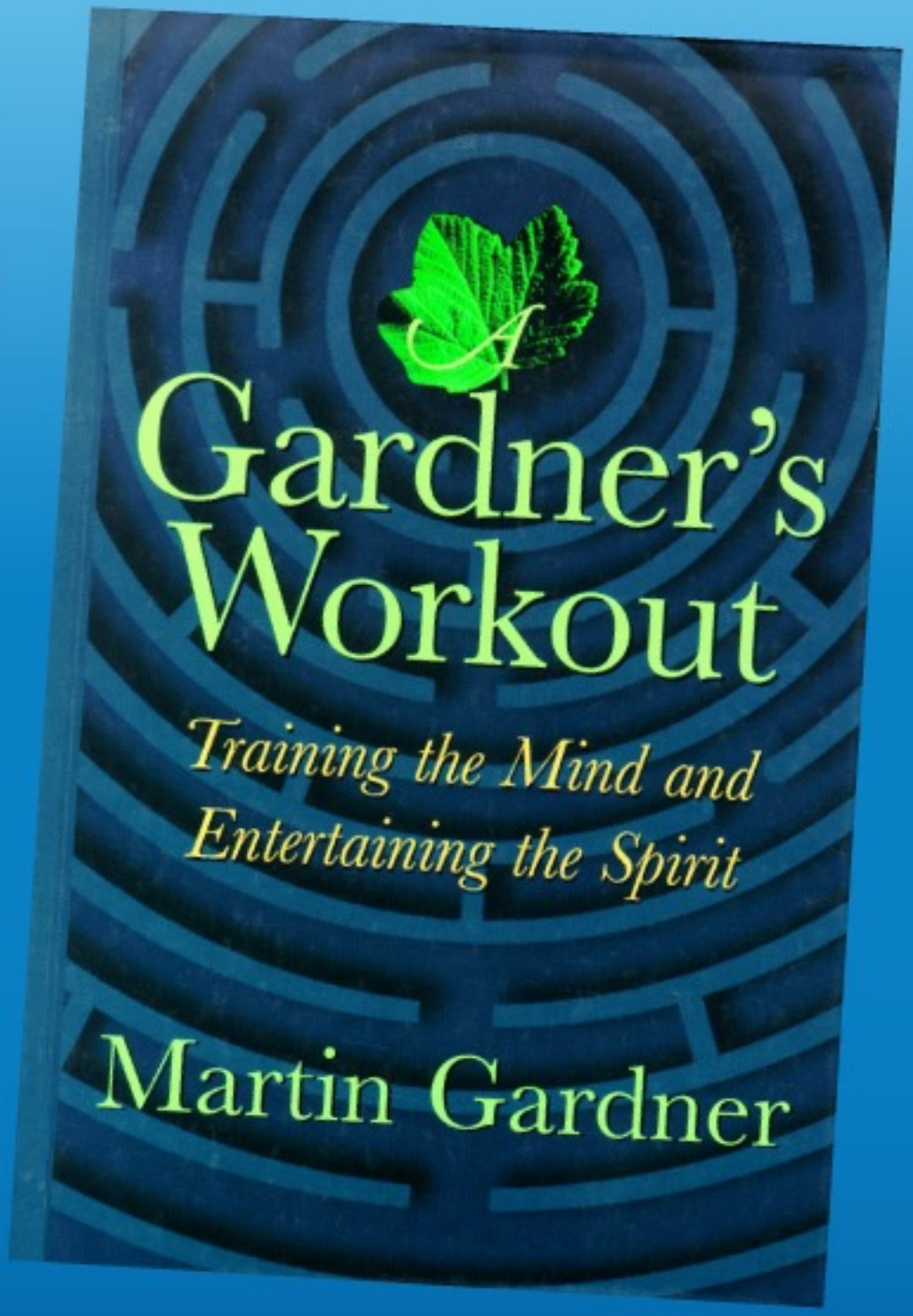

ThinkFun®

"The best way to keep students awake is to introduce recreational material that they perceive as fun."



Martin Gardner, "Fuzzy New New Math", New York Review of Books, September 24, 1998.

University level thinking skills for grade school kids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PROBLEM SOLVING 201
How To Create Your Own
Chocolate Fix Puzzle
YouTube


0:04 / 1:11
CC


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Mark Engelberg
Programmer, Teacher & Creator of Chocolate Fix
YouTube

YouTube

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Course Goals

Teach students how to reason systematically

Teach students how to explain their reasoning

Teach students to love doing this because it's so much fun!

TFU

CHOCOLATE FIX®

Visual Logic Puzzle Deduction System


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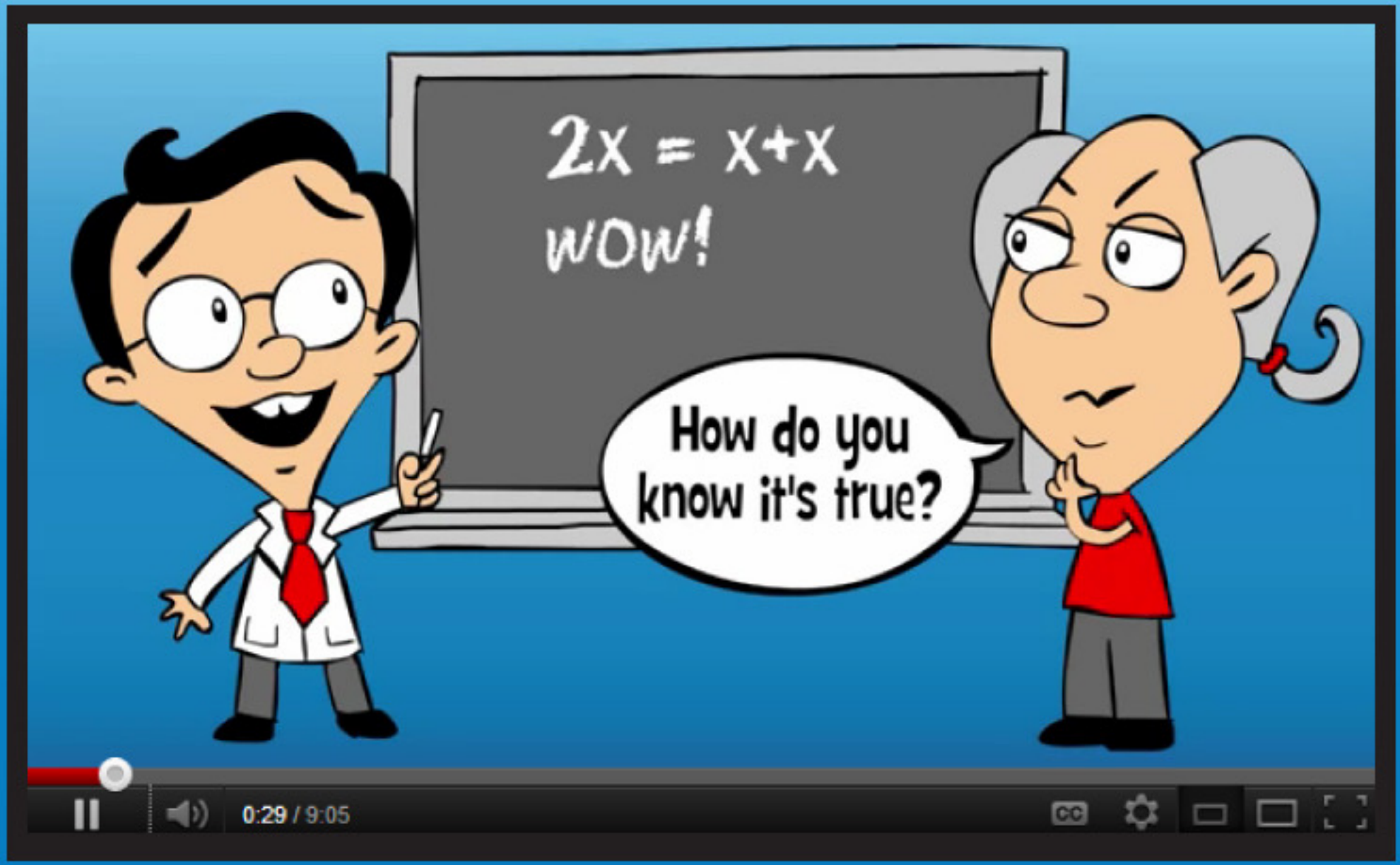
Introduction to
CHOCOLATE FIX
0:04 / 8:00


CHOCOLATE FIX
CHALLENGE
R
reset grid
SELECT BOOKMARK TO REVERT TO ITS STATE
Scroll Bookmarks
bookmark
ThinkFun
UNIVERSITY
0:29 / 4:58
CC


2x = x+x
wow!
How do you know it's true?
0:29 / 9:05

CHOCOLATE FIX

WORKBOOK 1 - SET A

CHALLENGE 7

CHALLENGE 8

Page 4

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CHOCOLATE FIX

WORKBOOK 1 - SET A

CHALLENGE 1

CHALLENGE 2

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WORKBOOK 1 SET A
SOLUTIONS

CHOCOLATE FIX

PROBLEM SOLVING 201:
How To Make Your Own Chocolate Fix Puzzle

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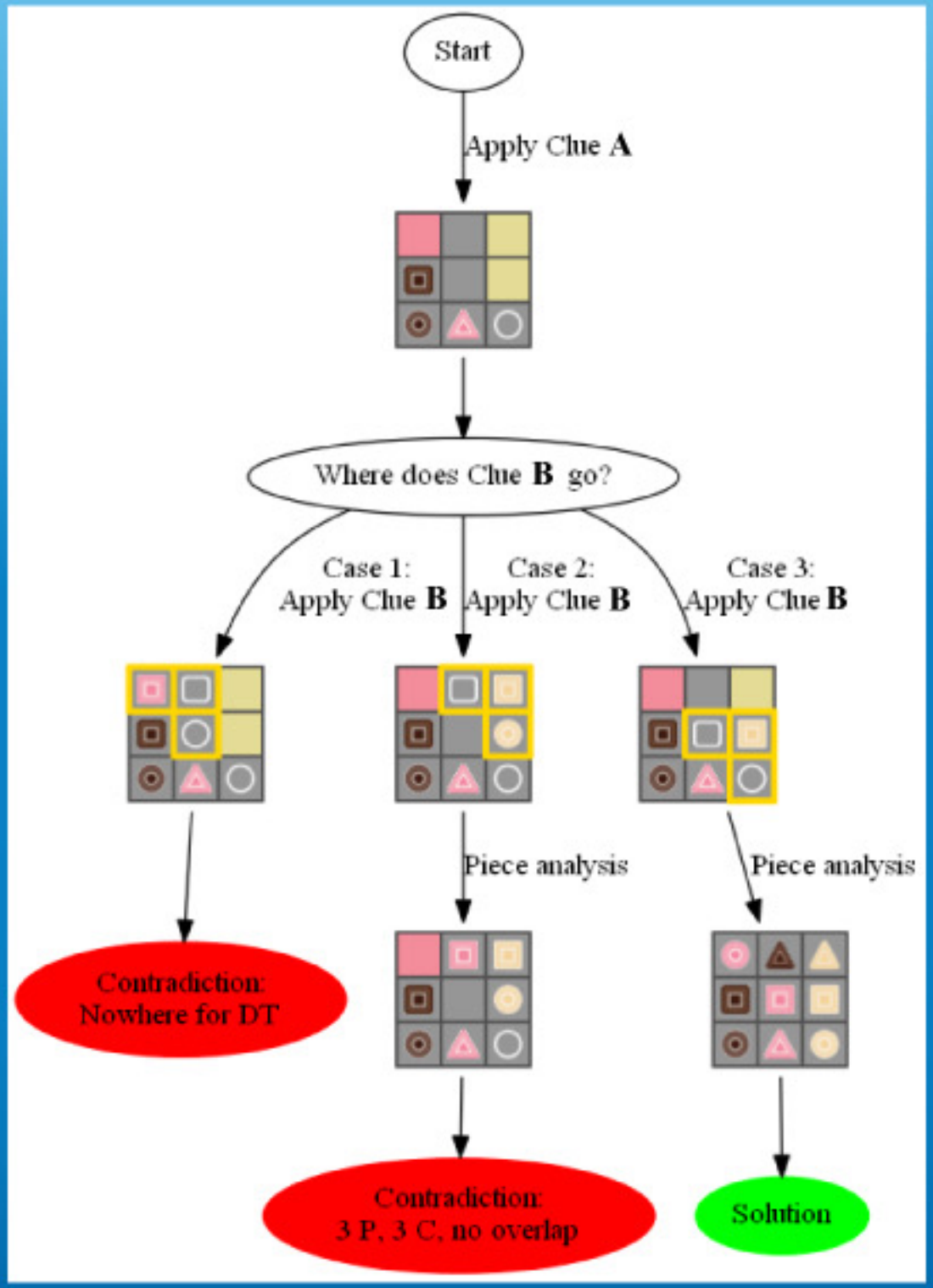
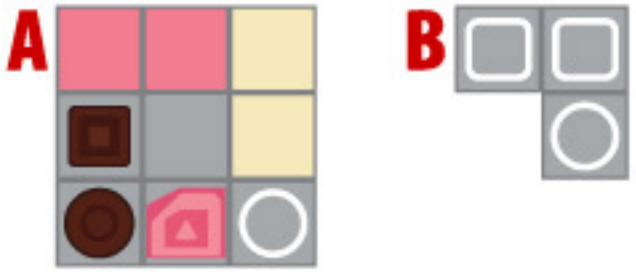

Start
Apply Clue A
Where does Clue B go?
Case 1: Apply Clue B
Case 2: Apply Clue B
Case 3: Apply Clue B
Piece analysis
Piece analysis
Contradiction: Nowhere for DT
Contradiction: 3 P, 3 C, no overlap
Solution

CHALLENGE


A
B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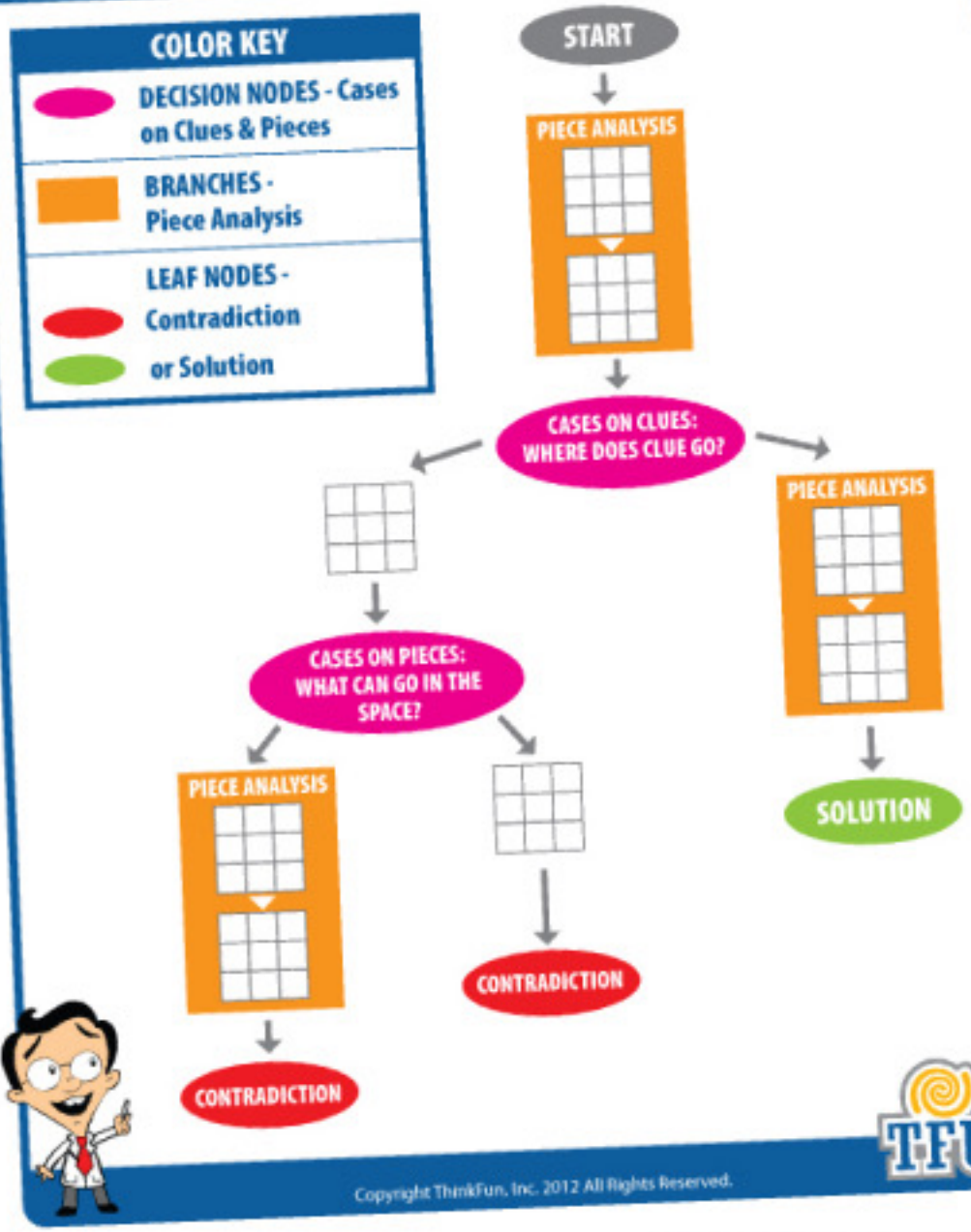
CHOCOLATE FIX

TREE ANALYSIS MAP



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CHOCOLATE FIX

NODES
2 KINDS OF DECISIONS

1 CONSIDER ALL THE PLACES A CLUE CAN GO

CLUE:

TREE:

WHERE DOES CLUE GO?

CASE 1

CASE 2

2 CONSIDER ALL THE PIECES THAT CAN GO IN A CERTAIN SPOT

WHAT CAN GO IN THE TOP LEFT?

CASE 1

TOP LEFT

CASE 2

TOP LEFT

CHOCOLATE FIX

BRANCHES
3 TYPES OF PIECE ANALYSIS

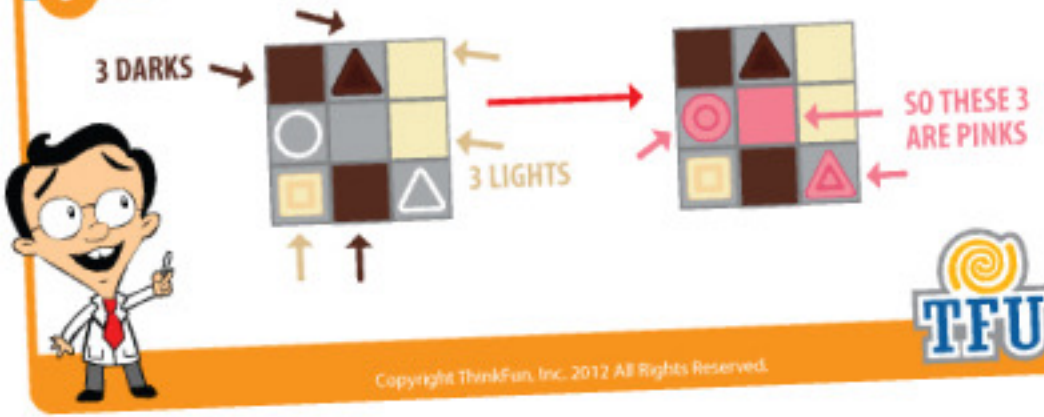
1 ONLY ONE PIECE LEFT FOR A SPECIFIC PLACE

THE ONLY PIECE FOR THE BOTTOM LEFT IS

2 ONLY ONE PLACE LEFT FOR A SPECIFIC PIECE

THE ONLY PLACE FOR IS THE TOP RIGHT

3 THE "3/3/3" DEDUCTION



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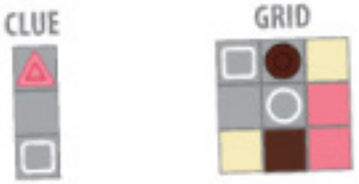
CHOCOLATE FIX

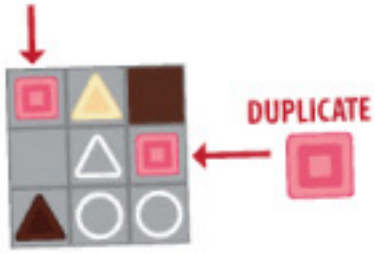
END NODES
5 TYPES OF CONTRADICTIONS

1 NO FIT FOR CLUE



CLUE DOESN'T FIT THE GRID

2 DUPLICATE PIECE

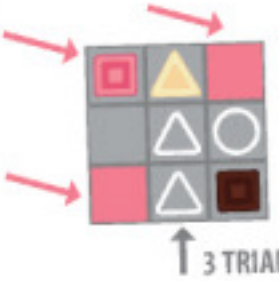


3 TOO MANY _____

TOO MANY CIRCLES

4 NO PLACE FOR PIECE

5 3 COLOR / 3 SHAPE / NO OVERLAP



NO OVERLAP!

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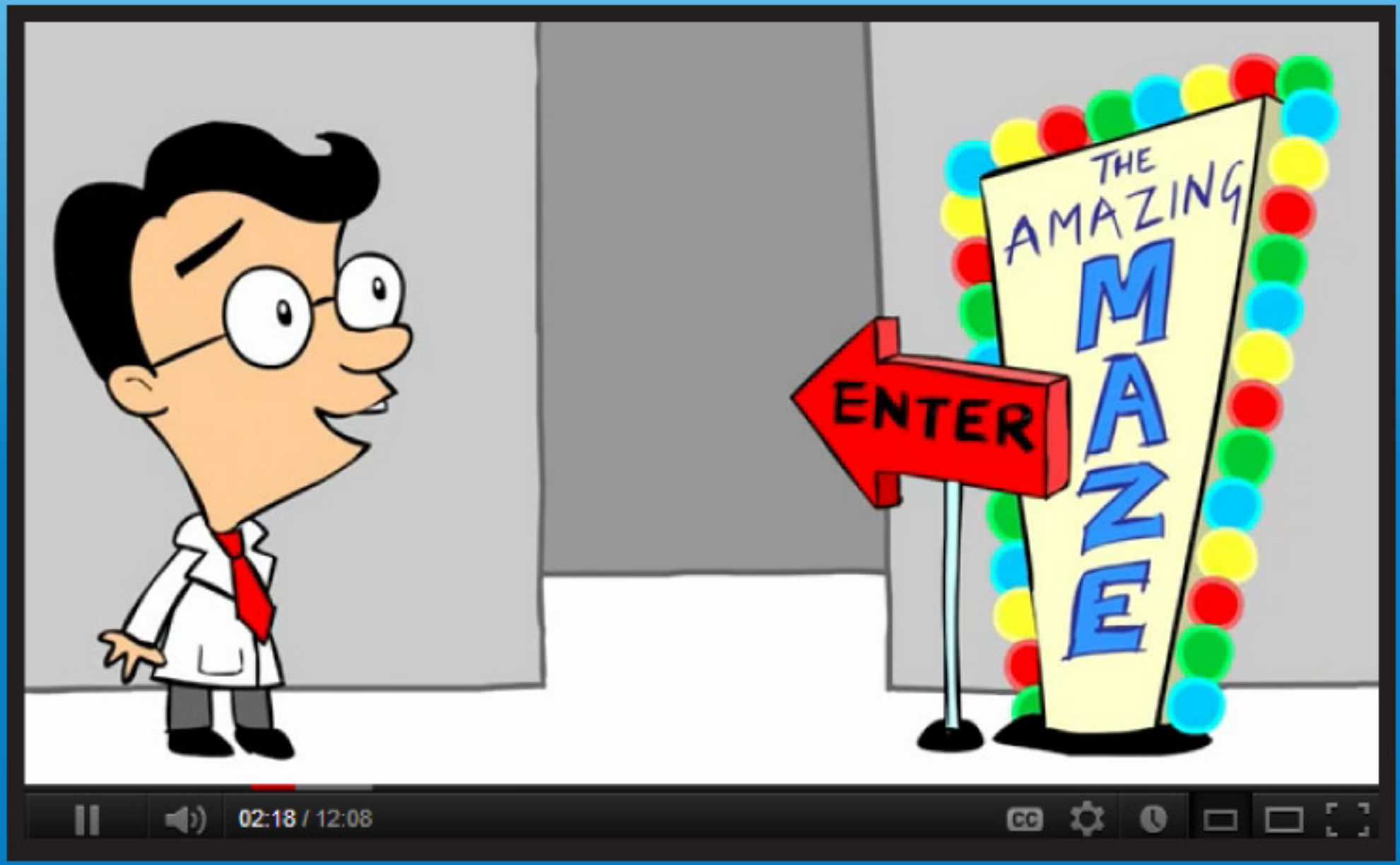
THE AMAZING MAZE
ENTER
02:18 / 12:08


02:32 / 12:08
CC


ANNOTATED
Alice
LEWIS CARROLL
MARTIN GARDNER
YouTube


EXIT
02:55 / 12:08

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