Advanced learning goals

You can combine the Blooms Taxonomy levels (columns) with a competence-based model (rows). Competences that scientifists need to have include **working with facts** from a specified domain of knowledge, **applying the scientific method** (observing, formulating and testing hypotheses), **communication** (describing, presenting, writing, using web resources), **evaluation** (relating to other sources of information, practical applicability, limits of methods).

This results in lots of different learning goals. During a longer course, you can use a similar table to create a diverse set of goal – this makes the course more interesting.

	Basic (Blooms 1-2) (know, identify, reproduce)	**Intermediate (Blooms 3-4)** (apply, order, associate)	**Advanced (Blooms 5-6)** (transfer to related fields)
Facts	**Recognize** 10 representative bird species.	**Arrange** birds into a taxonomic tree.	**Classify** an unknown bird.
Scientific method	**Record observations:** Describe features of a bird accurately.	**Answer hypotheses:** All birds that cannot fly compensate by good running or swimming.	**Formulate hypotheses:** What the form of the beak tells about a birds food habits.
Communication	**Know** latin species names of 10 birds.	**Draw** distinctive features of a bird.	**Present** a bird species.
Evaluation	**Verify** information about bird species in the literature.	How is taxonomic classification **applicable** in a natural habitat.	What are the **limits** of observation-based taxonomy in birds and other animals?

Table: classification of learning goals according to difficulty (x-axis) and competences (y-axis).