



## Applications of Remote Sensing

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Remote sensing is one of the best ways to be able to monitor and see changes in the Earth. The use of satellite images in the classroom can be a practical way to help students understand the importance and use of remote sensing and Geographic Information Systems (GIS). It is essential in helping students to understand that underlying individual data points are converted to a broad spatial form. The use of actual remote sensing data makes this more understandable to the students e.g. an online map of recent earthquake events, geologic maps, satellite imagery. For change detection, images of years ten or twenty years apart of the same area can be compared and observations recorded. Satellite images of different places can be available on the Internet or from the local space agency. In groups of mixed abilities, students can observe changes in land use over time and also give possible reasons and explanations to those changes. Students should answer essential questions like, how does satellite imagery offer valuable information to different faculties e.g. military, weather, environmental departments and others. Before and after images on disasters for example, volcanoes, floods and earthquakes should be obtained and observed. Key questions would be; how can scientists use these images to predict, or to change the future outcomes over time. How to manage disasters and how the archived images can assist developers in planning land use around that area in the future. Other material that would be useful includes maps and aerial photographs of the area. A flight should be organized over the area for students to acquire aerial photographs of their own; this further enhances their understanding of the concept "remote sensing". Environmental issues such as air, water and land pollution can also be identified on satellite images. Key questions for students would include causes, effects and possible solutions to the problem. Conducting a fieldwork exercise around the area would further the students knowledge about the area and this would also broaden the students research skills.