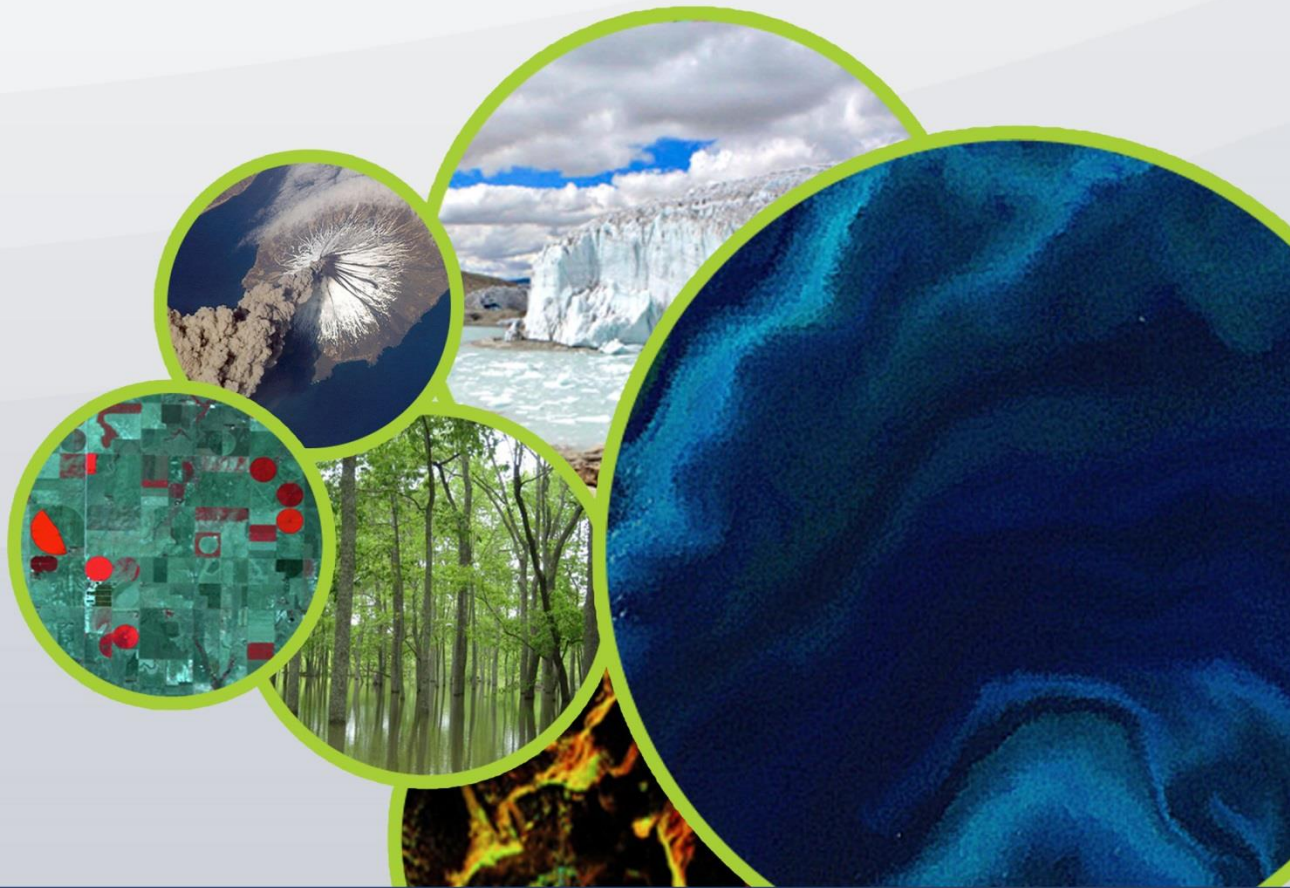




Committee on Earth Observation Satellites



CEOS Webinar Toolkit

Learning Objectives Guide

May 2021 | Version 1.0

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Version Control

Version #	Authors	Purpose/Change	Date
0.1	Lauren Childs-Gleason and Ella Haugen (NASA)	Initial Draft	Feb 2021
1.0	Sydney Neugebauer and Brock Blevins (NASA); Robert Eckardt (Univ of Jena)	Minor edits and Addition of taxonomies of learning outcomes	May 2021

CEOS Webinar Toolkit Introduction

In support of the CEOS mission and goals, the Webinar Toolkit serves to provide CEOS working teams with a foundation of resources to better promote and present CEOS work and initiatives. The WGCapD's collective experience in effectively designing and hosting webinars has been compiled in this document to support the strengthening and branding of CEOS webinars. This CEOS webinar creation guide is intended to be a living document, for exchanging experiences and sharing knowledge.

Purpose

Learning objectives give clarity to your potential webinar attendees regarding what they will gain from your webinar and also serve as a “north star” for crafting your webinar materials. Learning objectives typically describe specific, discrete units of knowledge and skill that can be gained within a short timeframe (i.e. by the end of your webinar).

Questions to Help Define Learning Objectives

Answering these questions will help identify learning objectives:

- ✓ Will this training focus on building awareness or skills?
 - To build awareness, focus on lower order thinking skills – Remember & Understand
 - To build skills, focus on higher order thinking skills – Apply, Analyze, Evaluate, and Create
- ✓ What is the training level?
 - Consider the depth and breadth of knowledge the attendees can realistically gain through the training to define training level: introductory to advanced
- ✓ What is the theme of the training?
 - Defining a specific topic/theme/application helps focus the training.
- ✓ Who is your target audience?
 - Keep your target audience in mind when you create your learning objectives.
 - Variables to consider: age, gender, level of education, professional experience, technical expertise related to the topics of the training, etc.
- ✓ What is the scope of the webinar?
 - Define the scope based on stated needs and available resources and confirm the scope is appropriate for the intended audience.
 - Communicate with the audience via email, surveys, etc.
- ✓ What are the expected results/outcomes of the training?
 - What new competencies, capabilities, or skills do you want your audience to leave the training having gained?
 - Always answer “Why does someone want to take this training?” and “What problem for the end user will this address?”

Drafting Learning Objectives

Learning objectives should be concise and clear. There is a simple formula for drafting a learning objective:

1. Begin with a phrase such as “At the conclusion of the webinar, attendees will be able to...”
2. Add an action verb to the phrase.
3. Finish the phrase with what the attendee will gain from your webinar.

Repeat this process for each objective. How many learning objectives you focus on is up to you but a good

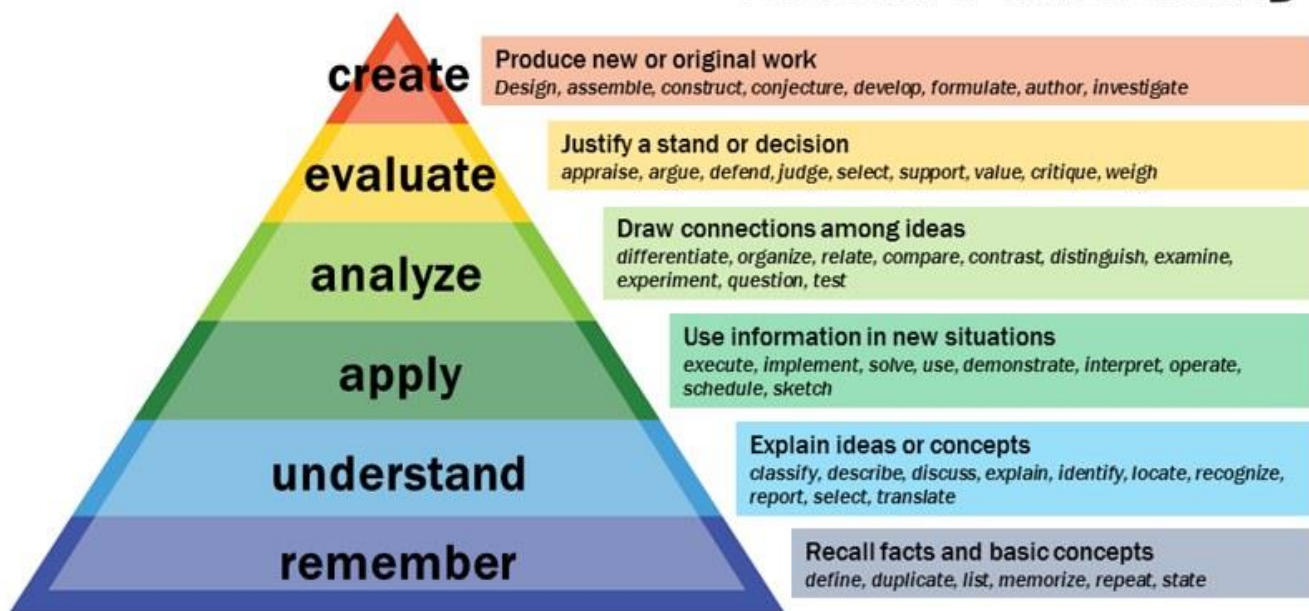
range for a webinar is two to three.

Ex. “By the end of this webinar, attendees will be able to understand the basic concepts of SIF and LIDAR sensors, how to interpret the measurements, and how they can be used to address different applications.”

Taxonomies of Learning Outcomes

Different cognitive skills are learned in different ways. Classification schemes like Bloom’s Taxonomy can help trainers consider what kind of thinking skills they are trying to teach and how best to assess related learning. Bloom’s Taxonomy helps distinguish learning outcomes based on the cognitive skills required and their level of complexity.

Bloom’s Taxonomy



Vanderbilt University Center for Teaching

Figure 1. Bloom’s Taxonomy from Vanderbilt University Center for Teaching.

General Considerations

- Stay focused on your target audience and what you want them to have gained from your webinar.
- Consider dividing your objectives into groups:
 - General webinar objectives (high-level goals)
 - Core concepts to be learned (key themes and topics)
 - Specific learning objectives (upon completion learners will be able to...)
- Consider the language you are using in your objectives.
 - Keep your target audience in mind
 - Keep objectives simple and avoid lengthy paragraphs
 - Be clear in what specific action is necessary to complete each required objective
- Note: WGCapD will review your draft learning objectives and offer feedback.
- As you move forward, be sure to develop your training materials and content with your learning objectives in mind.

Resources

- Boston University: Writing Clear Learning Objectives – <https://www.bu.edu/provost/planning-assessment/program-learning-outcomes-assessment/writing-learning-outcomes/>
- Iowa State University: Writing Course Goals/Learning Outcomes and Learning Objectives – <https://www.celt.iastate.edu/teaching/preparing-to-teach/tips-on-writing-course-goalslearning-outcomes-and-measureable-learning-objectives/>
- The Bob Pike Group: 5 Steps to Writing Clear and Measurable Learning Objectives – <https://www.bobpikegroup.com/trainer-blog/5-steps-to-writing-clear-and-measurable-learning-objectives>
- Vanderbilt University: Bloom’s Taxonomy – <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>
- WMO Taxonomies of Learning Objectives – https://etrp.wmo.int/pluginfile.php/15225/mod_folder/content/0/Readings_Competency%20II/Taxonomies%20of%20Learning%20Outcomes_v3.0.pdf?forcedownload=1