

*CRITICAL
THINKING*

As Teachers, we are asked to be critical and creative because these are vital parts of learning.

However, critical and creative thinking was rarely taught to us while in training

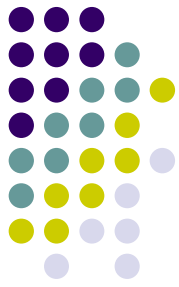


What is a THINKING SKILL?

- Thinking is beyond the level of repeating or memorizing information. Thinking is processing experiences by editing or rearranging them (*Matthew Lipman*)
- Thinking is bringing intellectual faculties into play. It requires one to ponder, reflect or weigh a matter mentally (*Webster's Dictionary*)
- Thinking is a complex act comprising knowledge, attitudes and skills that allow the individual to shape his/her environment more effectively than intuition alone (*Orlich*)

There are really many views on thinking.

For you, who are looking for ways to motivate students to think...



- **Thinking is the act of withholding judgment in order to use...**



- Make lesson plans that include thinking skills.
- Ask thought-provoking questions such as “How do you know?” “Why...?”
- Call on students to tell what they understand.
- Connect each lesson to students’ experiences.
- Ask students to summarize the lesson creatively.



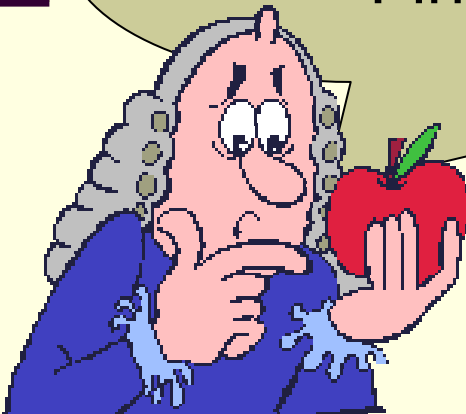


What is Critical Thinking?

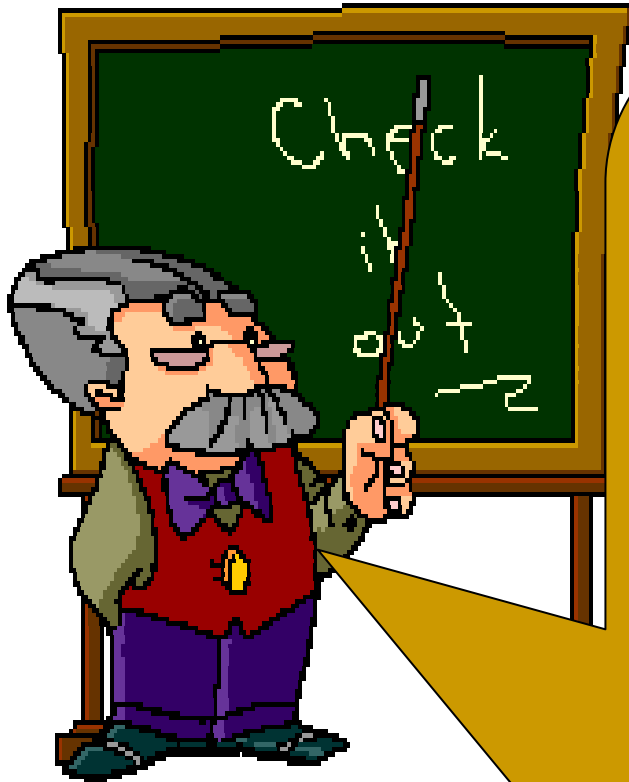
- It is the art of taking charge of the power of your own mind.
- It is about living and learning what empowers you and your students In practical ways.
- It is thinking beyond basic recall of information.
- It involves asking questions to establish ideas, create new ideas, solve problems and make decisions.
- Assists in the transformation of information into something that can be used to anticipate the future.
- It requires choices and responsibility.

Asking questions is the heart of critical thinking.

- Questioning to develop critical thinking requires students to;
 - Raise issues;
 - Discover ideas and things;
 - Pursue problematic areas;
 - Seek clarity and relevance of ideas; and
 - Find evidence and make conclusions.









An individual who thinks critically...



- Is open minded;
- Studies the whole situation;
- Looks for varied choices;
- Uses credible sources;
- Takes a position and justifies it; and
- Is sensitive to the feelings of others.

What is the difference between **critical thinking** and **ordinary thinking**?

- Believing  ○ Assuming
- Preferring  ○ Evaluating
- Associating concepts  ○ Formulating principles
- Supposing  ○ Hypothesizing
- Offering opinions  ○ Offering opinions with reasons
- Making judgments  ○ Making judgment with criteria

*PRACTICAL APPROACH TO
CRITICAL THINKING*



How can critical thinking be taught?

1. ***Recall*** is the simplest action. You recall facts, describe objects and events or put them into sequence.
2. ***Noting similarities*** is the action to compare the likeness of situations, ideas, people, etc.
3. ***Noting differences*** is the action to examine what is different about ideas, events or objects by contrasting them.
4. ***Identifying cause and effect*** is the action to analyze the reasons, consequences or make predictions.

How can critical thinking be taught?

5. *Forming generalizations* is the action of grouping facts or events into patterns.
6. *Substantiation* is the action that moves from general to specific.
7. *Evaluation* is the action that judges things or events. Based on the facts gathered, you determine the value of an idea or concept.

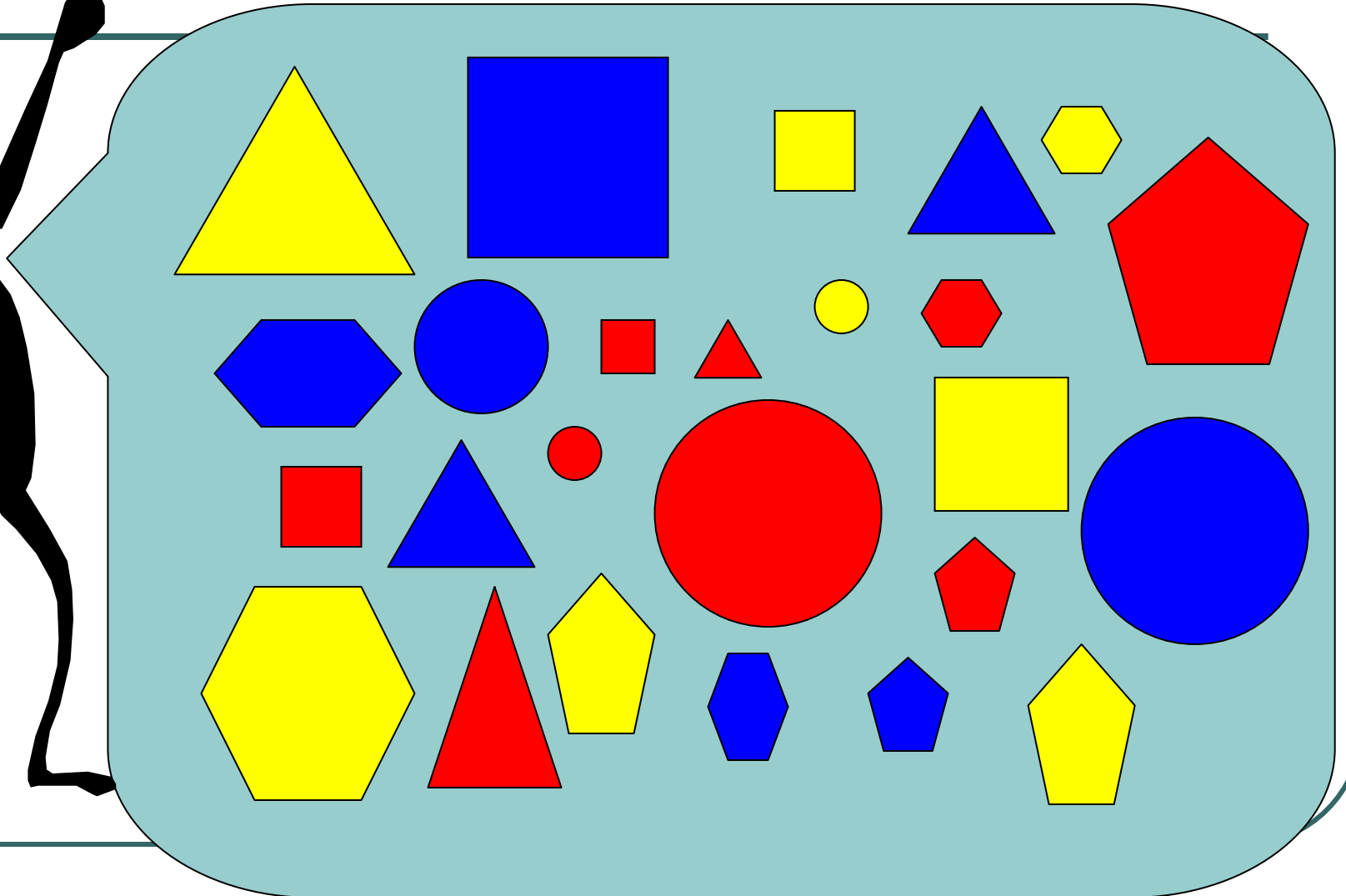
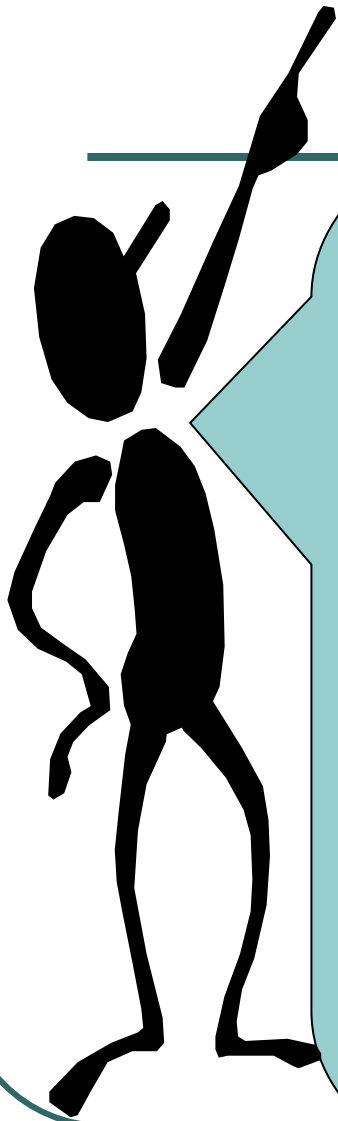
Example Modules:

CLASSIFICATION

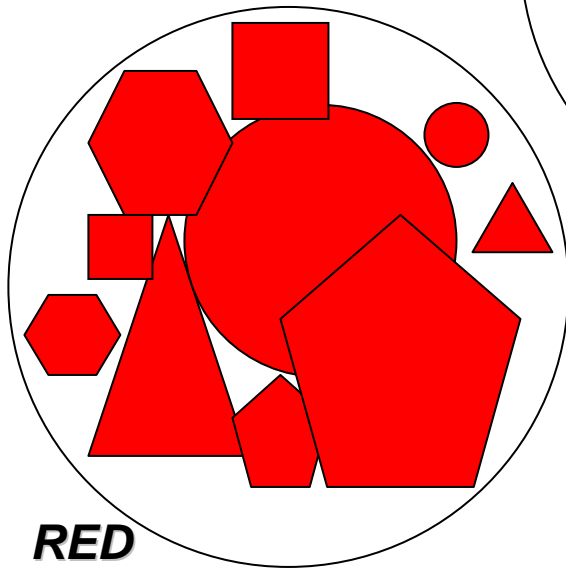
IDENTIFYING PATTERNS / RELATIONSHIPS

REPRESENTING RELATED CONCEPTS

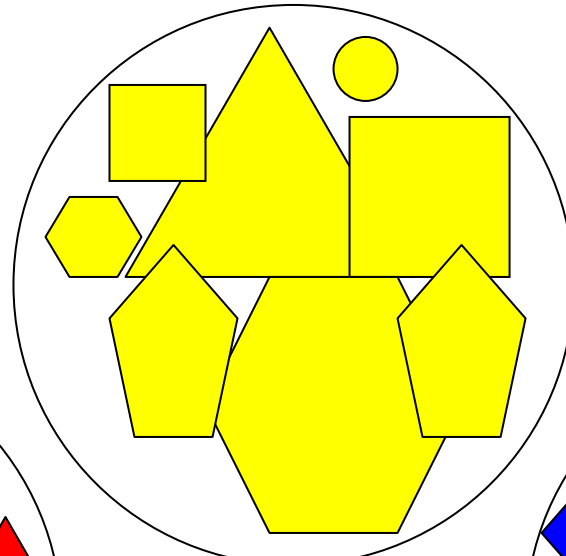
CLASSIFICATION



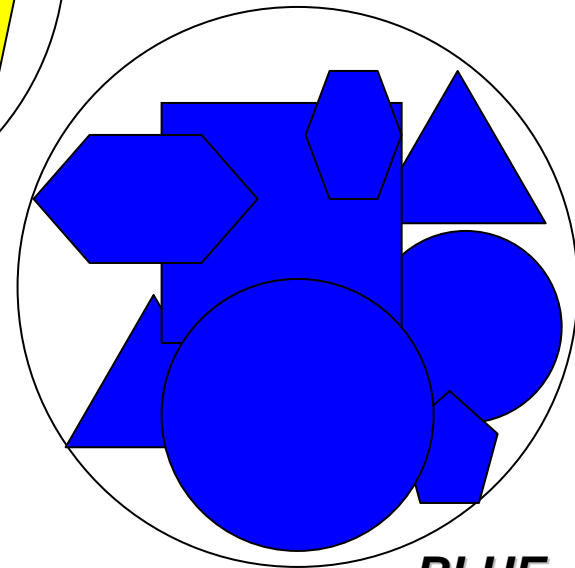
DISCRETE classification:



RED



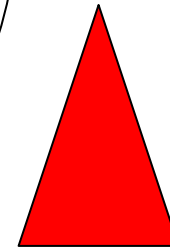
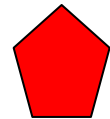
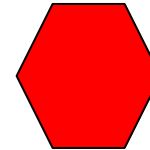
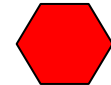
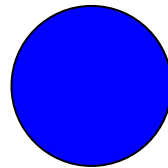
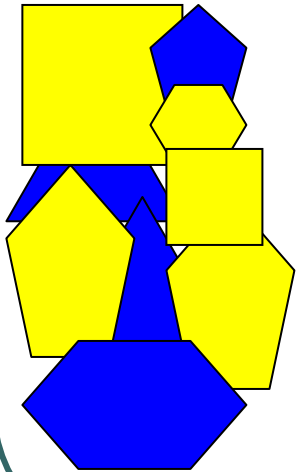
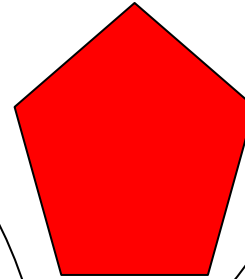
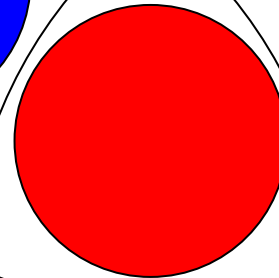
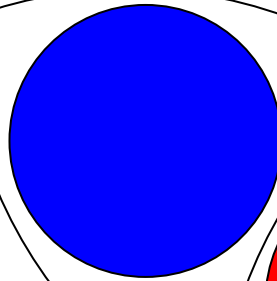
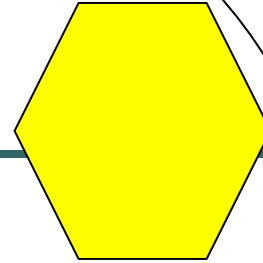
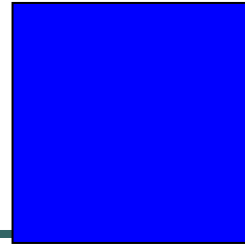
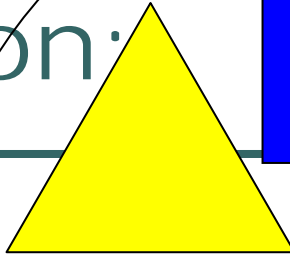
YELLOW



BLUE

OVERLAPPING classification:

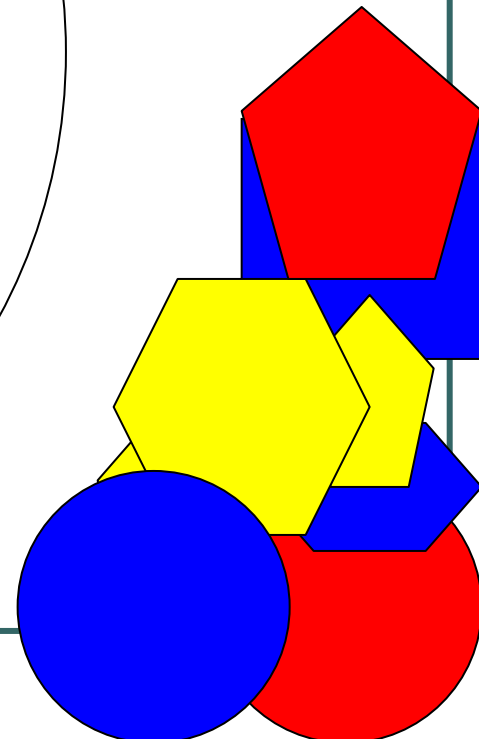
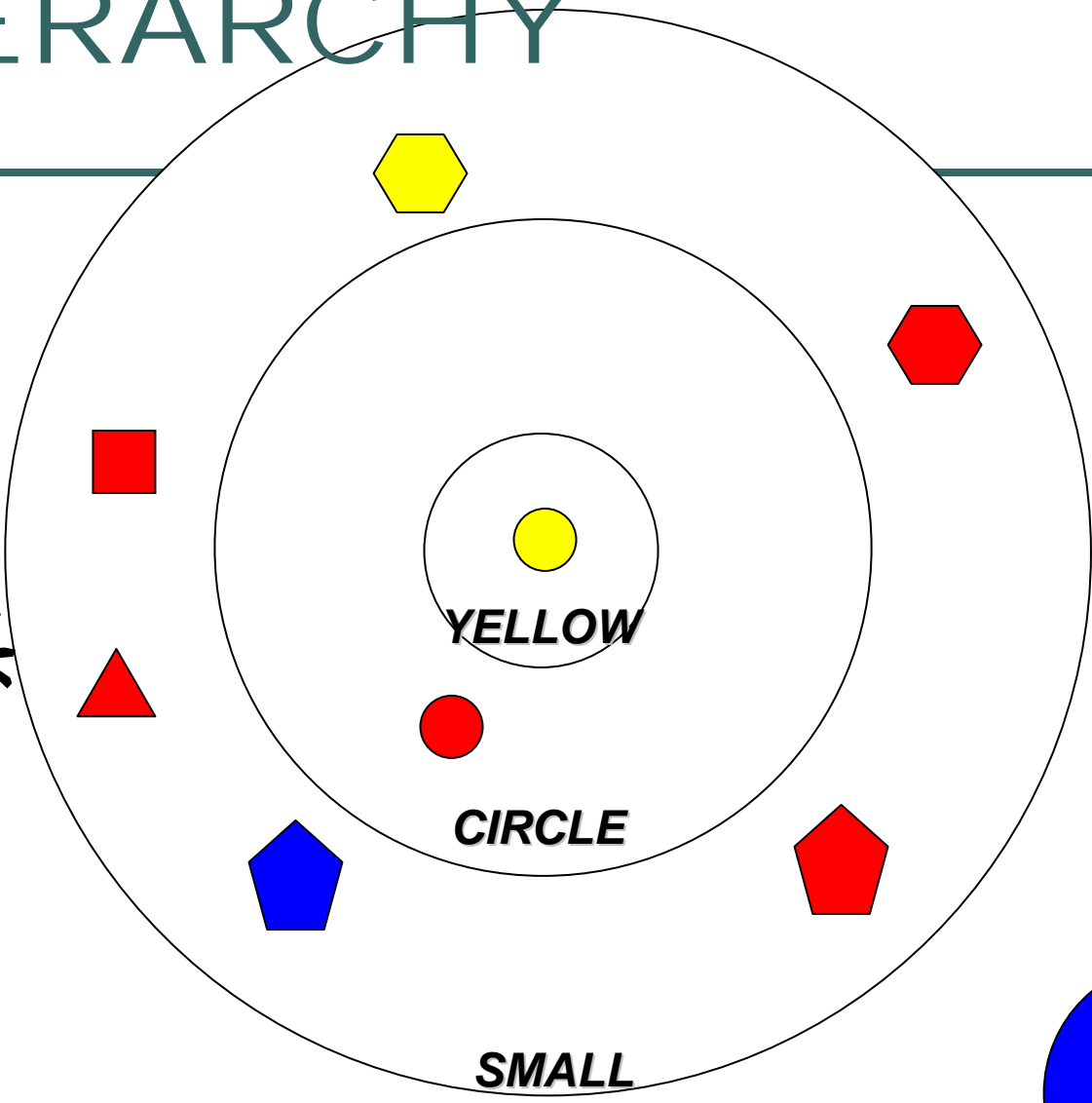
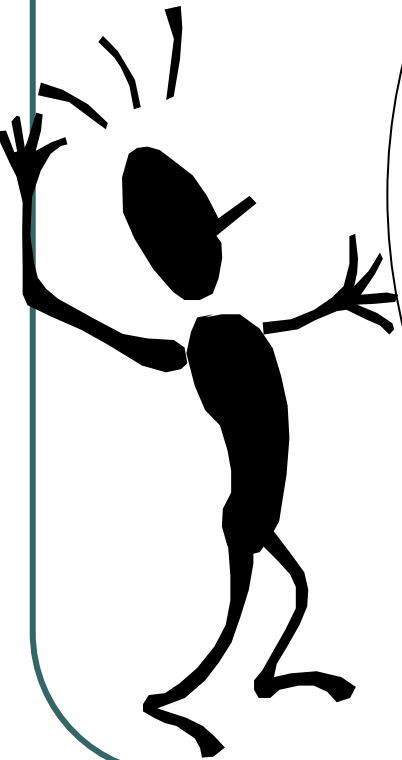
BIG



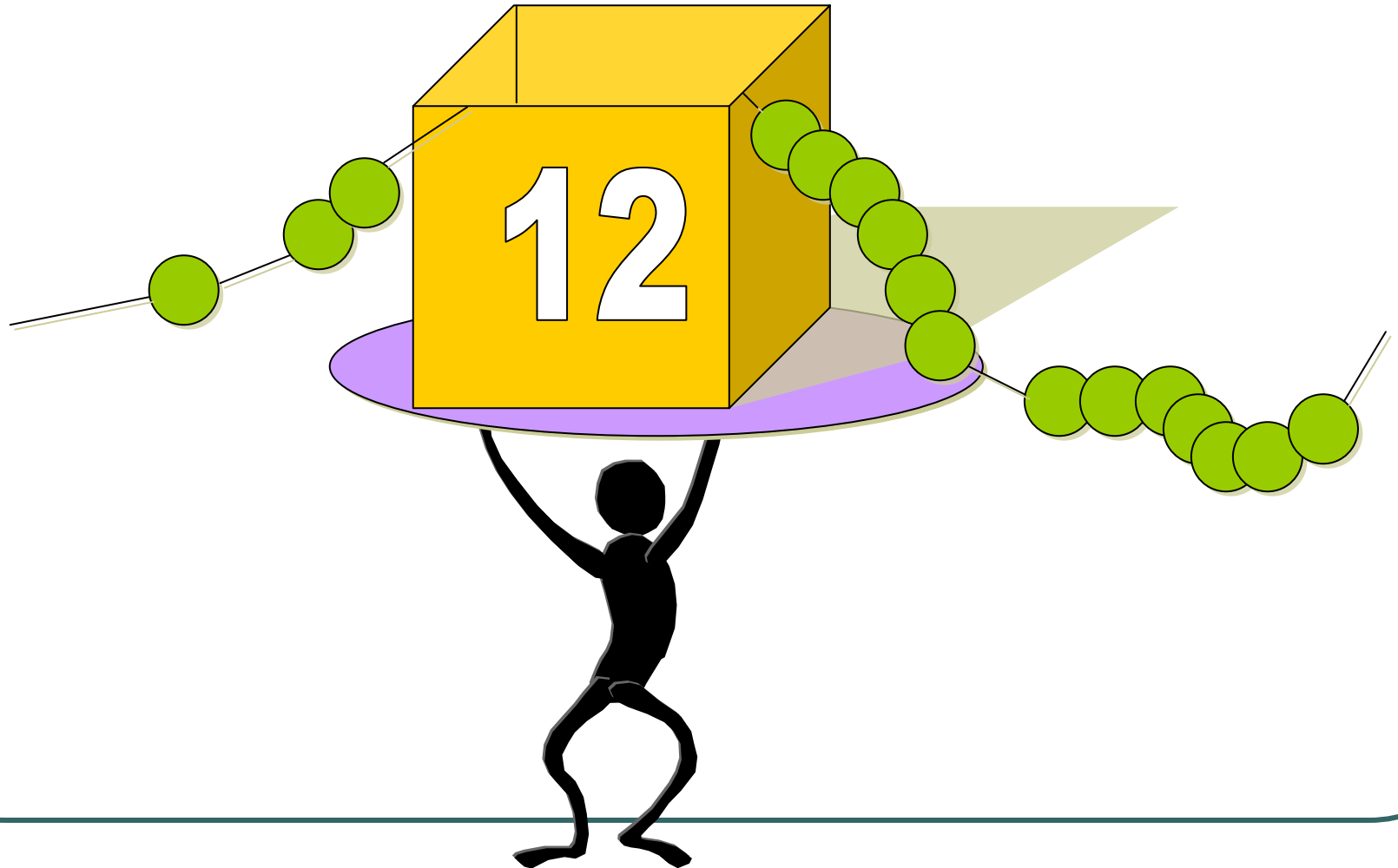
CIRCLE

RED

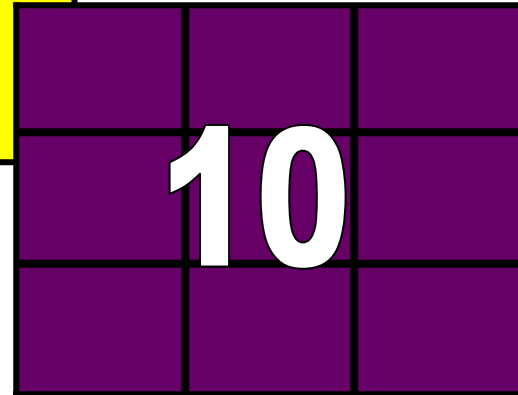
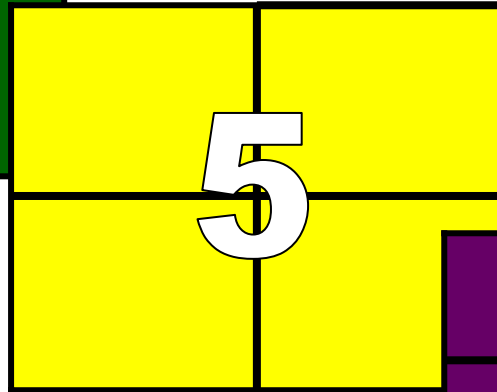
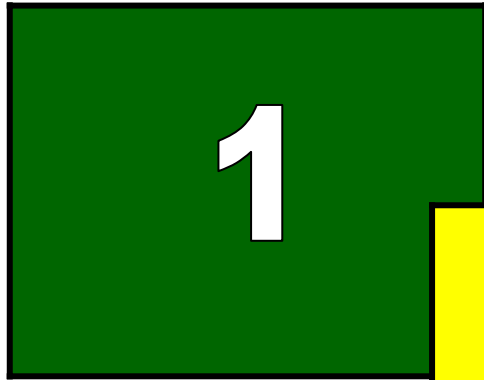
HIERARCHY



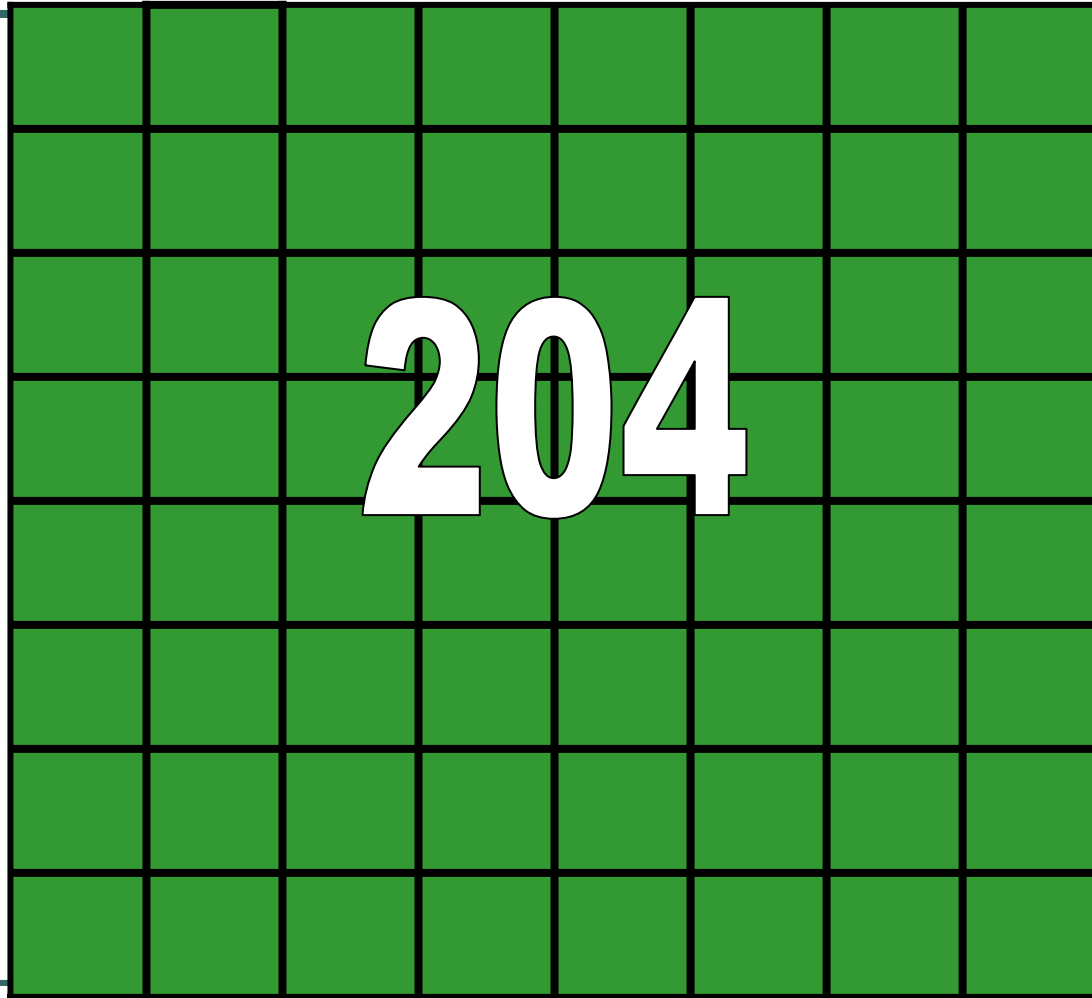
HOW MANY BEADS ARE THERE
INSIDE THE BOX?



IDENTIFYING PATTERN/RELATIONSHIPS

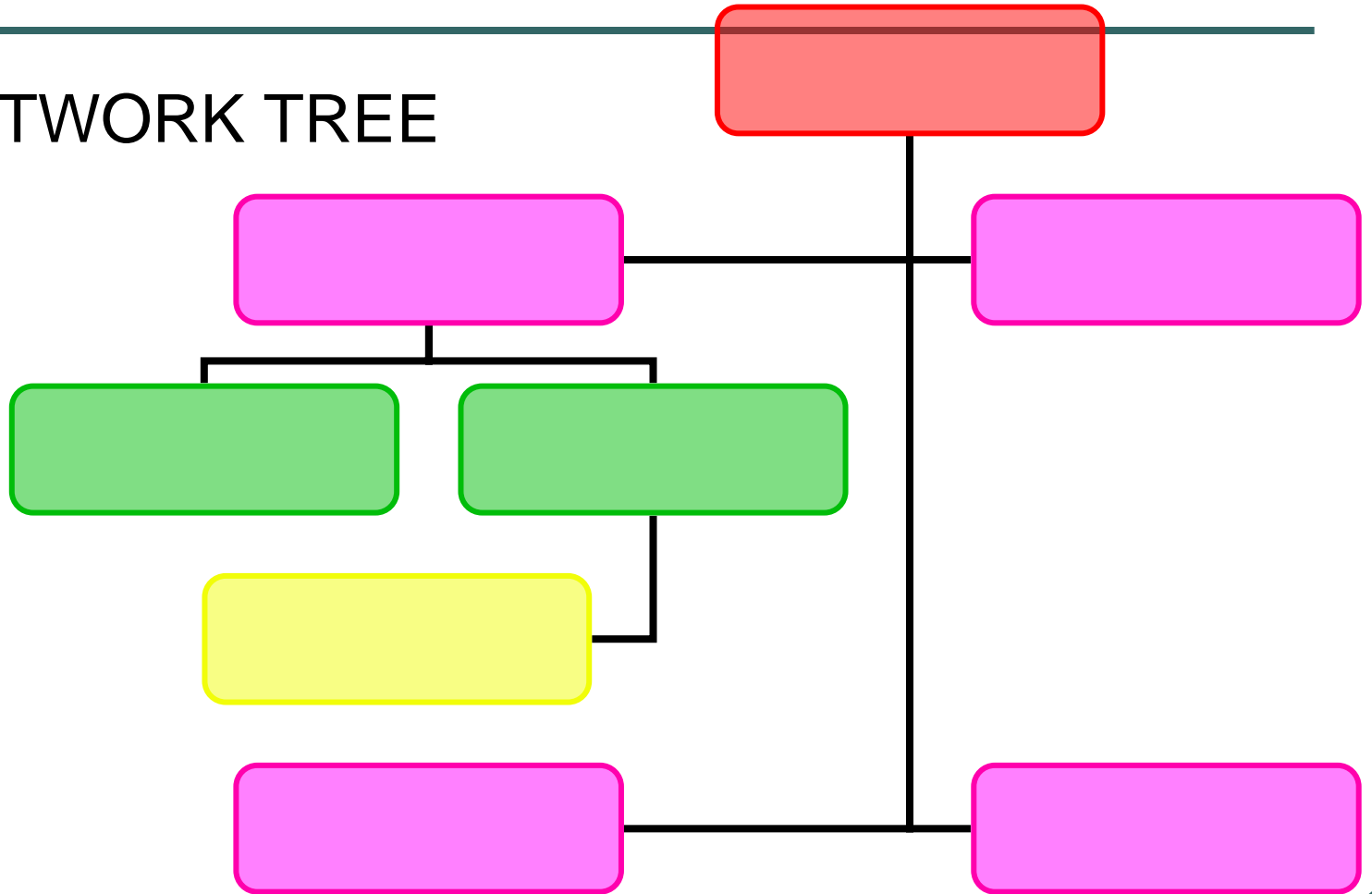


COUNT THE SQUARES!



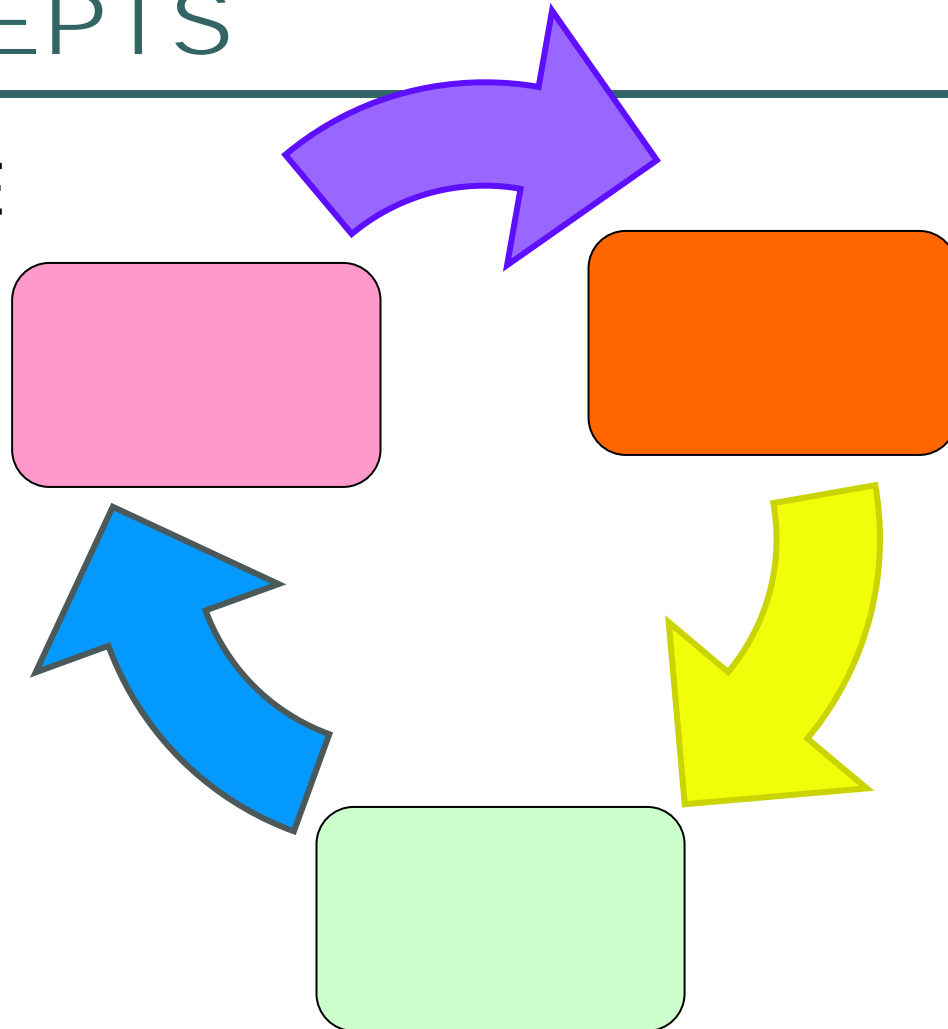
REPRESENTING RELATED CONCEPTS

- NETWORK TREE



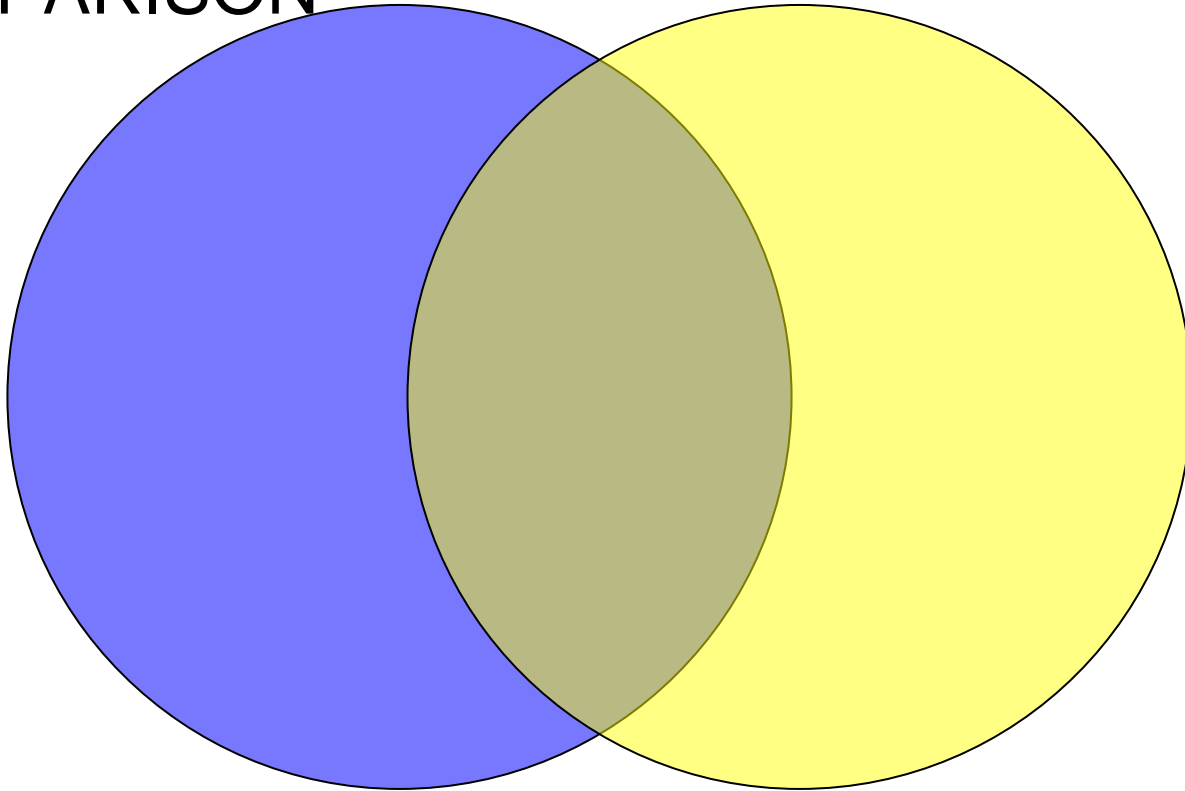
REPRESENTING RELATED CONCEPTS

- CYCLE



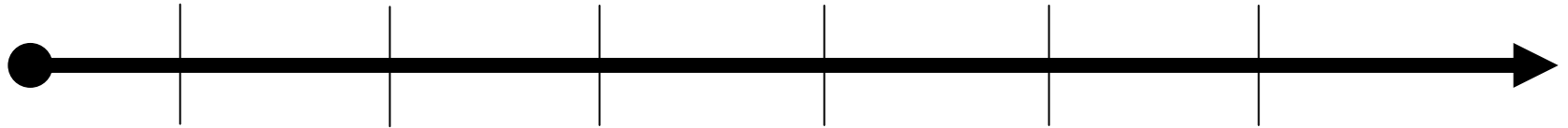
REPRESENTING RELATED CONCEPTS

- **COMPARISON**

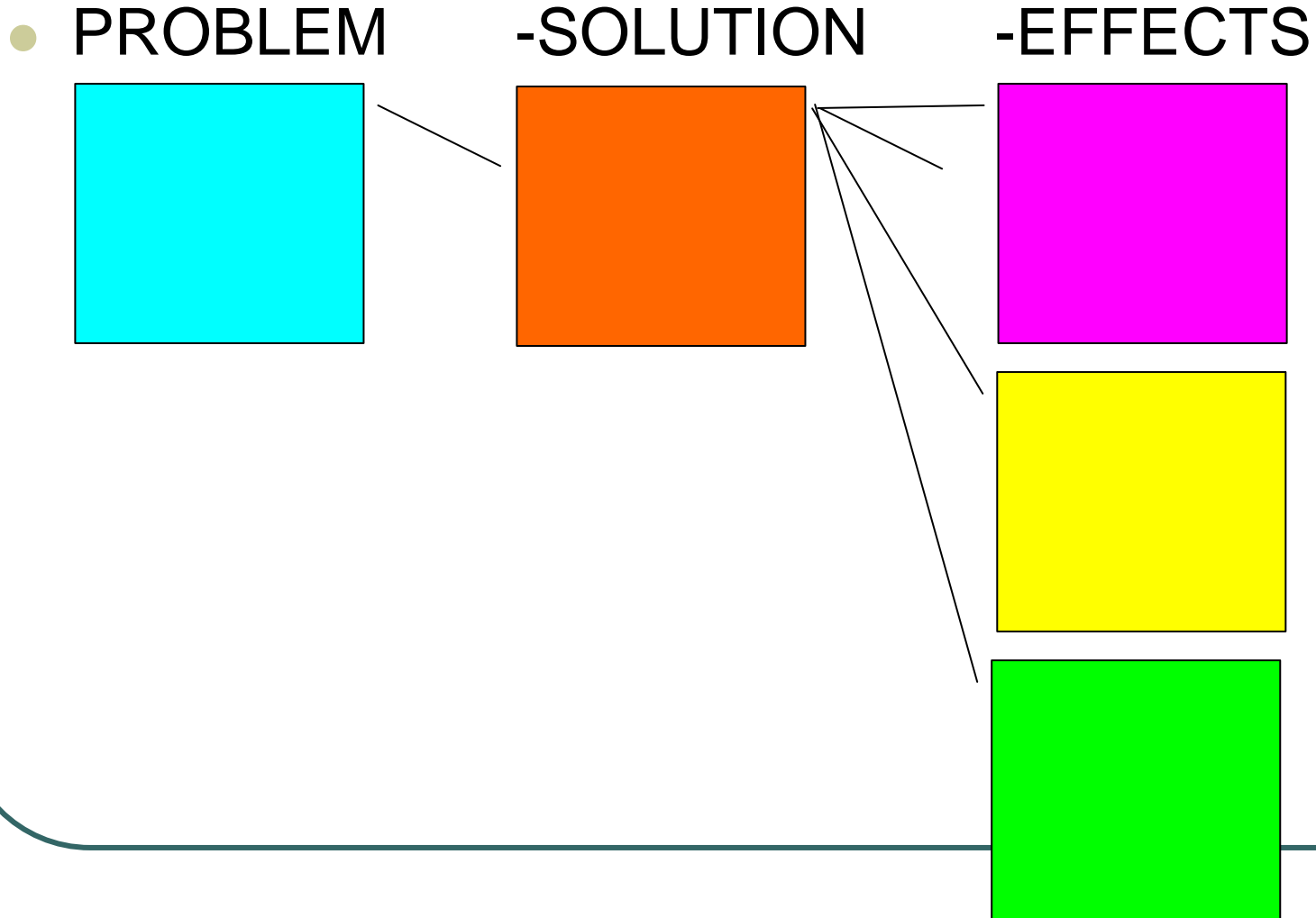


REPRESENTING RELATED CONCEPTS

- **TIMELINE**

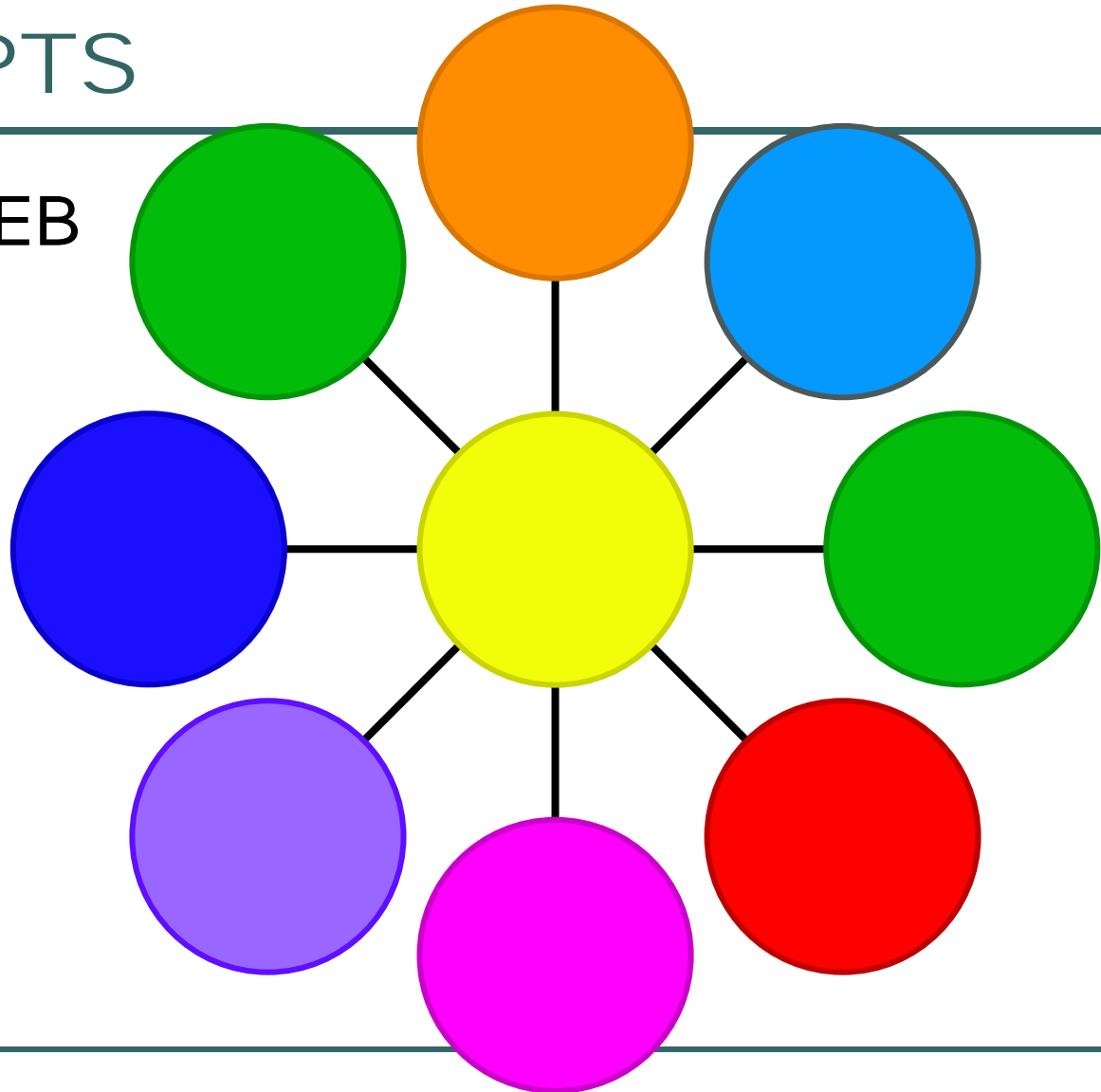


REPRESENTING RELATED CONCEPTS



REPRESENTING RELATED CONCEPTS

- SPIDER WEB



REPRESENTING RELATED CONCEPTS

- **MATRIX OR GRID**

Here are some guidelines for teaching critical thinking:

- Ask students to explain and clarify terms in their own words.
- Ask thought-provoking questions such as *Why?* *How?* *What makes you think so?* *How do they compare?* *Which would be more useful?*

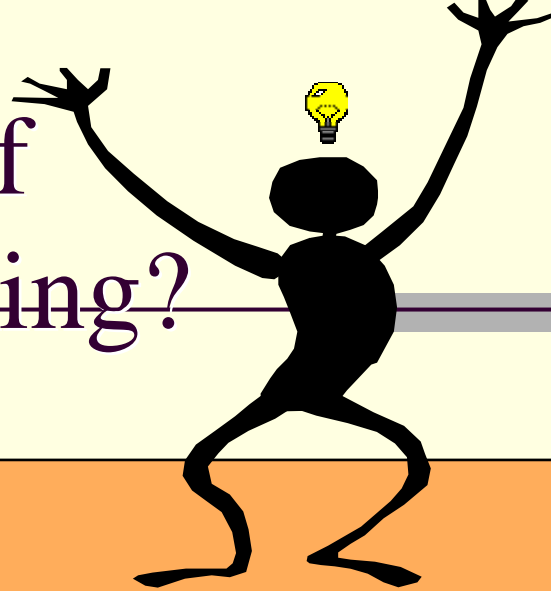


Here are some guidelines for teaching critical thinking:

- Make judgments based on credible sources, such as, experts, agreement between sources, reputable individuals, etc.
- Solve problems to make conclusions.
- Use variety of teaching strategies to promote critical thinking skill such as problem solving and decision making.
- Encourage group problem solving and decision making. Your students will enjoy learning together.



What are the values of teaching critical thinking?



4. This newly created knowledge helps them become more effective persons and hopefully assists them in realizing their life goals.

3. When students ask questions, there is interaction of new information with what they already know so new knowledge is created.

2. The more quality questions they ask, the better critical thinkers they become.

1. the more the students use it, the better critical thinkers they become.