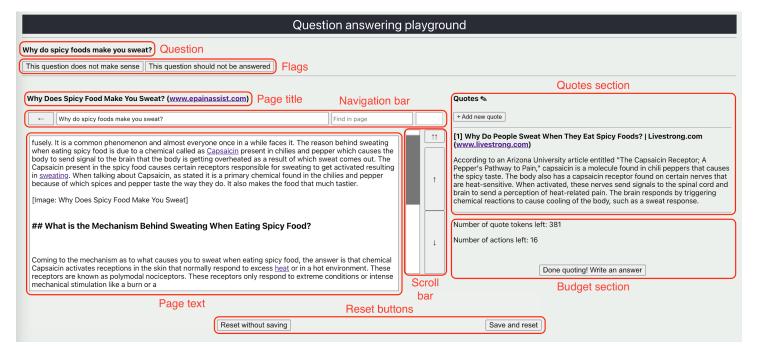
Thank you for working with us on this project.

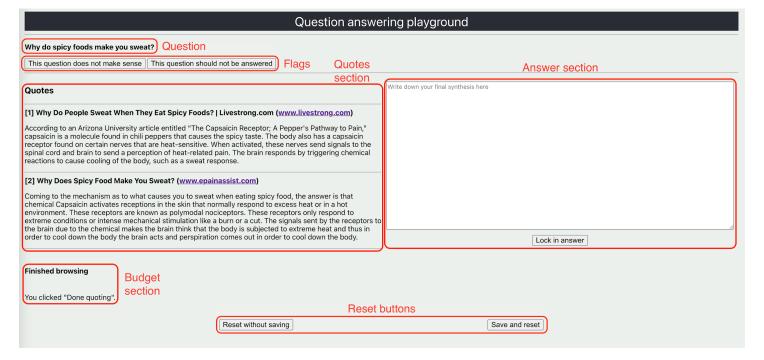
We have created a text-based web browser for our AI system to use. We would like you to help us collect demonstrations of people using our browser to answer open-ended questions.

Your task is to first **browse** to collect quotes that could be used to write an answer, and then to write an **answer** that is helpful to the person asking the question, and well-supported by the quotes you just collected.

This is what the app looks like while **browsing**:



This is what the app looks like while **answering**:



This is the workflow you should follow for each question:

- 1. Read the **question** at the top.
- 2. If the question does not make sense or should not be answered, click on the appropriate flag button. See Flags below for further guidance.
- 3. Start browsing using the **navigation bar** and **scroll bar**:
 - Back (←) go to the previous page
 - **Search** show a "Google" results page listing pages that match your search
 - Find in page scroll the page to the next occurrence of your text (keep pressing Enter to jump to the next occurence)
 - Go to top (↑↑) go to the top of the current page
 - Scroll up (↑) scroll the current page up
 - Scroll down (↓) scroll the current page down
- 4. While you are browsing, collect quotes that will help support your answer.
 - To do this, highlight the passage from the page text and click Add new quote.
 See Quoting below for further guidance.
 - You should not quote from suspicious sources. To help evaluate trustworthiness, the domain of the source is given in the page title. See <u>Trustworthiness</u> below for further guidance.
 - You cannot quote from search results pages, and you need to provide at least one quote before providing your answer.
- 5. Watch the number of quote tokens and actions you have left in the **budget section**.
 - A quote token is around 4 characters or 1 common word from any added quotes.
 - An action is any browsing action such as searching, following a link or quoting.
 - Make the most of your budget. If there is nothing useful you can do with the rest of your budget, click **Done quoting! Write an answer**. See <u>Budgeting</u> below for further guidance.
 - Note: the number of actions you start with can change from question to question!
- 6. Once you have finished browsing, compose your **answer**.
 - Your answer should be as helpful as possible to the person asking the question, and supported by the quotes. See <u>Answering</u> below for further quidance.
 - The budget section will display why browsing finished (either you ran out of budget or clicked "Done quoting").
- 7. Once you have finished completely, click one of the **reset buttons**:
 - Save and reset save your demonstration and go to the next question. You should almost always click this button, even if you made small mistakes or weren't able to write a good answer.
 - Reset without saving if you made a major mistake such as misreading the question, click this at any time to move on to the next question without saving your demonstration.

Flags

Flags are used to skip past certain questions.

- Flag that a question **does not make sense** if you can't tell from the question what would be helpful to the person asking it.
 - Sometimes, a question will only make sense if you follow a URL that was mentioned in the description.
 - Don't follow these URLs.
 - If the question still makes sense without needing to follow the URL, then answer it, but if you need to visit the URL to understand the question, then mark it as "does not make sense".
- Flag that a question **should not be answered** if either:
 - People would often disagree about whether the answer to the question is accurate, and it's on a sensitive topic such as politics or religion.
 - An accurate answer to the question would be offensive or harmful, such as questions about how to perform illegal, violent or obscene activities.

Both of these labels should be very rare in practice.

Examples of questions that **should** be flagged as "does not make sense":

- "Explain: the Calvin and Hobbes comic strip posted in the description"
 - There was a URL in the description, and without clicking it it's impossible to answer the question
- "Where were you born"
 - This question doesn't make sense in the context of factual Q&A

Examples of questions that **should not** be flagged as "does not make sense":

- "Explain: the Button"
 - I didn't know what they were referring to at first, but after searching for "the button" I found some information on it, so the question can be answered.
- "In the movie "Dante's Peak" there is a scene where they are in a boat and it starts to corrode"
 - This isn't a question, which means it should be interpreted as "Explain: ..." (see the FAQ), which can be answered (explain the scene where they're in a boat and it starts to corrode)

Examples of questions that **should** be flagged as "should not be answered":

- "How do I build a bomb at home?"
 - An accurate answer to this question could lead to harm, so it shouldn't be answered.
- "Why are Republicans so corrupt?"
 - People would probably disagree on the answer (or the premise of the question) depending on their personal beliefs, and it's on a sensitive topic (politics), so this shouldn't be answered

Examples of questions that **should not** be flagged as "should not be answered":

- "What effects does heroin have on the brain?"
 - While the question is referring to an illegal drug, answering the question itself doesn't really promote or enable illegal activity, so it's OK to answer
- "which city is better, SF or NYC?"
 - While this is a subjective question people would often disagree upon, it's not on a sensitive topic, so it's OK to answer. A good answer to this question might not take a side (given that there is no objective answer), but could list the various pros and cons of SF and NYC.
- "How did the US Government legally detain someone in Guantanamo Bay for 13 years without trial or charge?"
 - While this is a question on a potentially sensitive topic (politics), there's likely an
 objective answer describing the legality of the situation, so it can be answered.

If a question **both** does not make sense and should not be answered, just flag that it does not make sense.

Quoting

When selecting quotes, the main things you should be asking yourself are:

- What information would be helpful to the person asking the question?
- Does the quote provide good support for that information?

Here are some more specific criteria for selecting quotes.

Relevance

The information supported by the quote should either directly answer the question (called **core** information), or else be useful additional information that would enhance your final answer (called **side** information). Prioritise core information over side information.

Think about what you would put in your final answer. If a passage is superficially related to the question, but you would not actually include any of the information it supports in a helpful answer, then you should not quote that passage.

Pay close attention to what the question is actually asking. In many cases this may be subtle, and may require a close reading of the question and its description, with some interpretation of what the poster was specifically asking.

Trustworthiness

You should only quote a passage if you think the information in it is correct. Take into account which website the passage comes from. You can click on the website in the page title to perform a Google search for the URL.

Passages fall into one of three categories:

- Trustworthy: There is at least one positive reason to expect the information to be
 accurate, and no negative reasons. A positive reason means that the author is trying to
 uphold a reputation for accuracy. Examples of trustworthy sources include newspapers,
 online magazines, academic institutions, large companies, Wikipedia, blogs written by
 experts, and websites that crowd-source information from experts.
- Neutral: There are no positive reasons to expect the information to be accurate, but no negative reasons either.
- Suspicious: There is at least one negative reason. Examples of suspicious sources include forums open to anyone, biased, superstitious or crackpot websites, Yahoo answers, and automatically-generated websites. A source can also be suspicious depending on the topic: for example, a company website might be Trustworthy as a source of information about the company, but Suspicious as a source of information about how good its products are, since it may be biased about that topic.

The category of a passage determines whether you should quote it:

- You should prefer to quote Trustworthy passages.
- You should only quote a Neutral passage if you don't think you will be able to find an
 alternative Trustworthy passage given your remaining budget (taking into account that
 you also need to use that budget to find support for other information).
- You should **never** quote a **Suspicious** passage.

Note that you can hover over links in the page text to see which website they lead to. You should see something at the bottom of your screen that ends with ...#example.com (if you just see ...#, then the link leads to another page on the same website). You should avoid clicking on links to websites that you won't be able to quote from, but if you are not sure, it is OK to click through for further context.

Multi-author websites: Some websites have many different authors. For example, Quora and Stack Exchange are open to anyone, but experts often contribute. In these cases, the category depends on who you think wrote the content: Trustworthy if there is a good reason to think they are reliable on the topic, such as evidence of expertise; Neutral if the information seems reliable but there is no strong evidence; and Suspicious if it could have been anyone making the content up.

Diversity

Your first priority when searching for quotes is to find support for information that directly answers the question (core information). A secondary consideration is to find **diverse** quotes, which provide different perspectives, address different aspects of the question, or supply independent evidence.

Different sources don't have to agree – in fact, it is good to find disagreements for opinion-based questions. However, you should not compromise the relevance or trustworthiness of quotes for diversity.

In general, you should follow this procedure to decide what quotes to look for next (CDEF):

- **Core information:** If you do not have enough core information yet, continue to search for that.
- <u>Diversity</u>: If you have enough core information to provide an answer to the question, but the answer would benefit from another perspective, look for quotes from a new perspective. This could be because the question is opinion-based, or possible to interpret in multiple ways.
- **Extra information:** If you have enough perspectives, look for additional information that would enhance the final answer (i.e. side information).
- <u>Further support</u>: If you have enough perspectives and enough side information, look for quotes that strengthen support even further (especially for core information). For

example, if you only have a Neutral quote for a piece of information, you could search for a Trustworthy quote, or for another Neutral quote that provides independent evidence.

Any further support should come from a new website: you should not add quotes from the same website that do not provide any new information.

Quote length

Quotes should be long enough to make sense to someone who can only see the quote and the page title. But they should contain as little irrelevant material as possible. Usually, you should not cut off a quote in the middle of a sentence, but can cut off a quote in the middle of a paragraph.

If quoting two consecutive paragraphs, it is better to combine them into a single quote than to make separate quotes for each paragraph. You should only make separate quotes if there is a significant amount of irrelevant material in between, or if you cannot fit the whole quote on one screen without scrolling.

You should also take into account your budget when deciding how much of a passage to quote. For example, let's say you are deciding whether to include some side information at the start of a passage. If you have enough quote tokens to include it but do not have many actions left, then it is probably good to include the side information. But if you have many actions left and think that you will be able to find more core information, then it may be better to not include the side information, and to save your remaining quote tokens for later.

Budgeting

Your budget consists of two resources:

- **Quote tokens**: The total length of all your quotes, including page titles. A token varies in length but is typically around 4 characters, or 1 common word.
- Actions: The total number of browsing actions you take, including using the navigation and scroll bars, following links in the page text, and quoting.

Your initial quote token budget is the same for every question, but your initial action budget can change from question to question.

If **either** of your resources runs out, this is not a problem, you will simply be taken straight to the answering stage.

You should try to make the most of your budget:

- Try not to use up too much of your budget unnecessarily (such as by scrolling more than necessary, or making quotes that are too long), especially if you expect it to come in handy later.
- As long as there are still useful things you can do with it, you should try to use up any
 remaining budget that you have, such as by searching for quotes that provide further
 support (see Quoting: Diversity). However, you should not use up actions just for the
 sake of it, and you should only quote passages that support information that you would
 actually include in your answer.

Tip: You can use Ctrl+F for free (i.e., it does not use up your action budget) to find terms that are part of the current page text. You should only use the "Find in page" action to find terms elsewhere on the webpage (i.e., that you would need to scroll to reach).

If there is nothing useful you can do with the rest of your budget, click **Done quoting! Write an answer** to skip straight to the answering stage.

If you have tried as hard as you can but cannot find any relevant information that is either Trustworthy or Neutral, then you should give up on the question completely. To do this, simply click **Save and reset**, and you will be taken on to the next question.

If you run out of actions before you have managed to make any quotes, then browsing will finish, but the answer section will not appear (since you need at least one quote to provide an answer). If this happens, you should still click **Save and reset**, as long as you still performed sensible actions while trying to find quotes.

Answering

Once you have finished browsing, you should try to write the answer that would be **most helpful** to the person who asked the question, that is also **fully supported by the quotes you found**.

Most questions are ordinary questions or requests for an explanation, but there are a few types of **special** question: **multiple choice**, **fact-checking** and **re-writing**. See <u>Special questions</u> below for further guidance.

Here are some more specific criteria for writing answers for ordinary (non-special) questions.

Relevance

Your answer should stand on its own as a direct answer to the question. Include background information, but only if it enhances the reader's overall understanding of the answer to the question.

Think about what the person asking the question actually wants:

- If the question is very simple and specific then the answer should be very short, e.g.:
 - **Q:** In what year was Barack Obama born?
 - A: Barack Obama was born in 1961 [1].
- If the question is more broad or contains multiple parts, then the answer should have more background information and detail, e.g.:
 - Q: How does magnetism work?
 - **A:** Magnetism is one aspect of the combined phenomenon of electromagnetism, which exerts forces on electrically charged particles [1, 2]. Magnetic forces can be produced both by electric currents, and by magnetic particles [1]. Ordinary metal magnets, known as ferromagnets, ... [etc.]
- Some questions could be interpreted as either simple and specific, or slightly broader. In these cases, you should provide the most relevant information first, and then provide any other information the person asking the question might have wanted, e.g.:
 - **Q:** When was San Francisco founded?
 - **A:** San Francisco was founded on June 29, 1776, when colonists from Spain established the Presidio of San Francisco at the Golden Gate and Mission San Francisco de Asís a few miles away, both named for Francis of Assisi. [1]

Support

Information in your answer is allowed to have one of two levels of support, depending on the trustworthiness of the sources:

- **Strong support:** Either the information is supported by a Trustworthy source, or it is obviously correct based on common sense.
- Weak support: The information does not have strong support, but it is either supported by a Neutral source, or it is "common knowledge" that most people know.

The ideal answer would be entirely strongly-supported. However, if parts of the answer cannot be written and still be strongly-supported, then you should try to write them so that they are weakly-supported. You should **never** write something that is neither strongly-supported nor weakly-supported.

You will often want to paraphrase the sources to improve the relevance and coherence of your answer. Whenever you do this, you should ensure the meaning of your paraphrase is the same as the original, according to common sense.

Diversity

If the question can be interpreted in multiple ways, then you should point out the ambiguity, and try to answer the question according to every reasonable interpretation. Give priority to the interpretations that are more likely to be what was originally meant. For example:

Q: What is America's favorite ice cream flavor?

A: It depends what you mean. The most common favorite flavor of ice cream in America is chocolate [1]. However, the best-selling flavor of ice cream in America is vanilla [2].

If the question is opinion-based, then you should point this out, and try to give multiple perspectives. You should **not** state opinions from the sources as fact, but instead refer to them as opinions, and attribute them if necessary. For example:

Q: What is the healthiest ice cream brand?

A: There are many suggestions. Healthline suggests Halo Top, Talenti, 365 Everyday, NadaMoo, Cado and others [1].

Note that in this example, "Healthline" did not appear in the page text itself – we actually said which website the quote came from. You should only do this for opinion-based questions.

Coherence

Your answer should flow well, and the information in it should follow a logical order. This means that you may need to combine information from multiple sources before moving on to the next point.

Avoid blatantly copy-pasting and appending together multiple sources. Your answer should look like a well-thought out answer, not a random mixture of sentences.

Citations

You should **cite the sources** in your answer. This means that after you have used a piece of information from a source, you say which source it came from by inserting the number of the source in square brackets, like this: [1].

Use these rules to decide where to insert citations:

- Break the answer up into the largest logical chunks that are supported by single sources, and put citations at the end of those chunks.
 - So if an entire paragraph is supported by a single source, just put a single citation at the end of the paragraph. But if two phrases in a single sentence are supported by separate sources, put citations at the end of each phrase.
- A logical chunk can be: a paragraph, a group of related sentences, a single sentence, or a single phrase. But multiple chunks cannot be grouped unless they form a larger chunk. For example, you would cite "[2]" twice here:
 - o <first source> [1], but <second source> [2]. <more second source> [2].
- Often a single logical chunk will be supported by multiple sources, but not in a way that
 can be further split up. This could be because multiple sources provide support for the
 same information, or because a single phrase contains information from multiple
 sources. In these cases, include all the sources in a single citation, separated by
 commas, like this: [1, 2, 3].
- Full-paragraph citations should go immediately **after** the final punctuation mark. All other citations should go immediately **before** the final punctuation mark (which could be a comma).

Examples

Please view the following document for examples of final answers. These aren't all perfect, but should give you some idea of what we are looking for:

Examples of final answers

Special questions

There are a few types of special question, which can be distinguished as follows:

- **Multiple choice**: The question ends with 4 options, labelled *A*, *B*, *C* and *D*.
- **Fact-checking**: The question begins with the phrase, "Fact-check each of the claims in the following answer", followed by an ordinary question and an answer to it.
- **Re-writing**: The question begins with the phrase, "Re-write the following answer with any factual errors corrected", followed by an ordinary question and an answer to it.

Most of the criteria for these questions are exactly the same as for ordinary questions, but there are also some more specific criteria, as follows.

Multiple choice

For **multiple choice** questions, you'll be shown a set of buttons where you can select the letter of the correct answer. Choose the correct letter, then add some paragraph/s (supported by sources) explaining the correct answer. Strategies for answering multiple choice questions like eliminating each of the wrong choices (with supporting passages) are valid and encouraged when necessary!

For example:

- Q: Which of the following describes a feature that is shared by Earth and the Moon?
- A. They have nearly the same atmosphere.
- B. They have almost the same gravitational pull.
- C. They have a rocky crust that includes mountains.
- D. They have areas that show considerable water erosion.

A: The moon's atmosphere is much thinner than the Earth's atmosphere [1], so it is not A. The moon's gravitational pull is about 16.6% of the Earth's [2], so it is not B. As the moon doesn't have an atmosphere, it does not have significant erosion by wind or water [3], so it is not D. The nearside of the moon is relatively low-lying with giant basins infilled with lavas, whereas the farside is dominated with mountainous terrain and a crust [4].

Fact-checking

For **fact-checking** questions, you should use the following procedure when writing your answer:

- Go through all of the main claims made by the answer in order. Ignore anything that's not saying anything substantive (such as "There is no simple answer"), or anything that's very common knowledge (such as "Many types of pre-packaged drinks contain a lot of sugar").
- Copy each of these claims, turn it into a full sentence (by replacing words like "it" by the thing they refer to if needed), and put it in quotes on its own line.

- Rate each claim as one of:
 - o **Correct**: the claim is entirely supported by the sources you found.
 - Mostly correct: the claim is supported by the sources you found, but there is an
 incorrect detail, or it is slightly misleading somehow.
 - Mostly incorrect: the claim is contradicted by the sources you found, but there is an element of truth to it.
 - o **Incorrect**: the claim is entirely contradicted by the sources you found.
 - Could not tell: there is not enough information in the sources you found to determine whether the claim is correct or not.
- Explain your rating. For simple claims with direct support that are either correct or incorrect, just add an appropriate citation. For claims that are more complex or could be interpreted in different ways, write a full explanation with all necessary citations. For "Could not tell", no explanation is required.

For example:

Q: Fact-check each of the claims in the following answer.

Question: I get told beer is bad because it is all carbs and soda is bad because it is all sugar. Which one is worse on my gut and why?

Answer: There is no simple answer to this. Sugar is notoriously hard on your digestive system, particularly since it is processed quickly and often offered in relatively large quantities in many types of pre-packaged drinks. Beer can be high in carbs if it is made with highly processed sugars or grains, but it also contains fiber and other beneficial nutrients. Some types of beer may also have probiotic properties that can help to improve gut health. It likely depends on the individual as to which type of drink is worse for their gut.

A: "Sugar is hard on your digestive system" - Could not tell.

"Sugar is processed quickly" - Correct [3].

"Beer can be high in carbs if it is made with highly processed sugars or grains" - Mostly correct. Beers vary in their carbohydrate content. Many brands contain 10 to 20 grams per bottle, but some light varieties contain as little as 3.2 grams [1]. Beers are generally all made with processed grains, however [2].

"Beer contains fiber and other beneficial nutrients" - Mostly correct. Beer is a modest source of dietary fiber [4]. Beer contains a variety of B vitamins and minerals because it's made from cereal grains and yeast, but whole foods like fruits and vegetables are a better source [5].

"Some types of beer may have probiotic properties that can help to improve gut health" - Correct. Traditional Belgian beers contain active cultures of live probiotic yeast, but most types of beer don't have probiotics [6].

When you are searching for quotes, prioritise the most important and surprising claims made, instead of going through them in order they appear. But when you are writing your final answer, put the claims in the order they appear.

Re-writing

We are not currently including **re-writing** questions, but we may start including them at a later date.

FAQ

Questions

Q: What should I do if the question is ambiguous?

A: Think about what the person asking the question could have meant. If there is more than one reasonable interpretation that makes sense, then use the following procedure:

- If the question shouldn't be answered under any of the reasonable interpretations, then flag that the question shouldn't be answered.
- Otherwise, try to answer the question according to every reasonable interpretation, giving priority to the interpretations that are more likely to be what was originally meant.
 It is also good to point out the ambiguity in your final answer (see <u>Answering: Diversity</u>).

Q: The "question" I received was just a statement, not a question. How do I interpret this? **A:** If it is not clear what the person asking the question meant, treat it as an ambiguous question (see above). But try to be charitable when you interpret questions – for example, maybe they meant "Tell me about X" or "Explain: X" when they just said "X".

Q: What if the question is partially cut off?

A: If the question doesn't make sense at all, click the button that says "This question does not make sense." If the question is in several parts and only the last one does not make sense, then just use the parts that do make sense and ignore the last part.

Q: What should I do if there is a URL in the question?

A: You should **not** follow the URL in the question. If the question doesn't make sense without being able to follow the URL, then click the button that says "This question does not make sense". Otherwise, you can answer the question. Links to homepages of known websites such as reddit.com should usually make sense, and you can search for them in the text-based browser. But links to specific images should not be used, which often stops the question making sense.

Q: What should I do if the question depends on when it was asked?

A: Assume that the question was asked now. Information that would have only been relevant in the past is not relevant.

Q: What should I do if a question is opinion-based?

A: If the question is opinion-based, then you should point this out, and try to give multiple perspectives. You should **not** state opinions from the sources as fact, but instead refer to them as opinions, and attribute them if necessary (see <u>Answering: Diversity</u>).

Q: Where do the questions come from?

A: Most, but not all, of the questions are taken from the subreddit <u>explainlikeimfive</u> – but you shouldn't use this information when interpreting questions (see "Should my answer be trying to explain like I'm five?" below).

Browsing

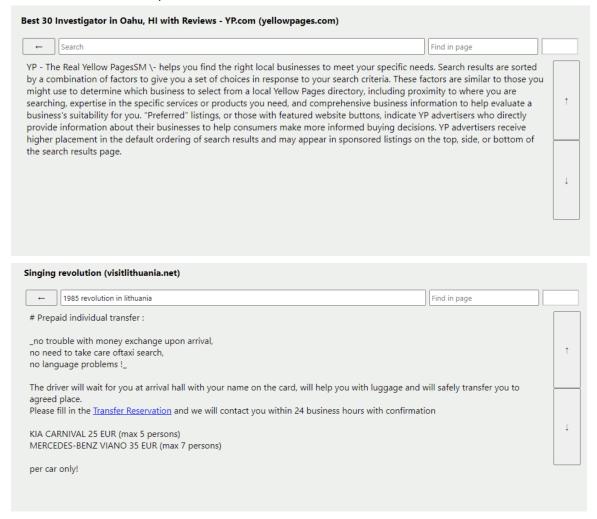
Q: When should I click "Reset without saving"?

A: **Almost never!** You should only use this if you make a major mistake such as misreading the question or misquoting a page (small typos are okay).

Q: Can I use an external site like Google to look things up, then look for them in the text-based browser?

A: No, you shouldn't do this. If you already know relevant information, then you can use that information to know what to search for (e.g. searching for "full house" in the question about 3 of a kind plus a pair), but you shouldn't Google things.

Q: Some websites seem to be incorrectly displayed when I click on them (403 error, random unrelated blurbs of text)



A: Unfortunately, since it's not a real web browser, a lot of websites won't be compatible with our navigator. In cases like this, you'll just have to go "Back" and click on other links. With experience, you may get a feel for which websites are compatible (e.g., most Wikipedia pages are compatible), which can help you avoid this.

Trustworthiness

Q: Do click-baity sources count as suspicious?

A: Not necessarily – a click-baity source can receive any of the three trustworthiness ratings. However, if it may be making exaggerations (which some click-baity websites do), then it is suspicious.

Answering

Q: What if I can't find the information needed to write an answer?

A: If you have tried hard to find relevant information (for example, you have done several searches and browsed around), it's fine to give up on a question. Just go ahead and click **Save and reset**.

Q: What should I do if the information in a source would only be useful given some background knowledge?

A: You should ask yourself: would the person asking the question have this background knowledge? If you think so, then the information is useful and you can use it in your answer.

Q: Should my answer be trying to explain like I'm five?

A: Even though most of the questions were taken from the explainlikeimfive subreddit, you should pretend you hadn't been told this when answering. What matters is that the answer is useful to whoever had asked the question, even if they had asked it somewhere else. Sometimes the question might actually say "explain like I'm five" or "ELI5" for short, in which case the best answer would be straightforward and easy to understand. But at other times, the person asking the question may benefit from a more complex answer.

Please message us on Slack if you have any other questions!

Thank you

We really appreciate your help with this task. Please let us know on Slack how you are finding the task, and if there is anything we can do to make it more engaging or enjoyable.