Inert Knowledge

You know it as fact, you can express it in words - but you can't apply it in reality.

Exploratory Learning

Learner controlled, facts have to be found and ordered, going for problem-solving skills, and going for intrinsic motivation

Constructivism

Knowledge and meaning is constructed individually and entirely inside the learner.

Authentic learning environment

Real problems, to be solved with real objects and facts

Programmed Instruction

From easy to difficult, with clear goals, with immediate feedback, in a given sentence and small units

Metacognition

What learning relevant tasks are there? What learning strategies exist? How do I learn (best)?

Tutor

The teacher observes and helps the learner if she has difficulties with certain topics

Anchored Instruction

Solving problems which are presented and contextualised within a narrative form

Accomodation

Modifying one's internal cognitive schema, so it will fit the experience of the world
Creating stereotypes

Objectivism

Knowledge exists external and independent from the learner. Knowledge is objectively either true or false.

Situated Learning Situated Cognition

Learning - and knowledge - is always socio-cultural, individual, emotionally and biographically situated

Immediate Feedback

Do something right or wrong. Do anything - and you'll get an immediate (helpful) reaction

Assimilation

Interpreting the experiences of the world according to existing cognitive schema
Thinking in stereotypes

Perturbations

Something happens that irritates you - until you find out what it is. Then it won't anymore.

Contextualisation

No thing can be perceived without a context in which it is perceived

Linear presentation

C follows B, B follows A: A presentation in a well structured and straightforward manner

Microworld A simulation where the user is free to explore objects and their relations, and may set his own goals what to do there	**Socio-technical environment** Learning is embedded in a network of technical media, of social structures and restrictions	**Drill & Practice** Teaching by presenting something to the learner until she can successfully repeat it	**Intelligent (Adaptive) Tutoring Systems (ITS/ATS)** A software that reacts in an appropriate way to the skills and knowledges of the learner
Self-referential Refering to one's own former perceptions, experiences and stances	**Problem-solving Skill** A skill that enables to recognize and solve complex, real-life-like problems from a specific domain	**Complex Situations** A situation where there are many interdependent and interrelated factors to pay attention to	**Simulation** A simplified representation of a certain aspect of reality, usually open for interaction with a user
Stimulus-Response Rubber hammer and knee jerk. I say „2 + 2 ?" and you answer without thinking „4".	**Cooperative, Collaborative Learning** Learning within a group with the mutual help of peers and accessible experts on shared problems	**Frederic B. Skinner** "Give me a child and I'll shape him into anything."	**Jean Piaget** "Knowing reality means constructing systems of transformations that correspond, more or less adequately, to reality."
Heinz von Foerster „The environment, as we perceive it, is our invention."	**Behaviourism**	**Cognitivism**	**Constructivism**

First round:

„Behaviourism"

Lay out the three concept-cards labeled „Behaviourism", „Cognitivism", „Constructivism". Each group has to categorise the expressions or names in one set of the concept-cards according to their association with Behaviourism, Cognitivism and Constructivism.
The game ends with the first group to announce all cards assigned. The group with the highest number of correctly assigned concept-cards is declared the winner.

Setup: Groups with an equal number of players with one set of concept-cards for each group.

Didactic goal: Behaviouristic limitations - ambivalent or negotiable objects can't be assigned in a game of clear cut categorisation.

Commercial game equivalent: Parker Brothers (1988), „Trivial Pursuit"

Public game equivalent: „Twenty Questions"

(Modification: Members from competing groups in turns ask each other what defines a specific concept. The group reaching first 5 points for correct answers - see explanation on cards - is the winner.)

Behaviourism	Cognitivism	Constructivism
Frederic B. Skinner	Jean Piaget	Heinz von Foerster
Stimulus-Response	Int. or Ad. Tut. Systems	Self-referential
Drill & Practice	Tutor	Anchored Instruction
Linear presentation	Accomodation	Situated Learning
Programmed Instruct.	Assimilation	Complex situations
Objectivism	Exploratory Learning	Auth. learn. environ.
Immediate feedback	Metacognition	Inert Knowledge
	Problem-solving Skill	Microworld
		Socio-tech. environ.
		Simulation
		Coop., Collab. Learn.
		Perturbations
		Contextualisation

Second round:

„Cognitivism"

Each student in a group of gets dealt five of the concept-cards and has to explain two expressions or persons to her fellow group members - but without mentioning the expression itself.
She may discard three concept-cards she doesn't like - or doesn't know how to explain - onto a central stack.
The first one of the other players who recognizes the expression is the next one to explain. After one minute without a 'winner', the concept-card is discarded and she has to draw another card from the stack. Then the player to the left of her is the next one to explain. The first one to have no concept-cards left is the winner in the group, and the game ends.

Setup: Groups with an equal number of players (3-5) with one set of concept-cards per group. Stopwatch or something similar to measure minutes.

Didactic goal: Cognitivistic multiperspectivity - Though the term itself may be rather clear, there are many ways to describe it.

Commercial game equivalent: Hasbro (1990), „Taboo"

Public game equivalent: „Wikipedia:Wikirace„

(Modification I: Find the fitting antonym - an (the?) antagonistic concept - to a drawn concept.)
(Modification II: The group that first has one player to get rid of her cards wins over other competing groups.)

Third round:

„Constructivism"

Each group selects two pairs of concept-cards (no persons!) and gives the first pair on to the next group. The group may decline the first pair, but has then to take on the second.
Now each consecutive group has three minutes to explain (as group) in a mini-lecture to the other groups, why - and how - the two expressions are closely connected to each other. The members of the other groups vote for the most entertaining and/or convincing relation presented. After each group has done one explanation, the winner is the group with the most votes.

Setup: Groups with an equal number of players with one set of concept-cards for each group. Stopwatch or something similar to measure minutes.

Didactic goal: Constructivistic creative connections - The relationsship between two (disparate) objects is not a given to be discovered or learned, but can be subjective, creative and object of negotiation.

Commercial game equivalent: Atlas Games (1994), „Once upon a Time"

Public game equivalent: „Powerpoint Karaoke"

(Modification: One concept is drawn and laid out. Each player gets three concepts and has to get rid of them by „attaching" it to one of the sides of an already laid out card - by explaining the connection. Only one concept can be laid down per turn and player, the peers decide whether the explanation was sufficient. Players may pass.)

Be aware that these games are just tools to explain other tools!

«The tools we use have a profound (and devious) influence on our thinking habits, and therefore, on our thinking abilities.»
- Edsger W. Dijkstra