**Science communication about Arctic research**

**Module structure**

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| **TEACHING HOURS**  **(45 min each)** | **TIME NEEDED** | **CONTENT & TEACHER ACTIVITY** | **STUDENT ACTIVITY** | **RESOURCE / METHOD** |
| 1 hour  **Lesson 1** | 20 min | What is science communication? Teacher presentation + outlines the three themes to be discussed in groups | Students take notes | PPT S1 1-9 |
| 15 min |  | Activity in pairs: discuss outlined questions and gather results: themes:  Permafrost  Melting Ice  Biodiversity |  |
| 10 min |  | Presentation of results | Jamboard |
| Self-study material for lesson 1:   * *EU policy brief on science communication* [*https://ec.europa.eu/research/participants/documents/downloadPublic?documentIds=080166e5ccaa3072&appId=PPGMS*](https://ec.europa.eu/research/participants/documents/downloadPublic?documentIds=080166e5ccaa3072&appId=PPGMS) * *Wallenstein, M., Live from the thawing Arctic tundra: The challenge of communicating complex science to the public,* [*https://www.nrel.colostate.edu/live-from-the-thawing-arctic-tundra-the-challenge-of-communicating-complex-science-to-the-public/*](https://www.nrel.colostate.edu/live-from-the-thawing-arctic-tundra-the-challenge-of-communicating-complex-science-to-the-public/) * *Video about Wallenstein’s work available at:* [*https://www.pbs.org/newshour/science/alaskan-tundra-scientists-dig-dirt-future-climate-change*](https://www.pbs.org/newshour/science/alaskan-tundra-scientists-dig-dirt-future-climate-change) | | | |
| 1 hour  **Lesson 2** | 15 min | Science communication of some major Arctic institutional stakeholders:  Arctic Council  IASC  University of the Arctic |  | PPT S2 1-11 |
| 15 min |  | Activity in pairs: discuss outlined questions and gather results: textual/visual communication of the three institutions, including social media | PPT S2 12 |
| 15 min |  | Presentation of results | Jamboard |
| Self-study material for lesson 2:   * <https://arctic-council.org/resources/pathways_2021/> * [https://iasc.info/about/publications-documents/bulletin#](https://iasc.info/about/publications-documents/bulletin) (2020 issue) * <https://www.uarctic.org/shared-voices/shared-voices-magazine-2021/> | | | |
| 1 hour  **Lesson 3** | 20 min | Teacher presentation of 3 major Arctic research institutions:  Arctic Centre Rovaniemi, AWI, Scott Polar Institute |  | PPT S3 1-8 |
| 15 min |  | Activity in pairs: discuss outlined questions and gather results:  Science communication strategies/  activities of 3 other Arctic Institutes | PPT S3 9 |
|  | 10 min |  | Presentation of results | Jamboard |
|  | Self-study material for lesson 3: consult the websites of the following three institutions in view of science communication   * Arctic Studies Center, National Museum of Natural History, Washington DC <https://naturalhistory.si.edu/research/anthropology/programs/arctic-studies-center> * The Arctic Institute of North America, University of Calgary <https://www.google.com/search?client=safari&rls=en&q=Arctic+instiute+canada&ie=UTF-8&oe=UTF-8> * Norwegian Polar Institute <https://www.npolar.no/en/> | | | |
| 1 hour  **Lesson 4** | 20 min | Targeting different audiences:  Example  ERIS,  EDU-ARCTIC,  NUNATARYUK |  | PPT S4 1-11 |
| 15 min |  | Activity in pairs: discuss outlined questions and gather results: how to communicate about the impact of climate change in the Arctic to young students at:  Primary,  Lower secondary  Upper Secondary Level | PPT S4 12 |
| 10 min |  | Presentation of results | Jamboard |
| Self-study material for lesson 4: consult the following websites to get an idea what these projects were/are about:   * ERIS – Exploitation of Research Results in School <https://eris-project.eu/index.php/en/2017/09/20/lessons-in-english-for-upper-secondary-schools/> * EDU-ARCTIC - Engaging students in STEM education through Arctic research <https://edu-arctic.eu> * NUNATARYUK - <https://nunataryuk.org> | | | |
| 1 hour  **Lesson 5** | 15 min | Targeting audiences: use of video/film etc. eg Sea Ice Portal and teasers (EDU-ARCTIC teaser, Gateway to the Arctic teaser etc.) |  | PPT S5 2-10 |
| 20 min |  | Activity in pairs: scientists as communicators: Michael Mann,  Valérie Masson-Delmotte  Markus Rex | PPT S5 11 |
|  | 10 min |  | Presentation of results | Jamboard |
|  | Self-study material for lesson 5: Watch the following videos and visit the websites listed below   * <https://www.youtube.com/embed/dztwrdvZj_c> * <https://www.meereisportal.de/en/mosaic/videos/> * <https://instaar.colorado.edu/galleries/baffin-island-disappearing-ice-and-climate-evidence/> * <https://instaar.colorado.edu/galleries/neem-deep-ice-coring-project-greenland/> * <https://instaar.colorado.edu/galleries/arctic-coastal-erosion-1/> * Michael E. Mann: <https://michaelmann.net> * Valérie Masson Delmotte speech: <https://www.youtube.com/watch?v=NIoMoWLZ4O8> | | | |