**Worksheet 2: Critical thinking, research, reading and writing**

**Name:** ………………………………………

**Skimming text**

Read the text’s title (headings and subheadings) and

Write some of the text’s keywords in the following blanks.

................. .................. ..................... ..................

Write the names of some important people and places given in the

reading passage.

.................. .................. ..................... .....................

Read the first sentences of each paragraph. What do you think the

reading is probably about?

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**2.1 The Brain Is an Inference Machine**

(1) Our brains facilitate our survival and promote our ability to find a partner and reproduce by using thought, calculation, prediction, and inference. For this reason, our natural and genetically primed ways of thinking do not necessarily serve the goals of philosophy, science, or truth.

(2) The relationship between mind and brain is one of the central problems of metaphysics, known as the “mind- body problem.” The mind-body problem is the problem of understanding the relationship between the organic gray and white matter in our skulls (the brain) and the range of conscious awareness (the mind). Biology does not tell us what the relationship is between our private mental life and the neurological, electrochemical interactions that take place in the brain.

(3) It can be helpful to use the resources of psychology and cognitive science (the study of the brain’s processes) to help us understand how to become better thinkers. Your brain is not passively capturing the world, like a camera, but is actively projecting the world so that it makes sense to you. When the brain defaults to ways of thinking that produce a less than optimal result or even an incorrect decision, it is operating with a cognitive bias. A cognitive bias is a pattern of “quick” thinking based on the ‘rule of thumb.’ Cognitive biases are like perceptual illusions.

**2.2 Overcoming Cognitive Biases and Engaging in Critical Reflection**

(4) Metacognition means thinking about thinking and involves the kind of self-awareness that engages higher order thinking skills. Cognition, or the way we typically engage with the world around us, is first-order thinking, while metacognition is higher-order thinking.

(5) One of the most common cognitive biases is confirmation bias, which is the tendency to search for, interpret, favor, and recall information that con5rms or supports your prior beliefs. Anchoring bias refers to our tendency to rely on initial values, prices, or quantities when estimating the actual value, price, or quantity of something. If you are presented with a quantity, even if that number is clearly arbitrary, you will have a hard time discounting it in your subsequent calculations; the initial value “anchors” subsequent estimates. The availability heuristic refers to the tendency to evaluate new information based on the most recent or most easily recalled examples. The availability heuristic occurs when people take easily remembered instances as being more representative than they objectively are (i.e., based on statistical probabilities).

(6) Another more loosely defined category of cognitive bias is the tendency for human beings to align themselves with groups with whom they share values and practices. Tribal thinking makes it hard for us to objectively evaluate information that either aligns with or contradicts the beliefs held by our group or tribe. A related bias is called the bandwagon fallacy. The bandwagon fallacy can lead you to conclude that you ought to do something or believe something because many other people do or believe the same thing.

(7) The sunk cost fallacy is thinking that attaches a value to things in which you have already invested resources that is greater than the value those things have today. A similar type of faulty reasoning leads to the gambler’s fallacy, in which a person reasons that future chance events will be more likely if they have not happened recently.

**2.3 Developing Good Habits of Mind**

(8) One of the ways to respond to cognitive biases is to develop good habits of mind. There are no quick fixes or easy solutions to cognitive biases, but some strategies can be helpful.

(9) To be more objective in thinking about issues, problems, or values, we should actively engage in strategies that remove us from our naturally subjective mindset. When considering philosophical views, try to actively promote the alternative point of view. Another good strategy is to identify counterexamples – instances that render an argument invalid by satisfying all the premises of the claim but demonstrating the conclusion is false. To respond to strong emotions, use the tools of metacognition to reflect on the source of those emotions and attempt to manage them.

(10) A final concept that is a critical component for becoming a better critical thinker is adopting a stance of epistemic humility. We should recognize these limitations of human knowledge and rein in our epistemic confidence. We should recognize that the knowledge we do possess is fragile, historical, and conditioned by a number of social and biological processes.

**2.4 Gathering Information, Evaluating Sources, and Understanding Evidence**

(11) Effective internet research requires knowing how to find information and evaluate the quality of sources. The SIFT method for evaluating sources teaches students how to become seasoned fact-checkers when searching online. The four moves for student fact checkers are: stop, investigate the source, find better coverage, trace the claims to the original context.

**2.5 Reading Philosophy**

(12) Read at a table with a comfortable chair, instead of on a couch or in a bed. Sitting up straight improves concentration. Have something to drink nearby, and avoid distractions, like the TV or music with lyrics. Next, choose an annotation tool. You will need to write notes, underline, and flag portions of the reading, so use text you can alter whenever possible.

(13) Philosophy consists of ideas and arguments. Your goal is to engage with those ideas and arguments to arrive at your own understanding of the issues. It is not as important to read sequentially for plot or narrative; it is much more important to follow the sequence of ideas and arguments. The author may use a variety of methods to make an argument. If you can identify these methods, strategies, and sources of evidence, you will be able to better evaluate the text.

(14) An effective method for reading philosophy involves three key steps: pre-read, first read, and close read. When encountering a new philosophical text, students who use this systematic method will better understand challenging content.

**2.6 Writing Philosophy Papers**

(15) Most philosophy papers require students to produce an argument in support of a claim about the readings in philosophy class. The first and most important step to writing a good argumentative paper is to find a clear, defensible thesis. The next step is to construct an argument using evidence from assigned readings and external research, original arguments, and applied cases. However, the goal of writing in philosophy is to approach truth, not just to win an argument.

**Comprehension check**

*Read each statement and decide whether it is true or false. Write “T” before true statements and “F” before false ones.*

1. The relationship between mind and body is one of the central problems of metaphysics, known as the “mind- body problem.” **…**

2. Biology does tell us what the relationship is between our private mental life and the neurological, electrochemical interactions that take place in the brain. **…**

3. One of the most common cognitive biases is confirmation bias, which is the tendency to search for, interpret, favor, and recall information that confirms or supports your prior beliefs. **…**

4. A final concept that is a critical component for becoming a better critical thinker is not adopting a stance of epistemic humility. **…**

5. The four moves for student fact checkers are: stop, investigate the source, find worse coverage, trace the claims to the original context. **…**

6. It is important to read sequentially for plot or narrative; it is less important to follow the sequence of ideas and arguments. **…**

**Multiple choice questions**

*Read the reading passage carefully and select the most appropriate answer for each of the following multiple-choice test items. There can be more than one answer correct.*

**The mind body problem is the problem of understanding what relationship?**

A) brain and mind

B) body and mind

C) language and mind

**What does the Anchoring bias refer to?**

A) tendency to rely on our beliefs

B) tendency to rely on others

C) tendency to rely on initial values

**What is a more loosely defined category of cognitive bias?**

A) tendency to align with groups with whom we share values and practices

B) tendency to align with groups with whom we share ecosystem

C) tendency to align with groups with whom we share lives

**What should we recognize about our knowledge?**

A) fragile

B) unlimited

C) historical

**What is the goal of writing in philosophy?**

A) win an argument

B) approach truth

C) give definition

**Synonym finding**

*Find a single word in the passage which means:*

1. Replicate (para. 1) ………………..

2. Deduction (para. 1) ………………..

3. Intellectual (para. 3) ………………..

4. Prejudice (para. 5) ………………..

5. Amount (para. 5) ………………..

6. Securements (para. 5) ………………..

7. Native (para. 6) ………………..

8. Submerged (para. 7) ………………..

9. Answers (para. 8) ………………..

10. Involve (para. 9) ………………..

11. Replacement (para. 9) ………………..

12. Control (para. 10) ………………..

13. Verse (para. 12)…………………

14. Foundations (para. 13)……………….

15. Build (para. 15)……………………….

**Matching**

*Match the terms with their definitions.*

1. Availability heuristic …

2. Bandwagon fallacy …

3. Cognitive bias …

4. Cognitive science …

5. Confirmation bias …

6. Dialectic …

7. Epistemic humility …

8. Heuristics …

9. Inference …

10. Metacognition …

11. Sunk-cost fallacy …

1. the tendency to search for, interpret, favor, and recall information that confirms or supports established beliefs.
2. is a systematic pattern of reasoning that deviates from a rationally optimal or logical judgment based on available facts and probabilities.
3. the tendency to evaluate new information based on the most recent or most easily recalled examples.
4. the process of thinking about thinking. Metacognition engages self-awareness and higher-order thinking skills so that an individual can regulate, monitor, and critically analyze their own thought processes.
5. the fallacy that we ought to do something or believe something because many other people do or believe the same thing.
6. the study of the brain and the mechanisms underlying thought, perception, memory, emotion, and other functions of the brain.
7. a stance in philosophical and scientific investigation that recognizes the limits of one’s own ability to know truth and reality in a direct or complete way.
8. the fallacy of attaching a greater value to something than is warranted because a person has already invested time, resources, and emotion in that thing (or person).
9. the mental process that leads from one set of information (premises, data, or information) to another (a conclusion, construction, or projection).
10. mental shortcuts or rules of thumb that provide a method of problem-solving that is not necessarily optimal but is efficient.
11. a method of discovering truth that comes from dialogue and uses the exchange of different points of view to arrive at a position that is more likely to be true.

**Cloze test**

*There are some missing words in the following text. Find the best choice for each blank.*

Information literacy scholar Michael Caulfield came to realize that the methods of research taught by librarians and information literacy educators often did not work well for (1)………… . Typically, students are encouraged to assess the quality of information using an acronym like CRAAP: currency, relevancy, authority, accuracy, and purpose. But these (2)……… are not always useful in spotting misinformation turned up through search engines. After all, many sources that provide (3)…………appear current and relevant and are generated by organizations that appear to be authoritative while they conceal a hidden agenda.

To find out how students evaluate sources they find on Google, Caulfield relies on the empirical research of Sam Wineburg and Sarah Mcgrew (2016). The researchers compared the behavior of Stanford University students to trained fact-checkers at newspapers and magazines. Not surprisingly, the online fact-checkers used search (4)…………more effectively. Based on this research, Caulfield developed his own protocol to make students better researchers.

The first thing to know about using a search engine like Google is that results are not ranked by authority, accuracy, or relevance. Internet companies are notoriously secretive about the algorithms (mathematical procedural rules) they use to generate search engine (5)………….., but we know that they prioritize paid advertisements, popularity, and web interconnectivity (the degree to which keywords and links from a website are shared with other websites). Thus, websites interested in sharing misinformation can use the same search engine optimization tools that legitimate companies or media sources use to move up the ranks of search results. So you need to learn to use the search engine to your advantage. Caulfield recommends using the acronym SIFT, or the “four moves” of student fact checkers.

1 A) teachers B) students C) books D) philosophers

2 A) facts B) rules C) laws D) criteria

3 A) knowledge B) facts C) information D) misinformation

4 A) books B) engines C) sources D) links

5 A) results B) endings C) finds D) trues

**Source:**

Smith, N. (2022). *Introduction to Philosophy*. Houstom, Texas: OpenStax.