



Learning & Learning Theories

Exploring the ecosystem of human potential—from neural pathways to digital networks.



**Experience
& Stimuli**



Processing



**Sustainable
Competency**

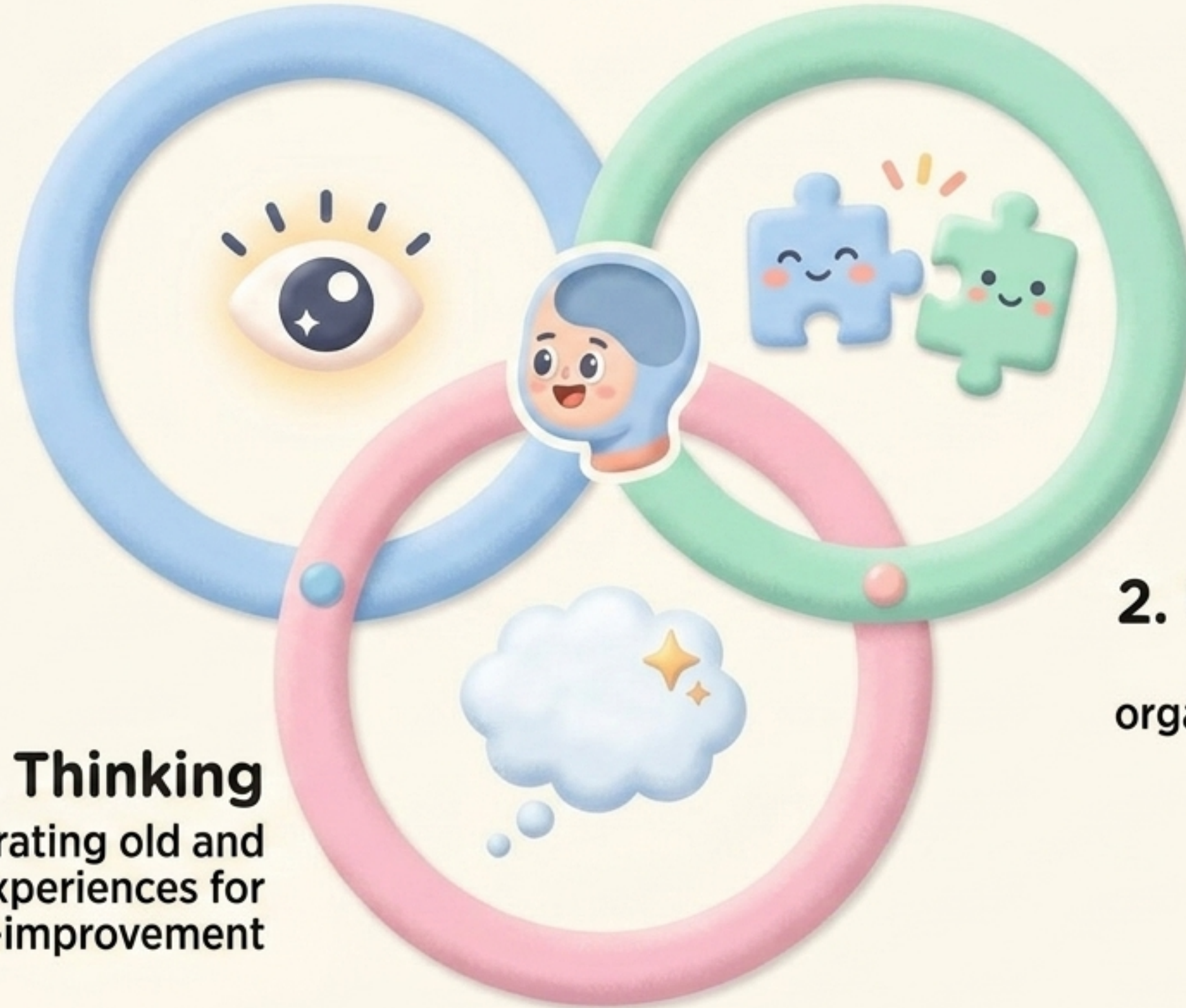
**“Learning is not what is given to students,
but what students do for themselves.”**

The Cycle of Knowledge

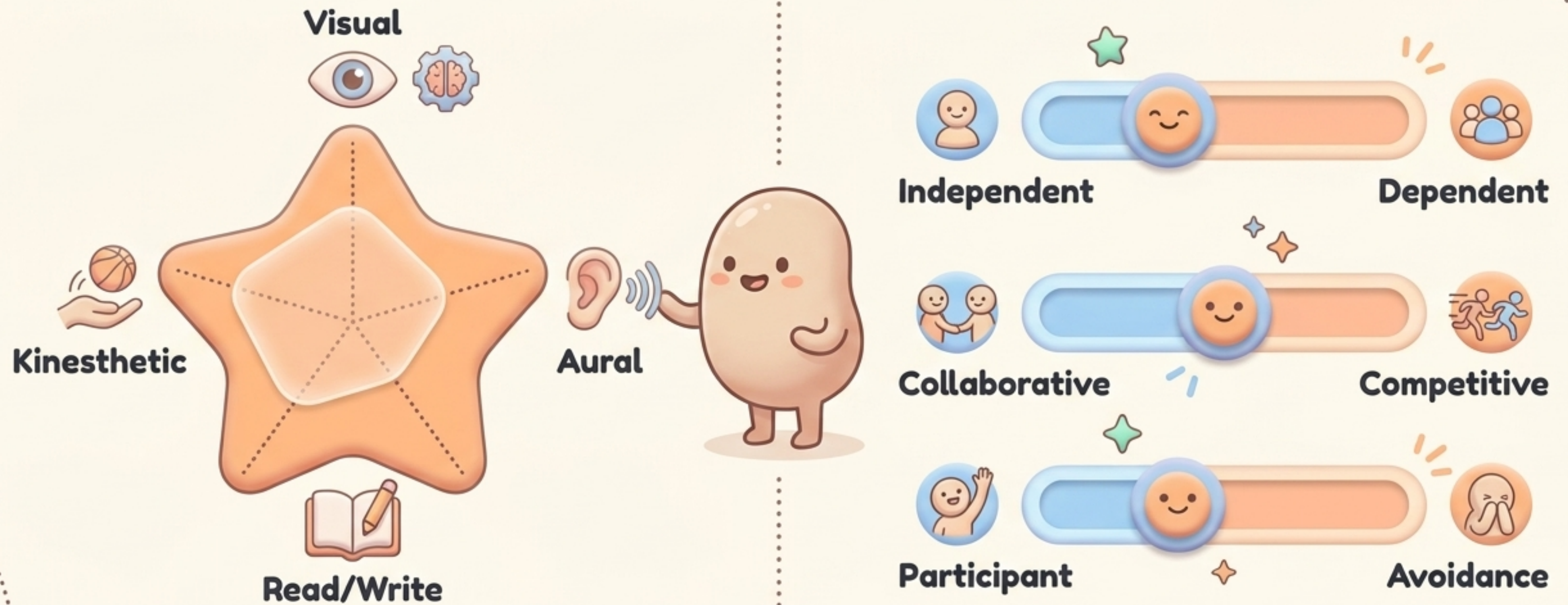
1. Experience
Sensory input and stimuli

3. Thinking
Integrating old and new experiences for self-improvement

2. Understanding
Brain processing, organizing, and analyzing

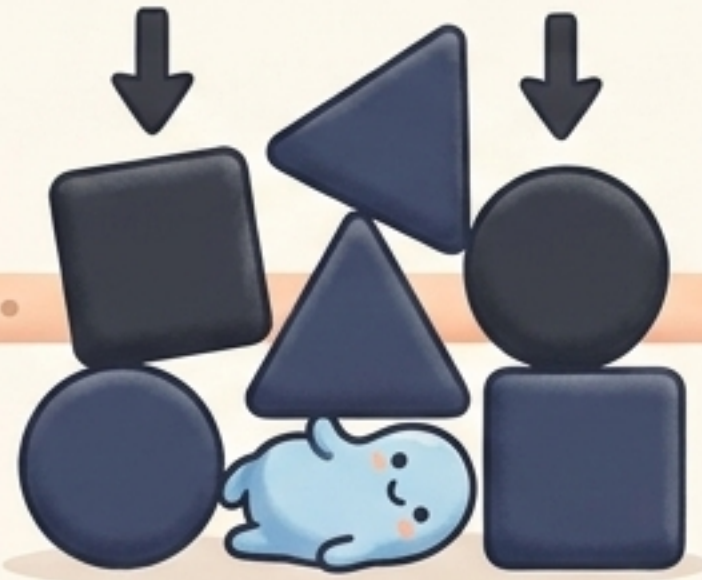


The Learner's DNA: Unique Profiles



Key Takeaway: Personalized learning must be carefully aligned with each student's unique DNA.

The Evolution of Education



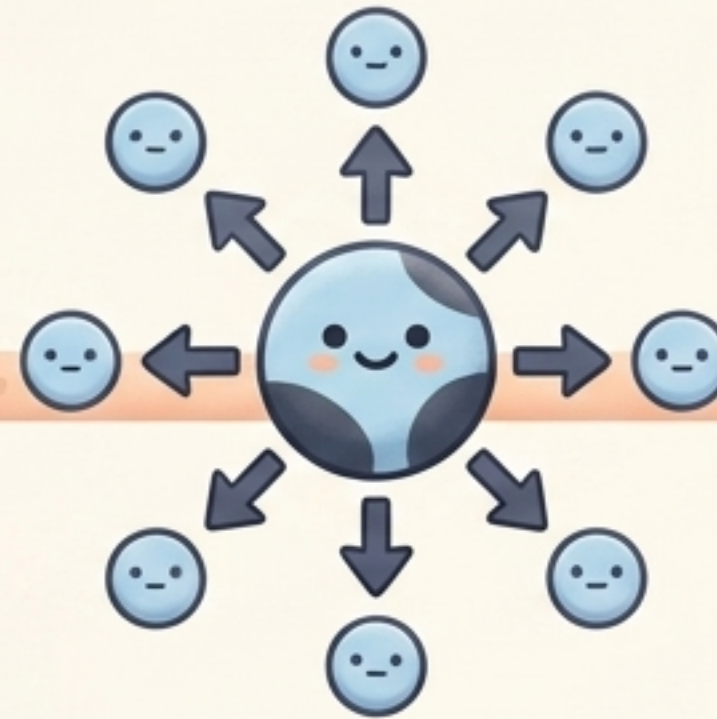
1. Indoctrination

Instilling beliefs
requiring compliance



2. Inculcation

Repeated
persuasion



3. Teaching

Teacher-centric
knowledge transfer



4. Instruction

Student-centric
active learning

The 4 Pillars of the Classroom Ecosystem

Teacher

Knowledge, intention, attitude, motivation, and personality

Student

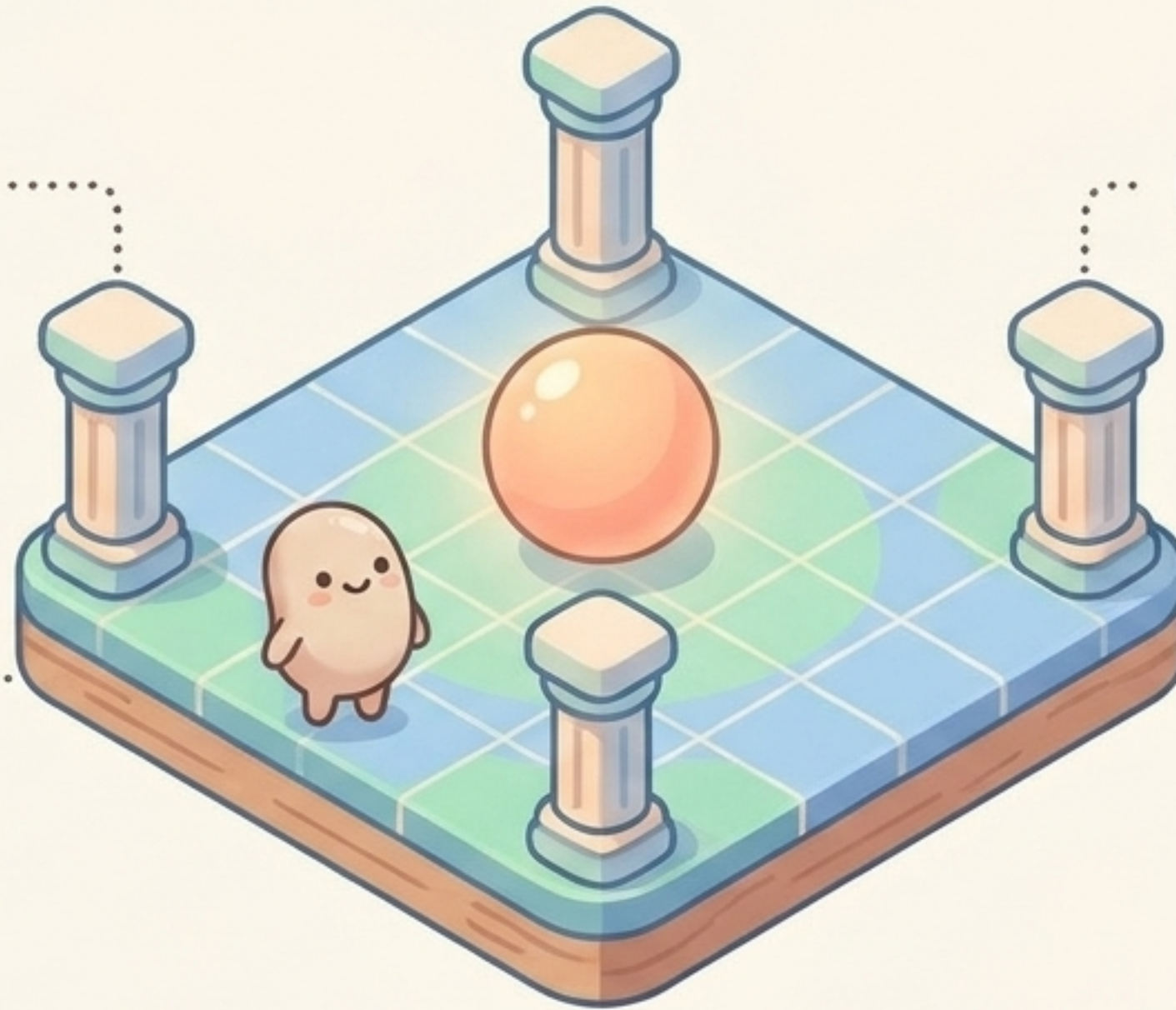
Interest, aptitude, readiness, health, and psychological foundation

Instructional Process

Objectives, methods, media, tools, and assessment

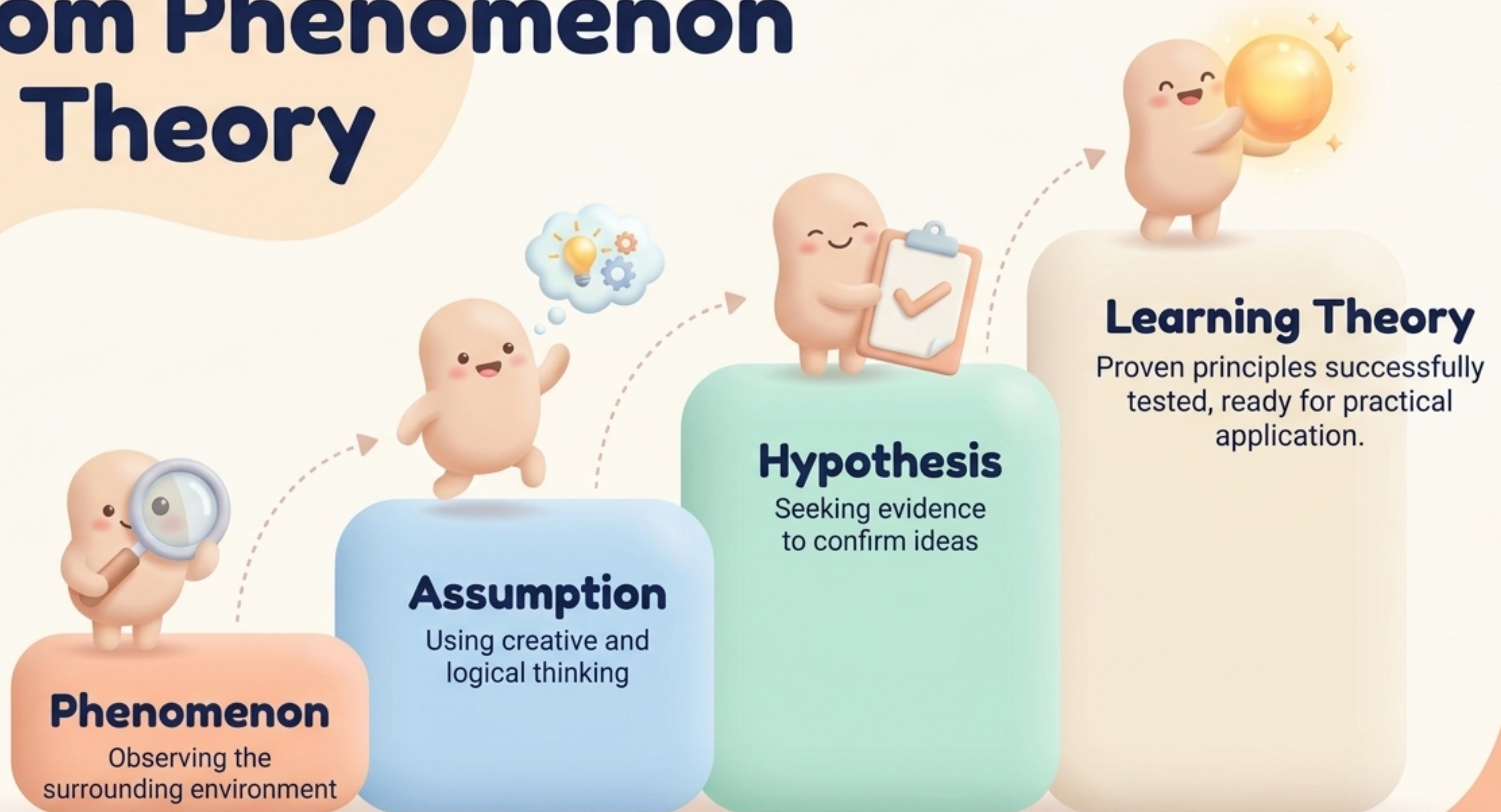
Environment

Light, sound, air, space, and internal/external distractions



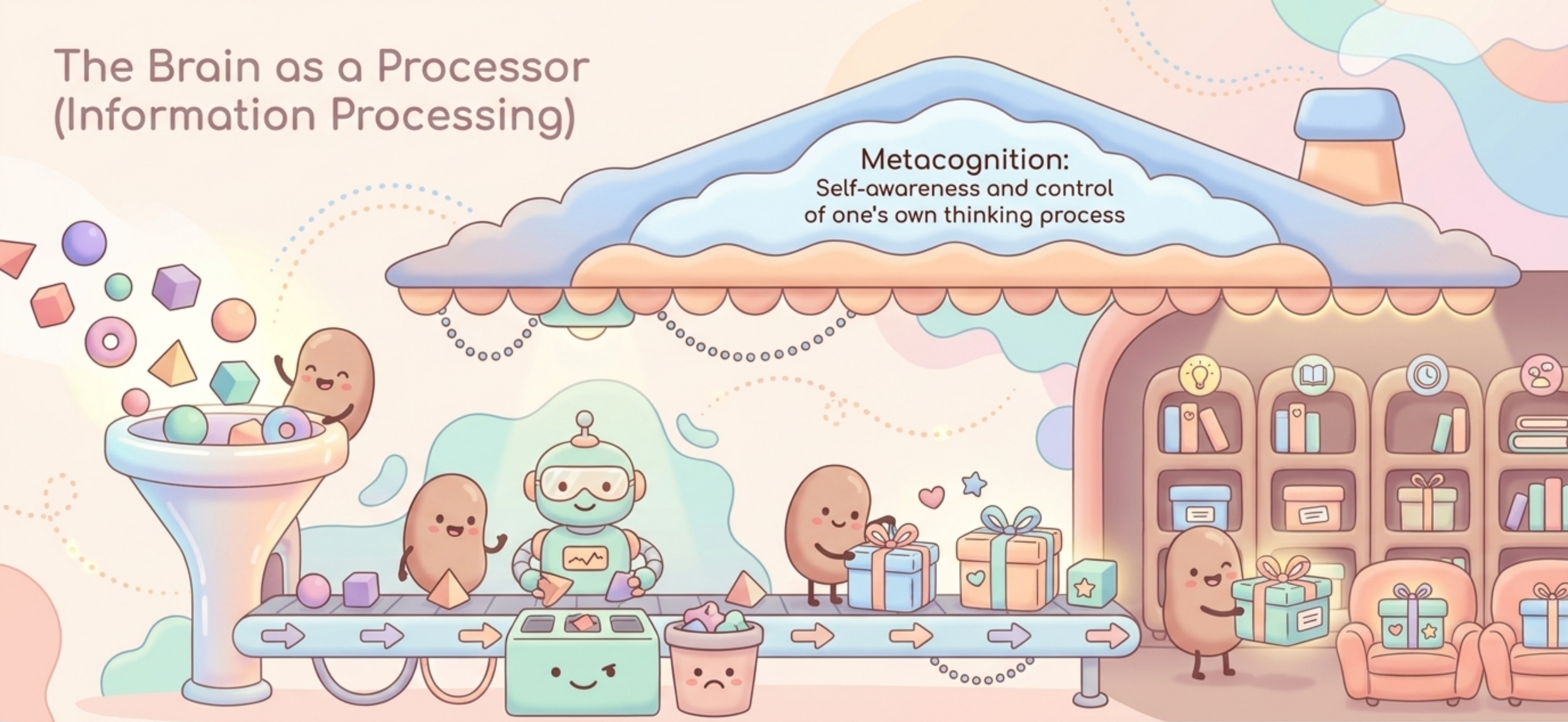
Learning problems almost always stem from an imbalance in one of these four pillars.

From Phenomenon to Theory



The Brain as a Processor (Information Processing)

Metacognition:
Self-awareness and control
of one's own thinking process



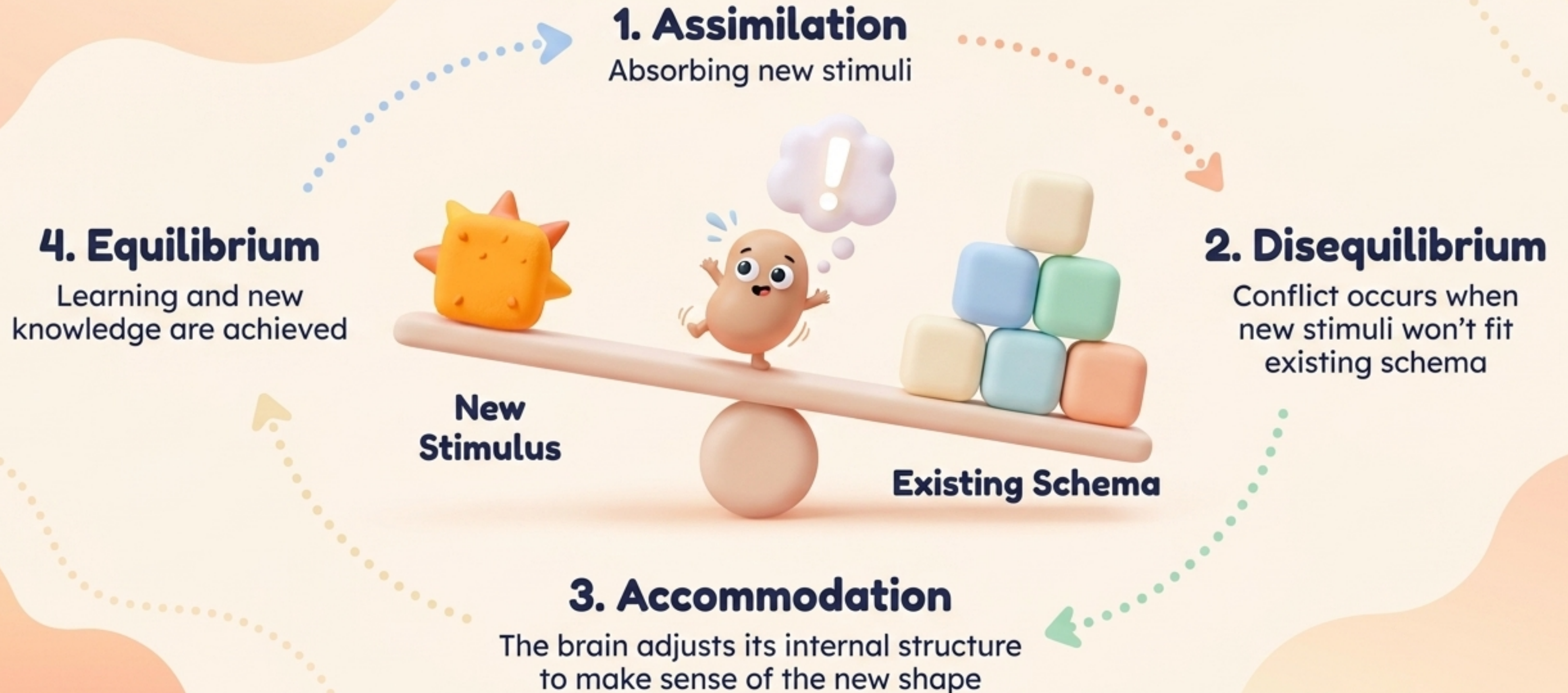
1. Input
Sensory Memory

2. Filter
Short-Term Memory
Limited to 7 ± 2 items

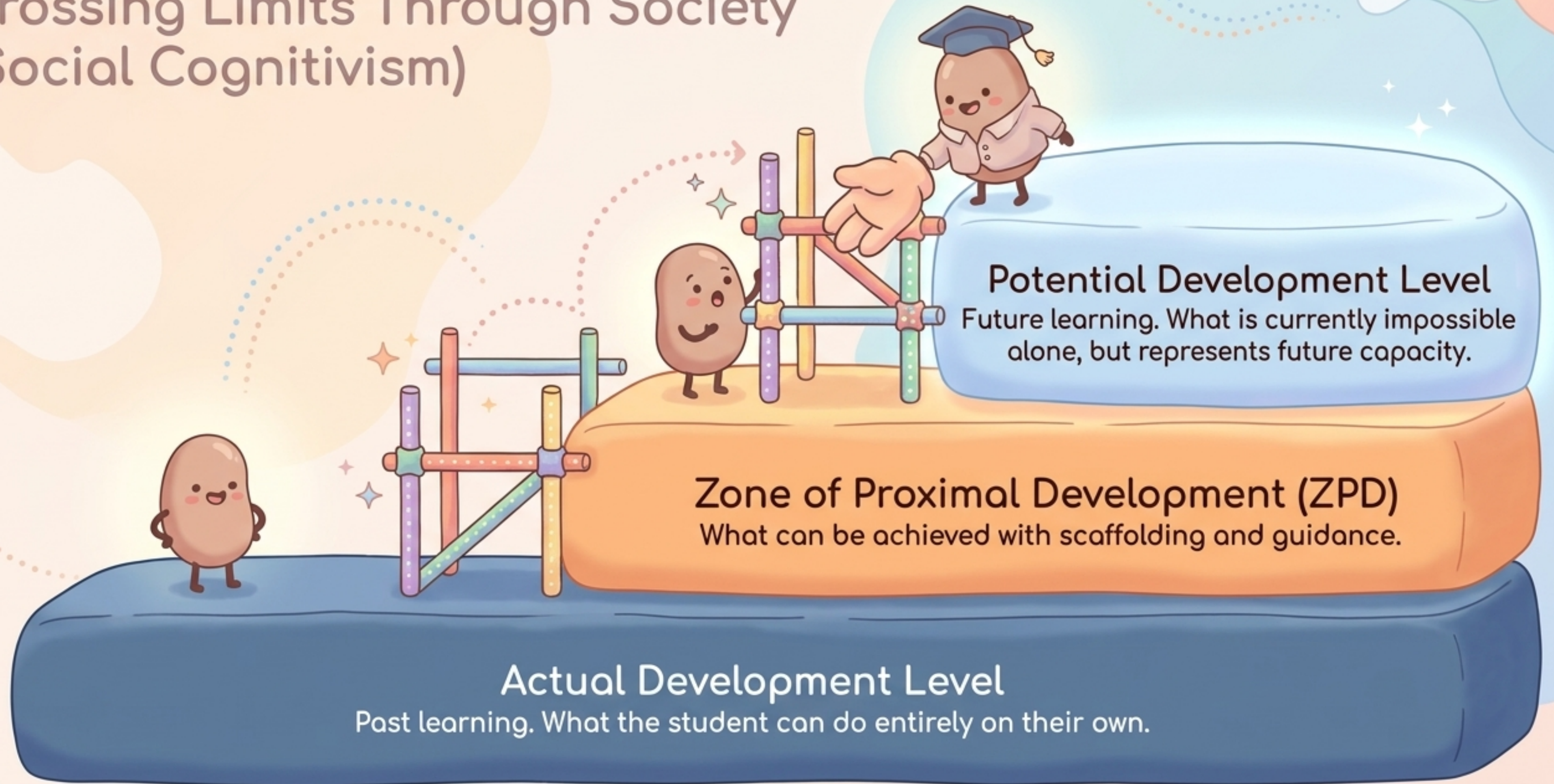
3. Encoding
Expanding ideas
and meaning

4. Storage
Long-Term Memory

Maintaining Cognitive Balance (Cognitive Constructivism)



Crossing Limits Through Society (Social Cognitivism)



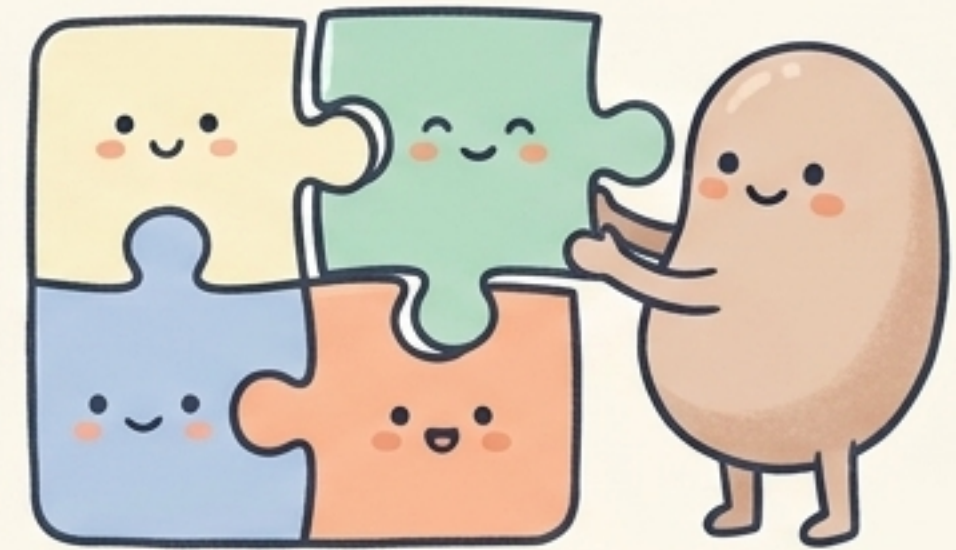
Concept by Lev Vygotsky

Constructionism



Building knowledge internally by creating tangible external projects. Utilizing media and technology in a friendly atmosphere with diverse choices to make knowledge durable.

Cooperative Learning



The 5 elements of teamwork:

1. Positive Interdependence
2. Face-to-face Interaction
3. Individual Accountability
4. Interpersonal Skills
5. Group Processing

The Dimensions of Genius (Multiple Intelligences)



Intelligence is not just IQ. Everyone possesses these dimensions at varying levels, and they can be developed given the right environment. (Howard Gardner)

The Digital Learning Ecosystem (Connectivism)



Nodes

People, data, images, sounds, feelings.

Networks

The set of connections between online nodes.

Patterns

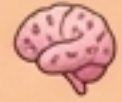
The nature of the relationships.

The ability to perceive 'more' is vastly more important than the data currently held.
Maintaining connections is the ultimate future skill. (George Siemens)

The Architecture of Theories



Theory



Focus



Mechanism



Key Element



Information Processing

Brain/Memory

Input -> Encode -> Retrieve

Metacognition

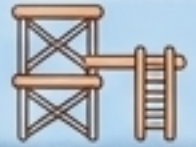


Cognitive Constructivism

Cognitive Structure

Assimilation & Accommodation

Stimuli causing conflict



Social Cognitivism

Social Potential

Crossing the ZPD

Scaffolding (Guide)



Constructionism

Tangible Output

Creating output = creating knowledge

Friendly atmosphere



Cooperative Learning

Teamwork

Interdependence & shared responsibility

Social skills



Multiple Intelligences

Individual Potential

Developing 9 intelligences

Matching aptitudes



Connectivism

Digital Network

Connecting nodes

Access to diverse information

Learning is an Endless Network



Personalized:

A bespoke process growing alongside unique learning styles.

Continuous:

Evolving from observation to understanding, finding cognitive balance.

Connected:

Breaking through the walls of the classroom to link with global networks.

Quality education management must understand human psychology to align experiences and environments with the learner's true nature.