

V4 - Experiment Procedure “Learning Sampling”

GENERAL INFORMATION

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SHORT EXPERIMENT DESCRIPTION

A large part of most sciences and something that humans love to do in general is assigning objects (and subjects) to categories, such as various galaxy types in Astronomy, the reproduction system in biology, type of Stone in geography, types of learners in psychology or pedagogy, types of equations in mathematics and so on. Categorizing objects can help find similarities and differences, assisting in research on these characteristics and oftentimes being able to transfer knowledge gained on one object to other objects in the same grouping.

HARDWARE CHECKLIST

	Rocks
	Soil
	Sand
	Metals
	Leaves
	Sample bags (optional)

PROCEDURE

LEARNING SAMPLING

Step	Action	NOTES	Duration	Check
1	Supply bags filled with material i.e. samples	Option: allow students to collect their own samples outdoors if time and resources permit.	10 min.	
2	Students sort samples	sort the samples into basic groups based on visible or tactile features (e.g., color, texture, size)	5 min.	
3	Students classify samples	Students create their own classification system based on chosen criteria (e.g., chemical composition, physical appearance). They must explain their reasoning and justify their approach.	25 min.	

PROCEDURE “LEARNING SAMPLING”

4	Discuss different merits of different options of classification	Facilitate a group discussion comparing the different classification methods. Discuss the advantages and disadvantages of each system based on research goals (e.g., precision, ease of use, relevance to specific studies).	20 min.	
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NOTE:

- Encourage creativity in classification systems to highlight various perspectives.
- Tie the activity back to real-world scientific applications by providing examples (e.g., classifying rocks in geology, categorizing stars in astronomy).