30 – 2:00	Lunch Break

2:00 – 3:30	Session 2: Anna-Marie Fergussson: Exploring and using data from grayscale images to develop informal classification models.

Thursday, July 22, 2021

10:00 – 11:30	Session 1: Catherine Case: Categorical Data Analysis: Strategies for exploring the relationship between two categorical variables using two-way tables, relative frequencies, and data visualization in CODAP
11:30 – 2:00	Lunch Break
2:00 – 3:30	Session 2: Anna-Marie Fergusson: Using randomization tests to make inferences and justify conclusions.