Educational Pearls for the Medical Director

Maia Dorsett

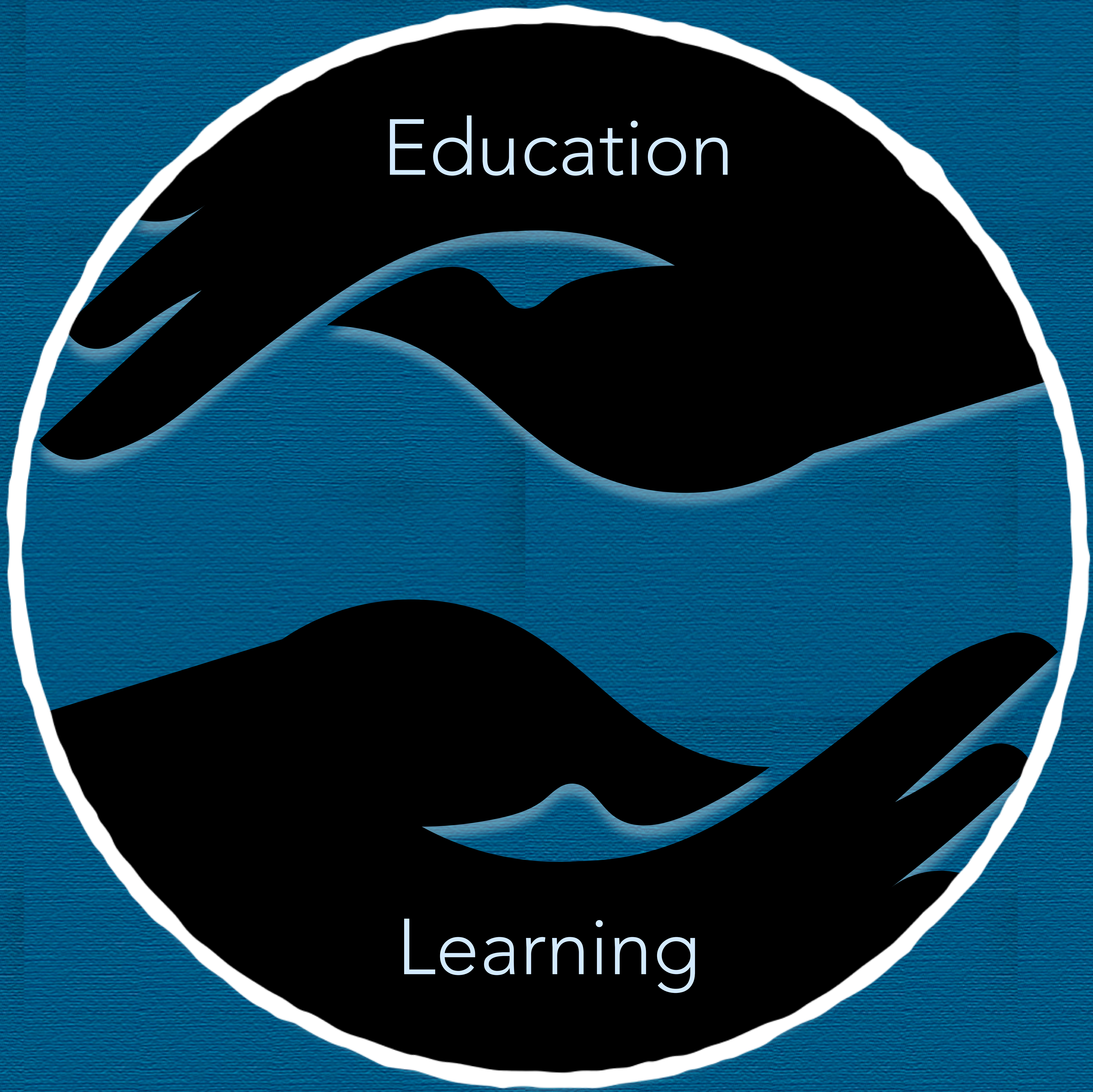
What does it mean to be an educator?

What is learning?

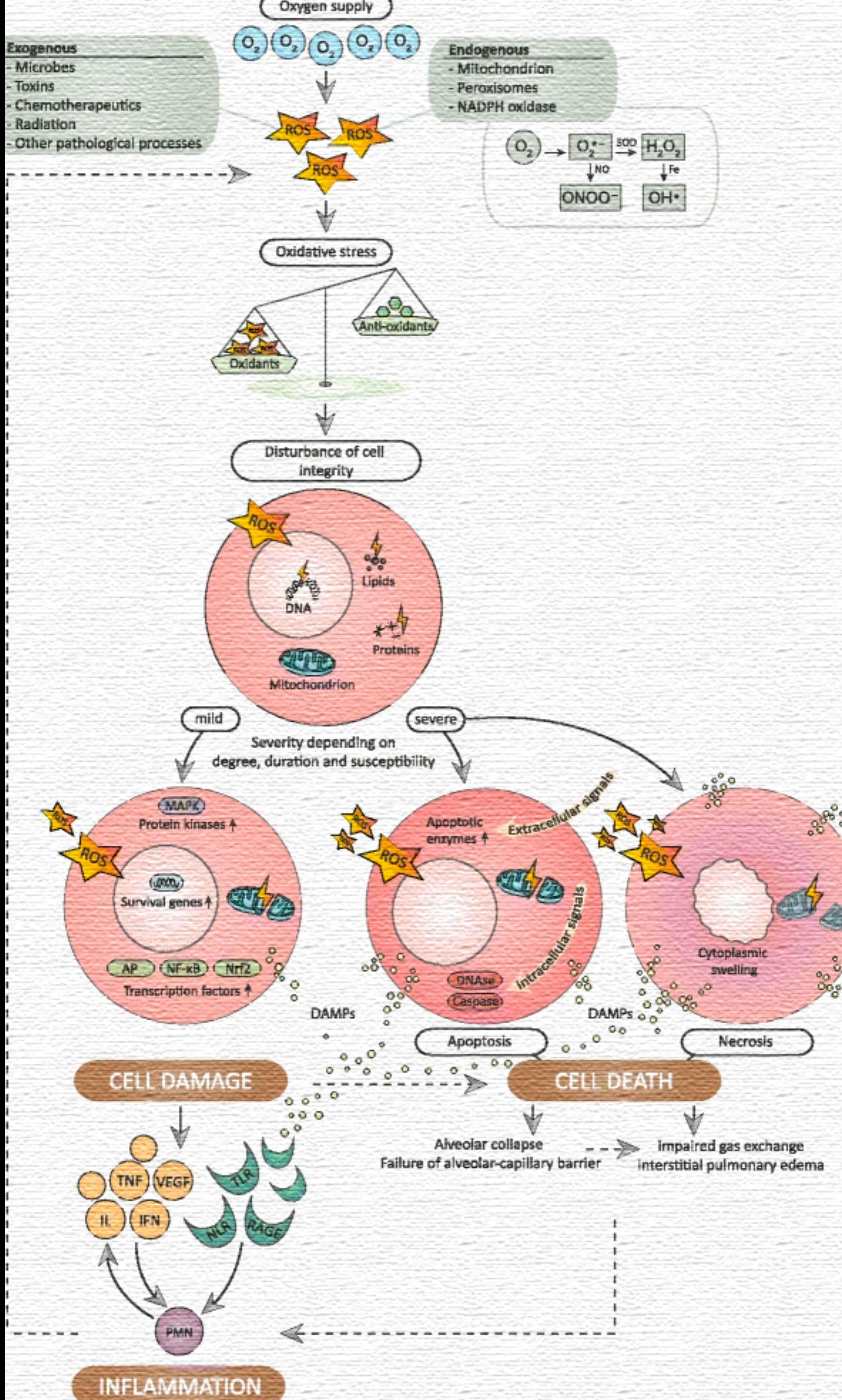
learning *(Def)*:

"Expanding the ability to produce the results we truly want"

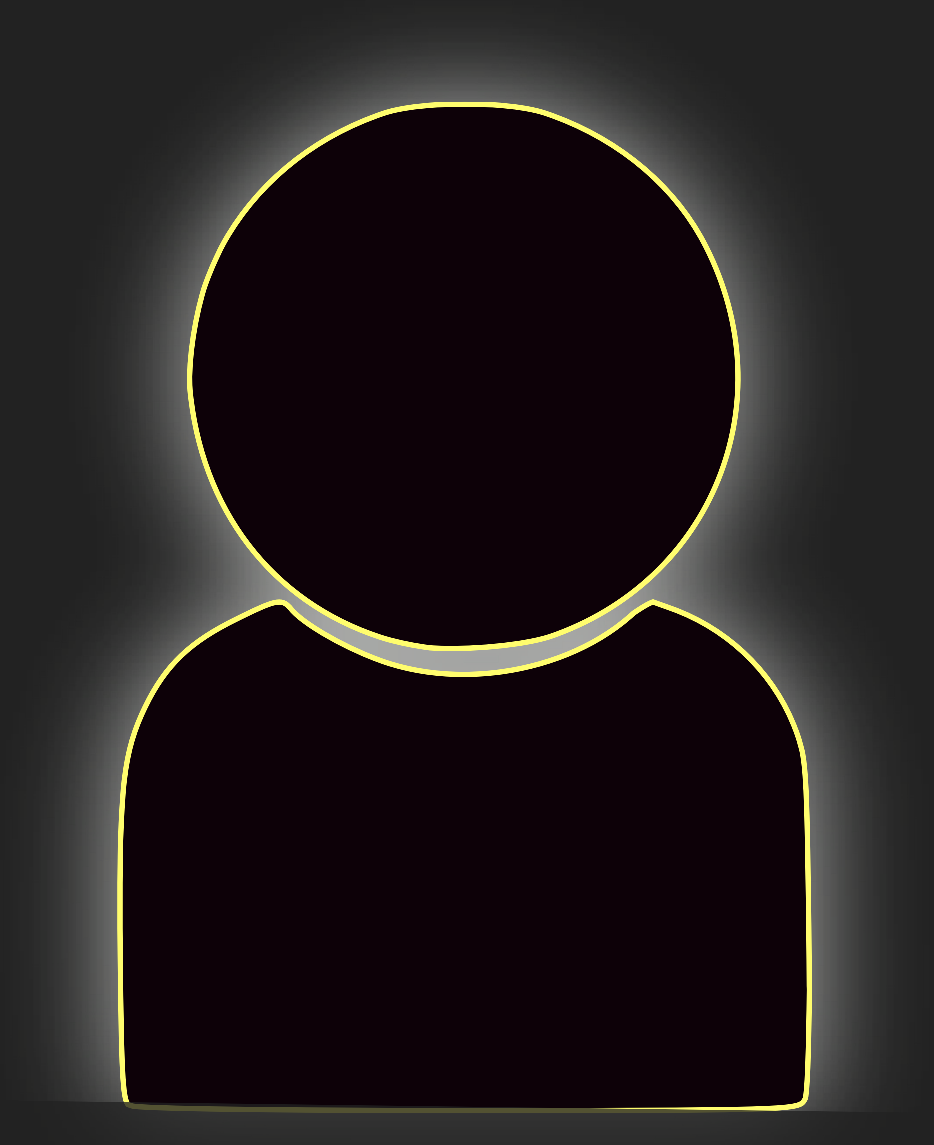
- Senge, The Fifth Discipline


Education
Learning

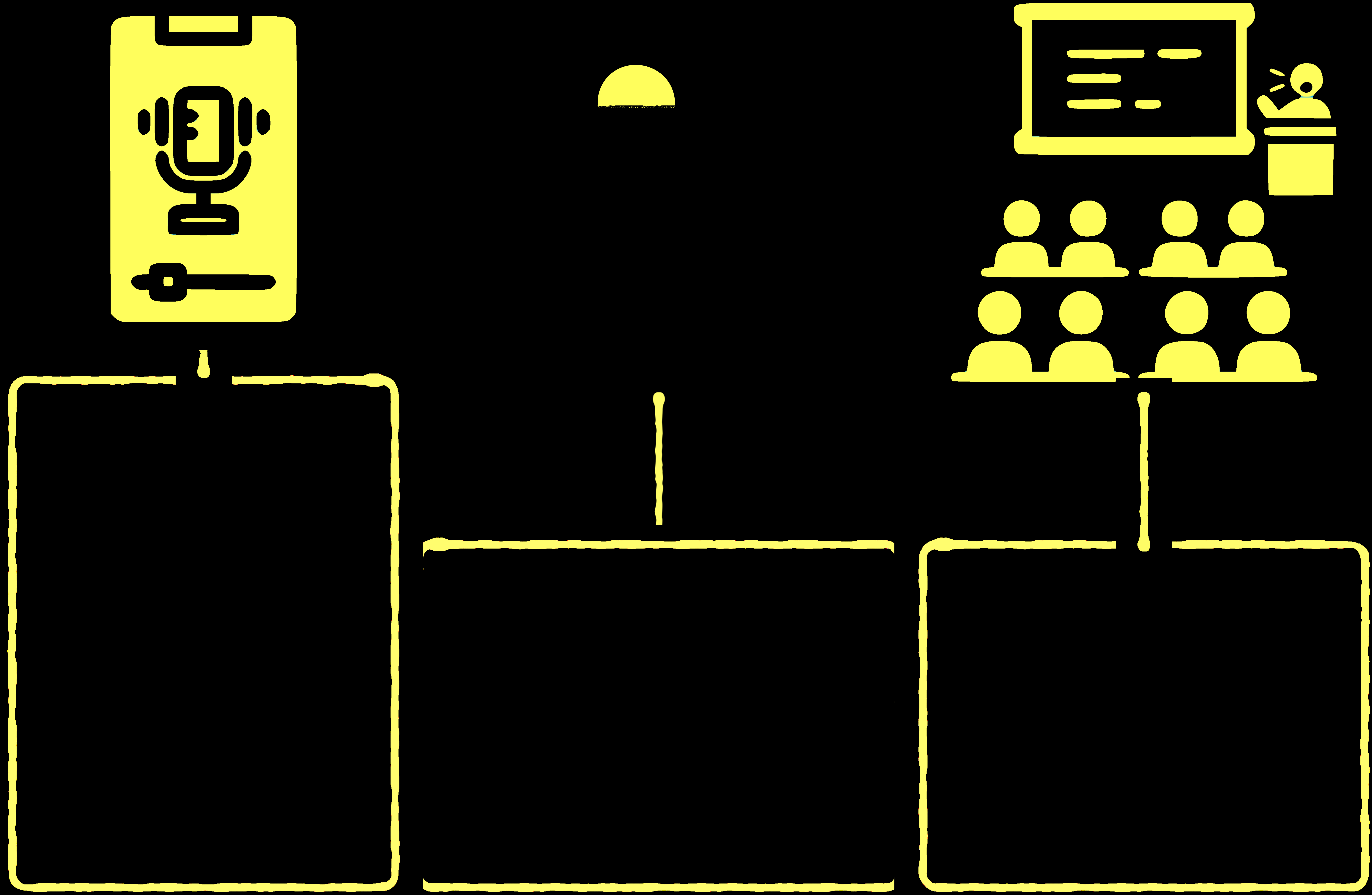
Oxygen


Oxygen supply
Exogenous
- Microbes
- Toxins
- Chemotherapeutics
- Radiation
- Other pathological processes
Endogenous
- Mitochondrion
- Peroxisomes
- NADPH oxidase
ROS
ONOO⁻
OH•
Oxidative stress
Oxidants
Anti-oxidants
Disturbance of cell integrity
DNA
Lipids
Proteins
Mitochondrion
mild
severe
Severity depending on degree, duration and susceptibility
MAPK
Protein kinases
Survival genes
AP
NF-κB
Nrf2
Transcription factors
Apoptotic enzymes
Extracellular signals
Intracellular signals
DNAse
Caspase
Cytoplasmic swelling
DAMPs
DAMPs
Apoptosis
Necrosis
CELL DAMAGE
CELL DEATH
Alveolar collapse
Failure of alveolar-capillary barrier
Impaired gas exchange
interstitial pulmonary edema
TNF
VEGF
IL
IFN
TLR
NLR
RAGE
PMN
INFLAMMATION

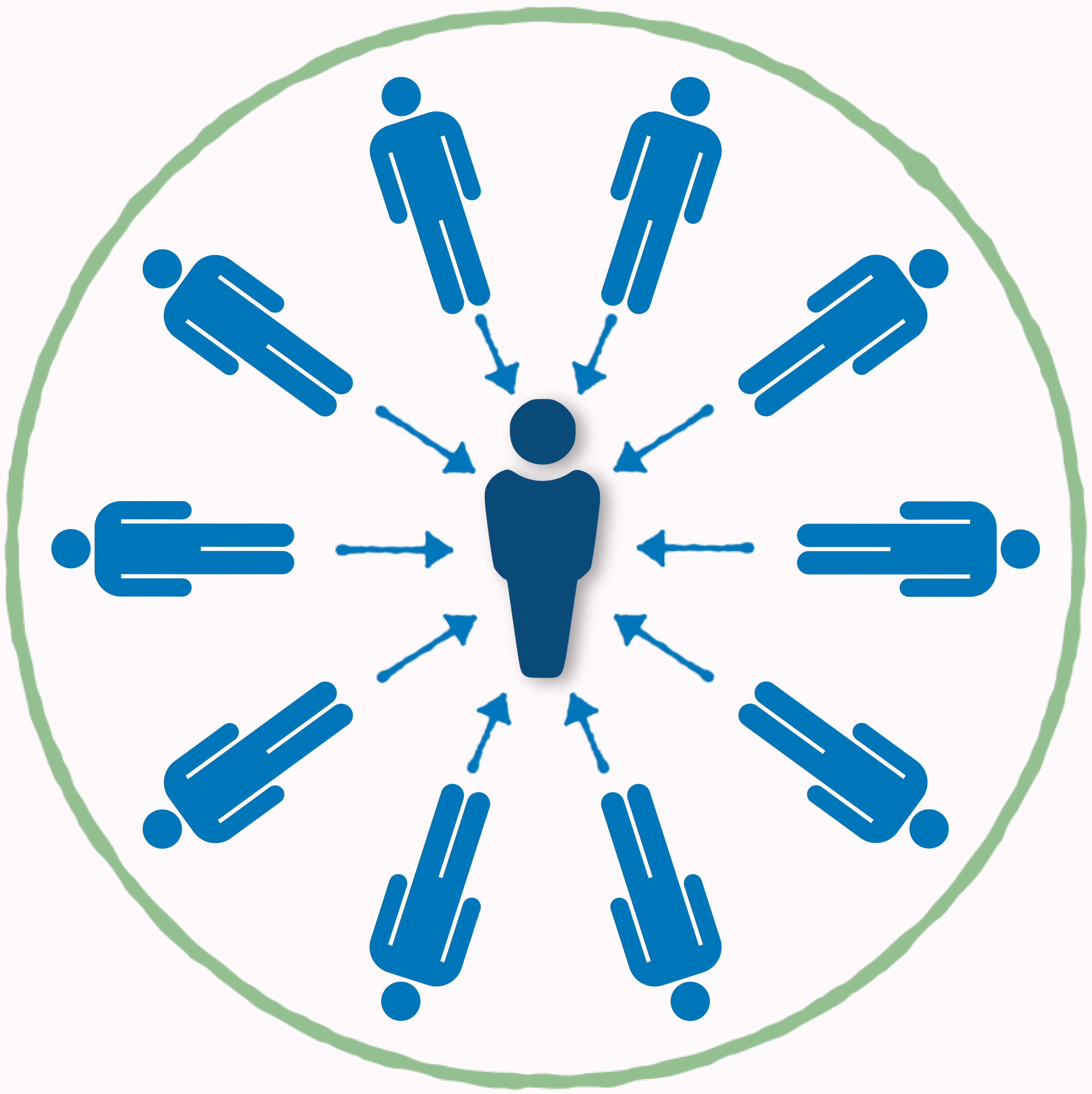
Think of an educator who positively influenced who you are today.



What made them the person you thought of?



PSYCHOLOGICAL SAFETY



FAILURE=OPPORTUNITY

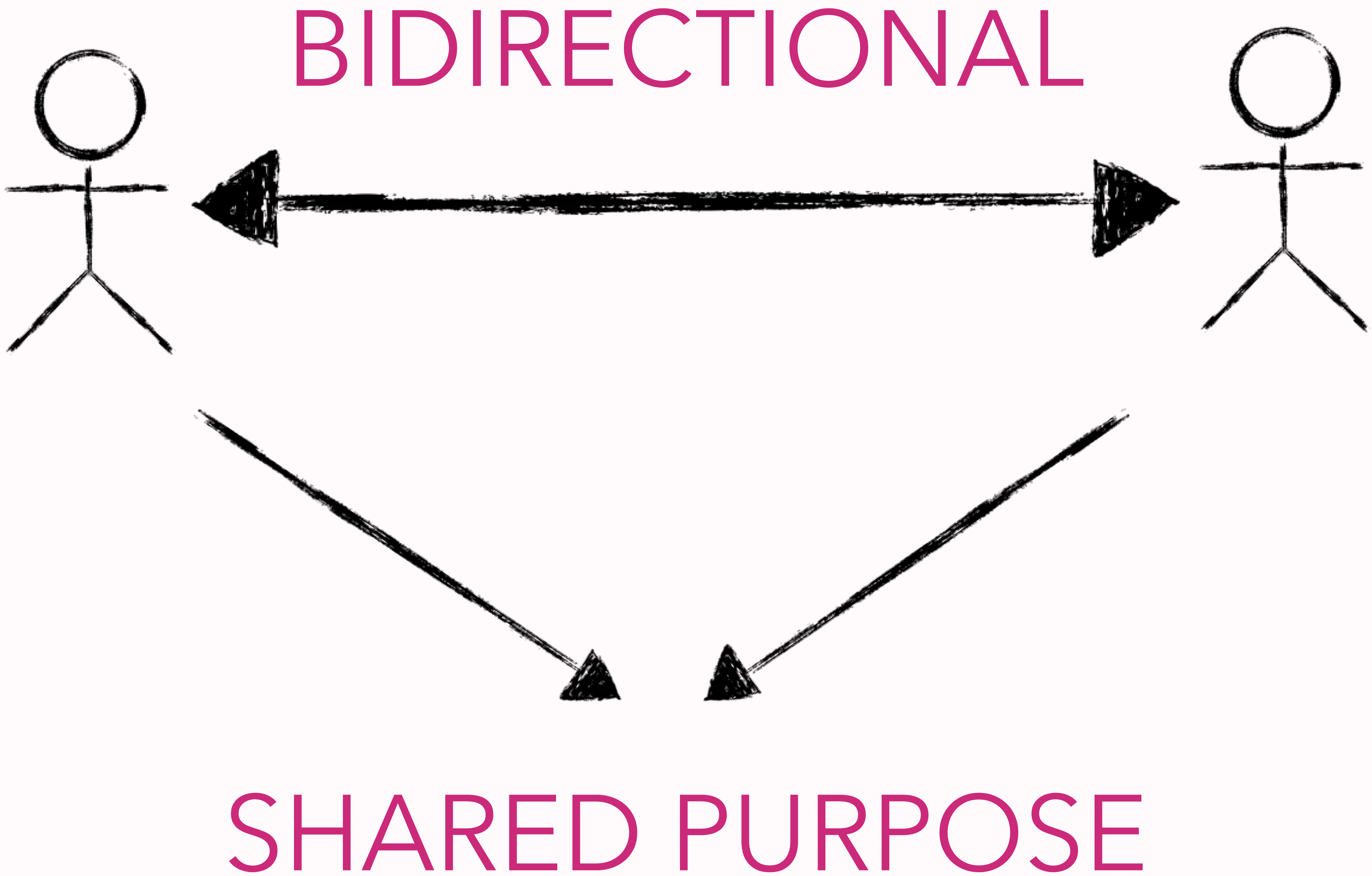
Edmondson, A. C. (2018). The fearless organization: Creating psychological safety in the workplace for learning, innovation, and growth. John Wiley & Sons.

FEEDBACK:

POSITIVE > NEGATIVE

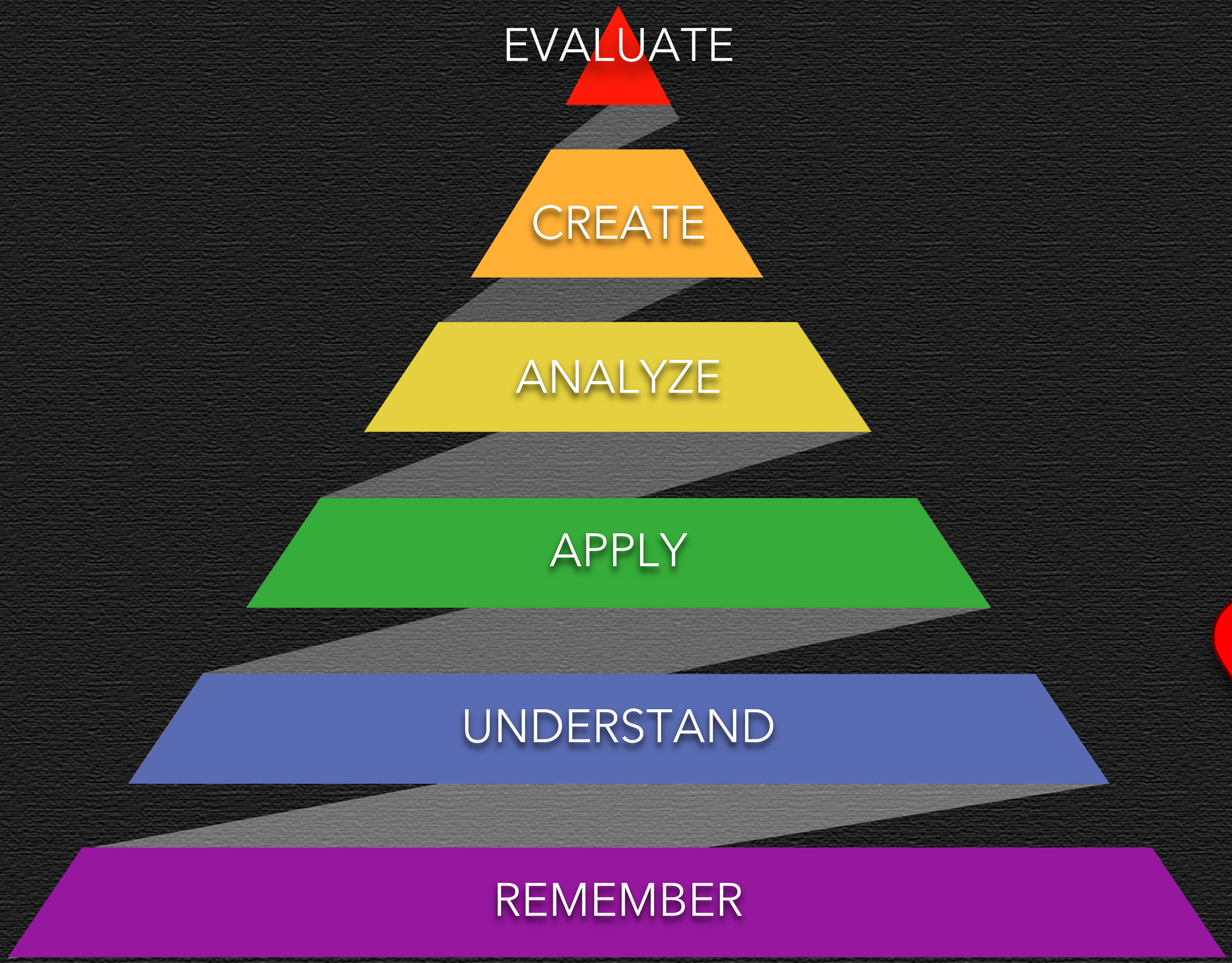
SPECIFIC

BIDIRECTIONAL


BIDIRECTIONAL
SHARED PURPOSE


72

What do I want them to be able to do?

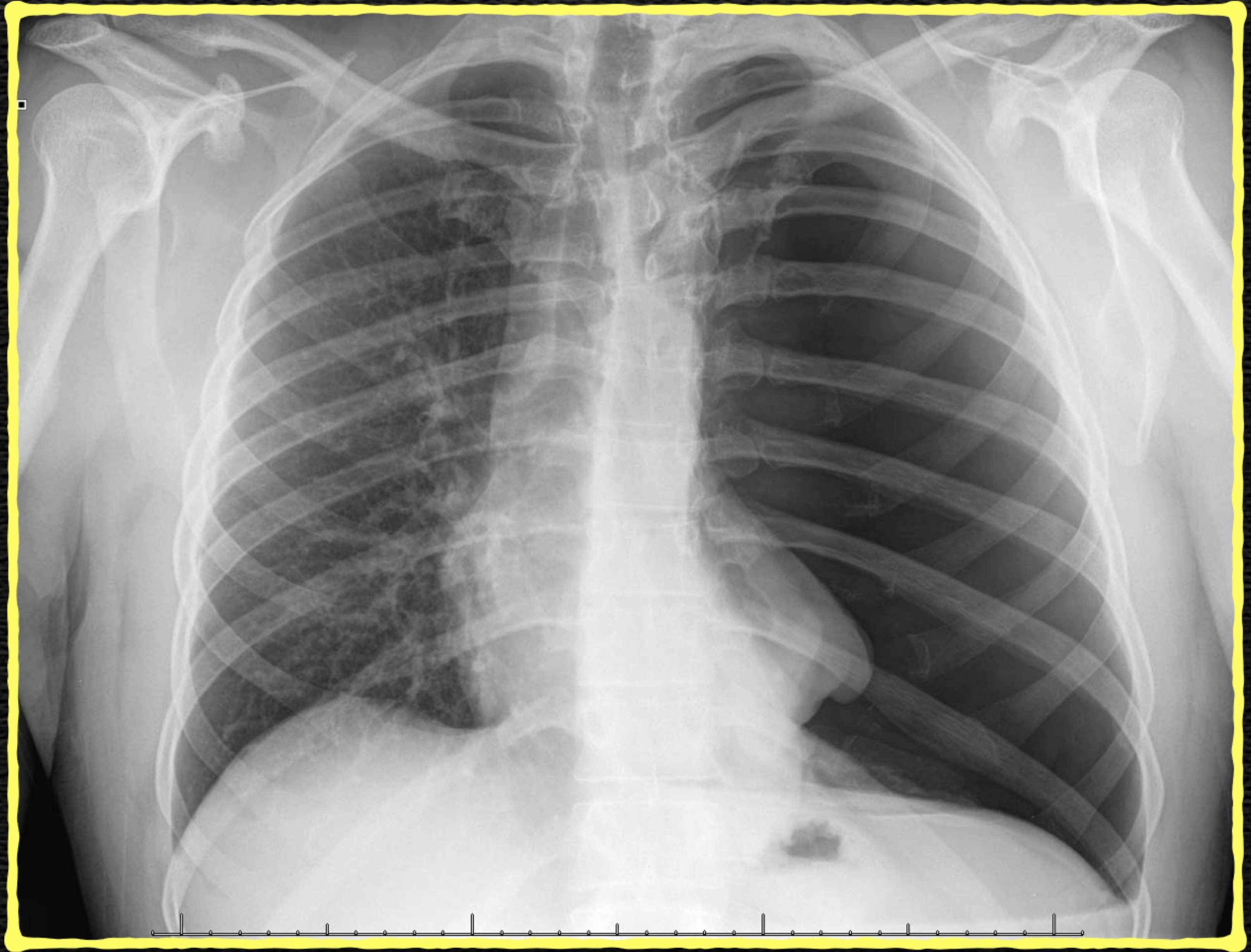


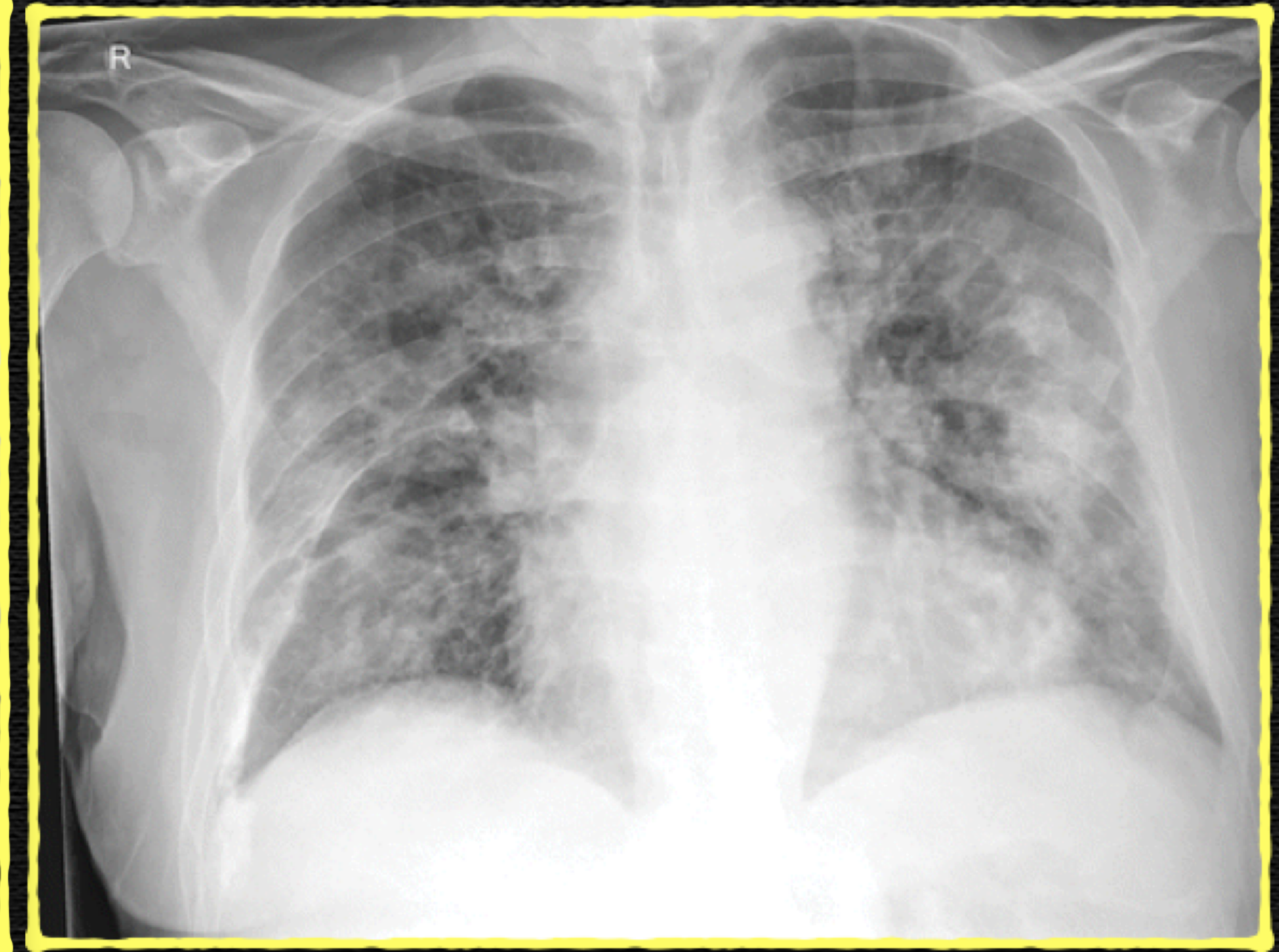
What do I want them to be able to do?

Where are they now?

MIND THE GAP

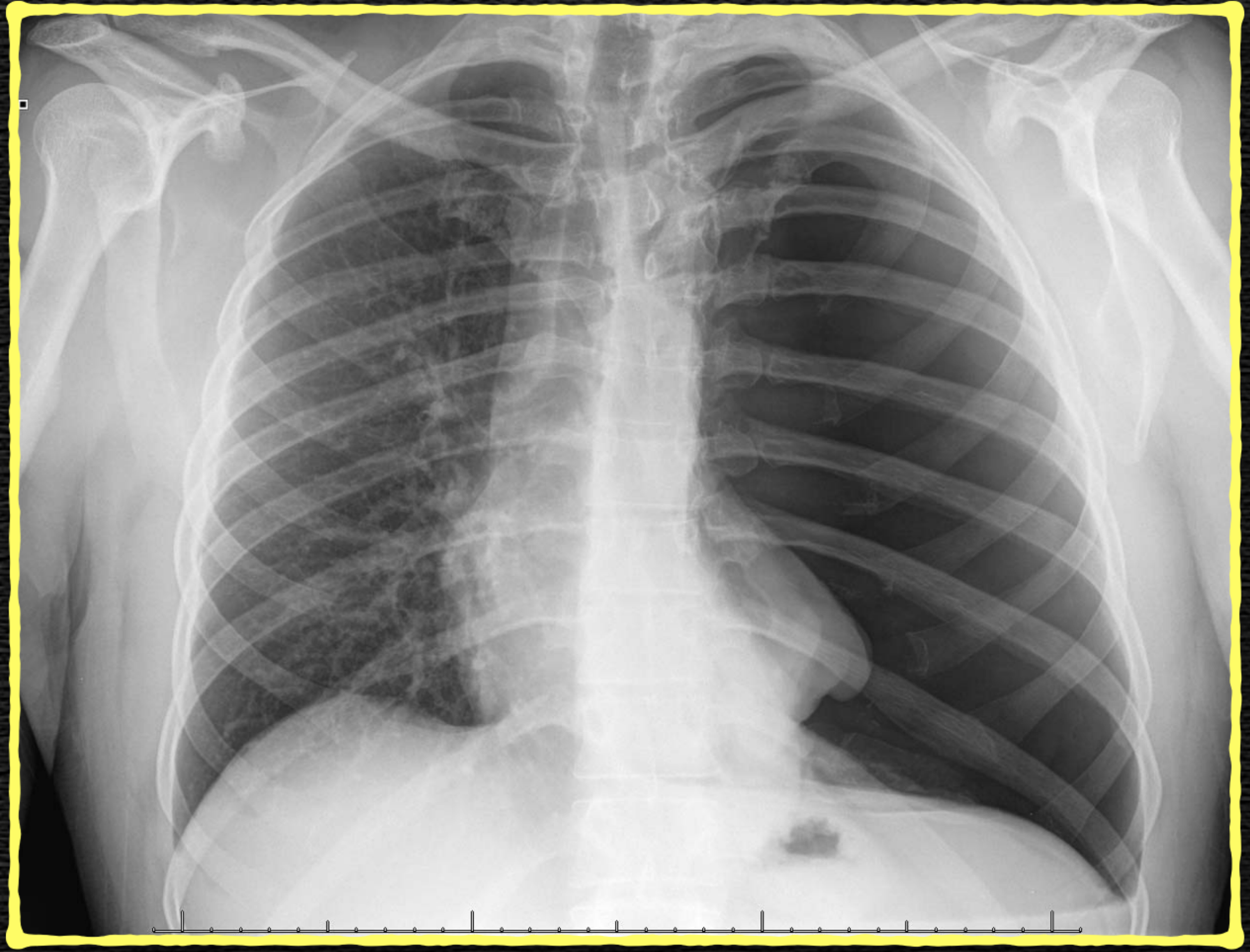
What do I want them to be able to do?

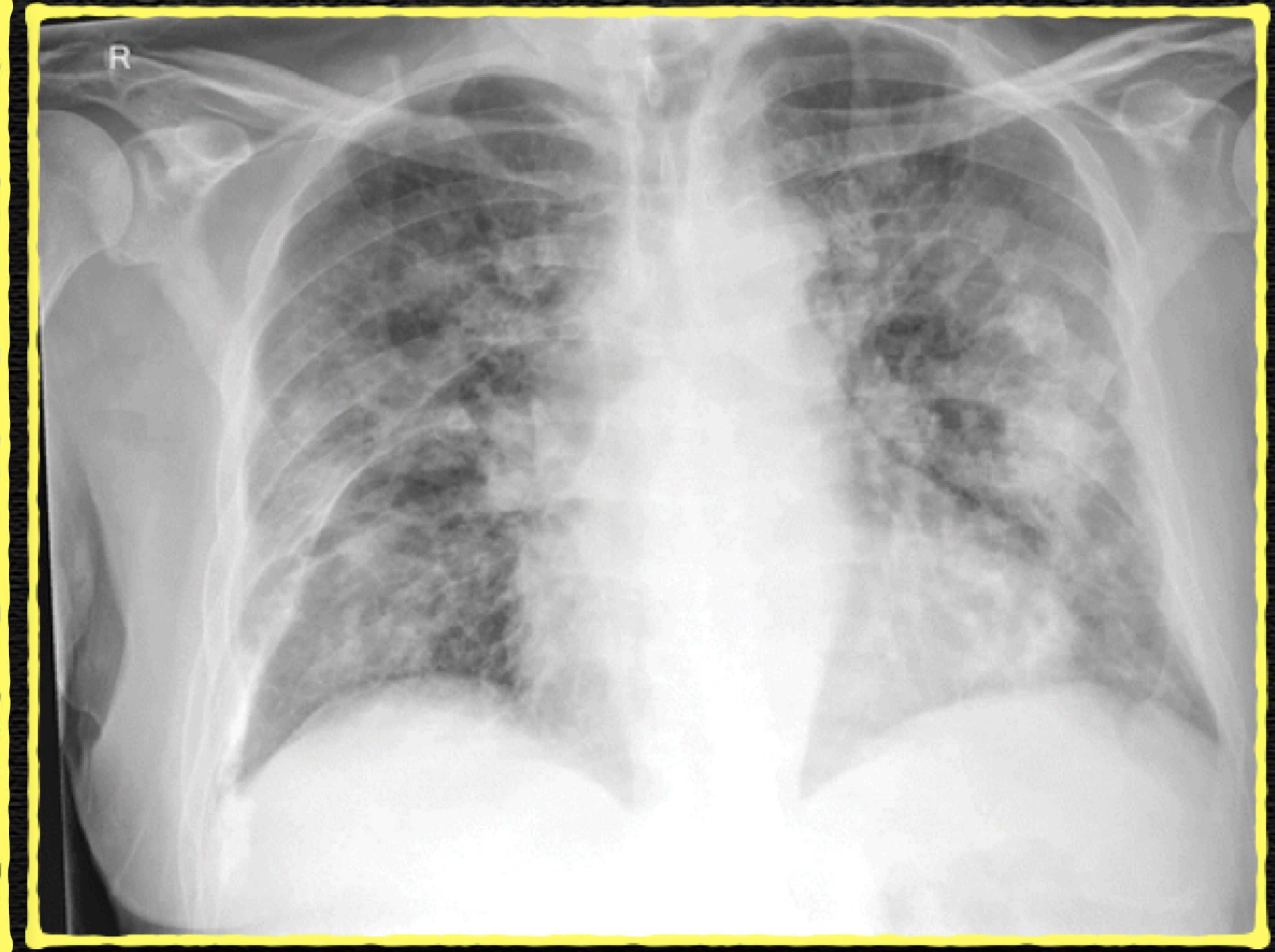



R

KNOWLEDGE

What information do they need to be successful?



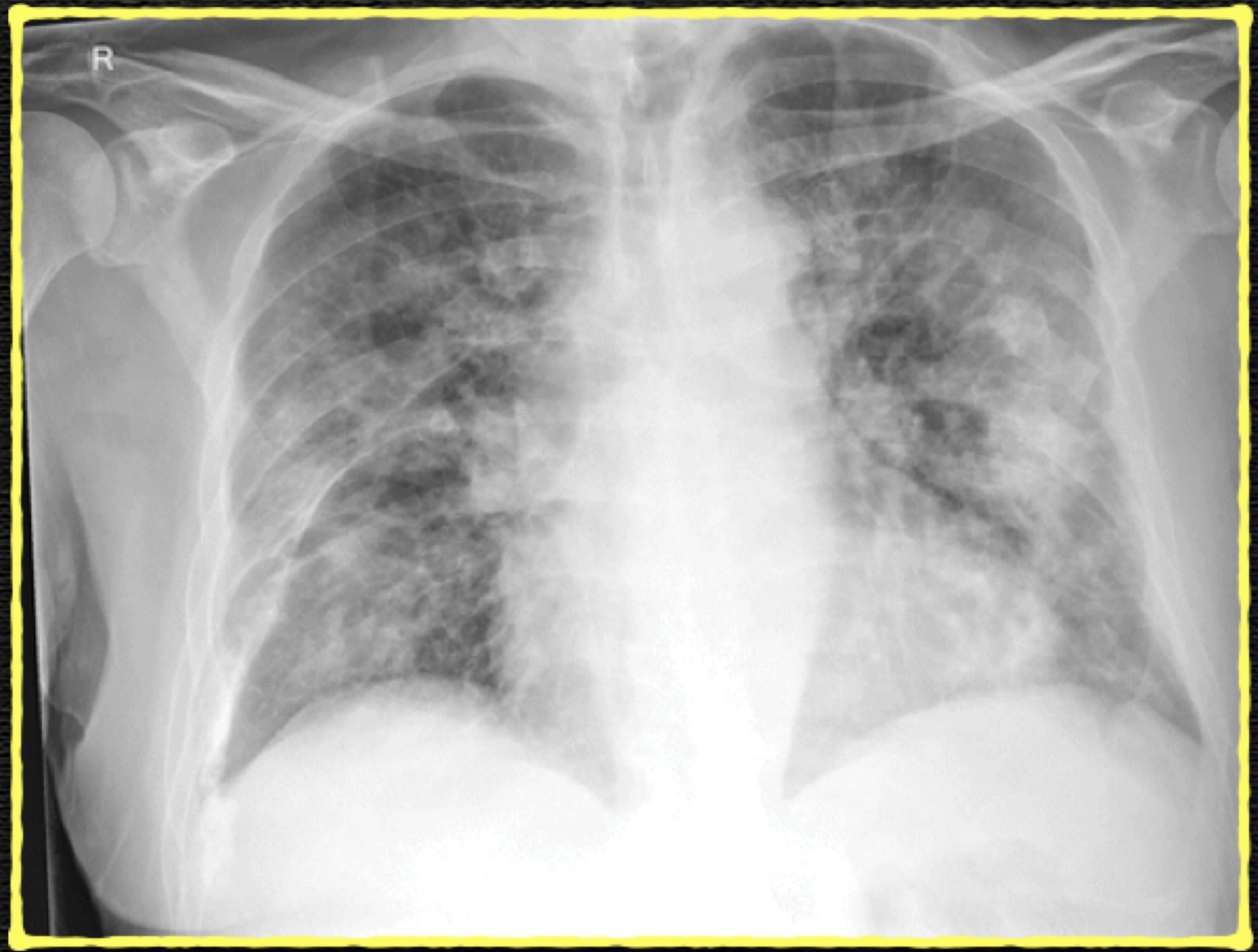


KNOWLEDGE

What information do they need to be successful?

SKILLS

What do they need practice to develop the needed proficiencies?



KNOWLEDGE

What information do they need to be successful?

SKILLS

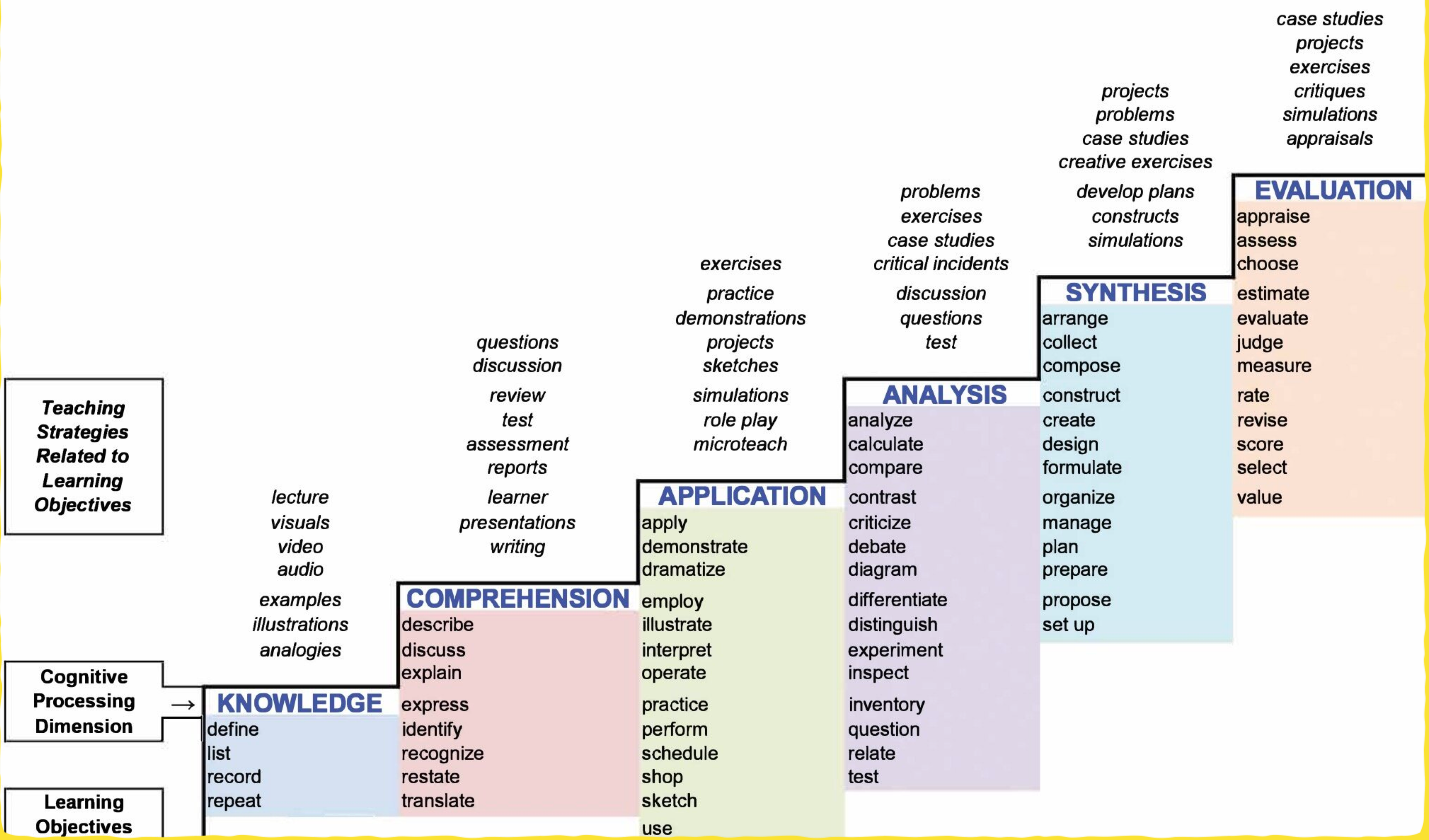
What do they need practice to develop the needed proficiencies?

MOTIVATION

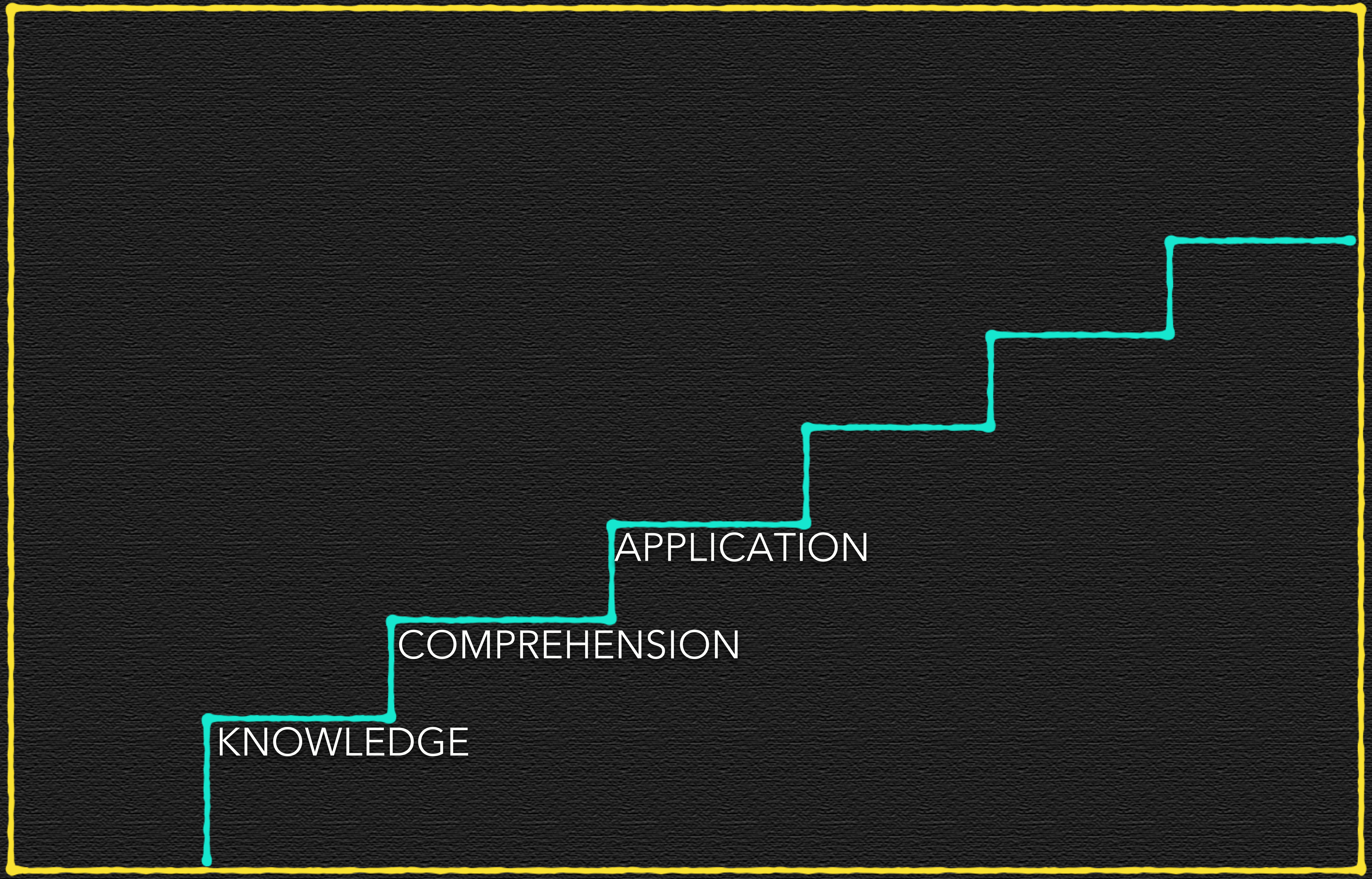
What is their attitude towards the change?

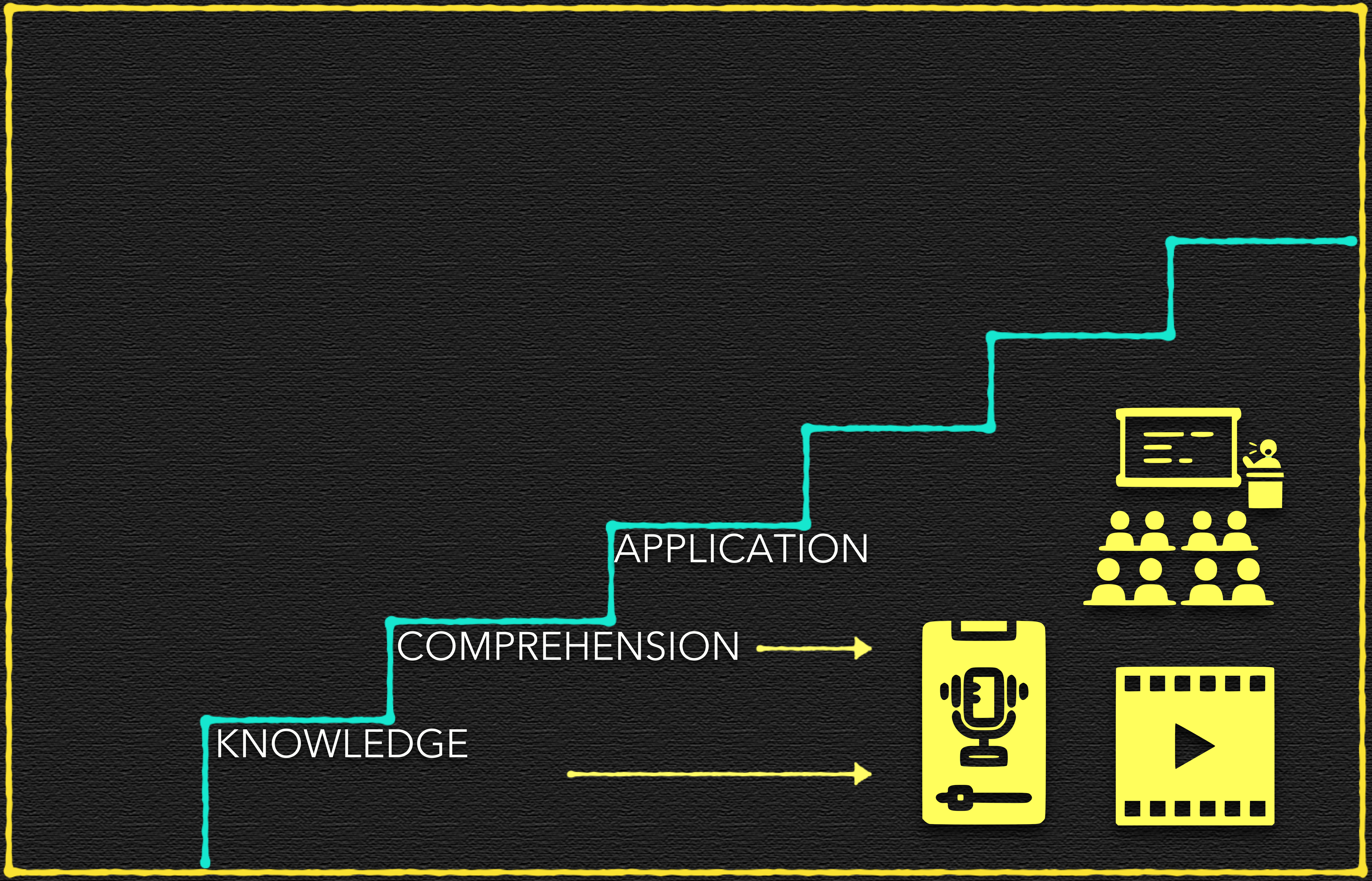

Interface of Learning Objectives and Teaching Strategies
Teaching Strategies Related to Learning Objectives
Cognitive Processing Dimension
Learning Objectives
lecture
visuals
video
audio
examples
illustrations
analogies
KNOWLEDGE
define
list
record
repeat
questions
discussion
review
test
assessment
reports
learner presentations
writing
COMPREHENSION
describe
discuss
explain
express
identify
recognize
restate
translate
exercises
practice
demonstrations
projects
sketches
simulations
role play
microteach
APPLICATION
apply
demonstrate
dramatize
employ
illustrate
interpret
operate
practice
perform
schedule
shop
sketch
use
problems
exercises
case studies
critical incidents
discussion
questions
test
ANALYSIS
analyze
calculate
compare
contrast
criticize
debate
diagram
differentiate
distinguish
experiment
inspect
inventory
question
relate
test
projects
problems
case studies
creative exercises
develop plans
constructs
simulations
SYNTHESIS
arrange
collect
compose
construct
create
design
formulate
organize
manage
plan
prepare
propose
set up
case studies
projects
exercises
critiques
simulations
appraisals
EVALUATION
appraise
assess
choose
estimate
evaluate
judge
measure
rate
revise
score
select
value

Interface of Learning Objectives and Teaching Strategies



https://www.andreasastier.com/blog/teaching-in-health-the-how-to-and-its-relevance-in-the-scope-of-clinical-education


APPLICATION
COMPREHENSION
KNOWLEDGE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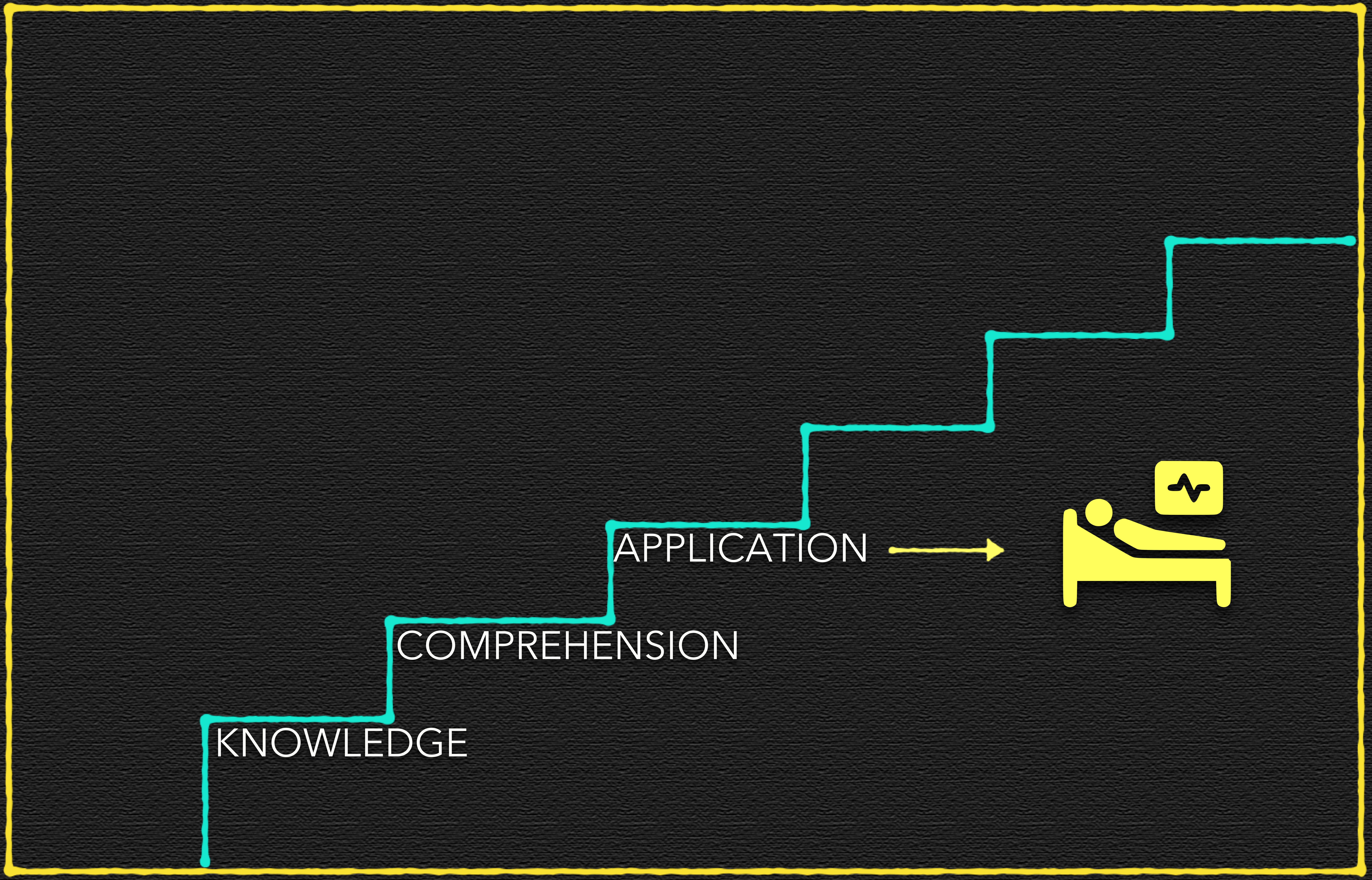
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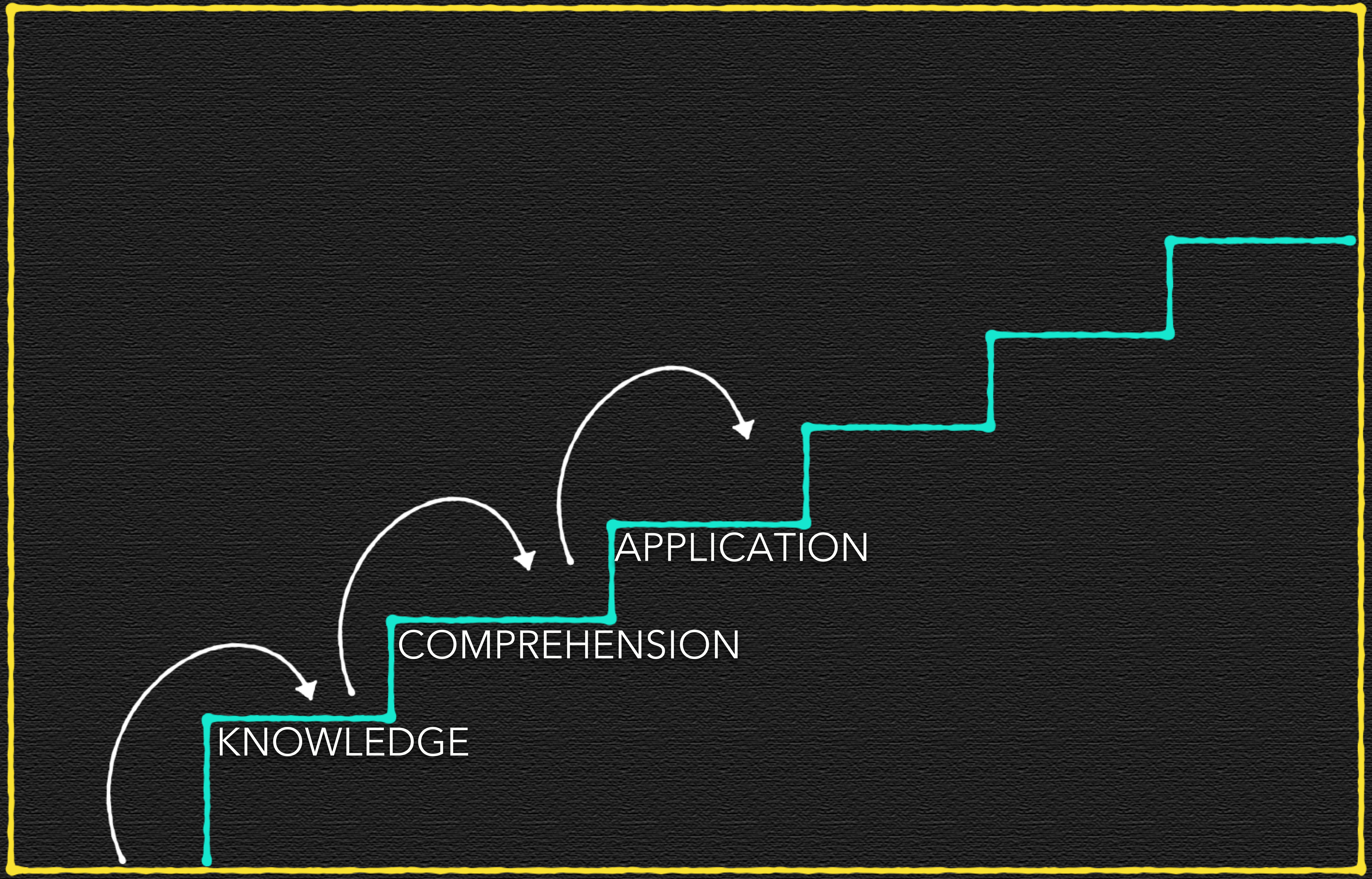
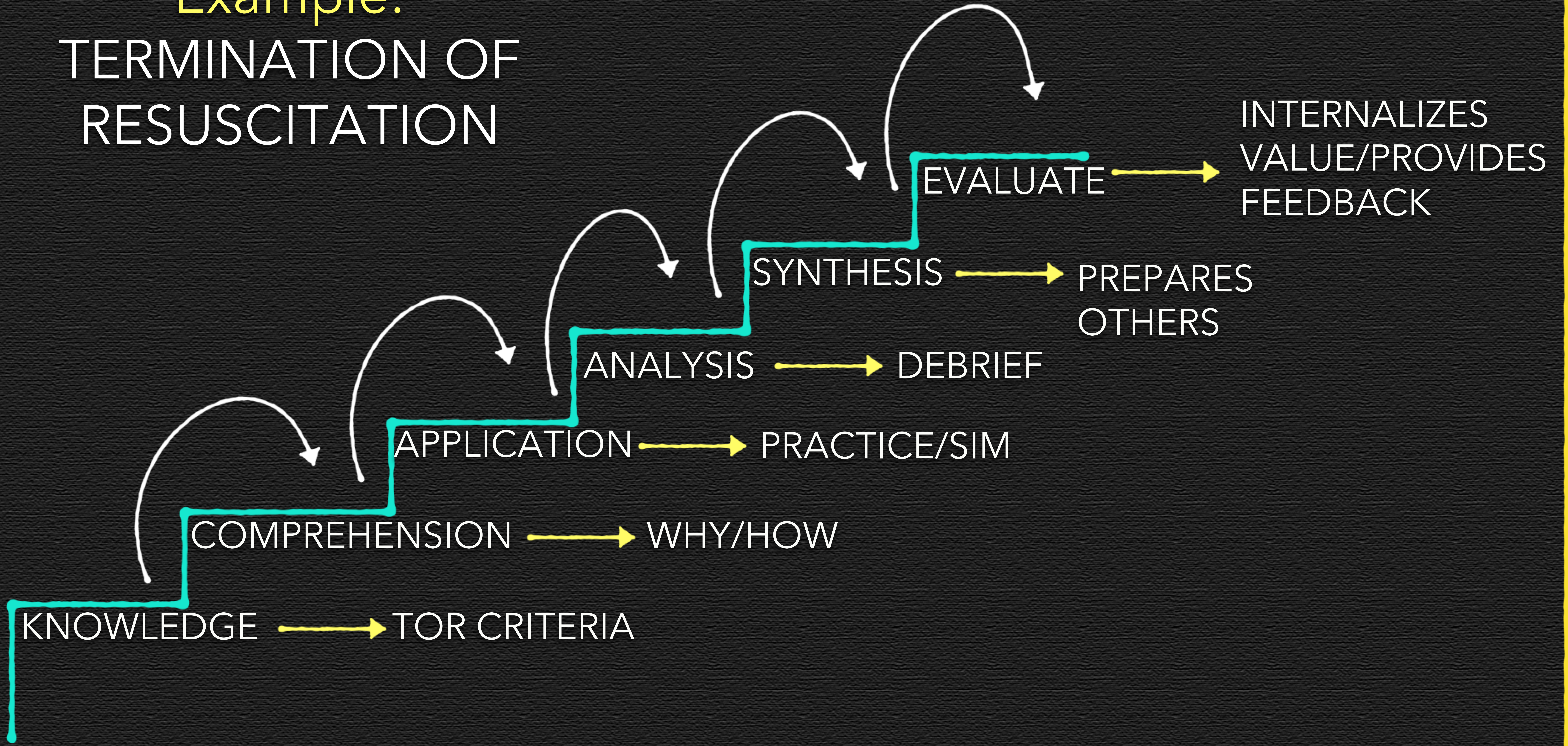

APPLICATION
COMPREHENSION
KNOWLEDGE

Example:
TERMINATION OF RESUSCITATION




INTERNALIZES VALUE/PROVIDES FEEDBACK
EVALUATE
SYNTHESIS
ANALYSIS
APPLICATION
COMPREHENSION
KNOWLEDGE
TOR CRITERIA


INTERNALIZES
VALUE/PROVIDES
FEEDBACK
EVALUATE
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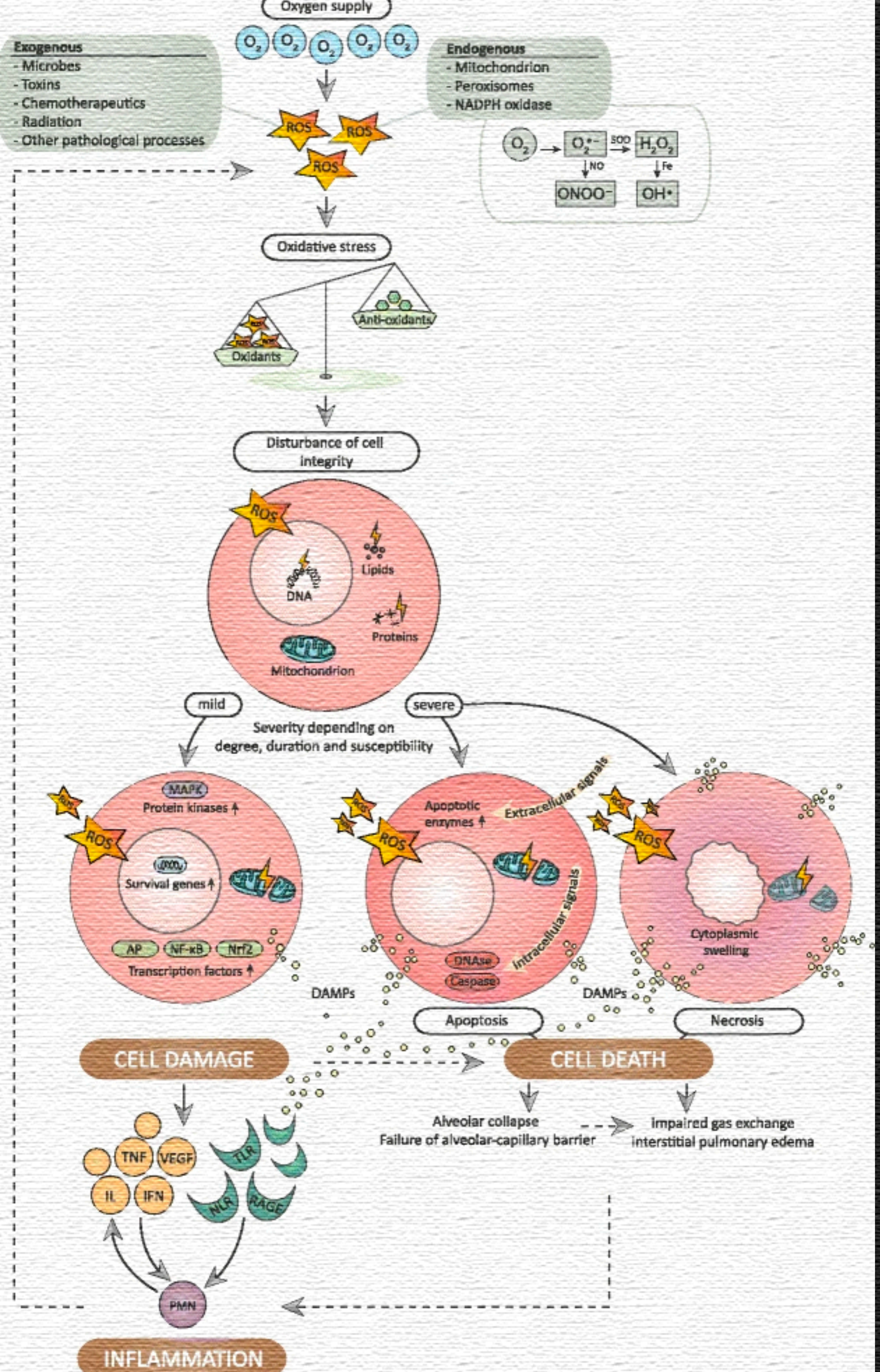

Oxygen supply
Exogenous
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- Chemotherapeutics
- Radiation
- Other pathological processes
Endogenous
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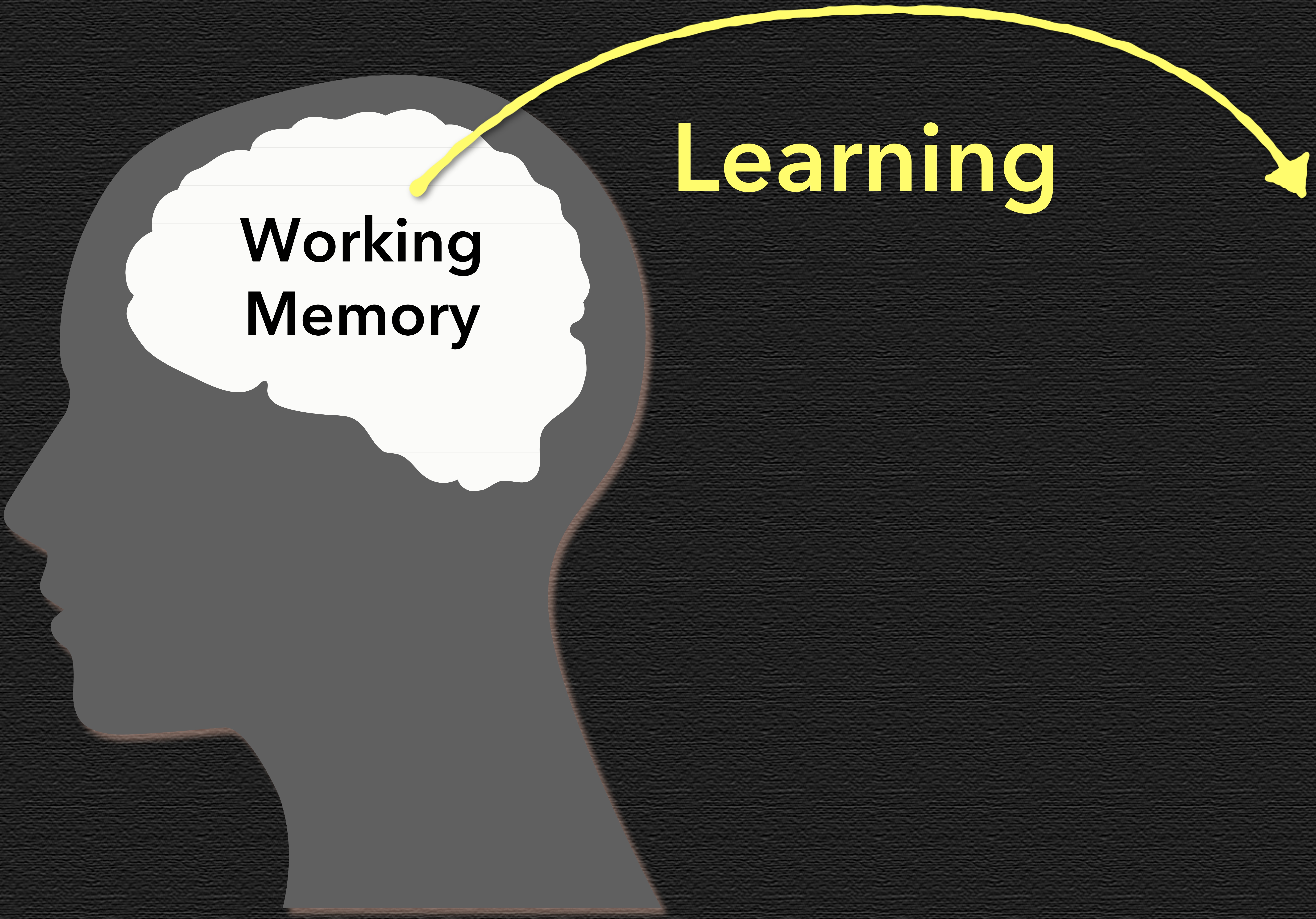
- NADPH oxidase
ROS
Oxidative stress
Anti-oxidants
Oxidants
Disturbance of cell integrity
DNA
Lipids
Proteins
Mitochondrion
mild
severe
Severity depending on degree, duration and susceptibility
MAPK
Protein kinases
Survival genes
AP
NF-κB
Nrf2
Transcription factors
Apoptotic enzymes
Extracellular signals
Intracellular signals
DNAse
Caspase
Cytoplasmic swelling
DAMPs
Apoptosis
Necrosis
CELL DAMAGE
CELL DEATH
Alveolar collapse
Failure of alveolar-capillary barrier
Impaired gas exchange
Interstitial pulmonary edema
TNF
VEGF
IL
IFN
TLR
NLR
RAGE
PMN
INFLAMMATION

TOO MUCH

Learning

Plass, J. L., Moreno, R., & Brünken, R. (Eds.). (2010). Cognitive load theory. Cambridge University Press.



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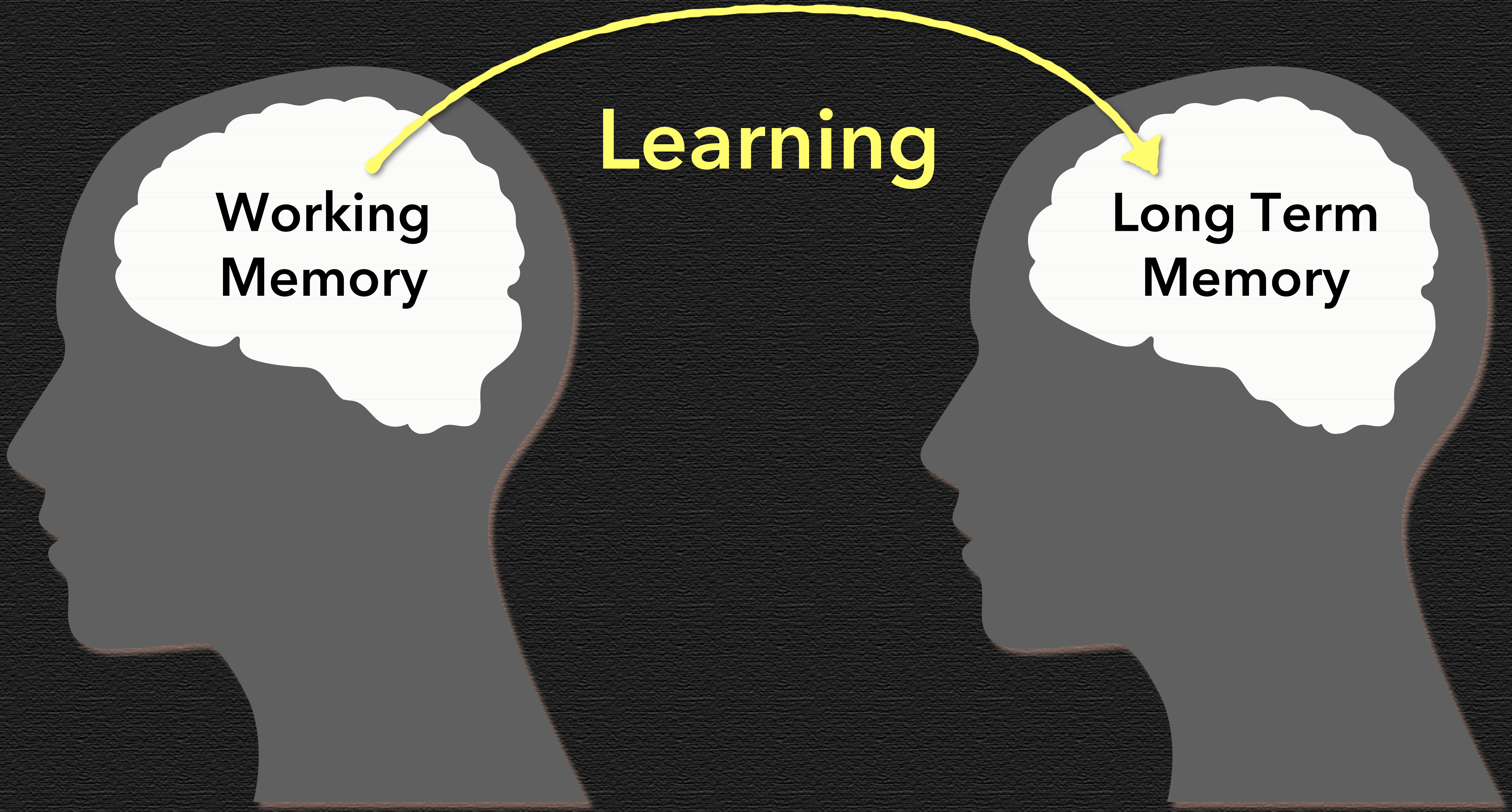

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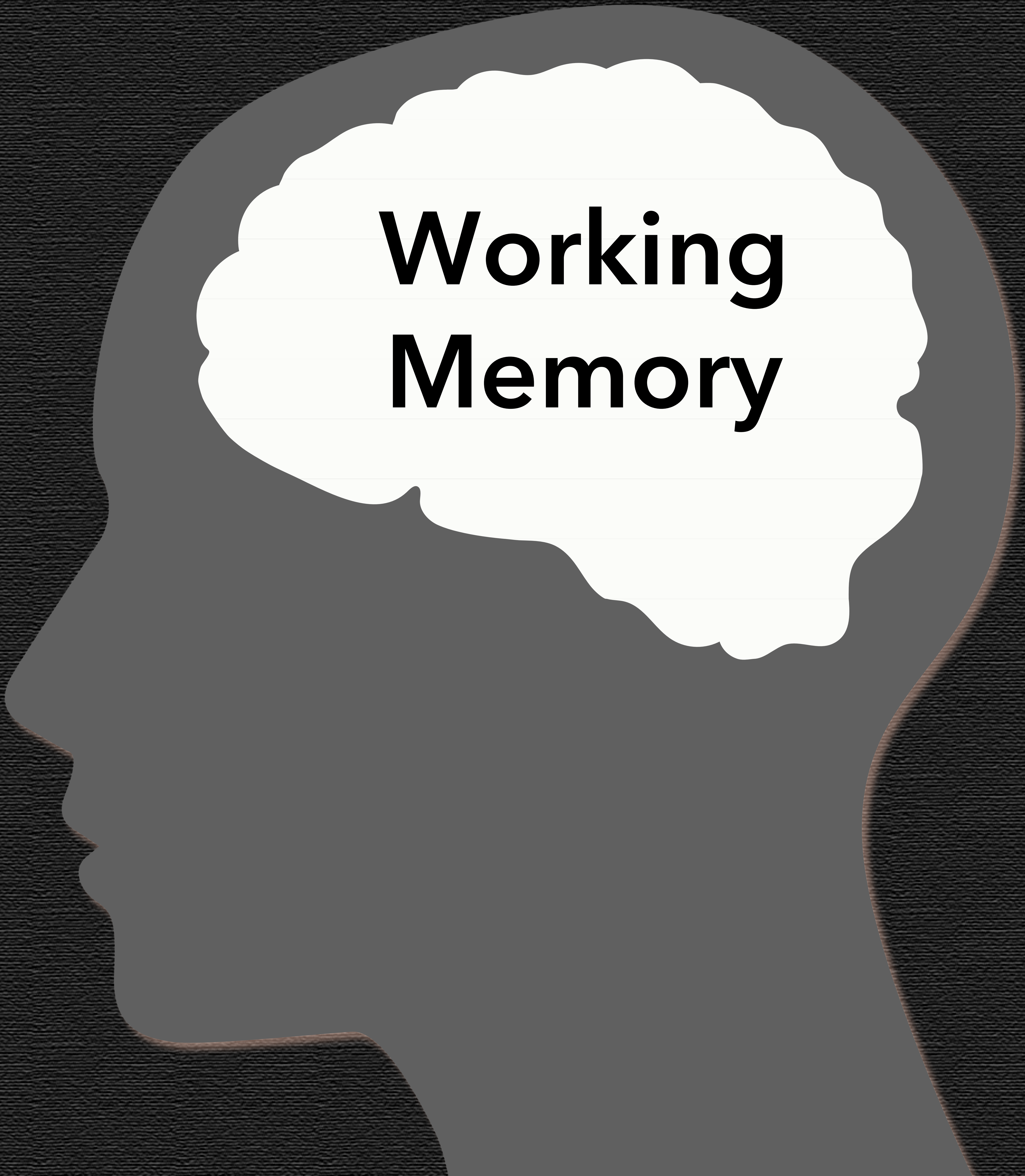
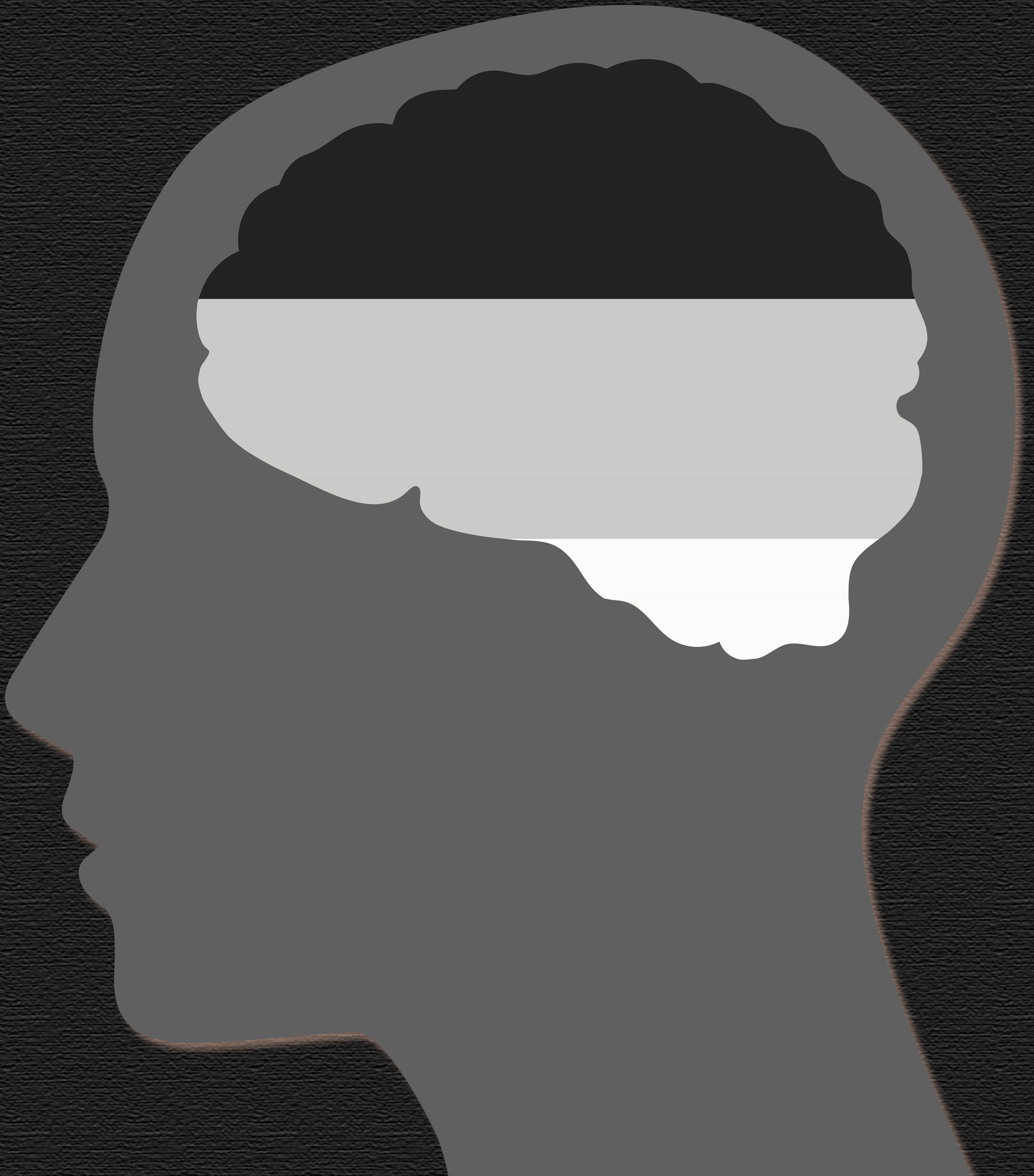

Working
Memory

Intrinsic load

Extrinsic load

Intrinsic load



Germane load

Extrinsic load

Intrinsic load

Germane load

Extrinsic load

Intrinsic load

Germane load

Extrinsic load

Intrinsic load

Do not try to teach too much at once. Do not try to teach too much at once. Do not try to teach too much at once. **Do not try to teach too much at once.** *Do not try to teach too much at once*. **Do not try to teach too much at once.** **Do not try to teach too much at once.** ***Do not try to teach too much at once***. Do not try to teach too much at once. **Do not try to teach too much at once.** Do not try to teach too much at once. Do not try to teach too much at once. Do not try to teach too much at once.

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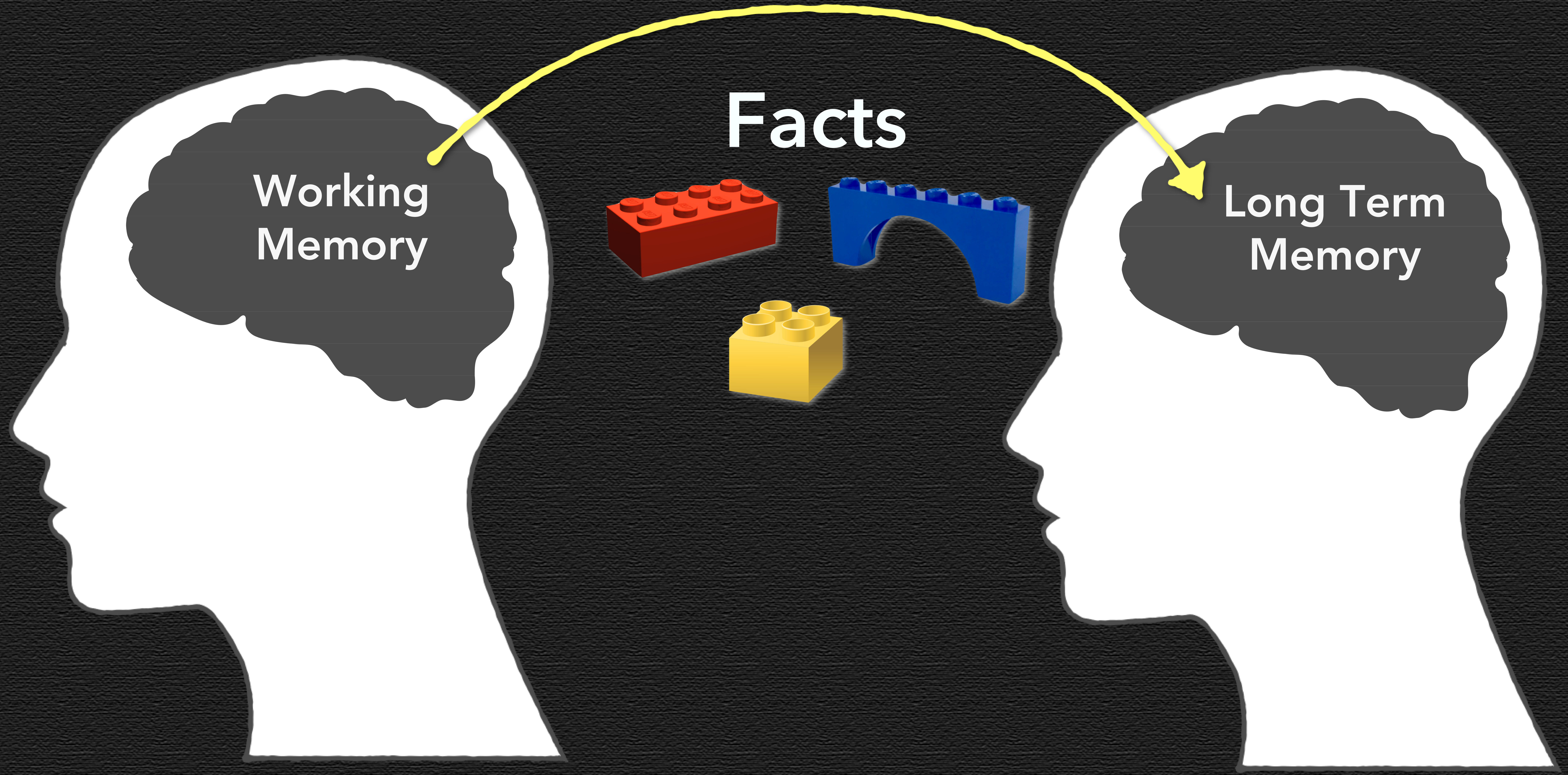
Pick what is most important… 3 is best.

Do not try to teach too much at once.

Pick what is most important… 3 is best.

Use metaphor and analogy

Ελληνικά	English
οικείος	familiar



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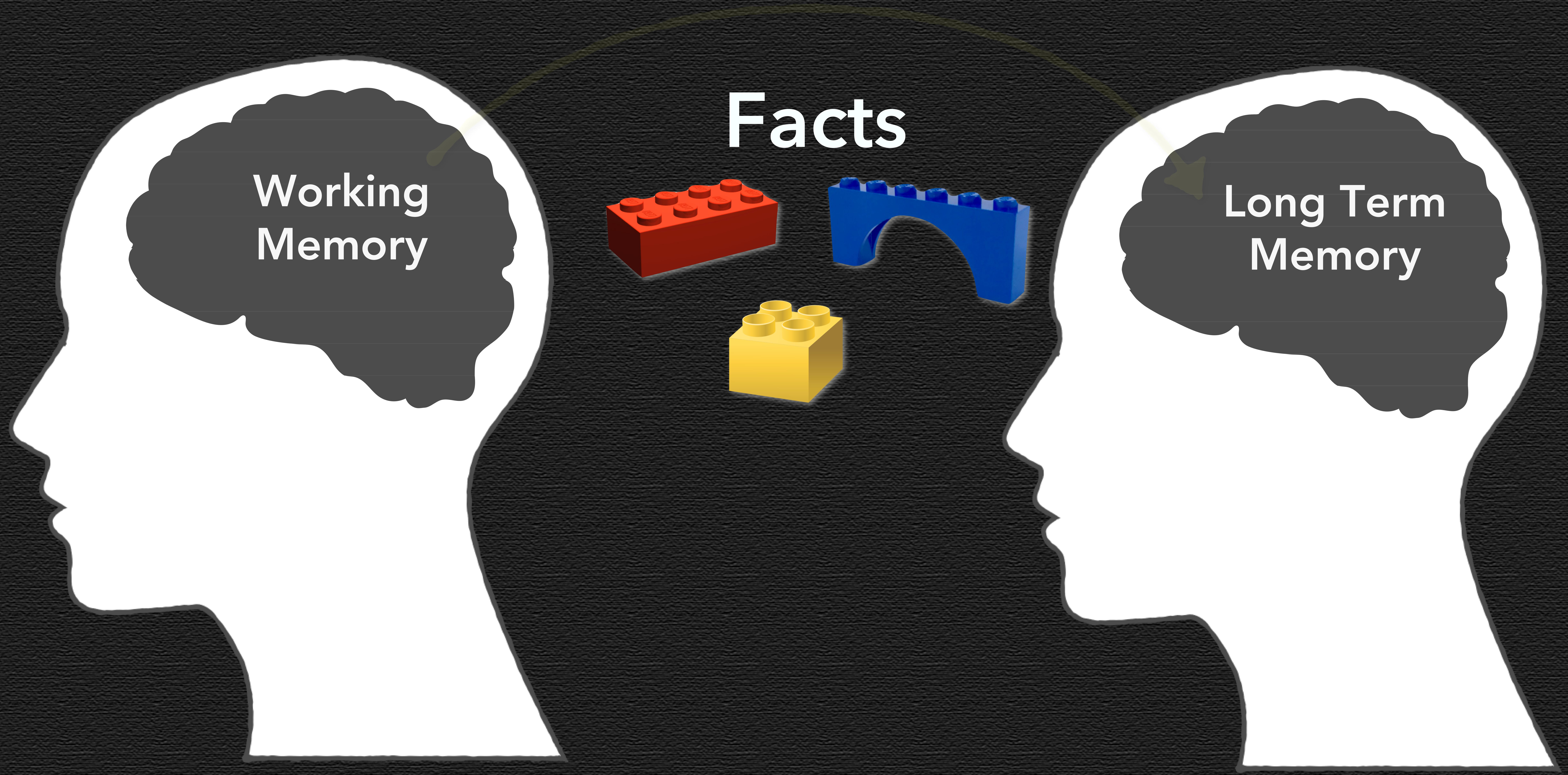

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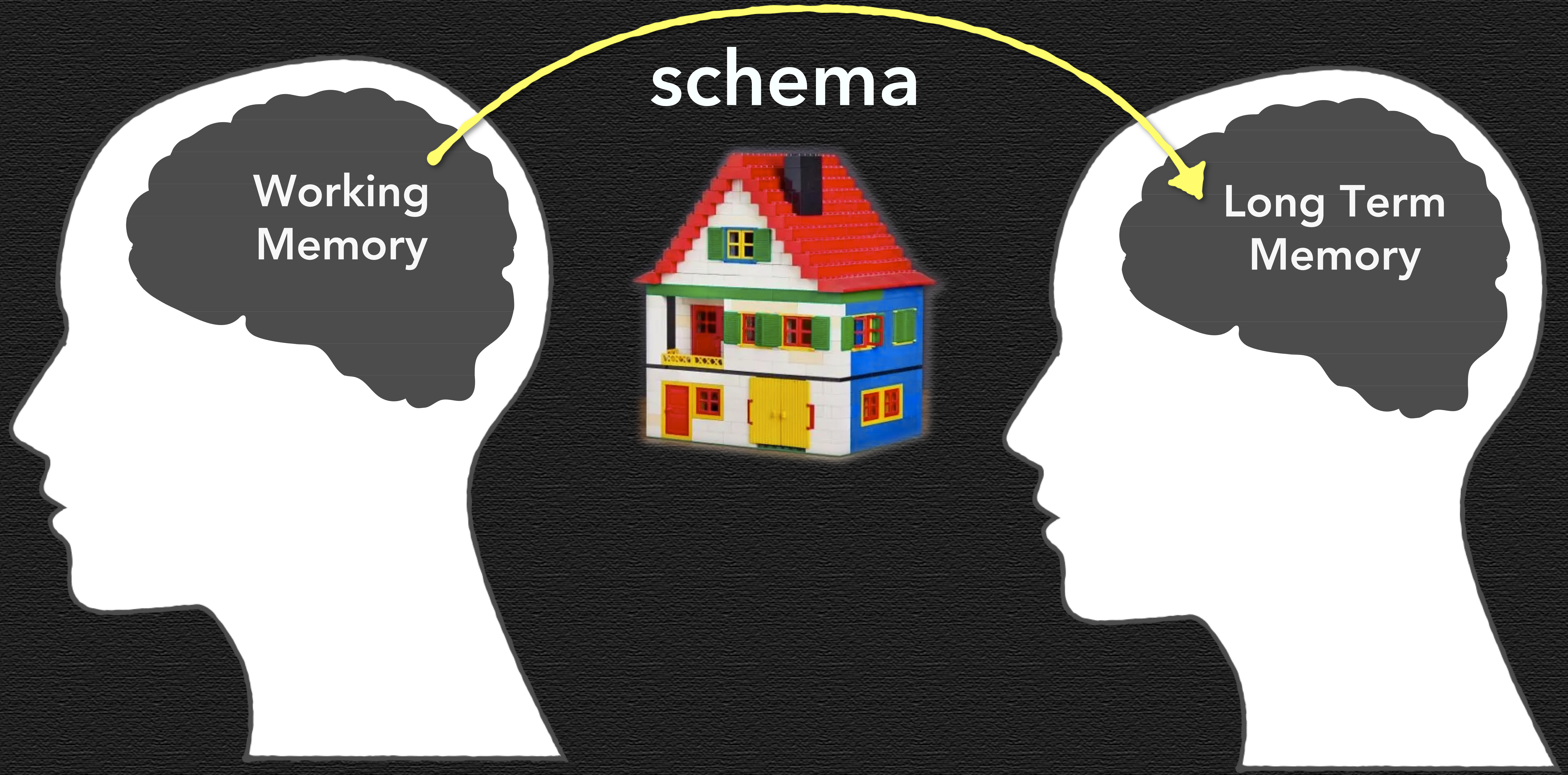

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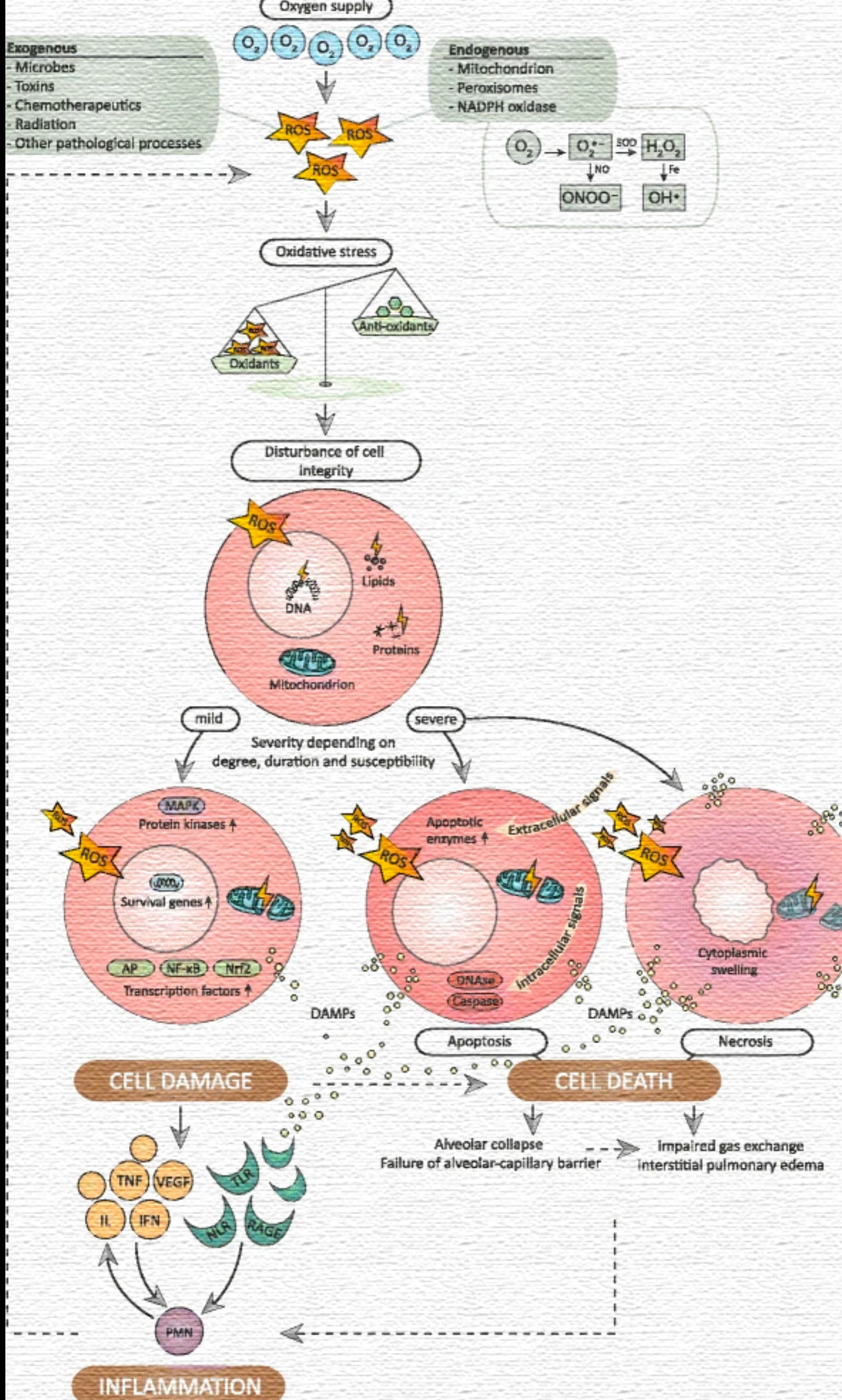
Oxygen



Oxygen supply
Exogenous
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- NADPH oxidase
ROS
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OH•
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TNF
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NLR
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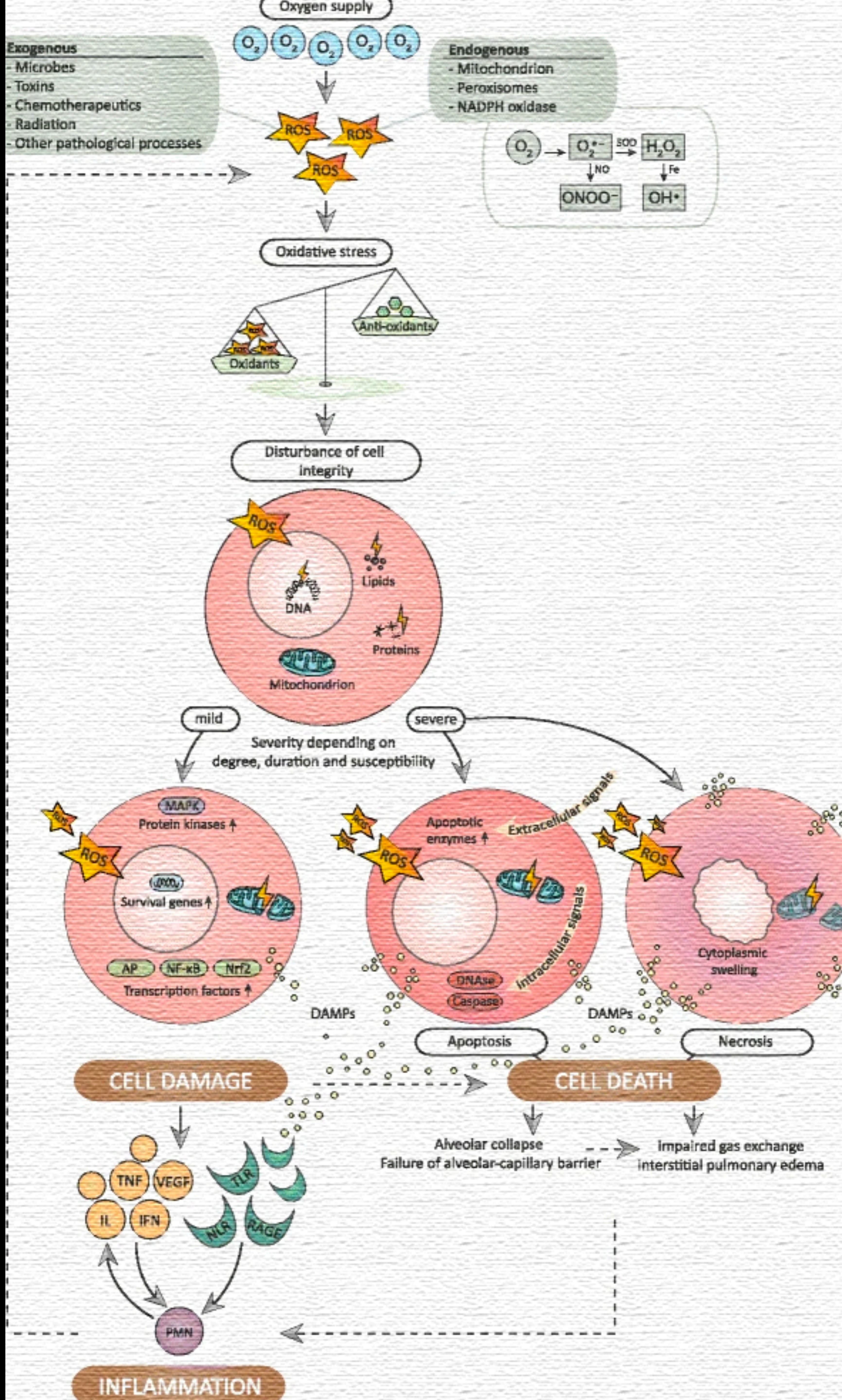
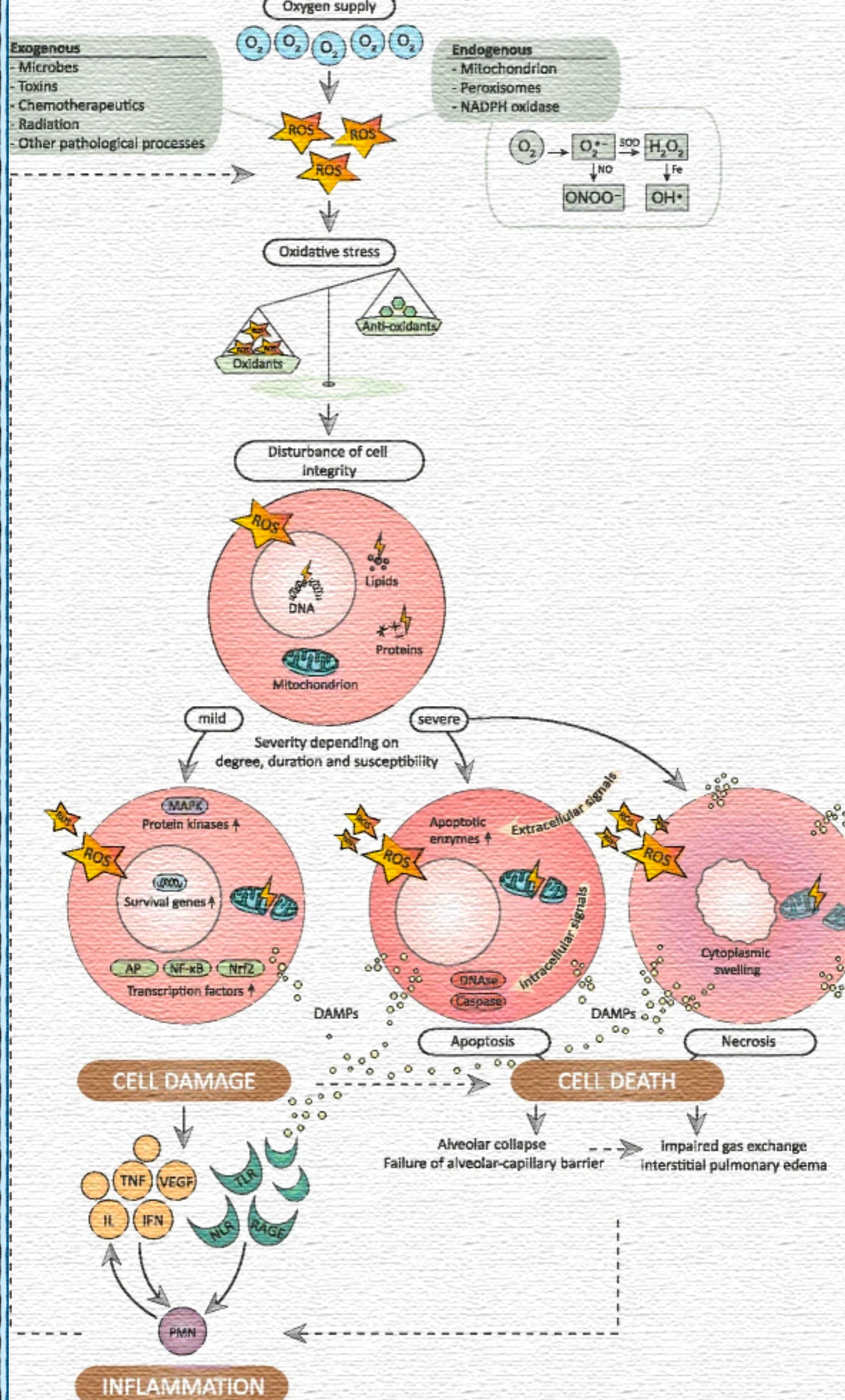
INFLAMMATION

Feedback is essential.



Feedback is essential.

Match the treatment to the problem.



Feedback is essential.

Match the treatment to the problem.

Too much at once is toxic.

learning *(Def):*

"Expanding the ability to produce the results we truly want"

- Senge, The Fifth Discipline

MEDICAL DIRECTOR = EDUCATOR

Reading list:

Dweck, C. S. (2008). Mindset: The new psychology of success.

Murch, G. (2016). Fixing Feedback.

Edmondson, A. C. (2018). The fearless organization: Creating psychological safety in the workplace for learning, innovation, and growth

Dirksen, J. (2016). Design for How People Learn.

Ericsson, A., & Pool, R. (2016). Peak: Secrets from the new science of expertise.

Duarte, N. (2013). Resonate: Present visual stories that transform audiences.