

Water Skills for Life – Motor Learning Principles

The national framework for water safety education aligns well with several motor learning principles. In this exercise you will be asked to explain five important principles of motor learning and identify how they relate to the Water Skills for Life framework. Online resources for teachers are available at: <https://www.waterskills.org/solutions>

Principle 1: Fundamental Movement Skills

Explanation: A collection of foundational movement capacities that act as building-blocks on which more mature movement skills can be built.

Example: Walking, jumping, throwing, kicking, floating

Principle 2: Skill progression

Explanation: Progressively make the practice task more difficult to suit the improving skill level of the learner.

Example: Float in calm/still water, float in wavy water, float in surf/ocean

Principle 3: Perception-action coupling

Explanation: An important part of becoming skilled is learning how to read the environment (perceive) and move (act) accordingly

Example: Gauge the current of moving water before deciding if its safe to wade across

Principle 4: Constraints-led teaching

Explanation: Identify key factors that influence how the learner moves and if appropriate modify them to guide learners to more effective ways of moving

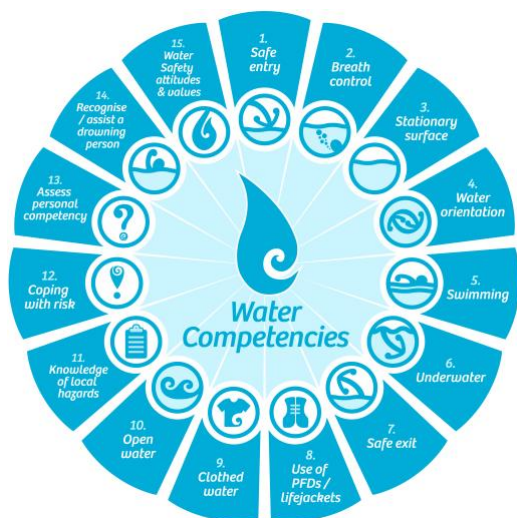
Example: Try to swim a length with as few arm strokes as possible to emphasise gliding

Principle 5: Representative Learning Design

Explanation: It is important for teachers when designing practice activities to reflect the performance context

Example: Have learner practice swimming underwater with their eyes closed as the water is not often transparent in open water conditions

Principle	Application in WSFL	How could this be taught?
1. Fundamental Movement Skills	- Core water safety competencies identified (e.g., entry, floating, propulsion) -	- Set up obstacle course or simulated rescue and students identify core competencies required -
2. Skill progression	- -	- Different levels of difficulty progressively built into lessons -
3. Perception-Action coupling	- Emphasis on perception of environment and how to move -	- -
4. Constraints-led teaching	- -	- Manipulate water conditions in pool (i.e., wavy, current, temp) to simulate open water -
5. Representative learning design	- Key features of to-be-learnt tasks preserved in practice -	- Teach advanced lessons at beach, river, lake, etc. -



Water Skills for Life: <https://www.waterskills.org>

Research/evidence:

Button et al. (2023): Water Safety Education in Different Aquatic Environments

doi.org/10.36905/jses.2023.02.03

Button et al. (2022): Motor learning principles and drowning prevention

doi.org/10.1016/j.ajsep.2022.04.001

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www.dpanz.org.nz/courses/water-safety-for-children