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Boosting European Citizens' Knowledge and Awareness
of Bio-Economy Research and Innovation

D 5.2
Monitoring Instruments

Report

Document Description

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1. Introduction

This deliverable 5.2 "Monitoring Instruments" reports on the evaluation and monitoring instruments used in the BLOOM project. Based on the evaluation criteria developed in D5.1 several quantitative and qualitative instruments useful for BLOOM's evaluation needs were elaborated. These instruments are compiled and presented in the deliverable 5.2 at hand. Deliverable 5.1 explains why these instruments have been chosen, what target groups they are appropriate for and what their aim and purpose is.

Section 2 provides information and an overview of all BLOOM evaluation instruments used for the formative and summative evaluation in the project. Section 3 offers guidelines for all project partners on how to apply the respective evaluation instruments of BLOOM. Additionally all questionnaires and reporting templates are attached (in English) to this document as Annexes.

2. Overview and description of the BLOOM evaluation instruments

The evaluation is pursuing two distinctive approaches, the formative and the summative evaluation. The formative evaluation aims at accompanying the BLOOM project and allows a continuous evaluation of how and if the objectives of the project BLOOM are met in order to set specific measures or adaptiations during the project to improve the outcome of the project. That means that the instruments outlined here support a reflective process. The formative evaluation in BLOOM will focus on two main categories of formative evaluation namely the "interactive category" and the "monitoring category". Both categories are part of the project implementation phase and help on one hand side to improve the design of the project BLOOM (continual improvement). Therefore, interviews, focus groups, questionnaires, online surveys, etc. will be applied. On the other side, the monitoring will help to ensure that the project activities are being delivered efficiently and effectively. Budget tracking, time tracking, questionnaires, and regular internal online surveys will support this approach. Formative evaluation generally provides more open questions and fosters an exploration of the project process from various viewpoints (participants, project staff and other stakeholders).[1]

The summative part of the BLOOM evaluation will focus on the impact of the interventions on the target groups and therefore focus on the objectives and output of the project.[2] Summative evaluation is outcome focused more than process focussed. Thus, the

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[1] See also:
http://evaluationtoolbox.net.au/index.php?option=com_content&view=article&id=24&Itemid=125 [2018-09-10]

[2] See also:
http://evaluationtoolbox.net.au/index.php?option=com_content&view=article&id=40&Itemid=126 [2018-09-10]

summative evaluation is more anchored in quantitative methods of data collection. It is applied during the implementation of the project and at the end of it. This approach helps the project to measure if it has met its goals, if there were any unintended consequences, which learnings happened and how to improve. Methods used in this regard will be questionnaires, audits, focus groups, etc. This approach will be particularly important for the outreach activities and materials developed in BLOOM.

In this context, qualitative and quantitative instruments have been developed to evaluate i) the project process including the project management and progress, ii) the project activities from co-creation workshops over outreach activities in the different hubs to events organised by BLOOM, and iii) the project outcomes including possible impact and the evaluation of materials and activities developed. Additionally, regular web-statistics and login data are collected and documented. Quantitative and qualitative instruments, information on methodology, target groups, the distribution channels and applied languages are introduced in the subsequent sections.

2.1. Quantitative instruments

The following quantitative instruments will be applied by BLOOM:

- Feedback questionnaires at meetings, events and workshops
- Feedback questionnaires at outreach activities
- Feedback questionnaire at teacher workshops and teacher trainings
- Regular online surveys for WP leaders
- Pre- and Post questionnaire for BLOOM MOOC
- Website statistics and social media tracking

Quantitative evaluation instruments serve to collect feedback from bigger amounts of respondents. Thus they will be used to gather numbers and enable a continuous monitoring and improvement of events, meetings, workshops, outreach activities and the online platform.

2.1.1. Feedback questionnaires at meetings, events, workshops, outreach activities and teacher events

For all workshops (consortium meetings, co-creation workshops, teacher workshops, teacher trainings) and events (outreach activities) evaluation questionnaires (Annex I, II, III, IV, V) will be provided. The analysis will help to continuously improve the format and reach the highest success rate. Moreover, we will get insight in first learnings of participants and their motivation for further activities.

All questionnaires which are used on local level will be translated in local languages by the hubs. Questionnaires for BLOOM meetings or international activities will be in English. The questionnaires for the teacher trainings will be provided in local languages by coordination team. The following feedback questionnaires for events are applied:

Consortium Meetings (Annex I)

The target group of these questionnaires is the BLOOM consortium. After each meeting questionnaires are collected to improve all BLOOM meetings. The consortium meetings aim at enabling constructive exchange between all partners. The answers will support the team to identify specific needs and communication deficits and will help in adapting the meeting design to the needs of the consortium.

Co-creation workshops (Annex II)

The co-creation workshops are one key part of BLOOM. By involving a diverse stakeholder group BLOOM aims at developing innovative successful outreach activities and materials on the topic of bioeconomy. Therefore, all hubs are provided with ideas for methodologies and a suggestion for such a workshop process. However, each co-creation workshop format will be adapted to local needs and possible cultural differences. Task 5.2. supports the hubs in evaluating their co-creation workshops and successfully adapting them to reach their goals, by providing them with a feedback questionnaire to be filled in by the co-creation workshop participants. These questionnaires will be translated by the hubs if their workshops take place in local language.

Teacher workshop questionnaire (Annex III)

The formal education is one core target for BLOOM. By actively involving teachers from 10 different countries school materials are developed and further tested in the teachers' classes. Therefore three teacher workshops are conducted in WP4. Each one will be evaluated via quantitative questionnaires. As these activities are international, the working language is English, and so is the language of the questionnaire.

Teacher training participants questionnaire (Annex IV)

This questionnaire targets participants of the teacher trainings planned in WP4. The involved teachers in developing and co-creating the BLOOM school materials (10 coordination teachers plus 10 support teachers) are commited to hold 1-2 teacher trainings in their schools in order to disseminate the content and use of the school materials in BLOOM. The participants are teachers as well and are after the training supposed to apply the material in their classes with their students. After the training, organized and held by the 20 involved BLOOM teachers, the participants will receive a questionnaire indicating how they experienced the training and the content of the training. The questionnaire will be in local languages. The trainers provide answers in an online tool. Through that ZSI will collect the anonymized data and feed back the results to EUN.

Outreach activities and materials (Annex V)

After the co-creation workshops follow the BLOOM outreach activities, were the team aims at testing and implementing the co-created ideas. To evaluate the activities' quality and potential impact, an outreach activity/material questionnaire will be handed out to the participants and gather their impressions and feedback. The answers will be taken up for further co-creation workshops to improve the materials and outreach activities developed

there. These questionnaires will be translated in local languages. The analysed data will be collected by each hub and reported to ZSI as WP5 leader.

2.1.2. Regular online surveys for WP leaders

Online surveys for WP leaders (Annex VI) will help to enable a smooth project process and therefore aim at monitoring the progress of each workpackage according to the relevance of activities, the efficiency, the effectiveness, and the impact orientation of the activities implemented. Thus, additionally to virtual meetings all WP leaders will be encouraged to fill in this questionnaire, summarize the specific process within their WP, gather possible problems and share success stories. The results of these regular surveys will be shared among the whole consortium and help to always stay tuned. Moreover, possible difficulties can be identified and addressed timely.

The questionnaire will be conducted twice a year and will contain quantitative and qualitative questions. This helps to grasp detailed explanation of the quantitative answers and gives room for specific suggestions for improvement. The technology used will be Lime-survey. The answers will be analysed using descriptive analysis.

2.1.3. Pre- and Post-questionnaire for BLOOM MOOC

WP4 developed the BLOOM school box. After first creating 5 bioeconomy curricula the 20 BLOOM teachers from 10 countries tested the materials within their classes and improved the curricula. Based on the results EUN team provides a MOOC to reach out to even more teachers all over Europe. To evaluate this process two questionnaires will be used; a pre- and a post-questionnaire (Annex VII and Annex VIII). The questionnaires will evaluate if the expectations could be met and will give information how useful the MOOC and also the BLOOM schoolbox is for European teachers. The answers will be analysed using descriptive analysis.

2.1.4. Website statistics Media and social media tracking

Web analytics is the result of analyzing the activity of the website with the aim of focusing actions on results. It is necessary to know what contents and resources users and potential users prefer; what other websites are bringing us traffic; where the user enters the web and where it is going. Basically the idea is that we know what users do on our website, compare it with what we want them to do and determine the necessary steps to achieve it and meet the objectives. The analysis of the web statistics, that will be conducted each 6 months, implies several steps:

1. Data collection: The main segments for this collection will be:
   - Audience Overview: This allows to track interests on bioeconomy per countries.
   - Web traffic: It is important to know if it is organic, direct, social or referral to check where users come from (not only the country but the different ways to get to know the website). It is necessary to check if we have a good position on google search engine, Bing, explorer, etc. to make the BLOOM website search

easier for users from social networks, main search engines and from other website articles referrals

- Users behaviour: Monitoring the user behaviour helps to understand which parts of the website are most interesting to them. This can be checked with the "stay time" or Bounce Rate. In this occasion, the general Bounce Rate is high, so thanks to this data, we can think about a better way to make users come and stay on the website, for example, creating more attractive contents and keeping the good work on publishing articles through other website referrals, making it visible through different social networks and implementing some SEO work to make the project search easier to users.
- Bounce Rate

2. Analyse data: The data will continuously be analysed to respond to user behaviour.
3. Report: The results of the analysis will be reflected in a periodic report. It will contain the previous analysis with the main insights and improvements, redefining the web strategy together with the communication team and the coordination team in order to achieve the main objectives of this tool.
4. Implementation of the improvements.

2.2. Qualitative instruments

Qualitative instruments are used to comprehend the quantitative evaluation by providing rich data giving detailed insight in experiences and know-how. The most common methods, which are applied in BLOOM are participatory workshops or focus groups, interviews and observation.

2.2.1. Participatory workshops and Focus groups

As aforementioned qualitative evaluation methods help to get detailed insight in the experiences people made. The focus group is one method to reach this goal. Besides the interview the focus group enables discussing topics within a group. Through this participatory approach, all participants are given a voice. Feedback to their experiences and ideas for suggestions in their own field but also for others can be gathered. The focus group has the strong advantage to go into deeper detail and take up specific topics to collectively keep reflecting on them or collectively work on ideas for solutions. Single sessions of the cross-fertilisation workshop help to qualitatively evaluate the hub activities. The cross-fertilisation meetings, for instance, will be evaluated following this approach.

2.2.2. Reporting and reflection

All hubs are provided with a co-creation and an outreach activity/material reporting template (Annex IX and Annex X) which helps them to document their workshops and outreach activities and materials. For the workshops, this template on one hand addresses the organisation, the group constellation and the workshop framework. On the other hand, the content and results are observed and reflected on as well as the methods used. For the outreach activity and material the template supports reflecting about the process and gives

insight what worked well and what did not. Content but also design and organisation are qualitatively evaluated with the help of this template. Each sub topic will be narratively explained and give room for reflections.

2.2.3.   BLOOM teacher reporting template

Also the 20 teachers involved in WP4 of BLOOM are provided with a reporting template (Annex XI) after the testing of the BLOOM School Box materials. They will reflect on the implementation of the developed materials and afterwards organize trainings for other teachers in their country (quantitative evaluated see 1.1.1). The teachers will reflect how students perceived the BLOOM teaching materials and on their experience of applying the SchoolBox in their classes. The reporting template will give room for content related difficulties they might have experienced and for identifying recommendations for improving the implementation.

2.3.   Process of applying the evaluation

The evaluation supports the project team in successfully implementing its tasks. To assess all activities, also consortium partners take over some parts of the evaluation, especially when it comes to evaluating in local languages.This section gives a short guideline which evaluation is done by whom and how the results are collected.

Project meetings

ZSI provides all partners with feedback questionnaires. All meetings and project internal activities, such as consortium meetings, will be evaluated by ZSI. This means ZSI collects the data, analyses them and shares the results within the consortium.

WP leader

Also the WP leader questionnaire is in the responsibility of ZSI as WP5 leader. The data of the WP leader questionnaire will be gathered and analysed by ZSI. The coordination team will respond to the results and share them within the consortium.

Hub activities

Hub activities are evaluated in local language. After translating the provided questionnaire in the local languages all hubs are responsible to evaluate their activities, workshops, materials, etc. To do so, the hubs gather the data, perform the analysis and feed back the results to the WP5 leader (ZSI) in English. All outreach activities and materials must be evaluated and analysed. The results will centrally be collected at ZSI and edited there.

The qualitative short interviews performed? at outreach activities will also be done in local language, and therefore will be analysed by the hubs, who, again, will feed back the results in English to ZSI.

The reporting templates are filled out in English and are analysed by ZSI.

All results of all hubs will be centrally gathered and edited by ZSI.

Cross-fertilisation

The cross-fertilisation will be evaluated by ZSI. By participatory sessions, ZSI will gather the feedback regarding the learinings. ZSI will gather and edit the data and share the results between all hubs.

Teacher activities

EUN provides the WP4 workshop participants with the questionnaire and collects the data in English language. ZSI will analyse the data and send it back to EUN.

For testing and implementing, the BLOOM school box all teachers doing so fill in the provided reporting template within 2 weeks after the activity. The results are collected by EUN who forwards them to ZSI to analyse the results.

For the BLOOM MOOC the participants will fill in a pre- and a post- questionnaire.

Questionnaires for participants of teacher trainings

ZSI provides translated versios of the questionnaire. The BLOOM teachers who conduct the trainings will provide paper pen questionnairs to be filled in by all training participants. The teachers, who conduct the trainings, are responsible to collect the paper pen versions and fill in the answers to the provided online questionnaire in English. Teachers can also forward the link directly to the participants in case they have good command of English. ZSI will then centralize all data, analyse the results and report them back to EUN and the BLOOM teachers.

3.   Resources

Smallman, M.; Handler, K.; Schrammel, M.; Hofer, M.; Miller, S.; Voigt, C. 2015. D5.2 Methodologies and tools for Internal Formative Evaluation. Set of turn key evaluation designs including questionnaires and templates to perform formative evaluation processes throughout the project. RRI-tools. FP7 Grant Agreement No. 612393.

Marschalek, I.; Handler, K. Holocher Ertly, T.; Smoliner, S. 2011. Evaluation Strategy Plan. NanOpinion. FP7 Grant Agreement No. 290575.

Links:

http://evaluationtoolbox.net.au/index.php?option=com_content&view=article&id=24&Itemid=125

http://evaluationtoolbox.net.au/index.php?option=com_content&view=article&id=40&Itemid=126

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Annex I: Feedback questionnaire consortium meetings

Please give us your opinion on the following items:

1. objectives and activities:

How would you rate each of the following?

	Yes	Uncertain	No	n/a
I have gained a common understanding of bioeconomy	1	2	3	4
I feel confident with preparing and facilitating my co-creation workshops	1	2	3	4
I know how to use the BLOOMer platform	1	2	3	4
I feel confident in making my own mobile videos	1	2	3	4
I am satisfied with the evaluation and monitoring strategies	1	2	3	4
The dissemination strategy is clear to me.	1	2	3	4
The next steps in the project are clear to me	1	2	3	4

2. meeting organization

How would you rate each of the following?

	Yes	Uncertain	No
The objectives of the meeting were clear.	1	2	3
The meeting was useful for helping our organization to carry out the foreseen tasks.	1	2	3
Sufficient time was allocated to each issue on the agenda.	1	2	3
The project coordinators significantly contributed to achieve the meeting objectives.	1	2	3
Decisions were taken collaboratively.	1	2	3
Sufficient steps are taken to tackle open questions	1	2	3

3. overall

How would you rate the following?

	Yes	Uncertain	No
Overall, the meeting was useful for me.	1	2	3

My recommendations for the next consortium meetings are: ………………………………….
………
………
………
………
………
…………………………………………………………………………………………

Thank you!

Annex II: Feedback questionnaire co-creation workshops

To be translated in hub languages:

[Date, Location]

Thank you for attending this workshop. The organizer would appreciate your responses to the following questions.

1. The workshop met my expectations

strongly disagree   disagree   agree   strongly agree

2. The content presented was relevant and useful for me

strongly disagree   disagree   agree   strongly agree

3. The format of the workshop was appropriate to the objectives and aims

strongly disagree   disagree   agree   strongly agree

4. The workshop was well organized and planned

strongly disagree   disagree   agree   strongly agree

5. The workshop ….

… supported a common understanding of bioeconomy

strongly disagree   disagree   agree   strongly agree

… provided room for different perspectives

strongly disagree   disagree   agree   strongly agree

… inspired me to develop ideas for outreach activities on bioeconomy

strongly disagree   disagree   agree   strongly agree

… inspired me to develop ideas for outreach materials on bioeconomy

strongly disagree   disagree   agree   strongly agree

Do you have any suggestions or additional comments about this co-creation workshop? ……..
………
………
………
………
……………………………………………………………………………………Thank you!

Annex III: Questionnaire teacher activities

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SPW@FCL #20

Dear colleague,

Thank for your participation in the following event:

20th Science Projects Workshop in the Future Classroom Lab, Brussels 02-04 March 2018, organized by

Scientix and BLOOM.

As part of the projects, we would like to have your opinion on the event you attended. This will help us to better understand your needs and improve the delivery of our activities.

We would like to reassure you that all responses are anonymized in any reading by the national coordinators, industry representatives or by the evaluation research team, so that you can respond honestly and openly.

Note: **STEM*** is the abbreviation for Science, Technology, Engineering and Maths. This category includes general as well as any of the specialist subjects within these fields of knowledge (e.g. biology, astronomy, chemistry, health studies, ICT, informatics, algebra, etc.).

EVALUATION OF THE ORGANISATION OF THE EVENT

* 1. Please indicate your role in science education

- ○ STEM* Teacher
- ○ Non-STEM* teacher
- ○ School/ Departments Head
- ○ Teaching Assistant
- ○ Technician
- ○ Other (please specify)

- ○ Scientist / Technologist / Researcher
- ○ Consultant / Expert
- ○ Career Adviser
- ○ Primary school teacher

1

* 2. Please rate the different sessions you attended (General)

For those sessions you did not attend, select N/A (not applicable)

	1: Very bad	2	3	4: Very good	N/A
Networking dinner: "STEM classes and real life" - 02 March 2018	○	○	○	○	○
Welcome to the 20th Science Projects Workshop in the Future Classroom Lab and Introduction to Scientix and BLOOM	○	○	○	○	○
Future Classroom Lab visit	○	○	○	○	○
Meet & Greet the other teachers	○	○	○	○	○
Recap of Saturday's workshops & practicalities	○	○	○	○	○
Networking dinner: "Games and technology in education" - 3 March 2018	○	○	○	○	○
Summary of the event and distribution of certificates	○	○	○	○	○

* 3. What workshops did you attend?

○ BLOOM workshops

○ Scientix workshops

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SPW@FCL #20

* 4. **Please rate the different sessions you attended organized by the BLOOM project**

For those sessions you did not attend, select N/A (not applicable)

	1: Very bad	2	3	4: Very good	N/A
Introduction to bioeconomy	○	○	○	○	○
Bioeconomy themes, topics and resources	○	○	○	○	○
BLOOM teachers activities & tasks	○	○	○	○	○
The Learning Scenario & Designer (45'): Part I	○	○	○	○	○
The Learning Scenario & Designer: Part II	○	○	○	○	○
The set-up experience game	○	○	○	○	○
The Learning Scenario & Designer: Hands-on	○	○	○	○	○
The Learning Scenario & Designer: Peer-review	○	○	○	○	○
Next steps	○	○	○	○	○

3

* 5. Do you feel confident to introduce bioeconomy to your students after this weekend?

◯ Strongly disagree

◯ Disagree

◯ Neutral

◯ Agree

◯ Totally agree

Please explain:

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* 6. Please rate the different sessions you attended organized by Scientix

For those sessions you did not attend, select N/A (not applicable)

	1: Very bad	2	3	4: Very good	N/A
Introduction to bioeconomy	○	○	○	○	○
Gaming: from controversy to inventiveness	○	○	○	○	○
Future Classroom Lab workshop	○	○	○	○	○
Scientix workshop: The Nature of Science and Scientific Inquiry	○	○	○	○	○
Scientix workshop: Tips to include Scientix resources in different scenarios	○	○	○	○	○
Scientix workshop: Shared Leadership	○	○	○	○	○

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SPW@FCL #20

* 7. Your views of the event

Please indicate the level of your agreement-disagreement with the following statements by ticking one box per each record

	1: Strongly Disagree	2: Disagree	3: Agree	4: Strongly Agree	Do not know/N/A
The event fully achieved its expected learning outcomes	◯	◯	◯	◯	◯
I enjoyed the event	◯	◯	◯	◯	◯
I learnt more on how to link school mathematics / science / technology with bioeconomy	◯	◯	◯	◯	◯
I learnt more on how to teach bioeconomy in the context of real life	◯	◯	◯	◯	◯
I learnt a lot about teaching mathematics / science/ technology from talking to other teacher participants	◯	◯	◯	◯	◯

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* 8. Please rate the following aspects of the event

	1: Very bad	2	3	4: Very good	NA: Not applicable
Organisation of the event in general	○	○	○	○	○
Balance of programme (between individual, workshops, plenary activities)	○	○	○	○	○
Programme sent on time	○	○	○	○	○
Information about the travel arrangements sent on time	○	○	○	○	○
Relevance and accessibility of the venue	○	○	○	○	○
Quality of the venue	○	○	○	○	○
Quality of the catering	○	○	○	○	○
The programme facilitated interaction between participants	○	○	○	○	○
The venue rooms facilitated interaction between participants	○	○	○	○	○
Opportunities within the event to express yourself freely	○	○	○	○	○
Knowledge/communication/responsiveness of the event facilitator(s)	○	○	○	○	○

* 9. Regarding the event overall

	1: Not at all	2	3	4: Yes, definitely	NA: Not applicable
Did the meeting as a whole match your expectations?	○	○	○	○	○
Did you find the content of the meeting useful for you?	○	○	○	○	○
Did you find the agenda appropriate?	○	○	○	○	○

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* 10. Your actions after the event

Please indicate the level of your agreement-disagreement with the following statements by ticking one box per each record

	1: Very unlikely	2: Unlikely	3: Likely	4: Very likely	Do not know/ N/A
I will use the new knowledge, skills, or resources *to improve **teaching** in my school*	○	○	○	○	○
*to **share** with my colleagues in school*	○	○	○	○	○
to help pupils' learning in STEM/other **subjects**	○	○	○	○	○
to improve pupils' interest in STEM/other **subjects**	○	○	○	○	○
to improve pupils knowledge and interest in STEM/other **careers**	○	○	○	○	○

11. Which was the most useful /enjoyable/ inspirational / exciting aspect of the event and why?

12. Please describe any difficulties you faced during the event

13. How could the event as a whole be improved?

14. What did you get out of the event? (e.g. share with us the ideas or projects or collaborations the event has inspired you to follow up)

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15. If there is anything that we have not asked you and that you would like to communicate, please write it here:

* 16. Would you recommend this type of event to others?

○ Yes

○ No

European Schoolnet

Future Classroom Lab
by European Schoolnet

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Annex IV: Questionnaire for participants of the teacher trainings

Dear colleague,

Thank you for participation in the BLOOM **teacher training** in [venue], [date].

We, the BLOOM team, would like to have your opinion on the event you attended. This will help us to better understand your needs and improve the delivery of our activities.

We, the BLOOM team, would like to reassure you that all responses are anonymized in any reading by the evaluation research team, so that you can respond honestly and openly.

Please note: STEM is the abbreviation for Science, Technology, Engineering and Math. This category includes general as well as any of the specialist subjects within these fields of knowledge (e.g. biology, astronomy, chemistry, health studies, ICT, informatics, algebra, etc.).

EVALUATION OF THE ORGANIZATION OF THE EVENT

1. In which country are you teaching?

   ☐ Austria   ☐ Israel

   ☐ Belgium   ☐ Poland

   ☐ Croatia   ☐ Portugal

   ☐ Greece   ☐ Spain

   ☐ Italy   ☐ Sweden

2. Which subject(s) are you teaching?

   ☐ Physics   ☐ Technology

   ☐ Cemistry   ☐ Engineering

   ☐ Biology   ☐ Other: ……………………………

   ☐ Mathematics

3. Which school level are you teaching?

   ☐ Primary

   ☐ Secondary

4. Age of students you are teaching during the 2018-2019 school year. Select all the relevant ages

☐ < 8 years old   ☐ 13-14 years old

☐ 8-9 years old   ☐ 14-15 years old

☐ 9-10 years old   ☐ 15-16 years old

☐ 10-11 years old   ☐ 16-17 years old

☐ 11-12 years old   ☐ 17-18 years old

☐ 12-13 years old   ☐ 18+ years old

5. How many students do you teach, approximately, during the 2018-2019 school year?

_____

6. Please rate how useful the materials are in your teaching (select N/A for "not applicable")

School box materials	1/ not useful	2/ hardly useful	3/ useful	4/ very useful
Bloom your school with your biofuel and soap lab				
Examining the thermal properties of bio-based building materials				
Building a new environmental future				
How poop will change the world				
Growing plastic & new life for plastic				

7. I feel confident to introduce bioeconomy to my students after this training

☐ Strongly disagree

☐ Disagree

☐ Agree

☐ Fully Agree

8. I feel confident to use the bioeconomy materials in class after this training

☐ Strongly disagree

☐ Disagree

☐ Agree

☐ Fully Agree

9. Your views of the event

Please indicate the level of your agreement-disagreement with the following statements by ticking one box per each record.

	Strongly Disagree	Disagree	Agree	Strongly Agree
The event fully achieved its expected learning outcomes	☐	☐	☐	☐
I enjoyed the event	☐	☐	☐	☐
I learnt more on how to link STEM with bioeconomy	☐	☐	☐	☐
I learnt more on how to teach bioeconomy in the context of real life	☐	☐	☐	☐

Any other comments on your views of the event:

Add your comment here: …

10. Your actions after the event

Please indicate the level of your agreement-disagreement with the following statements by ticking one box per each record.

I will use the new knowledge, skills, or resources	very unlikely	unlikely	likely	very likely
to improve teaching in my school	☐	☐	☐	☐
to share with my colleagues in school	☐	☐	☐	☐
to help pupils' learning in STEM/other subjects	☐	☐	☐	☐
to improve pupils' interest in STEM/other subjects	☐	☐	☐	☐
to improve pupils knowledge and interest in STEM/other careers	☐	☐	☐	☐

11. What did you get out of the event? (e.g. share with us the ideas of projects or collaborations the event has inspired you to follow up)

12. Would you recommend this type of event to others?

☐ Yes

☐ No

European Schoolnet

Transforming education in Europe

Annex V: Outreach activities and materials

Event:

City/Region:

Date:

(To be filled in by local organisers in advance)

Please take 5 minute to evaluate today's event!

1. Are you …?

o   Female   o   Male   o   Other

2. What is your year of birth? _____

3. How did you come across this event …?

Please choose only one of the following:

o   Accidentally
o   Via school
o   Per invitation
o   Saw an announcement
o   Social Media
o   Other:

   _____

4. In general, how do you estimate the level of your knowledge about bioeconomy BEFORE the event?

Please mark on a scale from 1 to 10 the most applicable

No knowledge at all knowledge   Comprehensive

1	2	3	4	5	6	7	8	9	10

5. In general, how do you estimate the level of your knowledge about bioeconomy NOW?

Please mark on a scale from 1 to 10 the most applicable

No knowledge at all knowledge   Comprehensive

1	2	3	4	5	6	7	8	9	10

6. Did this event made you change your attitude on bioeconomy?

  ○ yes   ○ no

If yes, do you feel now more….   My attitude is the same as before
  ○ Negative
  ○ Informed
  ○ Curious
  ○ Critical
  ○ positive

7. What especially did you like about this event?

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7.1 Why?

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8. What did you not like about this event?

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8.1 Why?

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9. Do you have any recommendations for future events?

Thank you for time!

bloom

Boosting European Citizens' Knowledge and Awareness
of Bio-Economy Research and Innovation

Annex VI: Questionnaire for WP leaders BLOOM

The aim of the survey is to monitor the progress of each work package according to the relevance of activities, the efficiency, the effectiveness, and the impact orientation, in order to respond to unforeseen issues and to enable a smooth project process..

The questionnaire for WP leaders will be sent twice a year.

Filling in the questionnaire will take 25 minutes. The questionnaire is accessible until …. (fill in date)…. .

QUESTIONNAIRE FOR WORKPACKAGE LEADERS

I am leader of *

Please choose only one of the following

- o   WP 1 – Thematic approach, Content and Implementation
- o   WP 2 – BLOOM Platform, repository and virtual communications
- o   WP 3 – Dialogue and outreach activities, co-creation and stakeholder involvement
- o   WP 4 – Awareness and Knowledge gain for young citizens
- o   WP 5 – Monitoring and Evaluation
- o   WP 6 – Dissemination, Cross-Network collaboration and Exploitation
- o   WP 7 – Project Management and Coordination
- o   WP 8 – Ethics requirement

1.1 How does your WP contribute to a common understanding of Bioeconomy?

Please write your answer here:

1.2 Are all stakeholder groups reached within the activities of your WP?

Please choose the following:

- o Yes
- o No

1.2.1 Why not?

Only answer this question if the following conditions are met:

Answer was "No" at question 1.2 (Are all stakeholder groups reached within the activities of your WP?

Please write your answer here:

1.2.2 Which measures will be set for improvement?

Only answer this question if the following conditions are met:

Answer was "No" at question 1.2 (Are all stakeholder groups reached within the activities of your WP?

Please write your answer here:

1.3 How do the results of your WP feed into other WPs?

Please write your answer here:

1.4 How do you incorporate results from other WPs?

Please write your answer here:

1.5 Did the planned resources match the effort needed?

Please choose only one of the following

- o   Yes
- o   No

1.5.1 Why not?

Only answer this question if the following conditions are met:

Answer was "No" at question 1.5 (Did the planned resources match the effort needed)

Please write your answer here:

1.6 In your opinion: Do you think all tasks are clear?

Please choose only one of the following

- o Yes
- o No

1.6.1 Why not?

Only answer this question if the following conditions are met:

Answer was "No" at question 1.6 (Do you think all tasks are clear)

Please write your answer here:

1.6.2 Which measures will be set for improvement?

Only answer this question if the following conditions are met:

Answer was "No" at question 1.6 (Do you think all tasks are clear)

Please write your answer here:

1.7 How would you describe the communication within your WP?

Please write your answer here:

1.7.1 Possible improvements

If there is anything you need to improve the communication within your WP, please note here:

1.8 Please describe the outcomes and possible impact of your WP.

Please write your answer here:

1.9. Over all, would you rate your WP as successful?

Please choose only one of the following

- o Yes
- o No

1.9.1 Why?

Please write your answer here:

1.10 What discussions have taken place as a result of the WP activities within the consortium?

Please write your answer here:

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Annex VII BLOOM MOOC Evaluation pre-questionnaire

Boosting European Citizens' Knowledge and Awareness
of Bio-Economy Research and Innovation

This survey is for enrolled participants of the "Boosting Bioeconomy Knowledge in Schools" course, offered by the BLOOM project on European Schoolnet Academy. The purpose of the survey is to understand better who is joining the course. Your responses will be taken into account by the course moderators to ensure they can provide the best possible support. A selection of the data from the survey will be shared anonymously at the beginning of the course so that you also have a better idea of who else is participating on the course.

Your background

1. In which country are you working?

……………………………………………

2. What is your gender?

   ☐ Male

   ☐ Female

   ☐ Other

3. How old are you?

   ☐ 25 or younger

   ☐ Between 26 and 35

   ☐ Between 36 and 45

   ☐ Between 46 and 55

   ☐ Over 55

4. What is your professional background?

   ☐ Head of school

   ☐ Pre-primary teacher

   ☐ Primary school teacher (students age 5-11)

   ☐ Secondary school teacher – lower (students age 12-19)

   ☐ Secondary school teacher – upper (students agre 15-19)

   ☐ School counsellor/career adviser

   ☐ ICT coordinator/administrator

   ☐ Policy maker

   ☐ Researcher

   ☐ Other (please specify)

   ………………………………………

5. How long have you been working in the educational field?

   ☐ Less than 1 year

   ☐ 1-5 years

   ☐ 6-10 years

   ☐ 11-15 years

   ☐ 16-20 years

   ☐ More than 20 years

☐   Not applicable

Comments

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6. On a scale from 1 to 5, please rate your understanding of bioeconomy, before taking the course. (5 = high level of understanding

    ☐   5 (high level of understanding)

    ☐   4

    ☐   3

    ☐   2

    ☐   1 (low level of understanding)

7. How long have you been using bioeconomy in the classroom?

    ☐   Never

    ☐   Less than 1 year

    ☐   1-5 years

    ☐   6-10 years

    ☐   11-15 years

Comments

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8. What are your main motivations for joining this EUN Academy course? (more than one answer possible)

    ☐   I want to improve my classroom practice

    ☐   I want to improve my whole school

    ☐   I want to discuss with like-minded colleagues

    ☐   I am curious about European Schoolnet's work

    ☐   I am curious to know more about the BLOOM project

    ☐   I want to learn about how bioeconomy can be included in STEM teaching

- ☐ I want to learn about bioeconomy in general

- ☐ I want to have a certificate for professional development

- ☐ I want to get the digital badge

- ☐ I want to find useful resources

- ☐ Regular Continual Professional Development is compulsory for my job

- ☐ Other

9. How did you hear about this course? (more than one answer possible)

- ☐ Via a colleague

- ☐ Via European Schoolnet (website, Facebook Page, Twitter account, newsletter, etc.)

- ☐ Via the School Education Gateway (website, Erasmus + Facebook Page, Erasumus + Twitter account, newsletter etc.)

- ☐ Via eTwinning (website, Erasmus+ Facebook Page, Erasmus+ Twitter account, newsletter etc.)

- ☐ Via European Schoolnet Academy (EUN Academy email, EUN Academy Facebook page, EUN Academy course Facebook groups)

- ☐ Via another European education organisation

- ☐ Via your Ministry of Education

- ☐ Via another national education organisation

- ☐ Via BLOOM channels

- ☐ Via a private company

- ☐ Other

10. Do you see yourself participating in the following activities during the course?

	No, definitely not	No, probably not	Yes, maybe	Yes, definitely	N/A
Twitter discussions					
Facebook discussions					

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Forum discussions					
Webinars					
TeachMeets					
Sharing images/videos/documents with your fellow participants (e., photos of experiements you did in the course)					
Peer assessment					
Quizzes					
Writing and sharing a lesson plan					

11. On average, how often do you undertake Continual Professional Development for your job?

☐ Less than once a year

☐ Once a year

☐ Every 6 month

☐ Every month

☐ More than once a month

☐ Not applicable

Comments

12. Have you participated in an online training course (about any topic and on any platform) in the last 5 years?

☐ Yes

☐ No

Comments

Annex VIII BLOOM MOOC Evaluation post-questionnaire

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Boosting European Citizens' Knowledge and Awareness
of Bio-Economy Research and Innovation

This questionnaire aims to evaluate how well the Boosting Bioeconomy Knowledge in Schools course has fulfilled its objectives and is an opportunity to comment on your experience participating in the course and in the European Schoolnet Academy.

Please complete the questionnaire which will only take about 10-15 minutes. Responses will be used to improve the future courses on the EUN Academy. We value your opinion, whether positive or negative!

All feedback is completely anonymous.

Your background

13. In which country are you working?

…………………………………………

14. What is your gender?

- ☐ Male
- ☐ Female
- ☐ Other

15. What is your current position?

- ☐ Primary school teacher (students age 5-11)
- ☐ Secondary school teacher (students age 12-19)
- ☐ Pre-primary teacher
- ☐ ICT coordinator/administrator
- ☐ Headteacher
- ☐ School counsellor
- ☐ Teacher trainer
- ☐ Policy maker
- ☐ Researcher
- ☐ Other (please specify)

…………………………………………

16. How long have you been working in the educational field?

- ☐ Less than 1 year
- ☐ 1-5 years
- ☐ 6-10 years
- ☐ 11-15 years
- ☐ 16-20 years
- ☐ More than 20 years

17. How old are you?

- ☐ 25 or younger
- ☐ Between 26 and 35
- ☐ Between 36 and 45
- ☐ Between 46 and 55
- ☐ Over 55

Course Evaluation

18. How would you rate the overall value of the course

O very good   O Good   O Poor   O Very poor

Comments

19. To what extent do you agree with the following statements?

	Strongly agree	Agree	Disagree	Strongly disagree	N/A
The quality of the course met my expectations					
The learning objectives were clearly communicated					
The course discussions were useful for my learning					
I have gained practical ideas of how I can improve my professional practice					
I will use the ideas and examples presented in the course in my everyday work					
The course has made me more confident in teaching about bioeconomy in my classroom					
I would recommend this course to a colleague or friend					
I would participate in a similar type of course provided by the European Schoolnet Academy again					
Any comments:					

20. Please rate each of the course features based on their usefulness for your learning

	Very good	Good	Poor	Very Poor	N/A
Structure of course					
Video content					
General content					
Webinars					
Activities (e.g. Padlets)					
Quizzes					
Final Peer Review Activity					

Any comments:

21. Please rank the tools used on the course in the order of which you find them most useful to share ideas? (1=most useful, 4=least useful)

.... Facebook group

.... Forum

.... Padlet

22. On average, how much time did you spend per module?

☐ More than 4 hours

☐ Between 3 and 4 hours

☐ Between 2 and 3 hours

☐ Between 1 and 2 hours

☐ Less than 1 hour

23. Impact of the course. To what extent do you agree with the following statements since you completed the course?

	Strongly agree	Agree	Disagree	Strongly disagree	N/A
I now understand bioeconomy better					
I now understand better how to teach bioeconomy					
I now know how to implement the BLOOM schoolbox in my classroom					
I now know where to find bioeconomy teaching materials					
I know more about how to include bioeconomy in different STEM subjects					

Any comments:

24. Have you experienced any significant problems that prevented you from making the most of the course? Tick everything that applies.

- ☐ I have not experienced any problems
- ☐ I have not experienced any significant problems
- ☐ Language issues
- ☐ Technical issues
- ☐ Lack of information on course organization
- ☐ Time issues
- ☐ Other (please specify)

25. Did you complete the course?

- ☐ Yes
- ☐ No

No completion

26. At what stage did you stop the course?

- ☐ Shortly after the beginning of the course
- ☐ Near the middle of the course
- ☐ Towards the end of the course

27. Why did you not complete the course? Please tick all that applies.

- ☐ I never planned on finishing the course
- ☐ I was only interested in some of the modules
- ☐ I did not have enough time to fully engage with all the course materials and do all the activities
- ☐ There were too many deadlines
- ☐ The deadlines were confusing
- ☐ The deadlines were too short
- ☐ The course was too long
- ☐ The course did not deliver what it advertised
- ☐ The course was not relevant to improving my daily teaching practice
- ☐ I experienced technical difficulties
- ☐ I experienced language difficulties
- ☐ The instructions given during the course (via email or on the platform, concerning learning activities, how to obtain badges and certificates etc.) were unclear
- ☐ The course content (the videos and resources provided) was too difficult
- ☐ The course content (the videos and resources provided) was too easy
- ☐ The learning activities were too difficult
- ☐ The learning activities were too easy
- ☐ I did not find doing a peer review of my partner's work useful for my learning
- ☐ I did not value the outcome of my partner's peer review of my work
- ☐ The course moderators did not respond quickly enough to my questions
- ☐ The course moderators did not respond adequately to my questions

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☐ There were not enough opportunities to interact with fellow course participants

☐ Other (please specify)

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┌──────────────────────────────────────────────┐
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│                                                │
│                                                │
└──────────────────────────────────────────────┘
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28. What did you enjoy most about taking part in the course?

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│                                                │
│                                                │
└──────────────────────────────────────────────┘
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29. What did you like least about taking part in the course?

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┌──────────────────────────────────────────────┐
│                                                │
│                                                │
└──────────────────────────────────────────────┘
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30. Do you have any suggestions for us on how this course could be improved in the future?

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┌──────────────────────────────────────────────┐
│                                                │
│                                                │
└──────────────────────────────────────────────┘
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Full completion

31. What were the main reasons for you full participation until the very end? Please tick all that applies.

☐ The certificate and digital badges

☐ The collaboration with other course participants

☐ The engaging and useful activities

☐ The engaging and useful content

☐ The live events (webinar, TeachMeet)

☐ The community spirit of the course (e.g. participants helping each other)

☐ The support from the course moderators

☐ The clear structure and organization of the course

☐ Other (please specify)

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┌─────────────────────────────────┐
│                                   │
│                                   │
│                                   │
└─────────────────────────────────┘
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32. What did you enjoy most about taking part in the course?

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33. What did you like least about taking part in the course?

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34. Do you have any suggestions for us on how this course could be improved in the future?

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Organisation of the BLOOM MOOC

35. Please rate the quality of organizational services of the BLOOM MOOC

	Very good	Good	Poor	Very poor	N/A
Registration to BLOOM MOOC					
Navigating the Academy platform					
Receiving the announcements and updates on the course					
Feedback and support from organizers					
Any comments:					

36. Do you have any suggestions for the EUN Academy team on how to improve the general organization of the above points (registration, announcements, support)?

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37. According to your ongoing commitments, what would be your preferred duration for a course on the European Schoolnet Academy?

    ☐ 1-2 weeks

    ☐ 2-4 weeks

    ☐ 4-6 weeks

    ☐ 6-8 weeks

    ☐ Longer than 8 weeks

Comments

38. Educational topics are you interested in receiving training on in the future?

Annex IX: Co-creation reporting template

Dear Hub leaders and co-leaders,

Please find attached a template for reporting on your experiences with and reflections on the co-creation workshops. The template is designed to collect information on your workshops and help to improve the workshop designs. Moreover the template will help us to exchange between the hubs and learn from each other.

Please take care to document your workshop in a concise and clear manner.

Section 1 and 2 address the framework of the workshop including location, invitation process, stakeholder groups reached, etc. Section 3 and 4 focus on the content and methodology. Please make sure to only focus on the content you gathered in the workshop in section 3 and to exclusively address the methodology you used to get your content in section 4. Section 5 provides room for self-reflection and overall description.

Basic information

Item	Description
Location of the workshop (e.g. institution, room, special features or speciality/nature of the room)	
Detailed description of participants (number, gender, stakeholder group, geographical scope/region)	

Invitation

Item	Description
How where participants invited?	
What worked well, what did not?	

How many people took part? Which stakeholder groups could they be associated with?	

Workshop content documentation – this section addresses ONLY the content

Item	Description
Attitudes towards Bioeconomy How did the group understand Bioconomy? Could they reach a common understanding? Which potentials and benefits do the participants see? Which reservations, difficulties and barriers are important to them?	
Ideas for outreach activities and materials Document the ideas for the outreach activities and materials. Which ideas were more important, which less, why?	

Outreach activities/materials design What is the goal of each co-created activity/material? What will be needed to implement their ideas? Which target groups can be reached? Which content should be communicated?	

Workshop methodology documentation – this section addresses ONLY the workshop methodology to answer the objectives

Item	Description
Attitudes towards Bioeconomy Describe the methodology used, to understand the attitudes towards bioeconomy, its potentials, benefits and visions, but also reservations, difficulties and barriers - what worked well, what did not work?	

Ideas for outreach activities and materials Describe the methodology used to collect ideas for outreach activities and materials - what worked well, what did not work?	
Selection of ideas Describe the methodology used to select ideas for further design - what worked well, what did not work?	
Outreach activities/materials design Describe the methodology used to design the activities and materials - what worked well, what did not work?	
Feedback Describe the methodology used – what did work well, what did not work?	

Self-Reflection on the workshop process

Item	Description
Which objectives could be reached? Which not and why?	
Reflection on group dynamics and diversity	
Observed barriers of dialogue (what prevented from participation or active involvement?)	
Lessons learnt, hints for improvements	
General issues?	

Annex X: Outreach activity/material reporting template

Dear Hub leaders and co-leaders,

This is a template for reporting on your experiences with and reflections on your conducted outreach activity. The template is designed to collect information on each activity and all materials and helps to improve further activities. Moreover the template will help us to exchange between the hubs and learn from each other.

Please take care to document your outreach activity in a concise and clear manner.

Date:

Hub:

Contact person:

Basic information

Item	Description
Location of the outreach activity (e.g. institution, room, public space, specific rural or urban area, café, restaurant, event location, etc.) Duration of activity? Date and time (e.g. morning, whole day, evening, night event) Which style and format did you use? (e.g. online, f2f, …)	
Detailed description of target group (estimated number of people reached, gender, age, background, etc.)	

Format of outreach activity

Item	Description
Please give an overview on your activity a	
Describe your outreach activity/material, its aim and content (describe the topics discussed), the methods used (gamification approach, projections, hands on experiencing)? Did you give examples of bioeconomy products? If so describe them.	
What worked well, what did not?	

Outreach activity content and design documentation

Item	Description
Please describe the content of your outreach activity in detail	
Which topics did you tackle?	
Which discussions came up?	
Did the target group	

understand the content?	
How did the target group understand Bioconomy?	
How were their reactions on the topic? (sceptical, positive, refusal, open, interested, uninterested, etc.)	
Which potentials and benefits do the participants see, regarding bioeconomy?	
Which reservations, difficulties and barriers are important to them, regarding bioeconomy?	
Please describe the design of your outreach activity/material in detail (the methods used, e.g. gamification approach, projections, hands on experiencing)?	
Did you give examples of bioeconomy products? Describe them.	
How was the design of the activity/material perceived by the target group?	
What worked well? What did not?	
Please describe how the activity met your expectations?	

Self-Reflection on the outreach activity/material

Item	Description
Which objectives could be reached? Which not and why?	
Observed barriers of the outreach activity/material (what prevented from participation or active involvement?)	
Lessons learnt, hints for improvements	
General Comments?	

Publishable Summary for BLOOMer

Item	Description
Please write a short Blog post about your activity (approx.. 300 words) and add 2 pictures. The blog post should be ready to post on BLOOMer.	

![bloom](bloom logo)

Annex XI: BLOOM teacher reporting template

Dear colleagues, dear teachers,

Please find attached the reporting template. The template was elaborated for all 20 teachers involved in the BLOOM project and aims at helping reflecting your experiences using the BLOOM school materials in your classes. Moreover the template will support the exchange of experience between the teachers and to learn from each other. It aims at helping to improve similar future processes. Please take care to document your activities in a concise and clear manner.

General Info

Item	Description
Date	
Time	
Venue/School	
BLOOM resources used	

Basic information on testing the BLOOM school materials

Item	Description
Subject(s) where I tested the BLOOM materials	
Indicate the resource of the schoolbox you implemented/tested	
Description of students/pupils:: - Age of students - Number of Students - Students from specific school branche	

Time	
- How many hours did you plan for this implementation - How many hours did the implementation actually require?	

Perception of School box – students and teachers

Item	Description
Students - Attitudes towards Bioeconomy 1. How did the students understand Bioconomy? 2. Could they reach a common understanding? 3. Which potentials and benefits of bio economy do the students see? 4. Which reservations, difficulties and barriers towards bioeconomy were important to the students?	
Students - How were the BLOOM school materials perceived by the students? Document the: - Interest - Chances - Main reservations / difficulties with the school material	

Teacher – How did you perceive applying the resource of the school box?	
1. Was it easy to use?	
2. Was everything understandable?	
3. How confident did you feel applying the resource of the school box? Why?	
4. Is content missing? Why and which?	
5. Is there content you would take out of the resource? Why and which?	
6. For which subjects does the resource fit best? Why?	
7. For which age is the resource most appropriate? Why?	