The NASA-sponsored Classroom of the Future's Study of NASA-TV Viewers

During FY07, the NASA-sponsored Classroom of the Future (COTF) will collect opinions from the public about the effectiveness of NASA-TV.

Collection Name	Start	End	Purpose	Sampling Method	Population	No. in Sample	Burden Hours
NASA-TV User Survey	March FY07	June FY07	Determine opinions on the effectiveness of NASA-TV	Accidental, haphazard, or convenience (volunteers) nonprobability sampling	Adults	1,020	170

A. Justification

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

NASA's founding legislation, the Space Act of 1958, directs the agency to expand human knowledge of Earth and space phenomena and to preserve the role of the United States as a leader in aeronautics, space science, and technology. High achievement in science, technology, engineering, and mathematics (STEM) education is essential to the accomplishment of NASA's mission. The Strategic Management of Human Capital initiative under the President's Management Agenda requires agencies to "build, sustain, and effectively deploy the skilled, knowledgeable, diverse, and high-performing workforce needed" to meet agency core competencies. NASA's education investments will contribute to the agency's human capital needs.

All of NASA's education efforts are part of an integrated agencywide approach to human capital management. Within the NASA Strategic Plan, education is identified as a cross-cutting function that supports all of the agency's strategic goals and objectives. NASA delivers a comprehensive agency education portfolio—a collection of investments and strategies, such as research and development, managed to further common goals—implemented by the Office of Education, the NASA mission directorates, and the NASA centers. Through the portfolio NASA contributes to our nation's efforts in achieving excellence in STEM education. Three outcomes serve to align all agency education activities:

- **Outcome 1: Strengthen NASA and the nation's future workforce**—NASA will identify and develop the critical skills and capabilities needed to achieve the Vision for Space Exploration. To help meet this demand, NASA will continue contributing to the development of the nation's future STEM workforce through a diverse portfolio of education initiatives that target America's students at all levels, especially those in traditionally underserved and underrepresented communities.
- **Outcome 2: Attract and retain students in STEM disciplines**—To compete effectively for the minds, imaginations, and career ambitions of America's young people, NASA

will focus on engaging and retaining students in STEM education programs to encourage their pursuit of educational disciplines critical to NASA's future engineering, scientific, and technical missions.

- **Outcome 3: Engage Americans in NASA's mission**—NASA will build strategic partnerships and linkages between STEM formal and informal education providers. Through hands-on, interactive, educational activities, NASA will engage students, educators, families, the general public, and all agency stakeholders to increase Americans' science and technology literacy.

As the United States begins the second century of flight, the nation must maintain its commitment to excellence in STEM education to ensure that the next generation of Americans can accept the full measure of their roles and responsibilities in shaping the future.

Wheeling Jesuit University's COTF will collect information on the use of NASA-TV to make recommendations to NASA Education to increase the effectiveness of the network to support science, technology, engineering, and mathematics literacy and pipeline achievement. Educational programming will be used to support outcomes 2 and 3.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

NASA-TV recently changed from analog to digital transmission. NASA Education wants to know how NASA-TV resources are being used, by whom, where, and via what delivery system. Wheeling Jesuit University's COTF will collect information on the use of NASA-TV to make recommendations to NASA Education to increase the effectiveness of the network to support science, technology, engineering, and mathematics literacy and pipeline achievement. Educational programming will be used to support outcomes 2 and 3. This is a new collection.

3. *Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.*

Respondents will complete an online survey. All study data will be collected online using database technologies.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

No duplication is involved. COTF will conduct this research to determine changes in the use of NASA-TV following the transition from analog to digital transmission in 2005.

5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-I), describe any methods used to minimize burden.

Small businesses will not be impacted.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

A. NASA consequence
NASA needs to understand how the change to digital transmission affects viewers to determine the most effective use of this powerful resource. Without this data collection, NASA will not be able to make informed decisions about NASA-TV.

B. COTF consequence
NASA Education has contracted COTF to conduct the NASA-TV survey. If this data collection is not conducted, COTF will not be able to fulfill this year's contractual requirements to NASA.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:
** requiring respondents to report information to the agency more often than quarterly;*
** requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;*
** requiring respondents to submit more than an original and two copies of any document;*
** requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;*
** in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;*
** requiring the use of a statistical data classification that has not been reviewed and approved by OMB;*
** that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or*
** requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.*

This is a one-time survey. Participants will volunteer to provide information that will guide future use of NASA-TV.

COTF will contact individuals and organizations that have purchased the NASA-TV digital decoder. COTF will also contact individuals and organizations that have previously contacted NASA Central Operation of Resources for Educators (CORE) in order to obtain NASA-TV-related resources. COTF will contact individuals and organizational representatives via telephone and e-mail.

COTF will attempt a rapid turnaround between time of contact and the survey submission by respondents. This will help secure the targeted response rate. Thus, we hope participants will complete the survey soon after receiving the survey URL. However, there will be no time constraint other than the project collection end date.

COTF will provide potential respondents with the survey site URL. Respondents who elect to complete the survey will navigate to the survey site. The site will present the respondent with an informed consent form (see NASA-TV Informed Consent document). Those who agree to the details of the consent form will select a "continue" button. By clicking the button and completing the survey, subjects will indicate their willingness to participate in the survey. None of the other concerns in this question are applicable to this data collection.

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden. Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported. Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years - even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

N/A

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

N/A

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

A. NASA-TV Survey
Respondents will review an online informed consent form (see NASA-TV informed Consent Document) approved by Wheeling Jesuit University's Institutional Review Board that assures them of confidentiality. Choosing to complete the review is evidence of consent. No personally identifiable information will be collected with data. The survey is online with anonymous data collection. This will ensure confidentiality.

B. Contact Information Database
COTF will establish a contact information database for the purpose of recruiting participants for the survey data collection. This database will not be connected to the online data

collection. A Privacy Impact Assessment has been completed by COTF and will be reviewed by Goddard Space Flight Center's Privacy Act manager for this contact information database.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

N/A

12. Provide estimates of the hour burden of the collection of information. The statement should:
** Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.*
** If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I.*
** Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included in Item 13.*

We estimate that about 1,020 participants will take this survey, spending an average of 10 minutes each. This totals 170 hours. This is a one-time data collection.

13. Provide an estimate for the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 12 and 14).
** The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life) and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.*
** If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information*

*collections services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate. * Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.*

There is no cost to participants.

14. Provide estimates of annualized costs to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information. Agencies may also aggregate cost estimates from Items 12, 13, and 14 in a single table.

This is a one-time survey that will be done totally online. We anticipate that 1150 hours will be spent by our educational psychologist, computer programmer, TV programming expert, and researcher to prepare the survey, post it online, retrieve and analyze data and make policy recommendations. We estimate that this number of hours for the staff involved will cost $135K (including indirects and cost centers).

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-I.

N/A

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

COTF will summarize results and use them to make recommendations to NASA. The data collection will start in March 2007 and be completed by June 30, 2007.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

N/A. The OMB number will be displayed within the online survey Web site.

18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submissions," of OMB Form 83-I.

None

B. Collections of Information Employing Statistical Methods
The agency should be prepared to justify its decision not to use statistical methods in any case where such methods might reduce burden or improve accuracy of results. When Item 17 on the Form OMB 83-I is checked, "Yes," the following documentation should be included in the Supporting Statement to the extend that it applies to the methods proposed:

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection methods to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.

Collection Name	Start	End	Purpose	Sampling Method	Population	No. in Sample	Burden Hours
NASA-TV User Survey	March FY07	June FY07	Determine opinions on the effectiveness of NASA-TV	Accidental, haphazard, or convenience (volunteers) nonprobability sampling	Adults	1,020	170

2. Describe the procedures for the collection of information including:
** Statistical methodology for stratification and sample selection,*
** Estimation procedure,*
** Degree of accuracy needed for the purpose described in the justification,*
** Unusual problems requiring specialized sampling procedures, and*
** Any use of periodic (less frequent than annual) data collection cycles to reduce burden.*

S*tatistical methodology for stratification and sample selection.*
This is a short survey. There will be no statistical methodology for stratification and sample selection. COTF will contact individuals and organizations that have purchased the NASA-TV digital decoder. COTF will also contact individuals and organizations that have previously contacted NASA Central Operation of Resources for Educators (CORE) in order to obtain NASA-TV-related resources. COTF will contact individuals and organizational representatives via telephone and e-mail. We targeted a response rate of 1,020 individuals to allow COTF to examine the data trends among user types. For example, COTF might develop a multivariate model to compare usage for home users, museum users, and school users across multiple indicators. The modeling will be data driven rather than theoretical. However, COTF will look for statistically significant differences among user groups.

** Estimation procedure:*

COTF will analyze data using descriptive and inferential statistical methods. For example, COTF will conduct correlational, regression, and t-test analyses. For example, we might disaggregate the responses by question #2 "Where NASA-TV is used?" into formal and informal use and run t-tests to determine if there is a significant difference in the frequency of use.

** Degree of accuracy needed for the purpose described in the justification.*
COTF will round descriptive and inferential statistics to two decimal places (i.e., $\alpha < .05$ or $\alpha < .01$).

** Unusual problems requiring specialized sampling procedures.*
COTF will not use specialized sampling procedures.

** Any use of periodic (less frequent than annual) data collection cycles to reduce burden.*
At this time, COTF data collection for NASA-TV is a one-time data collection. There are no plans for multiple data collections.

3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.

COTF will make direct e-mail and telephone contact with individuals and organizations known to have purchased the digital decoder or to have requested NASA-TV follow-up information and materials from CORE.

4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of test may be submitted for approval separately or in combination with the main collection of information.

Please see the document entitled "TV User Survey" for details regarding the questions to be asked on the survey. This is a short survey. It was developed by NASA Educational Technology Services (NETS). The actual TV User Survey will be reformatted for delivery as an online survey.

5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

Dr. Debbie Denise Reese, 304-243-4327