

# **CAN WE THINK FOR A CHANGE? YES!**

## **TRANSFORMING THE CLASSROOM WITH CRITICAL THINKING**

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## BEFORE WE BEGIN

- Can I ask for a commitment?
- No peeking ☺
- The Parking Lot
- If I can have your attention, would you please clap twice
- Find a partner and a group

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## WHY DO WE NEED TO THINK?

- Our שכל is the core of the כלים אלקיים in us and is the כלי of the יצר טוב. It must be developed!
- Thinking the root of problem solving, goal setting, planning
- Thinking is the foundation of self-control and behavioral choices
- Thinking is the research proven link to success in workforce, relationships and making good decisions
- Complicated and fast paced world we are in presents more problems than we have ever faced
- Glut of information but no idea how to use it effectively
- 35,000 conscious decisions PER DAY
- 75% employers do not want to hire graduates due to lack of ability to think critically, innovate or solve problems

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## BENEFITS OF THINKING

- Read between the lines – what was not explicitly said
- Perspective taking
- Clearer and more precise communication
- Make connections
- Conscious outlook instead of impulsive or emotional ones
- Prioritization
- Understand and predicting consequences
- Opinions that are well informed (of what is true AND not true)
- Planning strategically
- Sifting through information for importance and relevance
- Using not just knowing information
- Effective and realistic problem solving
- Innovative and initial ideas
- Work in a detailed and systematic way
- Critique their own ideas and self-correct

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### BIG IDEA:

Thinking provides more than just academic challenge; it enriches learning and enhances our lives

### ESSENTIAL QUESTION:

How can we enrich and enhance our students' learning and lives with thinking?

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#### TODAY WE WILL LEARN:

- Understand what is "Critical Thinking"?
- Examine the criteria of critical thinking and how it is used
- Identify how we can move our students from repeating and rote learning into real thinking through the questions we ask
- Explore some creative ways to engage students in advanced critical thinking

#### BY THE END OF THIS SESSION YOU WILL BE ABLE TO:

- Define "critical thinking"
- Be able to identify when your students are thinking critically and when they are not
- Design questions that foster critical thinking for any age group or subject matter
- Select one area of critical thinking to employ tomorrow

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#### WHAT IS CRITICAL THINKING?

- Critical Thinking is thinking in a structured way to **produces new thoughts** of your own
- Critical Thinking uses knowledge as its foundation to **ensure that you have good reasons for your thoughts** (knowing *why* you think what you think) and that those reasons are valid and true
- Critical Thinking can also be used to **evaluate the thoughts of others** in order to validate, expand or dispute them

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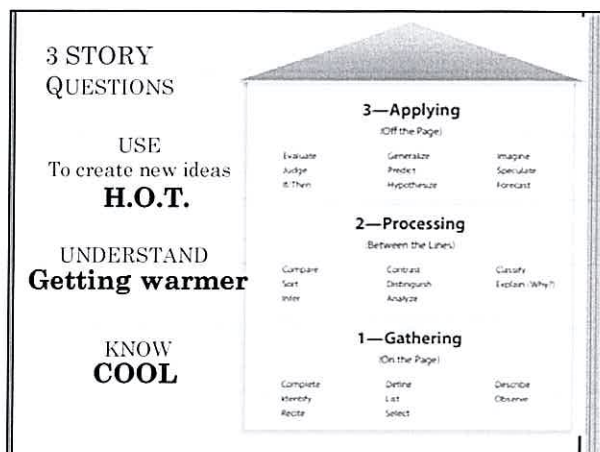
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COOL QUESTIONS (LEVEL 1)	H.O.T QUESTIONS (LEVEL 2-3)
<ul style="list-style-type: none"> <li>Who</li> <li>What is</li> <li>Where</li> <li>When</li> <li>Why</li> <li>How</li> <li>How many</li> <li>Translate</li> </ul>	<ul style="list-style-type: none"> <li>Who would be able to...?</li> <li>What could be an alternative?</li> <li>Where do we see this in life?</li> <li>When is this acceptable / not?</li> <li>Why would he... and why would he not?</li> <li>How is this similar to...?</li> <li>How many would be needed if...?</li> <li>What other words could have been used?</li> </ul>
REPEAT / RECALL COMPREHENSION	REASONING, CLARIFY / EXPLAIN, COMPARE / DIFFERENTIATE, FINDING EVIDENCE, MAKE CONNECTIONS, FIND RELEVANCE INTERPRET, EVALUATION, ARGUE FOR or AGAINST PROVIDE ALTERNATIVES, CHALLENGE ASSUMPTIONS, PRIORITIZE, PROBLEM SOLVE

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A FEW I.D.E.A.S. TO GET TO LEVEL 3 - EARLY GRADES
<ul style="list-style-type: none"> <li><b>I – Inquiry</b> : begin with a question and then research through resources or experiment to build understanding How is pizza made?</li> <li><b>D – Design</b> : begin with clarifying a problem and then brainstorm ideas, evaluate or test them to decide on a product or solution to create How can we build a structure that is high but doesn't tip?</li> <li><b>E – Evaluation</b> : begin with a product / idea and then use criteria to evaluate its quality or significance Is the city mouse a good friend? Is the field mouse?</li> <li><b>A – Argumentation</b> : begin with a claim and then justify it or critique it with evidence for or against All bears are basically the same.</li> <li><b>S – Systems Analysis</b> – begin with a whole and how its parts relate and then predict consequences (short / long term; positive and negative) if changes are made to a part Plant part: what would happen without the roots? Leaves? etc</li> </ul>

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### A FEW I.D.E.A.S. TO GET TO LEVEL 3 - UPPER GRADES

- **I - Inquiry** : begin with a question and then research through resources or experiment to build understanding  
What would make a soldier volunteer to fight in the Civil War?
- **D - Design** : begin with clarifying a problem and then brainstorm ideas, evaluate or test them to decide on a product or solution to create  
How can we build a bridge that can sustain weight?
- **E - Evaluation** : begin with a product / idea and then use criteria to evaluate its quality or significance  
Did the original US society reflect the democracy of 2023?
- **A - Argumentation** : begin with a claim and then justify it or critique it with evidence for or against  
Government provided school lunch should offer healthy food only.
- **S - Systems Analysis** - begin with a whole and how its parts relate and then predict consequences (short / long term; positive and negative) if changes are made to a part  
What would America look like today minus the Legislative branch?

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### SOME CREATIVE SYSTEM 3 STRATEGIES

- Metaphors
- R.A.F.T.
- Polar opposites
- Mystery Lessons
- YES and NO examples
- Quote (or Problem) of the day
- Stick-it-Together
- Inductive learning
- In all of these activities, we set up a motivating question or problem for students to resolve using their new knowledge
- Notice several I.D.E.A.S. combined within the strategy
- The combination of creativity with critical thinking flexes the mind even more and makes it fun

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### THE SIGNS OF THINKERS

- Don't jump to conclusions
- Work systematically
- Ask important questions
- Argue with themselves
- Willing to change their opinions
- Read and write copiously
- Welcome adversity and challenge
- Stay calm!

### HOW WE CREATE THINKERS

- Start with Big Ideas and Essential Questions
- Challenge students to ask questions
- Ask three story questions
- Probe and extract more thinking - Why? Why?
- Create activities that require critical thinking
- Welcome diverse responses

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## DEBUNKING THE MYTHS

MYTH: Not all students are capable of critical thinking.

TRUTH: Although some students intuitively think more critically than others, thinking skills can be taught and cultivated. When posing a thought-provoking question or a problem to be resolved, break the task into a series of steps and coach (don't tell) them what to do. Besides strategic thinking is best done collaboratively, so break the students into small groups to work together.

MYTH: Critical thinking tasks should be hard.

TRUTH: Critical thinking is greater in *cognitive complexity*, but does not necessarily need to be "hard" to do! When questions are created and structured well there is a logical progression that may even ensure that it's NOT "hard" – just stimulating. Thinking is about *digging deeper into concepts* and understanding how different ideas work together, not about pressure and stress.



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## A FINAL THOUGHT

“If everyone is thinking alike,  
then somebody isn't thinking.”

- George Patton



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## CRITICAL THINKING ACTIVITIES

### Metaphors

When you teach are you a...



### Polar Opposites

תפילה is...

A means.....An ends  
Constant.....Evolving  
For me.....For Hashem  
Formal.....Informal  
Obligation.....Privilege

### R.A.F.T.

Choose a Role, Audience,  
Format, and Topic

*LUNG / SMOKERS / LETTER /  
CIGARETTE SMOKE*

*DUCK / CONGRESS /  
COMPLAINT / OIL SPILLS*

GREEK / SELF / DIARY /  
MATISYAHU's DECLARATION

### Mystery

Formulate a question:

As late as 1830 Jews in Spain were still  
being sentenced to Death by the  
Inquisition for the practice of Jewish law

By the 1700s Jewish law had been  
completely forgotten and was no longer  
practiced in Spain

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גחזי is cursed with leprosy for his lie

גחזי is blessed with 8 blessings as a  
reaction to his lie

## CRITICAL THINKING ACTIVITIES

<b>Stick-it-Together</b>	<b>Quote of the Day</b>  “If I had an hour to solve a problem, I’d spend 55 minutes thinking about the problem and 5 minutes thinking of solutions.”  <i>-Albert Einstein</i>
<b>Yes and No Examples</b>	<b>Inductive Learning</b>



# BENEFITS OF CRITICAL THINKING

IMPROVED RELATIONSHIPS	BETTER DECISIONS	GREATER SUCCESS	<i>IRRELEVANT</i>



AGREE

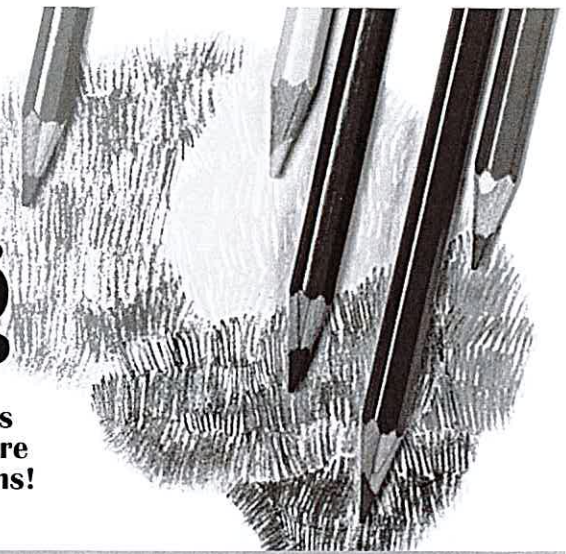
DISAGREE





# The Ultimate Cheatsheet for Critical Thinking

Want to exercise critical thinking skills? Ask these questions whenever you discover or discuss new information. These are broad and versatile questions that have limitless applications!



<b>Who</b>	<ul style="list-style-type: none"> <li>... benefits from this?</li> <li>... is this harmful to?</li> <li>... makes decisions about this?</li> <li>... is most directly affected?</li> </ul>	<ul style="list-style-type: none"> <li>... have you also heard discuss this?</li> <li>... would be the best person to consult?</li> <li>... will be the key people in this?</li> <li>... deserves recognition for this?</li> </ul>
<b>What</b>	<ul style="list-style-type: none"> <li>... are the strengths/weaknesses?</li> <li>... is another perspective?</li> <li>... is another alternative?</li> <li>... would be a counter-argument?</li> </ul>	<ul style="list-style-type: none"> <li>... is the best/worst case scenario?</li> <li>... is most/least important?</li> <li>... can we do to make a positive change?</li> <li>... is getting in the way of our action?</li> </ul>
<b>Where</b>	<ul style="list-style-type: none"> <li>... would we see this in the real world?</li> <li>... are there similar concepts/situations?</li> <li>... is there the most need for this?</li> <li>... in the world would this be a problem?</li> </ul>	<ul style="list-style-type: none"> <li>... can we get more information?</li> <li>... do we go for help with this?</li> <li>... will this idea take us?</li> <li>... are the areas for improvement?</li> </ul>
<b>When</b>	<ul style="list-style-type: none"> <li>... is this acceptable/unacceptable?</li> <li>... would this benefit our society?</li> <li>... would this cause a problem?</li> <li>... is the best time to take action?</li> </ul>	<ul style="list-style-type: none"> <li>... will we know we've succeeded?</li> <li>... has this played a part in our history?</li> <li>... can we expect this to change?</li> <li>... should we ask for help with this?</li> </ul>
<b>Why</b>	<ul style="list-style-type: none"> <li>... is this a problem/challenge?</li> <li>... is it relevant to me/others?</li> <li>... is this the best/worst scenario?</li> <li>... are people influenced by this?</li> </ul>	<ul style="list-style-type: none"> <li>... should people know about this?</li> <li>... has it been this way for so long?</li> <li>... have we allowed this to happen?</li> <li>... is there a need for this today?</li> </ul>
<b>How</b>	<ul style="list-style-type: none"> <li>... is this similar to _____?</li> <li>... does this disrupt things?</li> <li>... do we know the truth about this?</li> <li>... will we approach this safely?</li> </ul>	<ul style="list-style-type: none"> <li>... does this benefit us/others?</li> <li>... does this harm us/others?</li> <li>... do we see this in the future?</li> <li>... can we change this for our good?</li> </ul>