Hunt Puzzle Solving Guide

This is not a definitive or comprehensive guide on puzzle hunts, but is intended to help provide tips on hunt puzzle solving for all.
(portions originally adapted from the 2015 pre-MITMH presentation deck by Atlas Shrugged)
Kah Kien Ong – last updated Dec 2024. Check here too for a hunt Puzzle Hunt Guide and Hunt Puzzle Writing Guide

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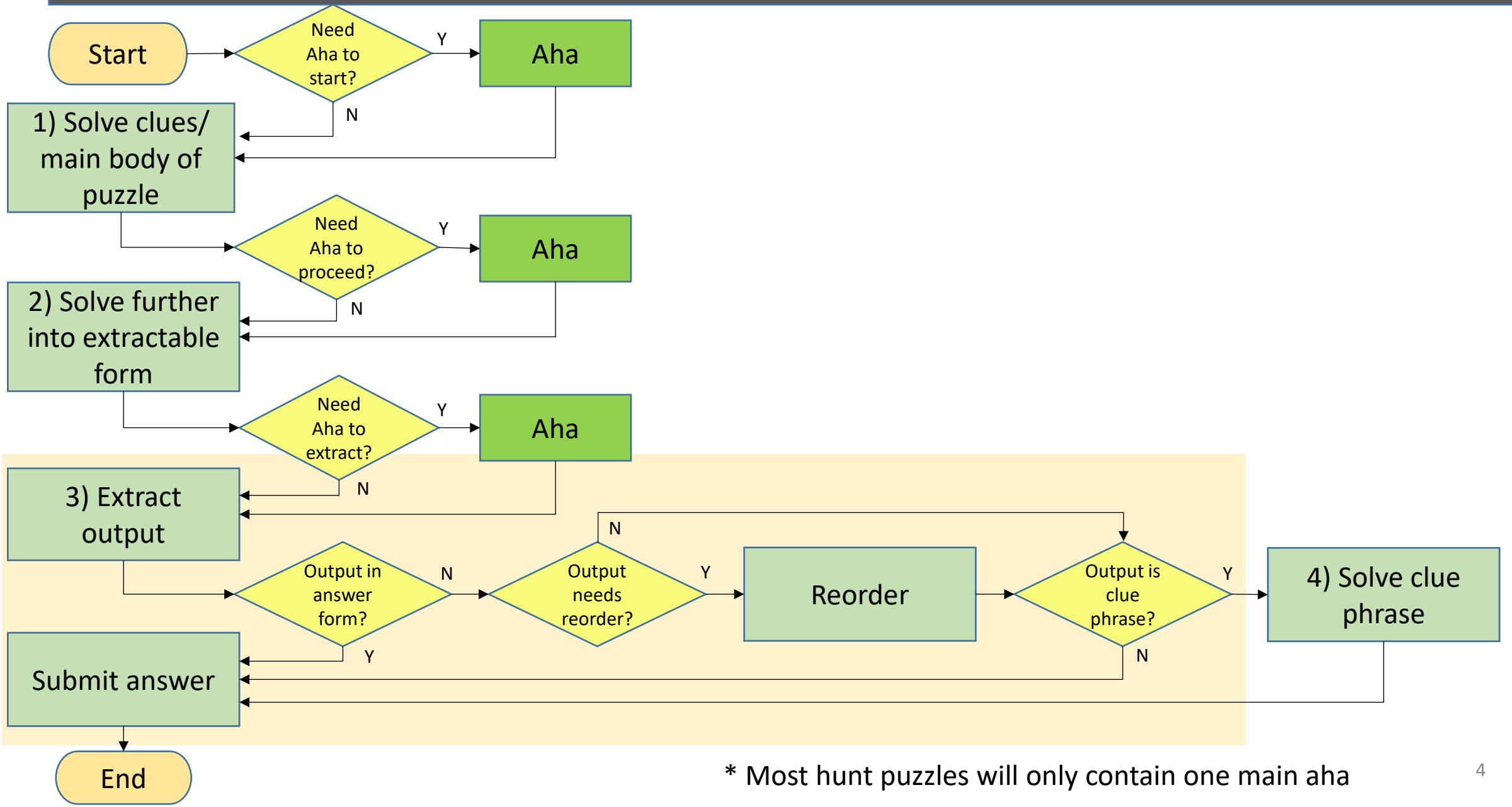
1) Steps to Solving a Hunt Puzzle

General Solving Steps for a Hunt Puzzle



* Most hunt puzzles will only contain one main aha

2) General Hunt Puzzle Solving Strategies

General Strategies – Solving (Step 1)

- Read through puzzle in detail. Look for clues in the title, flavortext, and main body of the puzzle. Notice any words that are unusual or look out of place – they are either clues to the theme, external reference or a solving step.
- Read the first letters of clues for a possible intermediate instruction
- Google anything and everything in the puzzle that you are unfamiliar with to find its reference, especially titles and key words/phrases in the flavortext
- Where there is a list of clues to be solved, there would be some clues which are more specific, to serve as easier entry points. Focus on those first.
    - You may need to identify the commonality or pattern first, in order to solve some of the other more ambiguous clues
- If you run into contradictions with traditional rules of the puzzle form, consider alternate rules possibly clued by the puzzle, such as filling in cells with multiple letters, leaving out certain letters etc

General Strategies – Solving (Step 2)

- Look for given key information in a puzzle that you have not used yet, or things used in the puzzle presentation that didn't need to be there
- Count the total number of clues/clue answers, clue answer letters, grid spaces etc. This usually provides helpful clues to the next solving step. Eg.
  - If the total number of two items in a puzzle are the same, they are likely to be paired/matched up. Look for how elements of each item could correspond to each other, which may also help to disambiguate some of these elements from their possible answers.
  - If the total number of clue answer letters exceed the total number of grid spaces, the clue answers may need to be transformed before filling in the grid, or there could be overlapping/reused letters.

General Strategies – Extraction (Step 3)

- Extraction is generally performed on derived/solved information like clue answers or identified names, rather than given information
- Make use of any other remaining information in the puzzle that you have not used yet
- Look for common methods used to encode letters (which should be hinted by the theme, flavortext or visual cues), eg.
  - Braille (possibly clued by words like blindness or feeling)
  - Morse Code (possibly clued by words like tapping, dots, or dashes)
  - #1-26, line tracing of letters, binary, ASCII, flag semaphore, resistor codes
  - Helpful resource as a reminder on different things to try when stuck -
    - www.mit.edu/~puzzle/resources/haveyoutried.pdf

General Strategies – Final Clue Phrase (Step 4)

- Identify the form of the final clue phrase, eg.
  - Cryptic clue – Solve the cryptic
  - Non-cryptic clue – Solve directly as crossword clue (eg. synonyms)
  - Follows the form of clues in main body of puzzle – Solve again recursively using the same approach as for clues in the main body of puzzle
  - Instruction – Follow the instruction. This may involve manipulating the physical form of the puzzle, or simply submitting a completed task to Hunt HQ

  - Helpful resources - Use an online thesaurus or crossword solver, eg.
    - www.thesaurus.com, www.onelook.com/thesaurus
    - www.wordplays.com/crossword-solver, www.the-crossword-solver.com

Some Helpful Online Tools

- Reverse image search – images.google.com
- Word builder – www.nutrimatic.org, www.onelook.com
- Thesaurus – www.thesaurus.com, www.onelook.com/thesaurus
- Crossword solver – www.wordplays.com/crossword-solver, www.the-crossword-solver.com
- Anagrammer – www.iread.it/anagrams.php
- Music/sound file analysis and manipulation – www.audacityteam.org
- Image file analysis and manipulation – www.exif-viewer.com

3) Using Hunt Puzzle Characteristics and Conventions to Solve

Hunt Puzzle Characteristics and Conventions

- Refer to the slide Annex for a recap of the hunt puzzle characteristics and conventions from the Puzzle Hunt Guide. Making use of these are important general steps to help solvers figure out the solving path for a hunt puzzle.
- Some caveats to this:
  - There is no official list of hunt puzzle characteristics and conventions, so writers less experienced with MITMH may not be familiar with these, and not use them consistently in the puzzles they write.
  - Not every online hunt, or every puzzle in an online hunt, always goes through the necessary hunt puzzle writing process of rigorous editing, fact-checking and test-solving, especially by those with sufficient puzzle hunt experience. Otherwise, puzzles should be clean, as any unintended non-adherence of hunt puzzle conventions would have been picked up during the writing process.
  - Writers may choose to innovate and intentionally write a puzzle that breaks a convention to subvert solver expectations. This is still fine if the puzzle retains the hunt puzzle characteristics, and ideally if the non-conformity to convention is clued or made clear, so that solving is not adversely impacted

Examples of How to Use Hunt Puzzle Characteristics and Conventions to Solve (1/2)

- (HC2) If you are having to “try everything” or brute-force to find the right path, likely you are still missing a hidden clue phrase, clued aha, external reference or solving step.
- (GC1/GC2) If your theory is based on just one word in the title or flavortext as a potential clue/reference, it may not be the intended approach. Don’t cling on to your theories if there are clear contradictions or no collaborating confirmation.
- (GC3) If some info or part of the puzzle is unused yet, remember to see how it might be useful later at some point in the puzzle.
- (GC4) If you cannot find any commonality in your list of clue answers to help you progress further, perhaps there is an external reference being clued that is necessary to identify first for the next step.

Examples of How to Use Hunt Puzzle Characteristics and Conventions to Solve (2/2)

- (CC3) If clues or clue answers are in alphabetical order, look for some way to reorder your clue answers.
- (CC4) Words used in the clue itself are not potential answers to the clue.
- (EC2/EC3) If the submitted word or phrase from the final extraction is incorrect, see if they same solving step could be applied to it first, or if it could be interpreted as a clue phrase.
- (EC5) Think ahead of ways where the last step in a puzzle could possibly extract letters for a final answer, especially for grid puzzles. This may help you to confirm the earlier steps or answers, or shortcut the puzzle solving by extracting a partial answer before finishing the solving step.

4) How to Become a Better Hunt Puzzle Solver

Important Note on Hunt Puzzle Solving

- The most important point in taking part in a puzzle hunt and solving hunt puzzles is to have fun!
- Improving the ability to solve hunt puzzles will certainly help you to derive more enjoyment and satisfaction from the puzzles
- Nonetheless, it is just a means to an end, and the number of hunt puzzles solved should not define the fun of the hunt experience
- There are many other fun aspects in a puzzle hunt to be enjoyed, such as the camaraderie from solving with group of fellow puzzle enthusiasts (especially onsite), task submissions for puzzles, and the interactions with Hunt HQ and fellow solvers from other teams (like in MITMH).

Familiarize with Hunt Puzzle Forms and Types

- As shared in the Hunt Puzzle Guide, hunt puzzles can come in many different forms and types
- Typically, solvers are expected to be able to identify existing puzzle types solely from their presentation and clued references. Names and rules of these are usually only provided in hunts for casual solvers, or in puzzles where that step is not a key part of the puzzle.
- So being familiar with the presentation, references, rules and conventions of the various hunt puzzle forms and types is important

Familiarize with Hunt Puzzle Conventions

- The big initial learning curve to solving hunt puzzles is partly about becoming familiar with hunt puzzle conventions. So while solving hunt puzzles, note the standard hunt puzzle conventions used until they become second-nature.
- The conventions can often provide an intuitive and logical approach to figuring out the necessary next step to solving a hunt puzzle.
- Helpful to solve with more experienced solvers, whom you can observe picking up on these, or point these out for you

Familiarize with Extraction Techniques

- Hunt puzzles also use a variety of different extraction techniques. Eg. Indexing, Braille, Morse code, 5-bit binary.
- Typically, solvers are expected to be able to identify the extraction technical solely from their presentation and clued references.
- So being familiar with the presentation, references, rules and conventions of these various extraction techniques is important

Solve More Hunt Puzzles, and Be Selective

- Best way to get better is simply to solve more hunt puzzles to familiarize with hunt puzzle forms, types, conventions and extraction techniques. Certain ahas could also be broadly similar, so the more hunt puzzles you solve, the more likely that you can figure out what needs to be done.
- But recall the caveats from slide 12 – not all hunt puzzles may follow conventions consistently, and some “hunt puzzles” may not even posses the characteristics.
  - Consequently, such hunts and puzzles may tend to be less intuitive and more frustrating to solve, and are not as useful to honing general hunt puzzle solving skillsets. Instead, they may cause you to develop bad solving habits like “trying everything”, or doubting a puzzle/writer’s intent about following conventions.
- So be selective about your choice of puzzle hunts to solve from the many available out there, because you have limited time for solving as well.
  - Start with MITMH, and learn to discern which other useful online hunts have puzzles which follow those characteristics and conventions, and can make you a better solver. Remember though that hunt writers often change, so the standard of hunts could correspondingly change from year to year as well, including even MITMH (though less so given the most MITMH writing teams have experienced hunt writers).
- There is also an archive of past MITMH puzzles by year, which your team can solve as practice anytime – www.mit.edu/~puzzle/huntsbyyear.html

Solve with Other Teams / Experienced Solvers

- Most solvers new to puzzle hunts rope in other similar friends to form a team and solve puzzle hunts together, because it is more comfortable and fun to do so.
- While helpful for a team to solve hunts often together to improve teamwork and know each other's strengths and weaknesses, you should also make an effort to solving with different teams sometimes to learn from the experiences and solving practices of others.
- This is especially valuable for solvers new to puzzle hunts, as they would learn most while solving together with other more experienced solvers.

5) How to Get “Unstuck”

Becoming Stuck

- Solving a hunt puzzle often reaches a stage (termed as “stuck”) where the solving path becomes unclear, and progress cannot be made
  - Common reason is due to working errors. Because of the errors, the correct solving path appears unclear, or had been rejected prematurely because it did not work with the incorrect data, or did not work due to a solver error
    - Ask other solvers to double-check each other’s work, theories and the data in the sheet
  - Another reason is because of unorganized data. Especially if the data is in some alphabetical order, sorting the info into a clued or intuitive way (eg. chronological) could make a solving path or extraction work.
  - The last reason is because the aha, a hunt puzzle characteristic (HC3 in the Annex), is yet to be figured out. The aha is an intuitive leap in thinking required to solve a hunt puzzle (ideally only one key aha, but could possibly require more than one). Eg. Thematic/clued step, clued external reference, commonality that removes ambiguities, variant to standard puzzle rules

Finding the Aha

- Focus on looking for the missing aha – many solvers often instead waste time and keep re-trying the solving paths which had already been correctly logically rejected
  - If the puzzle is at the extraction step, the extraction aha is possibly identifying the clued (based on format of data and hinted references) or thematic extraction method.
  - If you are stuck at an extracted phrase or word, it could be interpreted as a clue phrase, or transformed using a repeated solving step used earlier
  - If you are stuck after solving a list of clues and getting a list of (probable) clue answers, the aha could be finding a thematic commonality amongst them, which may also help to disambiguate the intended clue answers which fit the pattern.
  - If you are stuck at the solving step (eg. cryptic clues, fitting answers into a grid, Nikoli puzzle logic), try thinking of clued or thematic variant rules that could make the solving work instead
  - If you are stuck at the start or earlier in the puzzle, the aha is likely an external reference (quite commonly used in MITMH) that would help give sense to the puzzle. Try to Google search key words in the puzzle title and flavortext together, especially contrived words used or terms which you don't understand or may have a specific reference.

6) How to Become a Better Hunt Puzzle Solving Team

Solving Puzzle Hunts as a Team

- Puzzle hunts are written to be solved in teams of varying sizes (commonly around 8 for online hunts), depending on their length and difficulty.
- Team solving is always more than a sum of its members because it improves solving efficiency. So an important part of being a better hunt solver, is to become a better hunt team member.

Maximize Solving Efficiency

- Always triage puzzles and spot initial ahas together as a team (or by the more experienced team members) first if possible. This reduces the wasted time for individual members trying to figure these out on their own when working on each puzzle.
- Choose a puzzle where you think you know roughly what to do next first, rather than one which immediately looks appealing to you. You may not know how to progress on the puzzle that seems attractive, and could better contribute to another puzzle.
- Switch to another puzzle when you get stuck and are unable to make progress for some time. But clearly note down the progress and theories up to that point, for other team members to help unstuck the puzzle.
- Give fresh eyes to another puzzle, and ask for help for fresh eyes on this puzzle.

Use a Shared Spreadsheet

- Set up a main Google spreadsheet (or Blackboard) to track overall hunt puzzle solve progress by the team, and individual spreadsheets for working on each puzzle
- Replicate the puzzle information like clues and grids on the spreadsheet so that other team members can work on them together. Hunt puzzles nowadays often provide a “Copy to spreadsheet” link to conveniently copy the puzzle info, but do note down puzzle elements (eg. Images) or formatting quirks which are not replicated by this function.
- Tabulate information given and derived, so that they match up, and can be conveniently sorted in different orderings as required
- Include a column with the original given ordering so that the data could be sorted back to that order when needed
- Always add header information first to new data, so that others can follow

Pen Down Observations & Theories

- Write down all observations in the puzzle spreadsheet for other team members to consider. Others might not have spotted what may appear obvious to you in the puzzle. Putting these info in the spreadsheet also serves as a reminder later on important things which are unused yet.
- Write down potential theories in the puzzle spreadsheet too. Even if you are uncertain if an approach might work, it helps for others to be aware and consider all theories too. Someone might have spotted something else in the puzzle or knows about an external reference that helps confirm your theory or approach. Don’t dismiss a theory too hastily just because the first few extractions do not really make sense. It might be due to a cryptic clue phrase, working/spreadsheet error, or a need to reorder.
- Mark uncertain clue answers with a “?” at the end, so that others can help to verify and comment
- When you get stuck, note down clearly the progress and theories (including which ones have been tried), for other team members to help unstuck the puzzle.

Communicate Well

- Set up a Discord chat channel to discuss the solving of each hunt puzzle. This allows onsite and remote solvers in the team to brainstorm about the puzzle together, and collaborate their work effectively on the spreadsheet.
- Besides penning down observations and theories in the spreadsheet for others to see, also voice them out in the chat so that everyone knows about them immediately.
- Where the next step is unclear, take initiative to start a discussion by soliciting views on what theories everyone has in their minds. Often, the solving path becomes clearer after talking it out with everyone.

Contribute in Any Way

- Be willing to help out in other less glamorous tasks besides puzzle solving to assist the team. This can also help serve as a mental break from puzzle solving.
  - Some hunt puzzles have certain more tedious and menial steps, which are considered more “grunt” work that needs to be done.
  - Helping to keep spreadsheets organized is important for puzzle solving. This includes tidying up duplicate/inaccurate data, updating puzzle statuses etc.
  - Puzzles are often stuck because of errors in the spreadsheet, or during testing of a theory. While potentially wasted effort, someone needs to double-check the existing work on the spreadsheets, and to retest any theories marked as failed.
  - Running logistical errands for the team like ordering food, picking up stuff etc.

End

Annex - Hunt Puzzle Characteristics and Conventions

Hunt Puzzle Characteristics

- A hunt puzzle can be distinguished/defined by the following characteristics* :
  - (HC1) How to get the answer is not explained and needs to be figured out
  - (HC2) An intuitive solving path for the puzzle can be logically inferred from the hunt puzzle conventions used. Solvers should not be required to "try everything"
  - (HC3) Require an intuitive leap in thinking or "aha" to solve (ideally only one key aha, but could possibly require more than one). Eg. Thematic/clued step, clued external reference, commonality that removes ambiguities, variant to standard puzzle rules.
  - (HC4) Has a substantive solving step (excludes the aha/s, extraction, or menial tasks like online research/identification)

* There are no agreed definitions on what constitutes a hunt puzzle, but these characteristics are based on the common traits that typical Mystery Hunt puzzles share.

Hunt Puzzle Conventions (General)*

- (GC1) Puzzle titles and any flavourtext usually include clue references to the answer, aha or theme; but should not be the only or critical clues to a particular solving step
- (GC2) Hints and confirmation points are designed into a puzzle, such as the presentation/formatting, and thematic links
- (GC3) Has no extraneous information, in particular potential red herrings (ie. plausible solving paths which cannot be quickly/easily dismissed)
  - (GC3') Collorary - Key information provided should all be used during puzzle solving process.
- (GC4) Puzzles may sometimes clue and reference thematic extraneous content, which is critical for solving the puzzle. If knowledge of such content is insufficient, research or help from subject matter experts is usually required

* There is no agreed listing of the standard conventions of hunt puzzles, but these are some of the established conventions used in typical Mystery Hunt puzzles.

Hunt Puzzle Conventions (Clue-related)*

- (CC1) Cryptic clues follow the standard cryptic clue conventions in their structure
- (CC2) Word forms, tenses and plurality of clues are consistent with those of the required clue answers
- (CC3) Clue or clue answers should be in alphabetical order if the given order is unimportant (eg. if the clue answers are meant to be reordered)
  - (CC3') Collorary - Given order is important/final if neither clues or clue answers in alphabetical order
- (CC4) Words in clue answers do not appear in clues. Words in puzzle answer do not appear in clues or clue answers (aka TTCBN - The Error That Cannot Be Named)
- (CC5) Numbers in parenthesis behind clues indicate the length of required clue answers, or sometimes the index used to extract a letter from the clue answer
- (CC6) Blanks or boxes indicate the number of letters and spacing of required clue or puzzle answers. Shaded or highlighted positions indicate the extraction, or sometimes changed letters

* There is no agreed listing of the standard conventions of hunt puzzles, but these are some of the established conventions used in typical Mystery Hunt puzzles.

Hunt Puzzle Conventions (Extraction)*

- Extraction may give an intermediate word or clue phrase which requires further solving
- (EC1) If there are still other unsolved parts of the puzzle, this provides clues to solving those subsequent steps
- If this is already the final extraction, the intermediate word or clue phrase could be:
  - (EC2) Solved as a clue phrase to give the thematic puzzle answer
  - (EC3) Recursively applied with the same solving step used earlier in the puzzle to get the puzzle answer
  - (EC4) Submitted to receive a more detailed instruction to perform a task first, then submit it to Hunt HQ to receive the puzzle answer
- (EC5) Answer is a word or short phrase, typically thematic

* There is no agreed listing of the standard conventions of hunt puzzles, but these are some of the established conventions used in typical Mystery Hunt puzzles.