Bloom's Revised Taxonomy for Learning Objectives

REMEMBER

To repeat or list **information**[1] or **procedures**[2]

UNDERSTAND

To explain, paraphrase, organise, or exemplify **information**[1] or **procedures**[2]

APPLY

To apply **procedures**[2], theories or skills to a known or similar **situation**[3]

ANALYSE

To break a complex **situation**[3] into parts or **clusters**[4], and/or to identify what **procedures**[2], **ideas**[7] or relationships are applicable.

EVALUATE

To assess **information**[1], **procedures**[2], tools, processes, skills, and/or **products**[5] on their **quality**[6] and/or significance in order to reach a conclusion, advice, decision, or proof.

CREATE

To create original **ideas**[7], **procedures**[2], tools, or **products**[5]

[1]***Information*** *e.g. facts, terms, definitions/concepts, ideas, theories*
[2]***Procedures*** *e.g. formulas, techniques, procedures, methodologies, rules, experiments, analyses*
[3]***Situations*** *e.g. problem, experiment, data, process, research question, literature, list of specifications, computer program, or other information*

[4]***Parts or clusters*** *e.g. causes and consequences, advantages and disadvantages, motives, stakeholders, and relations*
[5]***Products*** *e.g. computer programs, designs, data, products, list of specifications, literature*
[6]***Quality*** *e.g. reliability, validity*
[7]***Ideas*** *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

The student is able to **derive** equations describing the steady-state performance of the vehicles discussed during the course.

Example

The student is able to **evaluate** the quality of the collected data.

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, Simplify[CR], Solve[AP,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], Infer[EV], Link[AP], Model[CR], Rank, Relate, Reorganise
Select applicable procedure/theory/skill:
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):
Argue, 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, Develop[AP], 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 possiblities. You can also use other verbs.*

Products

Definition
Fact
Label
List
Reproduction
Quotes

Products

Categorisation
Collection
Closed questions (e.g. true/false, multiple choice)
Examples
Explanation
Outline
Summary
Devise a wiki entry

Products

Demonstration (e.g. video)
Illustration
Interview
Performance
Presentation
Role play
Simulation
Use formulas, programs, rules, procedure, techniques
Calculation

Products

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

Products

Advise
Case presentation
Comment
Conclusion
Discussion/debate
Essay
Evaluation
Judgement
Opinion
Recommendation
Report
Review
Verdict

Products

Computer program
Design plan/ blueprint/ scheme/drawings
Exam questions
Game
Paper
Plan
Portfolio
Project
Prototype
Research proposal

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