

# Bloom's Revised Taxonomy for Learning Objectives

REMEMBER	UNDERSTAND	APPLY	ANALYSE	EVALUATE	CREATE
To repeat or list <b>information</b> <sup>1</sup> or <b>procedures</b> <sup>2</sup>	To explain, paraphrase, organise, or exemplify <b>information</b> <sup>1</sup> or <b>procedures</b> <sup>2</sup>	To apply <b>procedures</b> <sup>2</sup> , theories or skills to a known or similar <b>situation</b> <sup>3</sup>	To break a complex <b>situation</b> <sup>3</sup> into parts or <b>clusters</b> <sup>4</sup> , and/or to identify what <b>procedures</b> <sup>2</sup> , <b>ideas</b> <sup>7</sup> or relationships are applicable.	To assess <b>information</b> <sup>1</sup> , <b>procedures</b> <sup>2</sup> , tools, processes, skills, and/or <b>products</b> <sup>5</sup> on their <b>quality</b> <sup>6</sup> and/or significance in order to reach a conclusion, advice, decision, or proof.	To create original <b>ideas</b> <sup>7</sup> , <b>procedures</b> <sup>2</sup> , tools, or <b>products</b> <sup>5</sup>

<sup>1</sup>**Information** e.g. facts, terms, definitions/concepts, ideas, theories

<sup>2</sup>**Procedures** e.g. formulas, techniques, procedures, methodologies, rules, experiments, analyses

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

<sup>4</sup>**Parts or clusters** e.g. causes and consequences, advantages and disadvantages, motives, stakeholders, and relations

<sup>5</sup>**Products** e.g. computer programs, designs, data, products, list of specifications, literature

<sup>6</sup>**Quality** e.g. reliability, validity

<sup>7</sup>**Ideas** e.g. ideas, theories, hypotheses, opinions, research questions

Example	Example	Example	Example	Example	Example
The student is able to <b>list</b> the steps in the following methods of analysis: interpolation and classification.	The student is able to <b>explain</b> the movement of bony segments of the human skeleton system.	The student is able to <b>calculate</b> the shear and bending moment resistance of pre-stressed concrete structures.	The student is able to <b>derive</b> equations describing the steady-state performance of the vehicles discussed during the course.	The student is able to <b>evaluate</b> the quality of the collected data.	The student is able to <b>design</b> systems engineering solutions through the use of requirements analysis and conceptual designs.

Verbs	Verbs	Verbs	Verbs	Verbs	Verbs
<b>Reproduce:</b> Duplicate, List, Repeat, Reproduce <b>Find/identify in e.g. a figure:</b> Identify <sup>AN</sup> , Label, Locate, Name, Recognise, Recall	<b>Give explanation:</b> Discuss <sup>AN, EV</sup> , Explain <sup>EV</sup> <b>Give examples:</b> Give examples, Illustrate <sup>AP, CR</sup> <b>In other words:</b> Define, Paraphrase, Rephrase, Restate, Summarise <b>Organise information</b> Categorise <sup>AP, AN</sup> , Compar <sup>AN</sup> , Contrast <sup>AN</sup> , Order <sup>AN</sup> , Organise <sup>AP, AN</sup>	<b>Apply general:</b> Apply, Administer, Develop <sup>CR</sup> , Employ, Perform, Use, Implement, Make use of <b>Apply knowledge:</b> Categorise <sup>UN, AN</sup> , Link <sup>AN</sup> <b>Apply specific procedures/skills:</b> Assemble, Calculate, Compile <sup>CR</sup> , Correlate <sup>AN</sup> , Construct <sup>CR</sup> , Evaluate, Experiment <sup>CR</sup> , Illustrate <sup>UN, CR</sup> , Interview, Simulate, Solve <sup>AN, EV, CR</sup>	<b>Analyse in general:</b> Analyse, Appraise <sup>EV</sup> , Estimate, Examine, Inspect, Investigate, Research, Simplify <sup>CR</sup> , Solve <sup>AP, EV, CR</sup> <b>Divide:</b> Breakdown, Categorise <sup>UN, AP</sup> , Discriminate, Dissect, Divide, Isolate, Prioritise <sup>EV</sup> , Order <sup>UN</sup> , Organise <sup>UN, AP</sup> <b>Arguments (one sided):</b> Criticise <sup>EV</sup> , Debate <sup>EV</sup> , Discuss <sup>UN, EV</sup> , Focus, Highlight, Motivate, Point out, Reason <sup>EV</sup> <b>Relationships:</b> Compar <sup>UN</sup> , Contrast <sup>UN</sup> , Correlate <sup>AP</sup> , Infer <sup>EV</sup> , Link <sup>AP</sup> , Model <sup>CR</sup> , Rank, Relate, Reorganise <b>Select applicable procedure/theory/skill:</b> Choose <sup>EV</sup> , Identify <sup>UN</sup> , Model, Select <sup>EV</sup> , Simplify	<b>Taking into consideration:</b> Consider, Deduct, Reason <sup>AN</sup> , Value <b>Working towards a conclusion*:</b> Appraise <sup>AN</sup> , Assess, Award, Evaluate, Grade, Mark, Rate, Reason <sup>AN</sup> , Score, Solve a problem <sup>AP, AN, CR</sup> <b>Reaching a conclusion*:</b> Advise, Choose <sup>AN</sup> , Conclude, Decide, Determine, Judge, Prioritise <sup>AN</sup> , Select <sup>AN</sup> <b>Defending a conclusion* (or not):</b> Argue, Convince, Criticise <sup>AN</sup> , Debate <sup>AN</sup> , Disprove, Dispute, Influence, Justify, Persuade, Prove, Reason <sup>AN</sup> , Recommend, Support, Validate <b>Discuss consequences/significance of conclusion*:</b> Discuss <sup>AN, UN</sup> , Explain (results, consequences for stakeholders, society, etc.) <sup>UN</sup> , Induce, Infer <sup>AN</sup> ,	<b>Make something new:</b> Compose, Create, Design, Develop <sup>AP</sup> , Discover, Experiment <sup>AP</sup> , Invent, Plan <b>Change something:</b> Adapt, Change, Innovate, Modify, Reframe, Revise, Simplify <sup>AN</sup> , Substitute, Transform <b>Add something:</b> Add to, Elaborate, Extend <b>Improve something:</b> Improve, Maximise, Minimise <b>Combine some things:</b> Combine, Compile <sup>AP</sup> , Integrate <b>New ideas:</b> Formulate, Hypothesise, Originate, Propose, Speculate, Suggest, Theorise <b>Construct:</b> Construct <sup>AP</sup> , Illustrate <sup>UN, AP</sup> , Draw, Visualise <b>Other:</b> Model <sup>AN</sup> , Solve <sup>AP, AN, EV</sup> , Program

<sup>UN, AP, AN, EV, CR</sup> 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 Fact Label List Reproduction Quotes	Categorisation Collection Closed questions (e.g. true/false, multiple choice) Examples Explanation Outline Summary Devise a wiki entry	Demonstration (e.g. video) Illustration Interview Performance Presentation Role play Simulation Use formulas, programs, rules, procedure, techniques Calculation	Abstract Analysis of a case/situation Case presentation Chart Checklist Discussion of the (quality of) results' Graph Observation of professional practice Peer feedback Report Spreadsheet Survey	Advise Case presentation Comment Conclusion Discussion/debate Essay Evaluation Judgement Opinion Recommendation Report Review Verdict	Computer program Design plan/blueprint/scheme/drawings Exam questions Game Paper Plan Portfolio Project Prototype Research proposal