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| **Lesson Name:** | **Correlating Salaries and Job Outlooks** |
| **Grade Level(s):** | 9th Grade Math |
| **Goal/Objective(s):** | The goal of this lesson is for students to practice finding and interpreting a correlation coefficient for bivariate data while exploring possible careers for which they may already have the skills needed. |
| **Standard(s):** | **Math Standards:**  **M.1HS.36** Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.  **M.1HS.37** Compute (using technology) and interpret the correlation coefficient of a linear fit.  **M.A1HS.38** Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.  **M.A1HS.39** Compute (using technology) and interpret the correlation coefficient of a linear fit.  **School Counseling - Student Success Standards:**  **ALP.SS.1.2.2** apply knowledge of skills, interests, aptitudes and the workplace to guide decision-making in relation to postsecondary choices.  **ALP.SS.1.2.5** revise career/life plan to reflect changing personal lifestyle dreams.  **ALP.SS.2.1.1** use a variety of resources to explore career options in relation to personal abilities, skills, interests, values and the current job market. |
| **Instructions:** | Have students complete the Basic Skills Survey on CFWV.com. As students explore their results, have them click on Review Matching Careers.  Each student should explore at least 15 different careers to find the Average Annual Wage in West Virginia vs. the Estimated Annual Job Openings. To gather this information, the student will need to click on the Job Name -> Money and Outlook from his or her results.  Students should utilize this information to create a table.  Use technology to have students create a scatter plot based on their table.  ASK: What kind of correlation do you see in the two variables?  Have students calculate the correlation coefficient, r, and use it to describe the correlation in the context of careers they have chosen.  Have students find another student with a similar coefficient and have them describe why they think this occurred.  Have them find another student with a very different coefficient and have them describe why they think this occurred. |
| **Materials:** | Technology to create a table and that can graph and calculate a correlation coefficient such as a graphing calculator or GeoGebra. |
| **CFWV Tools Used:** | CFWV Basic Skills Survey |
| **Assessment** | This problem from Illustrative Math can be used as a lesson assessment.  Coffee and Crime: <https://www.illustrativemathematics.org/content-standards/HSS/ID/C/8/tasks/1307>  You may wish to print the student section, as the website contains an answer key. |