

Appendix – IEP taxonomy

COGNITIVE-NEUROPSYCHOLOGICAL – A set of activities and functions that activate, consciously or not, in knowledge processes. Ability to process information (symbolic activity and thinking).

Memory – Being able to register, store and retrieve information as needed.

Short-term memory – Being able to retrieve information for the time necessary to perform an action (usually, between 30 seconds and few minutes).

Working memory – Temporary storage system that retains information and, at the same time, operates on it. It is involved in the control of attentive resources, manipulation of information, and supervision and coordination of the work-memory subsystems (Visuo-Spatial Sketchpad – Phonological Loop – Episodic Buffer).

Long-term memory – Being able to register and store information for a long period of time.

Attention functions – Being able to focus mental activity on a particular stimulus, ignoring others, and maintain concentration for an extended period of time. It works as a filter that organize information from the external environment in order to give an adequate response.

Intensive components – Attentiveness, intended as the amount of resources available to carry out one or more activities.

Selective components – Skill to select a content, neglecting others, i.e. the ability to select an information in function of a goal.

Executive functions – Skills that allow an individual to plan, design, set goals, monitor and, if necessary, modify behavior to adapt to new conditions.

Thought and reasoning – Being able to use cognitive elaboration processes aimed at achieving a goal in absence of known solutions.

Relations and associations – Being able to find logical connections between concepts.

Generalization skills – Being able to use acquired skills in other environments.

Problem solving skills – Being able to reach a desired condition from a given condition. The set of processes for analyzing, tackling and solving problems.

Sequential reasoning – Being able to analyze in succession the elements that characterize an object, a situation, a problem.

Temporal perspective – Being able to represent time and to use reference points that give meaning to changes in the environment.

Metacognition – Being able to reflect on your own mental states.

Cognitive flexibility – Being able to adapt to the changes in the environment, consistent with one's goals and plans.

Metacognitive skills – Being able to reflect on cognitive processes, self-monitor and choose the cognitive strategies to be implemented, to monitor their execution and to evaluate their effectiveness. Set of ideas that the pupil has of how knowledge works.

Theory of Mind – Being able to generate representations of mental states (such as desires, beliefs, intentions, perceptions and feelings), of one's own and others', and predict behaviors on the basis of such states.

AFFECTIVE-RELATIONAL – A set of activities to examine the potential and the motivation that can be expressed by the student in relation to the self and to the relationships with the others.

Social Interaction – Being able to create cooperative relations.

In/Out school interactions – Being able to establish cooperative relations inside and outside the school context.

Family interactions – Being able to establish cooperative relations within the family context.

Temperament – To possess a proper temperament, intended as an innate personality component that largely determines behavioral patterns. It is considered as a solid line that has on one end the most active pupils (“more difficult management”) and on the other end the less active pupils (“easier to manage”).

Affective-Relational self-related processes – The proper internal image of oneself in different areas of life.

Self-efficacy – Confidence in one's own ability to have control on task goals.

Attributional style – Being able to explain the causes of events that occur to oneself (self-attribution) and the others (hetero-attribution).

Self-esteem – Being able to manage the relation between how you see yourself (perceived-self) and how you would like to be (ideal-self).

Affectivity/Emotion management – Being able to recognize, understand, and express your emotions.

Stress management, self-control and pulse control – Being able to adapt to environmental changes and to modulate one's drives in order to maintain an appropriate behavior in relation to the context.

Recognize emotions – Being able to recognize the components and the elements of an emotion, such as visual expressions.

Understand – Being able to recognize and understand the cause-effect relations between context and personal emotions.

Express – Being able to express one's own emotions.

Emotive Intelligence – Being able to motivate oneself, to persist in the pursuit of a goal despite frustrations, to control impulses and postpone gratification, to modify one's own mood despite suffering and to be empathetic.

Motivation – Being able to set, start and maintain a behavior over time.

Intrinsic Motivation – Possess a motivation related to an internal push for knowledge.

Extrinsic Motivation – Possess a motivation related to an external push for concrete and measurable outcomes.

Theory of Mind (Affective-Relational) – Being able to generate representations of mental states (such as desires, beliefs, intentions, perceptions and feelings) of one's own and others, in relation to reality.

Recognize emotional states – Being able to recognize emotive states of others.

Empathy – Being able to understand or feel emotive states of others.

Sexuality – Being aware of one's own sexual identity, intended as the fundamental expression of the human being at every stage of his life; complex phenomenon that involves psychological, biological and cultural influences (such as gender, identity and gender roles, sexual orientation, eroticism, pleasure, intimacy and reproduction).

Sexual identity – Have a proper perception of one's own sexuality. It is the result of a complex process influenced by the interaction between biological, psychological, educational and socio-cultural aspects.

Interactions with individuals of the opposite sex – being able to establish a relationship with individuals of the opposite sex.

Social regulations – being able to identify and understand the social norms, of the dominant culture, that direct sexual behavior.

LANGUAGE AND COMMUNICATION – Communication is a dynamic process between a sender and a receiver.

Verbal communication – Being able to use communication code based on the orderly combination of basic sounds in words that are generally associated with meaning.

Comprehension – Being able to process and transform perceived sounds into meaningful units.

Naming – Process of recognizing an object and its transcoding into a sound.

Repeating – Being able to repeat a sound.

Production – Being able to handle the verbal production of words.

Non-verbal communication – Being able to exchange messages and information with other individuals through the use of non-verbal codes.

Motor communication – Using body parts to communicate (e.g. grabbing another person's hand).

Gestural communication – Being able to communicate through the use of meaningful but not organized gestures in a linguistic form (e.g. the gesture of indicating).

Body language – Being able to communicate through postures, gestures, movements, expressions and mimics along with verbal communication.

Vocal communication – Communicating with sounds that don't necessarily form words.

Formal sign language – Being able to communicate through the conventional sign code (for example, the LIS).

Written language – Being able to use a communication code based on the orderly combination of graphic elements in written words, generally associated with meaning.

Reading – Being able to identify and decode the graphic elements that are part of the written language.

Writing – Being able to decode and produce the graphic elements that are part of the written language.

Communicative function – Being able to use communication, consciously knowing its various purposes.

Communicative intent – Conscious will to communicate with another person.

Make a request – Communicate to satisfy a desire or a need.

Seek attention – Communicate to get the attention of the interlocutor.

Refuse – Communicate to express a refusal of an object or a request.

Comment – Communicate to express opinions or considerations about an object, a person or a situation.

Give information – Communicate to provide information about a known topic.

Ask for information – Communicate to request information.

Express feelings – Being able to express feelings and emotional states.

Social interactions – Maintain relationships through socially accepted conventions.

SENSORY – Being able to receive, understand and react to external stimuli through the senses.

Sight – Being able to receive and understand information from the environment through visual system.

Depth – Being able to perceive the depth, intended as the distance, measured along the vertical axis, between the bottom of a body and its upper extremity.

Size – Being able to perceive the size of an object.

Distance – Being able to perceive distance between two objects.

Movement – Being able to perceive and recognize movement, intended as a change of position associated with functionality or dynamism.

Shape – Being able to distinguish the appearance of an object in order to discern it exteriorly.

Light sensitivity – Being able to perceive light (radiation perceived by human eye and transformed by the brain into visual sensations).

Color vision – Being able to discern an object from another based on their color (perceptual feature of an object, given by the different light reflected by the bodies).

Hearing – Being able to receive and understand information from the environment through auditory system.

Sound – Being able to perceive an acoustic stimulation and detect the characteristics of pitch, loudness, timbre.

Language – Being able to communicate through articulated sounds, arranged in words.

Taste – Being able to receive and understand information from the environment through the gustatory system.

Recognize taste – Being able to recognize primary tastes.

Distinguish taste – Being able to distinguish different tastes.

Smell – Being able to receive and understand information from the environment through the olfactory system.

Olfactory perception – Being able to recognize a stimulus from its smell.

Olfactory discrimination – Being able to distinguish different scents and smells.

Touch – Being able to receive and understand information from the environment through the tactile system.

Shape – Being able to distinguish the shape of an object in order to discern it exteriorly and recognize it through touch.

Surface – Being able to recognize the outlines of an object, that is, the limit between the outer space and the one occupied by the object.

Temperature – Being able to perceive temperature, intended as the heat exchange between two objects in thermal contact.

Vibration – Being able to distinguish a moving object that produce a vibration, intended as an oscillatory motion with high frequency and small amplitude.

Pressure – Being able to perceive pressure, intended as the action of a force on a circumscribed surface.

Pain – Being able to feel physical pain.

Pleasant stimuli – Being able to feel and recognize pleasant sensations.

Space – Being able to receive and understand information from the environment through proprioceptive organs.

Body space – Ability to perceive one's body in relation to the surrounding space, thanks to the integration of perceptual functions.

Extra-body space – Being able to perceive the space/environment in one's body surroundings.

MOTOR-PRAXIS – Being able to voluntarily perform simple and complex movements.

Body image – Be conscious of one's body, as well as which and how many parts is composed of, what's their mental, motor and graphic use.

Recognize human figure – Being able to identify the body figure even when very schematics parts are presented.

Distinguish body parts – Being able to distinguish one body part from another through graphic identification.

Name body parts – Being able to denominate different body parts.

Body image representation – Being able to represent graphically, in a simple way, different body parts.

Lateralization – Be aware that the body is made up of two symmetrical parts and that one (right or left) is usually dominant.

Dominant lateralization – Being aware that a part of the body (hand, eye and foot) is more widely used than the other despite the actions being carried out with both.

Right-Left lateralization – Being able to distinguish the right and left part of one's body and another's body and project the relationships to the surrounding space.

Time-Spatial Orientation – Being aware that the objects, the elements of the environment, oneself and one's body are related to each other according to topological relations (e.g. in/out). Being able to discover and understand one's relation with objects, oneself, the others,

the environment and the space.

Time-Spatial awareness – Being able to properly use topological hints in communication.

Time-Spatial orientation use – Being able to approach space as indicated by topological relations and to follow rhythm and beats with the body.

Global motion skills – Being able to move body parts in a voluntary and coordinated way.

Dynamic motor schemes – Being able to walk, run, jump etc.

Static motor schemes – Being able to assume and hold different body positions.

Fine motor skills – Being able to perform precise movements in a voluntary and coordinated way.

Voluntary movements coordination – Being able to manage the set of functions associated with controlling and coordinating voluntary, simple and complex movements, performed in an orderly combination.

Speech articulation – Being able to properly articulate the sounds of a language to produce words.

Manipulating – Motor-sensory activity aimed at practicing muscle tone as well as accomplishing construction and creativity.

Grasping – Being able to grasp object with thumb, index and medium.

Praxia – Being able to make voluntary movements with and without meaning, and gesture sequences defined as combinations of actions.

Ideational praxis – Being able to use objects as they are meant to.

Visual-Constructive praxis – Skills that depend on the integration between different cognitive functions such as perception, attention, memory, and movement, and represent the ability to organize and synthesize individual elements in a given space format according to a perceived or imagined pattern.

Self-regulation – Being able to properly control one's body during group activities and group games.

Psychomotor control – Being able to control the functions that regulate the speed of behavior; response time that involves both motor and psychological components, such as in disruption of control producing psychomotor retardation or psychomotor excitement.

Sensations related to muscles and movement functions – Sensations associated with the muscles or muscle groups of the body and their movement.

AUTONOMY – Being able to self-regulate, intended as the ability to organize one's behavior and make one's own choices, act and think freely, and self-provide to one's needs.

Personal autonomy – Being aware of one's own needs and desire and being able to "operatively" satisfy them.

Sphincter control – Being aware and in control of one's personal need to eliminate organic products (defecation, urination).

Alimentation – Being able to take food and liquids as a vital and physiological activity in response to physical and psychic stimuli.

Personal hygiene – Washing and drying one's whole body, or body parts, using water and

appropriate cleaning and drying materials or methods, such as bathing, showering, washing hands and feet, face and hair, and drying with a towel.

Take care of personal health – Being able to satisfy your own needs for physical comfort, health and physical and mental wellbeing, such as following a balanced diet and an adequate level of physical activity, avoid health damage, practice a safe sex life and have regular medical checks.

Dress and undress – Being able to wear and take off clothes independently and in accordance with climatic and social conditions., to wear, dress and take off shirts, skirts, trousers, underwear, socks, hats, gloves, coats, shoes, boots, sandals and slippers.

Self-care/Self-regulation – Being able to predict and avoid dangerous situations, self-regulate alimentation and spend “free” time with appropriate activities.

Social autonomy – Being able to manage significant social situations with critical thinking and appropriate strategies.

Independent thinking – Being able to express your own judgments, opinions and preferences, to have a personal code of values and maintain a critical thinking despite group pressures, modes and conditioning.

Household tasks – Being able to fulfill daily domestic actions and tasks, such as getting food, clothing and other essential goods, and take care of other personal and house items.

Moving around – Being able to move around, use means of transportation, orientate (in and out of school or known zones), acquire pedestrian skills and the use of community services (shops, bars, offices, etc.).

Social and interpersonal skills – Being able to use proper communication and relation skills.

Affective and relational autonomy – Being able to overcome a condition of dependence/opposition to parental figures while maintaining an affective bond with them.

Functional and scholastic abilities: autonomous application – Being able to engage in aspects of school life independently and to plan personal obligations, such as homework.

Pre-Work skills – Possess the required skill to access the working world.

Work skills – Being able to seek, find and choose an employment, be hired and accept a job, maintain and make progress through a trade, an occupation or a profession, and quit job in an appropriate manner.

Money usage – Being able to use and manage money.

Economic self-sufficiency – Being able to manage economic resources, from private or public sources, in order to ensure economic security for present and future needs.