



**International Astronomical Union (IAU)
Office of Astronomy for Development (OAD)**

MONITORING AND EVALUATION FRAMEWORK 2014

Adapted for distribution to IAU OAD Funded Projects

11th December 2013

Version 2.0

Acknowledgements

This document is based on the “Monitoring and Evaluation Framework for the International Astronomical Union's Office of Astronomy for Development” report, developed in collaboration with Prof. Joha Louw-Potgieter and Dr. Sarah Chapman from the Institute for Monitoring and Evaluation, University of Cape Town, South Africa.

Overview of the Monitoring and Evaluation framework

The OAD requires project leaders to provide an evaluation of their program (see “Section 11: Monitoring and Evaluation” of the Grant Agreement). This monitoring and evaluation framework is meant to help project leaders in optimizing the quality, implementation and impact of the project, and communicating their recommendations for improvement. It has been designed to be easy to implement, such that any additional burden on the project leader is minimised.

The evaluation process will also provide important feedback to the OAD in terms of assessing whether funded projects help towards achieving the main mandate of the office. In other words, if the programme activities for “Universities and Research”, “Children and Schools”, and “the Public” are offered as intended and at the right intensity, astronomy will serve as a tool for education, and in the long run, as a tool for human development.

In this document, guidelines are provided to project leaders on how to evaluate their projects. There are two levels of evaluation that the OAD is interested in:

- **Level 1** is aimed at evaluating the *implementation process*: it provides information as to whether the project is being implemented as intended (with fidelity) and at the level of intensity needed.
- **Level 2** focuses on the *outcomes*: it provides information as to the state of the project recipients before the start of the project and after its completion, and specifically, as to how the project has changed the recipients.

For each of the Task Forces (TF1: “Astronomy for Universities and Research”, TF2: “Astronomy for Children and Schools” and TF3: “Astronomy for the Public”), indicators and data sources are identified for each of the two levels of evaluation. Examples of typical data sources (e.g. questionnaires) are given to help project leaders develop their own. This document should provide the basic information for each project leader to formulate an evaluation plan. The OAD endeavours to assist the project leader wherever possible to ensure that the Monitoring and Evaluation component of the project is implemented easily and successfully.

In addition to the evaluation of the implementation process (Level 1) and outcomes (Level 2) of a project, the OAD strongly recommends that the project leaders include some measure of impact evaluation in the form of documenting “perceptions” of impact. This consists of gathering anecdotal testimonies of how a project is perceived to have affected/changed the lives of its target audience. This can be in the form of writings, pictures or short films.

TASK FORCE 1

ASTRONOMY FOR UNIVERSITIES AND RESEARCH

Introduction

Guidelines in this section are given to help project leaders and the OAD evaluate projects and initiatives which fall under Task Force 1, Astronomy for Universities and Research.

As detailed in the general introduction to this document, there are two levels of assessment. These are designed to measure the implementation of processes (Level 1) and the outcomes of these processes (Level 2) for the project being implemented. Some items in the tables below may not be relevant to a particular project and project leaders are urged to discuss with the OAD if they need any clarification. All feedback submitted to the OAD should be clearly marked as Level 1 or Level 2 data sources.

It is recommended that all projects monitor Level 1 indicators as a minimum. Guidelines for the indicators, measures and sources for this data are given in Table 1. Templates for the data sources are given after the Table. Project leaders are invited to adapt these template data sources to the specific features of their project. In addition, project leaders are strongly encouraged to include questions that query *perceptions of impact* within their data sources. These help the OAD rapidly evaluate the perceived impact of projects as an initial benchmark for future evaluation.

In Table 2, outcomes (Level 2) indicators are given, followed by template data sources. These need only be used when relevant and following discussion with the OAD. They should be considered as guidelines and thus tailored by the project leader to better evaluate specific outcomes of the project.

In addition, the OAD strongly encourages all the project leaders to identify ways of sustaining a network of the participants of the project. This could be through mailing lists or a preferred social network. Project leaders are also requested, where possible and with the participants' permission, to share with the OAD the contact details (email addresses where possible) of the participants in their project. This may be used later for long term evaluation of the different projects.

In Table 1 below, you will find a summary of indicators and measures for a **Level 1** evaluation of University level activities. The “Data source” column indicates which example template can be adapted to source the relevant data.

Output	Indicator	Measure(s)	Data source	Level
University level workshop (or school) in astronomy	Workshops outputs	Number of workshops conducted. Number and type (incl. gender) of persons participating in workshops	Workshop report	1
Strong connections (twinning) are made between Universities	Correspondence frequency (proxy for strength of twinning)	Number of exchanges between twinned universities (students or staff)	Quarterly communication report	1
	Memorandum of Understanding (proxy for strength of twinning)	Signed MoU between universities	Organisational records	1

Table 1. Indicators, Measures and Data Sources for Level 1 (L1) evaluation for Universities and Research

Below are data collection templates for the **Level 1 (L1)** evaluation of Universities and Research Programme.

Programme for Universities and Research - Monitoring Data Collection Templates

Quarterly Communication Report

Procedure:

Records are kept regarding exchanges between the universities (email discussions, Skype meetings, visits, etc)

Counts are made and submitted on a monthly basis

Essential Information:

1. Number of exchanges per quarter between twinned university staff or students.

Workshop Report (L1)

Procedure:

To be compiled by workshop facilitators and submitted to the OAD for each workshop conducted.

Essential Information:

1. Country of workshop
2. City
3. Dates of workshop, duration of workshop
4. University/ universities represented at workshop
5. Facilitator name(s) and contact details
6. Number of participants
7. Participant type
 - Postgraduate students / subjects major
 - Undergraduate students / subjects studied
 - Public
 - Lecturers / departmental affiliation
8. Participant details

Gender, age, student number, E-mail, phone number, postal address
9. Workshop programme

In Table 2 below, you will find a summary of indicators and measures for a **Level 2** evaluation of University level activities. One can refer to the “Data source” column to find which example template can be adapted to source the relevant data.

Outcome	Indicator	Measure(s)	Data source	Level
Students show an interest in astronomy	Student attitude towards astronomy	Average student ratings on items in workshop participant survey	Workshop participant survey	2
Students show an interest in astronomy-related subjects (proxy: physics)	Student attitude towards physics	Average student ratings on items in workshop participant survey	Workshop participant survey	2

Students choose to get a degree in astronomy	Astronomy degree uptake	Number of students registered for a degree in astronomy Proportion of students (who registered for a degree in astronomy) who attended workshops	Workshop report	2
Students choose to study astronomy courses	Astronomy course uptake	Number of students registered for a course in astronomy Proportion of students who attended workshops who within 24 months register for an astronomy course	Workshop report	2
Students choose to study astronomy-related subjects	Uptake of physics (proxy for astronomy-related subjects)	Number of students registered in physics Proportion of students who attended workshops who within 24 months register for physics	Workshop report	2
Universities present a degree in astronomy	Astronomy degrees	Number of new astronomy degrees offered by twinned universities Proportion of twinned universities in which new astronomy degrees are offered	Annual university survey	2
Universities present a course in astronomy	Astronomy courses	Number of astronomy courses offered by twinned universities Proportion of twinned universities in which astronomy courses are offered	Annual university survey	2
Researchers access astronomy archives and services	Access to Astronomy Database Services (ADS)	Number of times ADS accessed by twinned universities Type of archives accessed by twinned universities	Annual university survey	2
Astronomy-related research increases	Astronomy-related Journal publications	Number of astronomy related peer-reviewed journal articles published by the twinned university	Annual university survey	2

Table 2. Indicators, Measures and Data Sources for for Level 2 (L2) evaluation the Programme for Universities and Research

Below are data collection templates for **Level 2 (L2)** evaluation of Universities and Research Programme.

Programme for Universities and Research - Monitoring Data Collection Templates

Baseline University Survey (2014)

Procedure:

Information is collected for each twinned university at baseline

Information is derived from university records and/or faculty handbooks

Essential Information:

1. Number of astronomy degrees offered
2. Name of degree, degree code
3. Number of students registered for the degree in the current year, and two years preceding
4. Gender of students registered for the degree in the current year, and two years preceding
5. Student number of students registered for the degree in the current year, and two years preceding
6. Number of astronomy courses offered
7. Name of course(s), course code(s)
8. Number of students registered for each course in the current year, and two years preceding
9. Gender of students registered for each course in the current year, and two years preceding
10. Student numbers of students registered for each course in the current year, and two years preceding
11. Number of physics courses offered
12. Name of course(s), course code(s)
13. Number of students registered for each course in the current year, and two years preceding
14. Gender of students registered for each course in the current year, and two years preceding
15. Student number of students registered for each course in the current year, and two years preceding

Annual University Survey (to be read in conjunction with Baseline Survey)

Procedure:

Information is collected for each twinned university on an annual basis

Information is derived from university records and/or faculty handbooks and/or Astronomy Database Services

Essential Information:

1. Number of new astronomy degrees offered
2. Name of degree, degree code
3. Number of students registered for the degree in the current year
4. Gender of students registered for the degree in the current year
5. Student number of students registered for the degree in the current year (*for validation against workshop attendance registers*)
6. Number of new astronomy courses offered
7. Name of course(s), course code(s)
8. Number of students registered for each course in the current year
9. Gender of students registered for each course in the current year
10. Student number of students registered for each course in the current year (*for validation against workshop attendance registers*)
11. Number of physics courses offered
12. Name of course(s), course code(s)
13. Number of students registered for each course in the current year
14. Gender of students registered for each course in the current year
15. Student number of students registered for each course in the current year (*for validation against workshop attendance registers*)
16. Number of times Astronomy Database Services accessed by twinned university (from ADS records)
17. Type of archives accessed by twinned University (from ADS records)
18. Number of astronomy related peer-reviewed journal articles published by the twinned university

Workshop Report (L2)

Procedure:

To be compiled by workshop facilitators and submitted to the OAD and/or project leader for each workshop conducted.

Essential Information:

1. Country of workshop
2. City
3. Dates of workshop, duration of workshop
4. University / universities represented at workshop
5. Facilitator name(s) and contact details
6. Number of participants
7. Participant type
 - Postgraduate students / subject major
 - Undergraduate students / subjects studied
 - Public
 - Lecturers / departmental affiliation
8. Participant details
 - Gender, age, student number, E-mail, phone number, postal address
9. Workshop programme

Workshop Participant Survey (L2)

Procedure:

To be completed by all participants of university workshops immediately after completing the workshop.

To be submitted by the workshop facilitators to OAD with the Workshop Report.

Feedback on the course facilitator:

Please tell us your opinion about the following:

Responses range from 1 (strongly disagree) to 4 (strongly agree).

1. The facilitator demonstrated thorough knowledge of astronomy
2. The facilitator presented the course in a well-structured manner
3. The facilitator was well prepared for classes
4. The facilitator was easy to understand
5. The facilitator treated all participants with respect and dignity
6. The facilitator explained concepts well
7. The facilitator fostered an environment where participants felt comfortable about asking questions

Feedback on the course (this measures “perceptions of impact” as described in the introduction)

8. I want to learn more about astronomy
9. I think I may become an astronomer one day
10. Astronomy is relevant to what I experience in my life
11. Astronomy is useful for making the world a better place
12. Attending this workshop has made it more likely that I will study astronomy at university
13. Attending this workshop has changed my perspective on how useful physics is as a subject
14. There is no astronomy at my university, but I would like to study physics (not applicable option available)

TASK FORCE 2

ASTRONOMY FOR CHILDREN AND SCHOOLS

Introduction

Guidelines in this section are given to help project leaders and the OAD evaluate projects and initiatives which fall under Task Force 2, Astronomy for Children and Schools.

As detailed in the general introduction to this document, there are two levels of assessment. These are designed to measure the implementation of processes (Level 1) and the outcomes of these processes (Level 2) for the project being implemented. Some items in the tables below may not be relevant to a particular project and project leaders are urged to discuss with the OAD if they need any clarification. All feedback submitted to the OAD should be clearly marked as Level 1 or Level 2 data sources.

It is recommended that all projects monitor Level 1 indicators as a minimum. Guidelines for the indicators, measures and sources for this data are given in Table 3. Templates for the data sources are given after the Table. Project leaders are invited to adapt these template data sources to the specific features of their project. In addition, project leaders are strongly encouraged to include questions that query *perceptions of impact* within their data sources. These help the OAD rapidly evaluate the perceived impact of projects as an initial benchmark for future evaluation.

In Table 4, outcomes (Level 2) indicators are given, followed by template data sources. These need only be used when relevant and following discussion with the OAD. They should be considered as guidelines and thus tailored by the project leader to better evaluate specific outcomes of the project.

In addition, the OAD strongly encourages all the project leaders to identify ways of sustaining a network of the participants of the project. This could be through mailing lists or a preferred social network. Project leaders are also requested, where possible and with the participants' permission, to share with the OAD the contact details (email addresses where possible) of the participants in their project. This may be used later for long term evaluation of the different projects.

In Table 3 below, you will find a summary of indicators and measures for a **Level 1** evaluation of Children and Schools related activities. One can refer to the “Data source” column to find which example template can be adapted to source the relevant data.

Output	Indicator	Measure	Data source	Level
Pre and primary school teacher training	Teacher training outputs	Number of teacher training sessions organised as part of a specific project. Number of teachers trained throughout the course of the project, and for each session (if applicable). Gender of persons receiving training. Number of countries in which teacher training has taken place (when applicable).	Teacher training report	1
	Teacher training quality	Average facilitator ratings.	Teacher survey	1
	Intent	Teachers’ intent to teach astronomy since completing training	Teacher survey	1
Secondary school teachers	Teacher training outputs	Number of teacher training sessions organised as part of a specific project. Number of teachers trained throughout the course of the project, and for each session (if applicable). Gender of persons receiving training. Number of countries in which teacher training has taken place (when applicable).	Teacher training report	1
	Motivation to teach astronomy	Motivation and intent to teach astronomy since completing training	Teacher survey	1
Teachers have access to suitable learning aids	Access to learning aids	Proportion of trained teachers reporting access to learning aids (posters, worksheets, etc.). Proportion of trained teachers reporting access to robotic telescopes or similar devices (when applicable). Proportion of trained teachers reporting access to internet-enabled learning (when applicable). Proportion of learning sessions making use of mobile phone-enabled learning (when applicable).	Teacher survey	1

Table 3. Indicators, Measures and Data Sources for Level 1 (L1) evaluation of the the Programme for Children and Schools.

Below are examples of **Level 1** data collection templates for the teachers and students of the Programme for Children and Schools.

Programme for Children and Schools

Monitoring Data Collection Templates for Teacher Trainers, Teachers and Students

Teacher Training Report (L1)

Procedure:

To be completed by the OAD-funded teacher trainer or facilitator.

To be completed during training, submitted to OAD and/or project leader immediately post-training.

Essential information:

1. Country of teacher training
2. City of teacher training
3. Dates of teacher training / duration of training
4. Facilitator Name(s) / OAD project reference number
5. Type of training offered (general, specific topic like constellations or solar system...)
6. Participant type
 - Primary school teachers
 - Secondary school teachers
7. Participant characteristics
 - Gender, teacher name, contact details (email preferably), affiliated institution, level of teaching and number of students/pupils they usually teach to.
8. Teaching aids/materials/equipment distributed (posters, worksheets, robotic telescopes, etc.)
 - Number distributed, type distributed, proportion of teachers receiving materials, etc.

Teacher Survey (L1)

Procedure:

To be completed by all trained teachers.
To be completed immediately post-training.

General questions:

1. Teacher references (name, institution, level of teaching and other information you might consider to be relevant).
2. If I were to teach astronomy in class, I anticipate that I will have access to the following.

Internet-enabled learning
Posters, flash cards, worksheets, etc.
Robotic telescopes
Mobile phone enabled teaching
None of the above

Feedback on the course facilitator:

Responses range from 1 (strongly disagree) to 4 (strongly agree).

3. The facilitator demonstrated thorough knowledge of the subject area
4. The facilitator presented the course in a well-structured manner
5. The facilitator was well prepared for classes
6. The facilitator was easy to understand
7. The facilitator treated all participants with respect and dignity
8. The facilitator explained concepts well
9. The facilitator fostered an environment where participants felt comfortable about asking questions

Feedback on teachers' intent to use astronomy examples in science classes (measures "perception of impact as described in introduction):

Responses range from 1 (strongly disagree) to 4 (strongly agree).

1. I feel that this course has made me a better science teacher
2. I liked the astronomy examples in the course
3. I think using astronomy examples in class will stimulate students
4. I think students will respond well to astronomy examples
5. I plan to use astronomy examples in my class
6. If I think of the curriculum, the chances are good that I will use astronomy examples in my class

In Table 4 below, you will find a summary of indicators and measures for a **Level 2** evaluation of Children and Schools related activities. One can refer to the “Data source” column to find which example template can be adapted to source the relevant data.

Outcome	Indicator	Measure	Data source	Level
School teachers	Teaching certification (if applicable)	Number of teachers obtaining the certification.	Teaching evaluation	2
	Behaviour	Number of classes on astronomy conducted by the teacher in schools Number of students taught astronomy	Classroom report	2
	Astronomy knowledge	Proportion of trained teachers who demonstrate subject knowledge in identified assessment areas	Examination (developed as part of the project)	2
	Astronomy-related skills	Proportion of trainees who show measurable demonstration of scientific inquiry skills (e.g. observing, classifying, exploring, questioning, predicting or experimenting) Proportion of trainees who show measurable demonstration of skills relating to the use of scientific devices (to be defined, e.g. using telescopes correctly)	Observational checklist (developed as part of the project)	2
Students are exposed to suitable learning aids	Use of learning aids in classes	Proportion of learning sessions using robotic telescopes Proportion of learning sessions making use of internet-enabled learning Proportion of learning sessions utilising distributed teaching aids (posters, worksheets, etc.) Proportion of learning sessions making use of mobile phone-enabled learning	Classroom report	2
Pre and primary school students excited by astronomy	Astronomy activation	Student ratings of astronomy activation	Primary student survey	2
Secondary school students interested in science	Science activation Science engagement	Average student scores for items relating to activation of science Average student scores for items relating to engagement in science	Secondary student survey	2

Table 4. Indicators, Measures and Data Sources for Level 2 (L2) evaluation of the Programme for Children and Schools.

Below are examples of **Level 2** data collection templates for the teachers and students of the Programme for Children and Schools.

Programme for Children and Schools

Monitoring Data Collection Templates for Teacher Trainers, Teachers and Students

Teacher Examination / Certification (L2)

When applicable this should be developed as part of the project and in line with the specificity of the teacher training program. Assistance and examples of resources developed for previous projects can be provided by the OAD.

Procedure:

To be completed by trained teachers

To be completed after training, results submitted to OAD and/or project leader.

Essential information:

1. Examination results
2. Observational checklist results showing adequate skills acquisition (instrumentation and scientific inquiry) by trainees
3. Participant characteristics
Gender, teacher name, contact details (email preferably), affiliated institution, level of teaching and number of students/pupils they usually teach to.

Classroom Report (L2)

Procedure:

To be completed by trainers/ facilitators who have taught pre-primary, primary or high-school students

And/or

Given to OAD trained teachers after they have completed an OAD sponsored teacher training programme, with the instruction that it is to be completed each time they teach astronomy in the classroom.

Sent to OAD by teachers 12 months after they have completed the sponsored teacher training.

Essential information:

1. Name of school
2. Country
3. City
4. Type of school
 - Government
 - Private
5. Level of school
 - Pre-primary
 - Primary
 - High-school
6. Number of classes on astronomy were conducted by the teacher/ facilitator
7. Class incorporated in curriculum?
 - Yes
 - No
8. Date of each class
9. Age category of students taught in each class
10. Number of students taught in each class
11. Whether or not the following were utilised during learning sessions
 - Internet-enabled learning
 - Posters, flash cards, worksheets, etc.
 - Robotic telescopes
 - Mobile-phone enabled learning
 - Other teaching aids (specify)

Primary Student Survey (L2)

Procedure:

To be completed by children who have been taught astronomy in school by an OAD facilitator and/or teacher trained by OAD facilitators (intervention group). (Please note that because of the possibility of pre-test sensitisation, we suggest administering this survey as a post-test only.)

Suitable for children aged 8 to 12.

General questions:

1. Age
2. Gender
3. School
4. Were you recently taught about astronomy? (Yes/No)

Please tell us what you think about the following (measures “perceptions of impact” as described in the introduction):

Responses range from 1 (strongly disagree) through 4 (strongly agree)

5. I find science interesting
6. I like science
7. I sometimes cannot stop thinking about the things we are taught in science
8. I am excited to talk to my friends and family about what I learn in science
9. I would like to read more about science on my own, outside of class
10. When I look at the sky, I forget about the bad things that worry me
11. Learning about science has shown me that I am part of a very big world
12. Learning about science has opened my mind to other people who share my interest

Secondary Student Survey (L2)

Procedure:

To be completed by secondary school children who have been taught astronomy in school by an OAD facilitator and/or teacher trained by OAD facilitators. (Please note that because of the possibility of pre-test sensitisation, we suggest administering this survey as a post-test only.)

Suitable for teenagers aged 12 to 18

General questions:

1. Age
2. Gender
3. School
4. Were you recently taught about astronomy? (Yes/No)

Please tell us what you think about the following (measures “perceptions of impact” as described in the introduction):

Responses range from 1 (strongly disagree) through 4 (strongly agree)

1. I find science interesting
2. I like science
3. Learning science is important for understanding my place in the world
4. Learning science has changed my ideas about how the world works
5. Learning science will help me get a good job
6. I want to learn more about science
7. Learning about science showed me that I live in a very big world
8. Learning science has opened my mind to other people who share my interest
9. Learning about astronomy in science class was exciting (not applicable option will be included for this item)

TASK FORCE 3

ASTRONOMY FOR THE PUBLIC

Introduction

Guidelines in this section are given to help project leaders and the OAD evaluate projects and initiatives which fall under Task Force 3, Astronomy for the Public.

As detailed in the general introduction to this document, there are two levels of assessment. These are designed to measure the implementation of processes (Level 1) and the outcomes of these processes (Level 2) for the project being implemented. Some items in the tables below may not be relevant to a particular project and project leaders are urged to discuss with the OAD if they need any clarification. All feedback submitted to the OAD should be clearly marked as Level 1 or Level 2 data sources.

It is recommended that all projects monitor Level 1 indicators as a minimum. Guidelines for the indicators, measures and sources for this data are given in Table 5. Templates for the data sources are given after the Table. Project leaders are invited to adapt these template data sources to the specific features of their project. In addition, project leaders are strongly encouraged to include questions that query *perceptions of impact* within their data sources. These help the OAD rapidly evaluate the perceived impact of projects as an initial benchmark for future evaluation.

In Table 6, outcomes (Level 2) indicators are given, followed by template data sources. These need only be used when relevant and following discussion with the OAD. They should be considered as guidelines and thus tailored by the project leader to better evaluate specific outcomes of the project.

In addition, the OAD strongly encourages all the project leaders to identify ways of sustaining a network of the participants of the project. This could be through mailing lists or a preferred social network. Project leaders are also requested, where possible and with the participants' permission, to share with the OAD the contact details (email addresses where possible) of the participants in their project. This may be used later for long term evaluation of the different projects.

In Table 5 below, you will find a summary of indicators and measures for a **Level 1** evaluation of public related activities. One can refer to the “Data source” column to find which example template can be adapted to source the relevant data.

Output	Indicator	Measure	Data source	Level
Competent presenters deliver the programme	Recruitment of lecturers	Number of lecturers recruited	Lecturer recruitment report	1
	Calibre of recruited lecturers	Lecturer calibre rating (i.e. on a scale of 1 to 3, with 3 corresponding to the highest possible calibre)	Lecturer recruitment report Participant Survey	1
	Lecture outputs	Number of lectures delivered per recruited lecturer Number of countries visited by recruited lecturers Number of cities visited by lecturers Type of audience (high school/public, etc.) Number of people attending lectures	Lecture report	1
The public is exposed to astronomy	Use of small telescopes or planetariums	Proportion of lectures making use of a small telescope or planetarium	Lecture report	1

Table 5. Indicators, Measures and Data Sources for Level 1 (L1) evaluation for the Programme for the Public

Below are examples of **Level 1** data collection templates for the Programme for the Public.

Programme for the Public
Monitoring Data Collection Templates

Lecturer Recruitment Report (L1)

Procedure:

To be compiled by project leader when a new lecturer is successfully recruited into the programme.

Essential Information:

Name of recruited lecturer

Calibre of lecturer:

- Affiliation
- Occupation
- Academic background
- Area of expertise
- Area of interest
- Relevant experience

Lecture Report (L1)

Procedure:

To be compiled by the lecturer and submitted to the OAD and/or project leader once the lecture is completed.

Essential Information:

1. Country of lecture
2. City of lecture
3. Date of lecture
4. Lecturer name / affiliation / contact details
5. Topic of lecture
6. Audience type
 - Primary/High school students
 - Public
 - University students
7. Number of people attending
 - Head count
9. Use of the following in lectures
 - Small telescopes
 - Planetariums
 - Other (specify)

In Table 6 below, you will find a summary of indicators and measures for a **Level 2** evaluation of public related activities. One can refer to the “Data source” column to find which example template can be adapted to source the relevant data.

Outcome	Indicator	Measure	Data source	Level
Public develops an appreciation of science and astronomy	Astronomy activation	Participants self-reported change in astronomy activation since participating in the lecture	Participant survey	2

Table 6. Indicators, Measures and Data Sources for Level 2 (L2) evaluation for the Programme for the Public.

Below is an example of a **Level 2** data collection template for the Programme for the Public.

Programme for the Public
Monitoring Data Collection Template

Participant Survey (L2)

Procedure:

To be completed by all members of the public who attended lectures directly after a lecture.
To be submitted by the lecturer or organiser of the event to the project leader with the Lecture Report.

Please tell us your opinion of the following (measures “perceptions of impact” as described in the introduction:

Responses range from 1 (strongly disagree) through 4 (strongly agree)

1. The course presenter was enthusiastic about astronomy
2. The course presenter demonstrated a high level of astronomy expertise
3. This presentation has increased my interest in astronomy
4. I can't stop thinking about astronomy
5. I want to learn more about astronomy
6. I think astronomy is useful to help me understand science
7. Astronomy is relevant to what I experience in my life
8. I think astronomy is useful to make the world a better place