Citizen Science: Information Problems, Library Solutions

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What is Citizen Science?

Citizen science is a form of scientific research in which professional scientists analyze data collected by volunteers without scientific training. Scientists are able to gather large sets of data that reveal broader trends and allow new discoveries about our world.

Citizen science also benefits participants by giving them a chance to participate in the scientific process, increasing their scientific literacy and potentially impacting their ability to make science-related decisions both in their own lives and in public policy.

Examples of Citizen Science Projects

Christmas Bird Count (Audubon Society)

Begun in 1900 by Frank Chapman, the Christmas Bird Count aimed to replace the popular Christmas tradition of competitive "side" hunts. Participants canvas an assigned area and identify and count all the birds they see. These counts provide valuable information about bird populations and migration patterns.

http://www.audubon.org/Bird/cbc/

American Association of Variable Star Observers

The AAVSO was founded in 1911 and includes both professional and amateur astronomers. Participants collect data on stars whose brightness varies in intensity. They measure brightness by comparing the variable stars to stars whose brightness remains constant. AAVSO members submit their observations to a database used by scientists studying astronomy.

http://www.aavso.org/

All-Taxa Biodiversity Inventories

In these projects, researchers attempt to catalog all the species that occur in a specific geographic region. Many use volunteers to find, collect, and identify species in specific taxa groups, ranging from fungi and plants to amphibians and insects.

http://www.atbialliance.org/

Information Problems

Data quality

Data sharing and project collaboration

Training participants and developing user-friendly protocols

Promotion of citizen science projects and recruitment of participants

Library Solutions

Standardized data collection techniques
(such as those used in cataloging)

Increased collaboration among projects through Information Commons or Digital Library Technologies

Registry of citizen science projects

Promotion of citizen science "toolboxes" already available

Assistance with training protocols for participants (e.g., finding age-appropriate materials)

Promotion of projects among library patrons

Promotion of citizen science as a data source to students and researchers

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