Fourth grade Math lesson plan: Estimating distances

Overview	Students will gain basic knowledge about maps, enough to interpret them correctly, and learn to estimate the distances between objects and places.
Objectives	Students will be able to: • Locate different places in the world • Read a map correctly and interpret exactly what they are seeing on the map • Have a good estimate of distances between selected objects or places
Learning environment	In a welcoming classroom environment, with computer access and a teacher or aid to help with students questions.
Types of students	4th Grade Math students of all levels
Standards	4.7. Students make decisions about how to approach problems and communicate ideas.
Materials	Computer: To have access to WolframAlpha in order to use the site with the mathematical activities.
Procedure	Student exploration: Students will estimate distances between places then use WolframAlpha to check their findings. Samples: Estimate the distance between New York and Texas Estimate the distance between The Statue of Liberty and The White house Find the approximate distance between The Grand Canyon and where you are now. Find Sydney, Australia and Auckland, New Zealand and estimate the half way point. Allow the students to choose two places they would want to go, and then get them to make estimations of the distance between the two places. Have a final discussion with all the students about their findings.
Application	Students will use WolframAlpha to help the make estimates of distances which will be helpful in the real world when travelling distances and calculating gas mileage.
Evaluation	Give the class a distance to estimate for the final quiz. For example tell them to estimate the distance between the school

	library and the classroom they are currently in. Whoever's estimation is the closest is the winner. If a more formal evaluation is needed, give the student a list of distances between places and get them to provide their answers. Grade students according to the correct answers they provided.