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SURGICAL EDUCATION GAME THEORY


APD Dermatologic Surgery Section
September 26, 2015



No financial disclosures

JEOPARDY!

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SURGICAL EDUCATION GAME **THEORY GAMIFICATION**

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Surgical Education Gamification

- Glossary of Game Based Education
- Ideal Elements of Serious Games for Dermatologic Surgery
- Applications in Dermatologic Surgery Training



Gamification vs Game Theory

Gamification vs Game Theory

X axis: decision-making type *Cooperative*

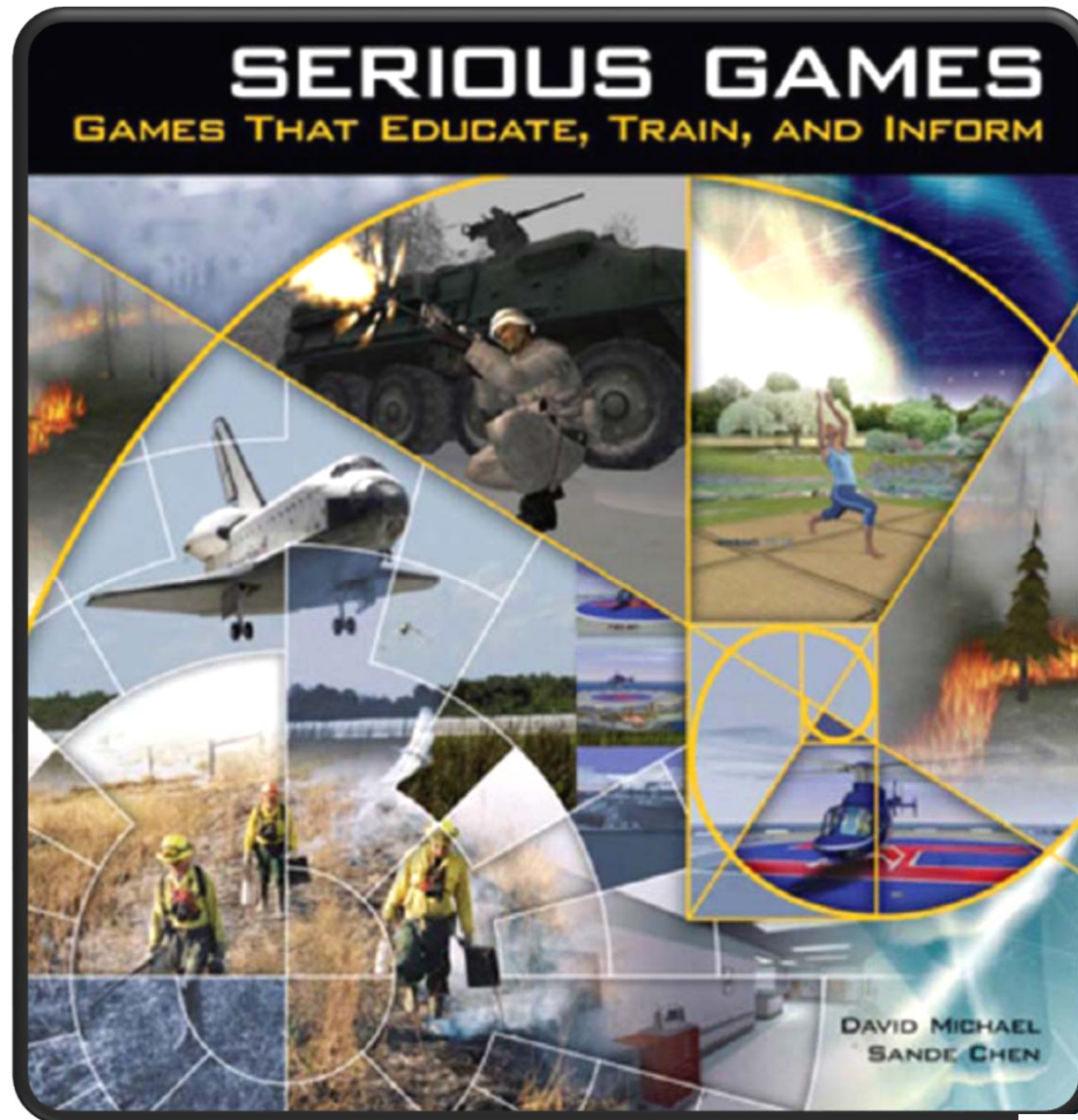
Y axis: equilibrium type





Serious Games vs Entertainment

Serious Games vs Entertainment





Gamification vs Simulation

Gamification vs Simulation



Gamification vs Simulation



Games within Medicine and Surgery

A 2013 Cochrane review of 2079 unique citations of health care game based education, included two RCTs out of 84 potentially eligible citations.

Neither of the RCTs strongly supported game based education in health care professionals.
(not students or trainees)

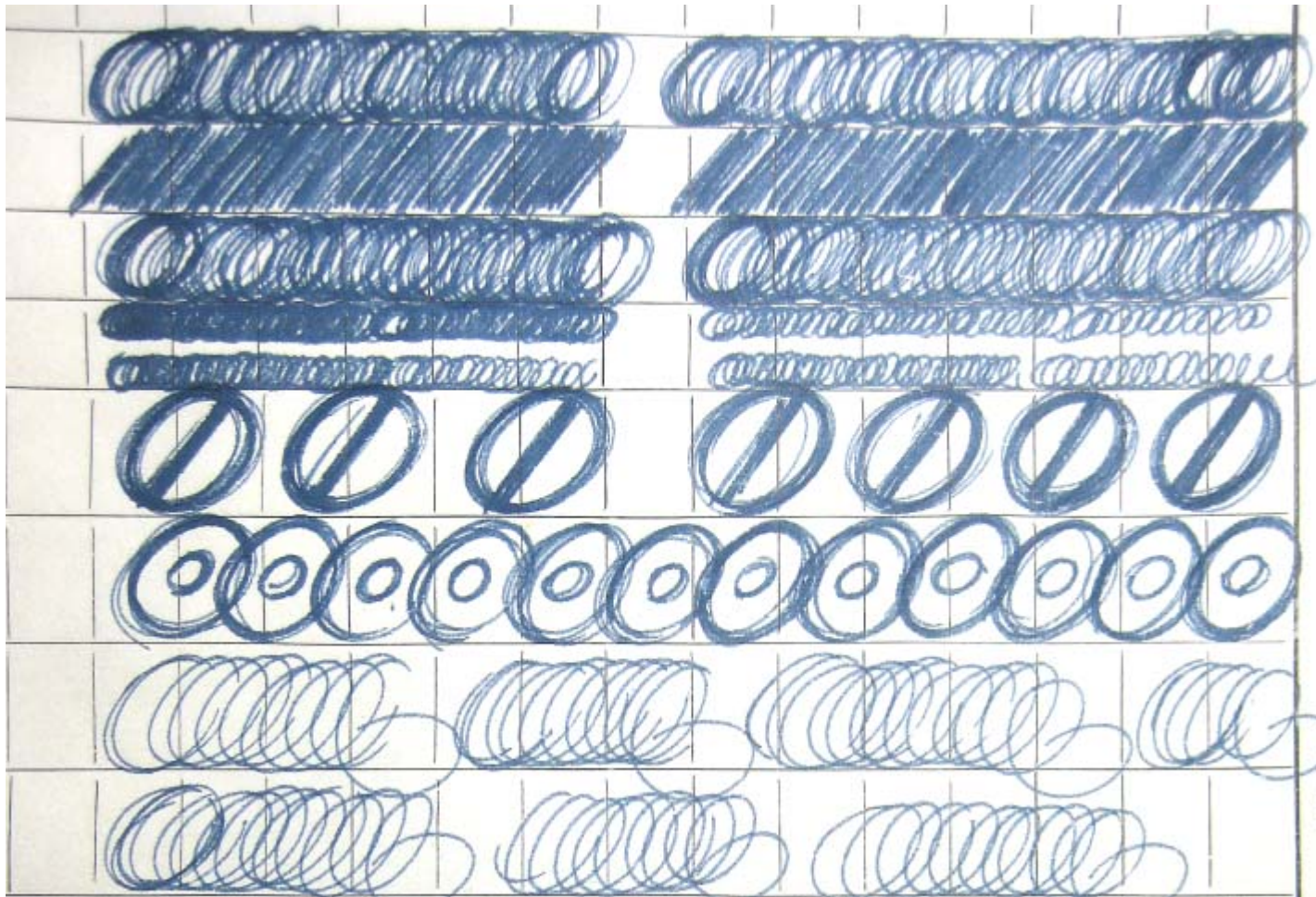


Ideal Elements of Serious Game for Dermatologic Surgery

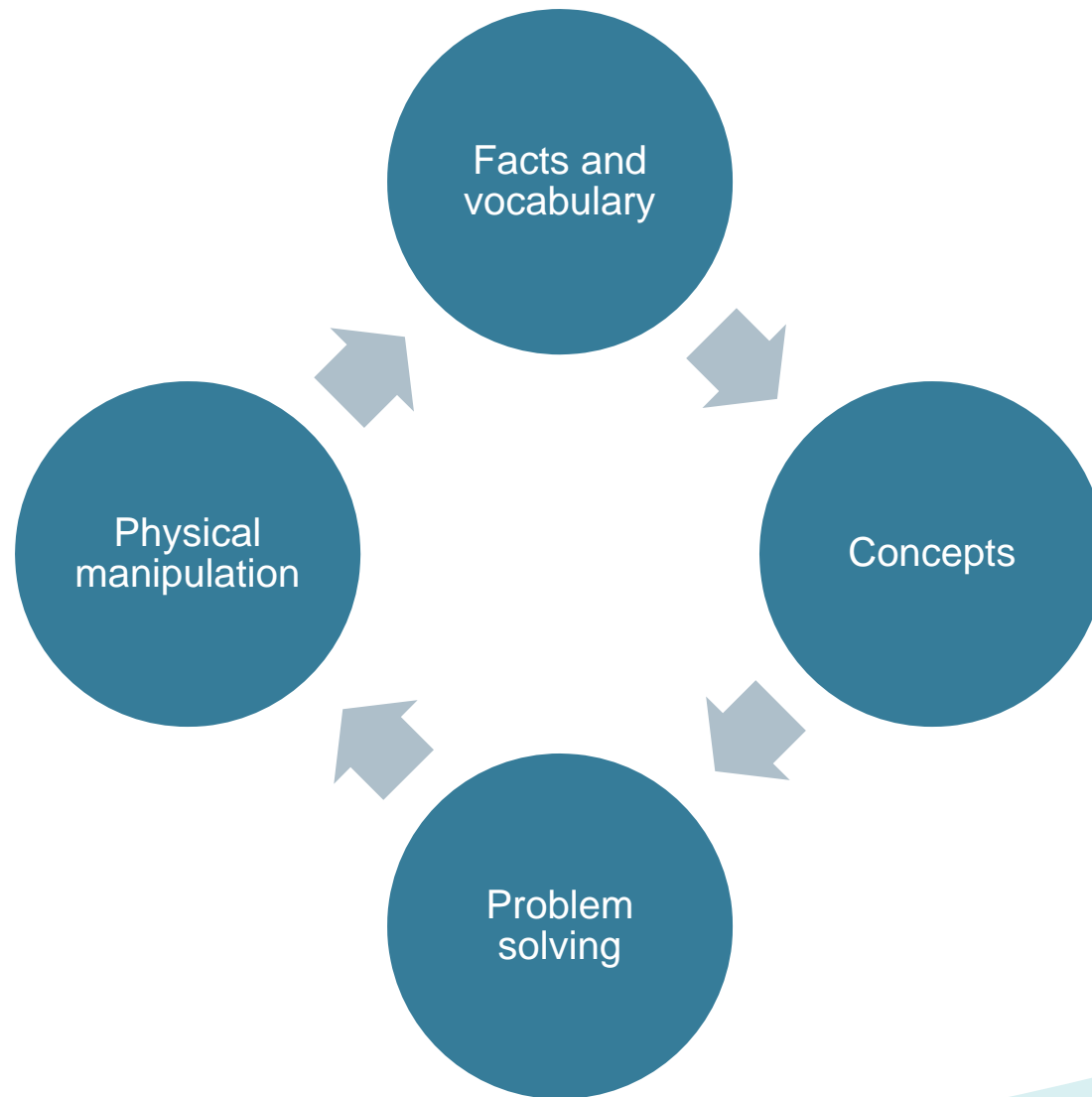
Simplify – Elemental objectives

*This is a specimen of
the Palmer Method penmanship.
It combines legibility, rapidity,
ease and endurance.*

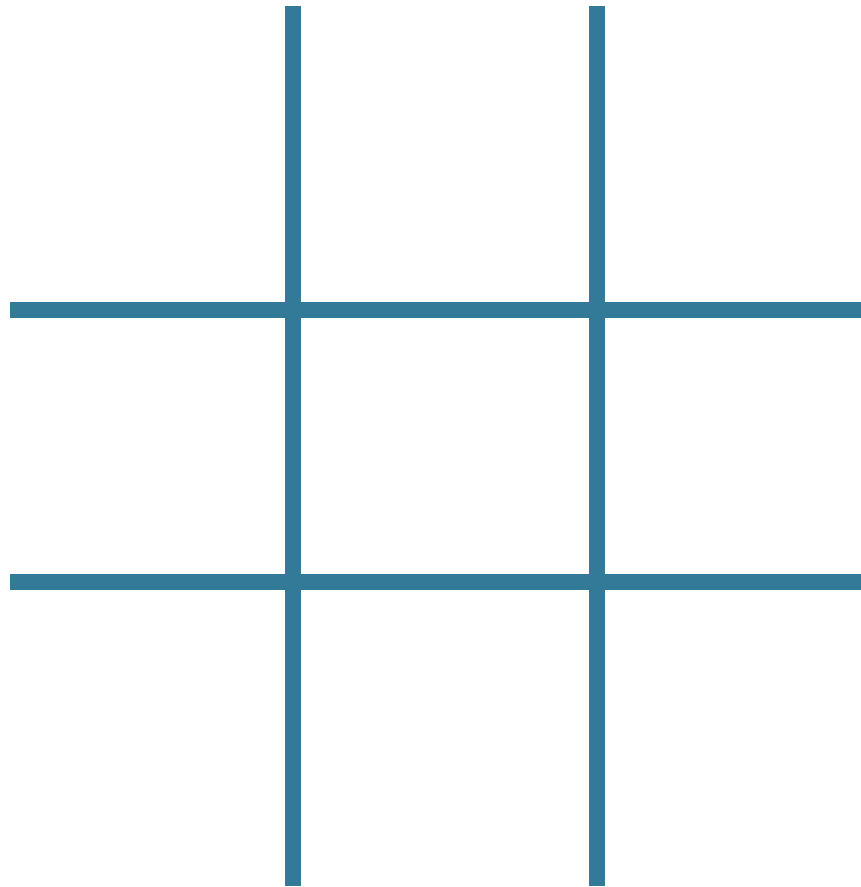
Simplify – Elemental objectives



Elemental objectives

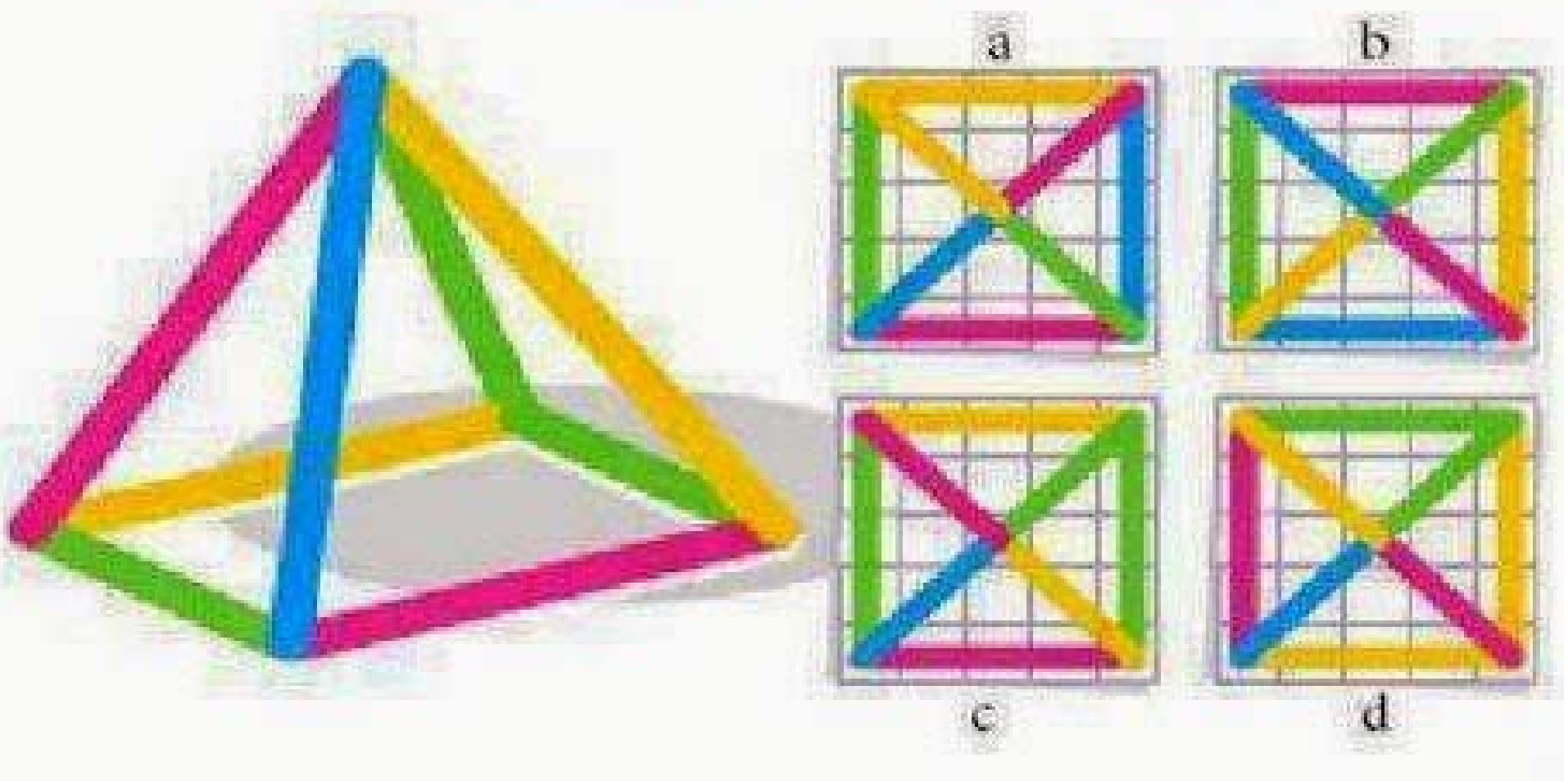


Provide clear Guidance

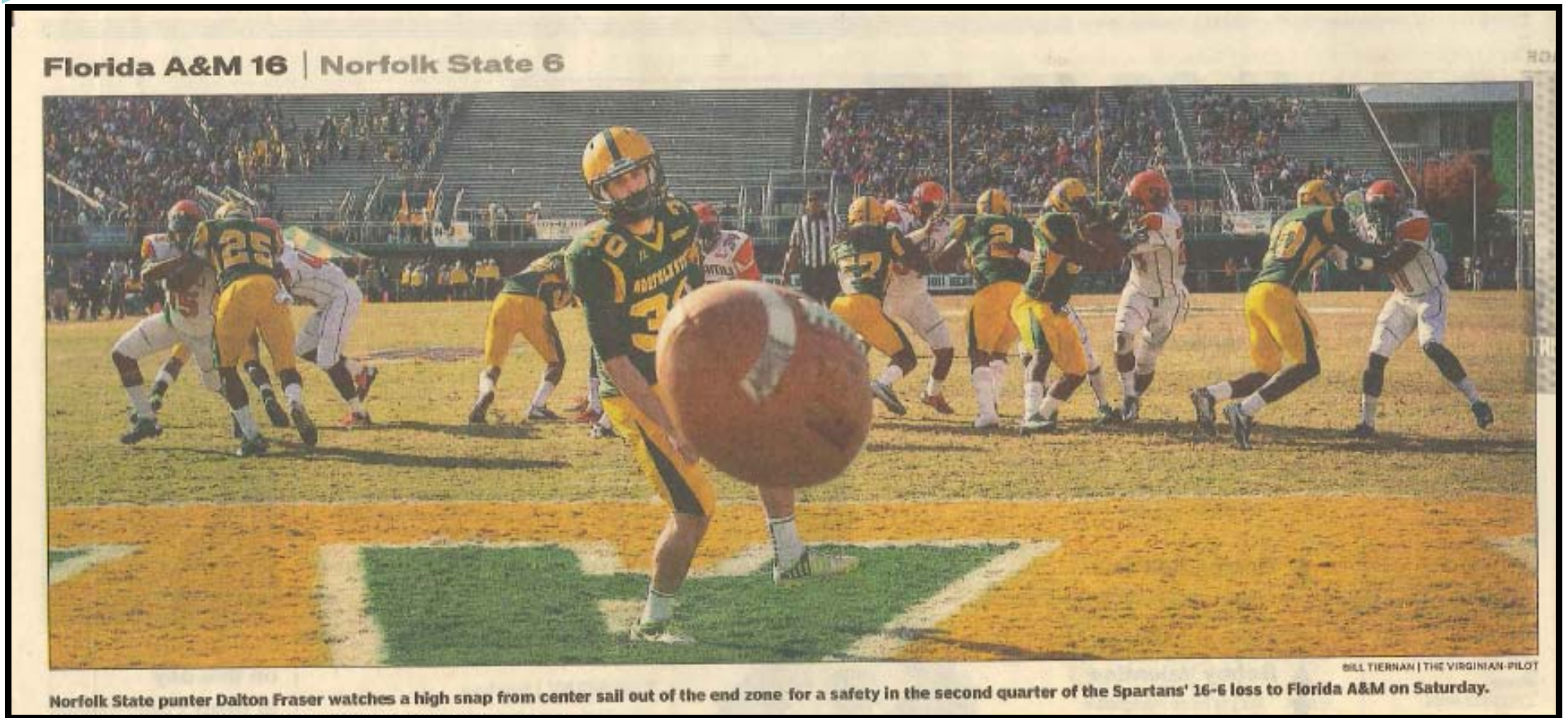


Provide Appropriate Challenge

Which is the top view?



Self assessment



Points, badges, recognition for achievements

A facilitator is key to a good game

Pop quizzes keeping Patriots' players ready

By Howard Ulman
The Associated Press

FOXBOROUGH, Mass.
— Quick.

Who are all the tight ends on the Buffalo Bills?

In his first week with the Patriots in 2009, Rob Ninkovich was stumped when Bill Belichick surprised him with that question.

"Afterward, he came up to me and he said, 'You should also know their shoe size,'" the defensive end said. "So from then on I made sure I knew every single tight end. Couldn't find the shoe size, but I was trying."

His coach's pop quizzes



AP file photo/Charles Krupa

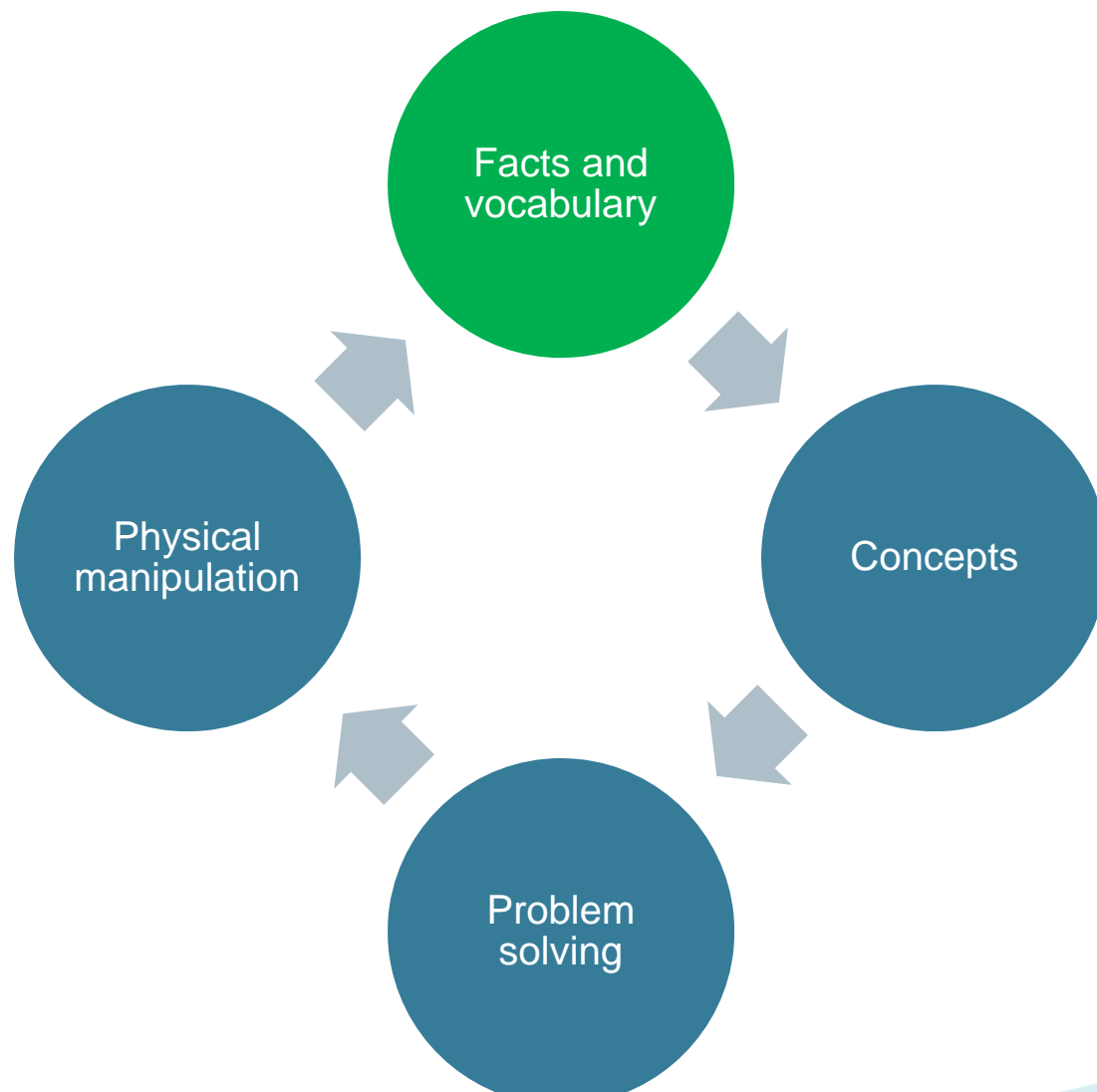
New England Patriots head coach Bill Belichick, left, randomly stops players and quizzes them.



deal Elements of Serious Game for Dermatologic Surgery

- ❑ Simplify – Elemental objectives
- ❑ Provide clear guidance
- ❑ Provide appropriate challenge
- ❑ Recognize achievement
- ❑ Facilitator

Elemental objectives





Body Boggle

Two teams

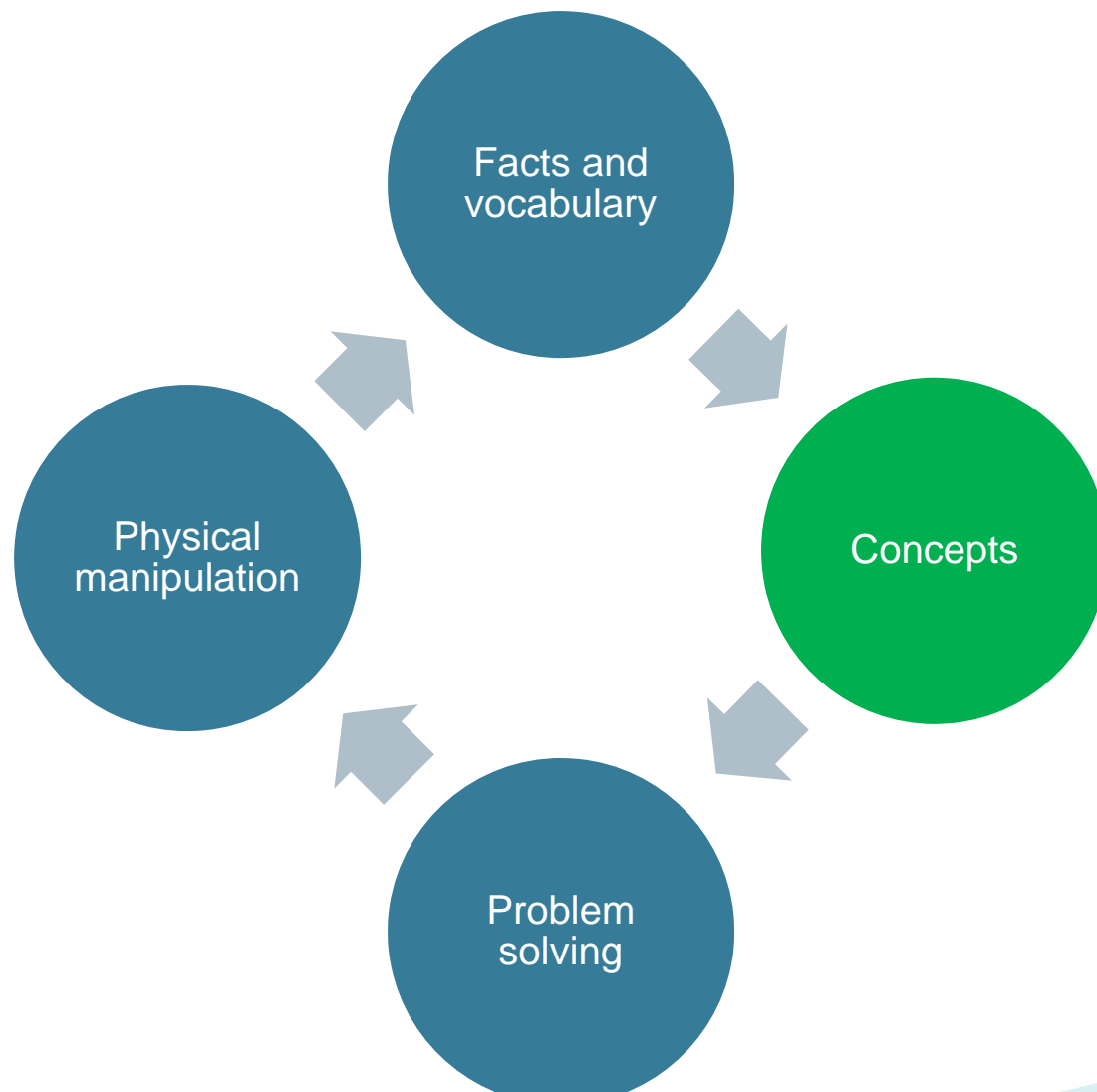
1 minute to write down anatomical names of a defined subset. For instance, surface anatomy of the ear.

One point for each term not identified by the other team.

Loss of one point for things that do not exist.

Pre-course assigned reading is the gold standard for validating terms in dispute.

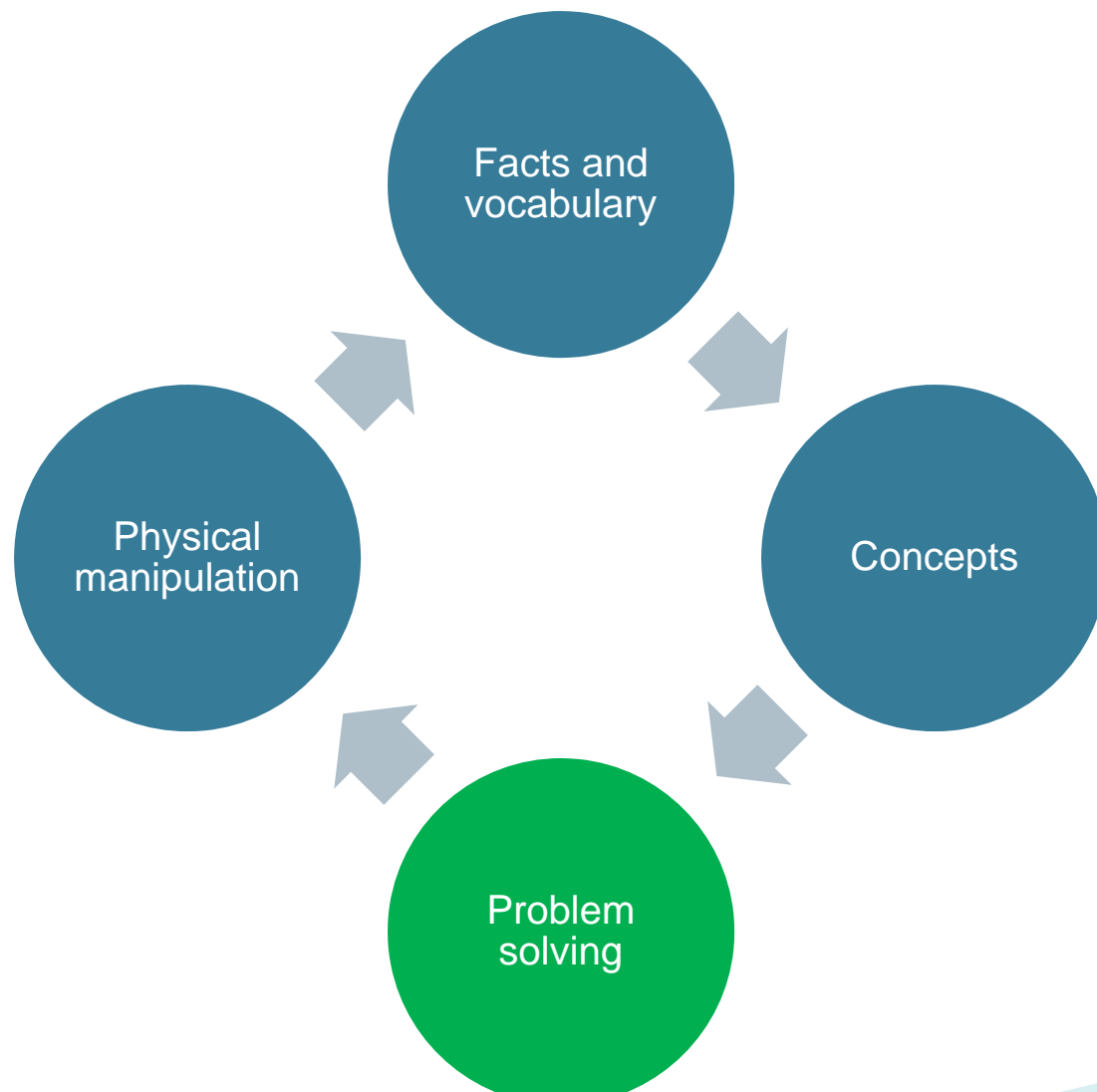
Elemental objectives



Wizards' Duel!

- Treatment and triage
Round based game play
- Facilitator presents scenario
- Two actions: suggest a treatment or rebut with contraindication that nullifies the treatment
 - Most points win
 - 1 point first line
 - 1 point rebuttal
 - 2 point first line offered after second line offered by other team
 - Lose 3 points for proton beam or diclofenac
 - Lose 2 points for disagreeing with score keeper without citation.
 - Lose 1 point for offering case report as evidence
- Once played, neither the treatment nor contraindication can be played again. Contraindications do not carry forward.
'Patient preference' can only be played on treatments of similar efficacy

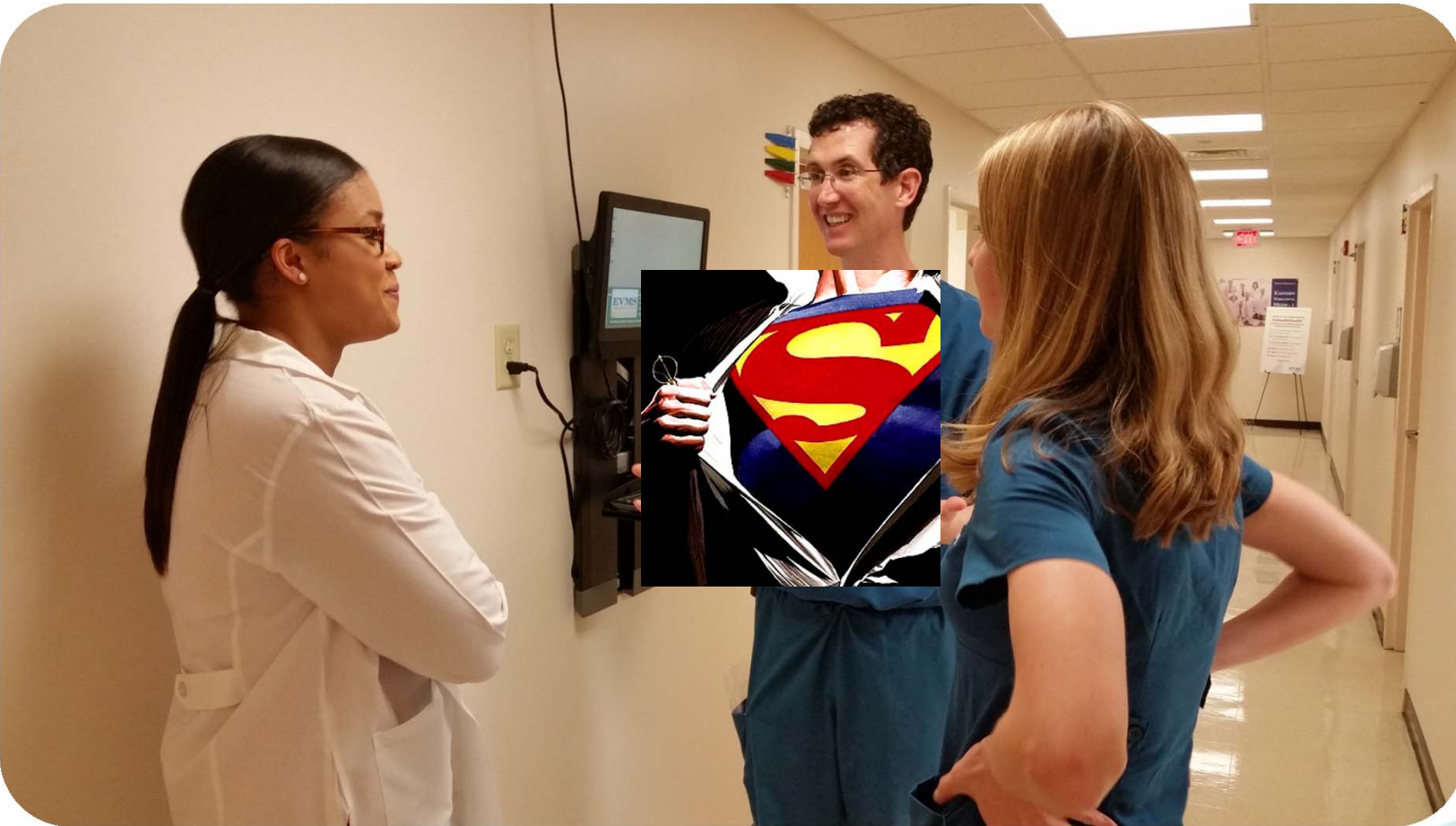
Elemental objectives



Application of games in the clinic



Role playing during patient discussions

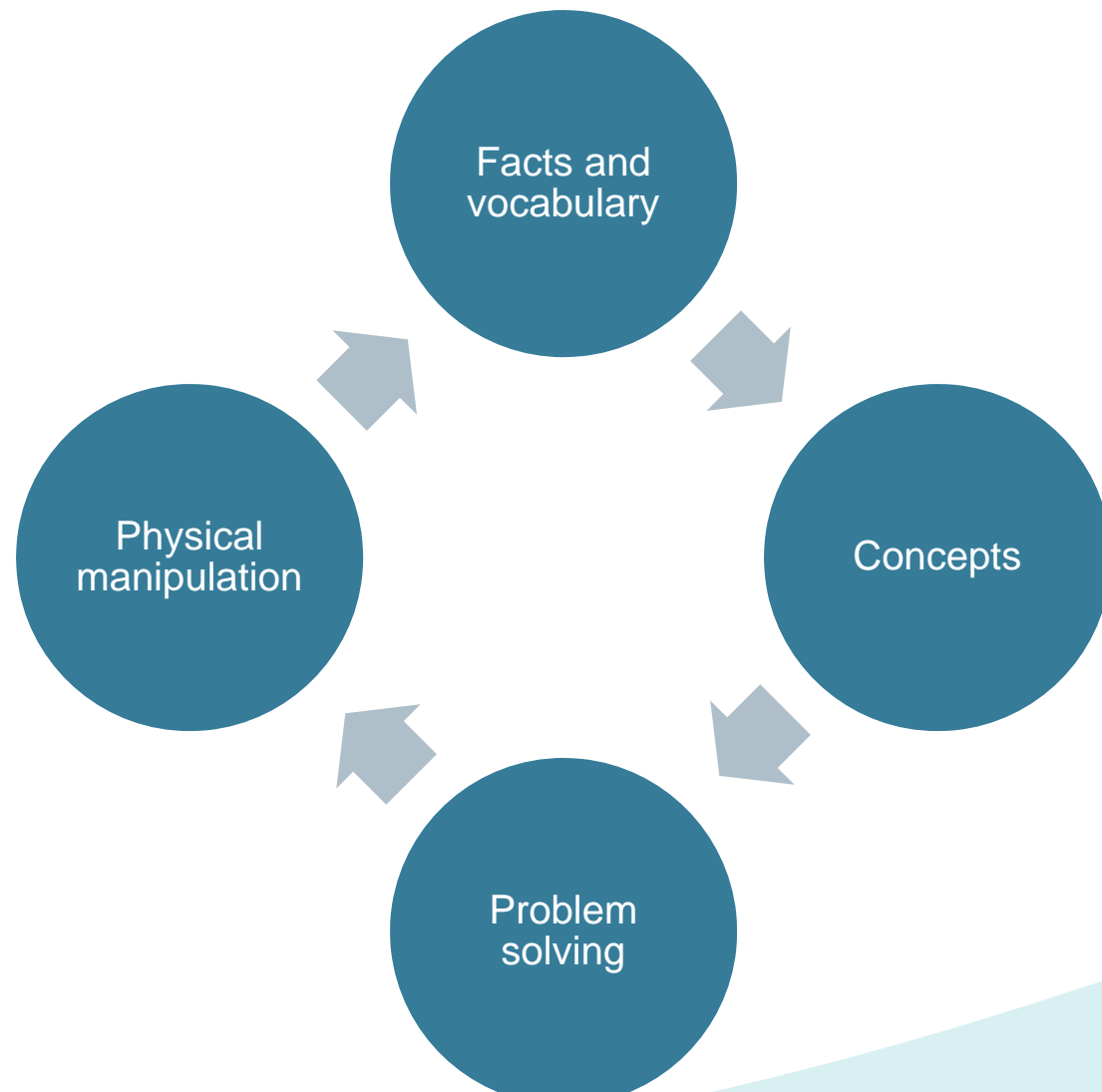


Elemental objectives

ture goals:

Assign game styles
for facts vs
concepts vs
problem solving vs
physical
manipulation

Align game styles
to milestones



Discussion

- What games do you use in your teaching of residents?

Please send your thoughts to me at
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Thank you!



Thank you – carrollht@eyms.edu