Bloom's Revised Taxonomy for Learning Objectives

REMEMBER

To repeat or list **information**¹ or procedures²

UNDERSTAND

To explain, paraphrase, organise, or exemplify **information**¹ or procedures²

APPLY

To apply **procedures**², theories or skills to a known or similar situation3

ANALYSE

To break a complex **situation**³ into parts or **clusters**⁴, and/or to identify what procedures², ideas⁷ or skills, and/or products⁵ on their relationships are applicable.

EVALUATE

To assess information¹. procedures², tools, processes, quality6 and/or significance in order to reach a conclusion, advice, decision, or proof.

CREATE

To create original ideas⁷, procedures², tools, or products⁵

¹Information e.g. facts, terms, definitions/concepts, ideas, theories

²Procedures e.g. formulas, techniques, procedures, methodologies, rules, experiments, analyses

3Situations e.g. problem, experiment, data, process, research question, literature, list of specifications, computer program, or other information

⁴Parts or clusters e.g. causes and consequences, advantages and disadvantages, motives, stakeholders, and relations

⁵Products e.g. computer programs, designs, data, products, list of specifications, literature

⁶Quality e.g. reliability, validity

⁷Ideas e.g. ideas, theories, hypotheses, opinions, research questions

Example

The student is able to **list** the steps in the following methods of analysis: interpolation and classification.

Example

The student is able to **explain** the movement of bony segments of the human skeleton system.

Example

The student is able to calculate the shear and bending moment resistance of pre-stressed concrete structures.

Example

describing the steady-state performance quality of the collected data. of the vehicles discussed during the course.

Example

The student is able to **derive** equations The student is able to **evaluate** the

Example

The student is able to **design** systems engineering solutions through the use of requirements analysis and conceptual designs.

Verbs

Reproduce:

Duplicate, List, Repeat, Reproduce Find/identify in e.g. a figure: Identify^{AN}, Label, Locate, Name, Recognise, Recall

Verbs

Give explanation:

Discuss^{AN,EV} Explain^{EV}

Give examples:

Give examples, Illustrate^{AP,CR}

In other words:

Define, Paraphrase, Rephrase, Restate, Summarise

Organise information

Categorise^{AP,AN}, Compair^{AN}, Contrast^{AN}, Order^{AN}, Organise^{AP,AN}

Verbs

Apply general:

Apply, Administer, Develop^{CR}, Employ, Perform, Use, Implement, Make use of

Apply knowledge:

Categorise^{UN,AN}, Link^{AN}

Apply specific procedures/skills:

Assemble, Calculate, Compile^{CR}, Correlate^{AN}, Construct^{CR}, Evaluate, Experiment^{CR}, Illustrate^{UN,CR}, Interview, Simulate, Solve^{AN,EV,CR}

Verbs

Analyse in general:

Analyse, Appraise^{EV}, Estimate, Examine, Inspect, Investigate, Research, SimplifyCR. SolveAP,EV,CR

Divide:

Breakdown, Categorise^{UN,AP}, Discriminate, Dissect, Divide, Isolate, Prioritise^{EV}, Order^{UN}, Organise^{UN,AP}

Arguments (one sided):

Criticise^{EV}, Debate^{EV}, Discuss^{UN,EV}, Focus, Highlight, Motivate, Point out, Reason^{EV}

Relationships:

Compair^{UN}, Contrast^{UN}, Correlate^{AP}, InferEV, LinkAP, ModelCR, Rank, Relate, Reorganise

Select applicable procedure/theory/

(quality of) results' Survey

Choose^{EV}, Identify^{UN}, Model, Select^{EV}, Simplify

Verbs

Taking into consideration:

Consider, Deduct, Reason^{AN}, Value Working towards a conclusion*: Appraise^{AN}, Assess, Award, Evaluate,

Grade, Mark, Rate, Reason^{AN}, Score, Solve a problem^{AP,AN,CR}

Reaching a conclusion*:

Advise, Choose^{AN}, Conclude, Decide, Determine, Judge, Prioritise^{AN}, Select^{AN}

Defending a conclusion* (or not):

Arque, Convince, Criticise^{AN}, Debate^{AN}, Disprove, Dispute, Influence, Justify, Persuade, Prove, Reason^{AN}, Recommend, Support, Validate

Discuss consequences/significance of conclusion*:

Discuss^{AN,UN}, Explain (results, consequences for stakeholders. society, etc.)^{UN}, Induce, Infer^{AN},

*conclusion can also be a recommendation. decision or proof

Verbs

Make something new:

Compose, Create, Design, DevelopAP, Discover, Experiment^{AP}, Invent, Plan

Change something:

Adapt, Change, Innovate, Modify, Reframe, Revise, Simplify^{AN}, Substitute, Transform

Add something:

Add to, Elaborate, Extend

Improve something:

Improve, Maximise, Minimise

Combine some things:

Combine, Compile^{AP}, Integrate

New ideas:

Formulate, Hypothesise, Originate, Propose, Speculate, Suggest, Theorise

Construct:

Construct^{AP}, Illustrate^{UN,AP}, Draw, Visualise

Other:

Model^{AN}, Solve^{AP,AN,EV}, Program

UN, AP, AN, EV, CR Some verbs can be used in multiple levels of the taxonomy. This is indicated with the superscripts: UNderstand, APply ANalyse, EValuate or CReate. The verbs used in this document are a selection of the possibilities. You can also use other verbs.

Products		Products		Products		Products		Products		Products	
Definition	List	Categorisation	Examples	Demonstration	Role play	Abstract	Graph	Advise	Judgement	Computer program	Paper
Fact	Reproduction	Collection	Explanation	(e.g. video)	Simulation	Analysis of a	Observation of	Case presentation	Opinion	Design plan/	Plan
Label	Quotes	Closed questions	Outline	Illustration	Use formulas,	case/situation	professional	Comment	Recommendation	blueprint/	Portfolio
		(e.g. true/false,	Summary	Interview	programs, rules,	Case presentation	practice	Conclusion	Report	scheme/drawings	Project
		multiple choice)	Devise a wiki entry	Performance	procedure, tech-	Chart	Peer feedback	Discussion/debate	Review	Exam questions	Prototype
				Presentation	niques	Checklist	Report	Essay	Verdict	Game	Research proposal
This work is licensed under a Creative Commons Attribution 4.0 International License.					Calculation	Discussion of the	Spreadsheet	Evaluation			