BBI 3420
Critical Reading and Thinking
Analyzing Arguments
Analyzing Arguments

To analyze an argument means to break it up into various parts to see clearly what conclusion is being defended and on what grounds.

• Identifying Premises & Conclusions
• Diagramming Short Arguments
• Summarizing Longer Arguments
Some Premise Indicator Words:

- To identify premises, it often easiest to look for premise indicator words, words that are often used to introduce a claim as a premise such as: *because, since, as, for, given that, as, judging from, seeing that*
Some Conclusion Indicator Words:

• Look for conclusion indicator words, such as:

  therefore, consequently, as a result, thus, it follows that, so, which shows that, hence, accordingly
Diagramming Short Arguments

Diagramming is a quick and easy way to analyze relatively short arguments (roughly a paragraph in length or shorter).

In order to analyze simple and complex arguments, we will find it useful to construct a diagram of the structure of the argument that details the relations among the various premises and conclusions.

Consider this argument:

Life is short, and so we should seize every moment.
Diagramming Short Arguments

Another example of argument:

Paris in in France, and France is in Europe. So obviously Paris is in Europe.
Diagramming Short Arguments

Six (6) basic steps:

1. Read through the argument carefully, circling any premise and conclusion indicators you see.

2. Number the statements consecutively as they appear in the argument (Don’t number any sentences that are not statements.)

3. Arrange the numbers spatially on a page with the premises placed above the conclusion(s) they are alleged to support.

4. Using arrows to mean “is evidence for,” create a kind of flowchart that shows which premises are intended to support which conclusions.

5. Indicate independent premises by drawing arrows directly from the premises to the conclusions they are claimed to support. Indicate linked premises by placing a plus sign between each of the linked premises, underlining the premises to the conclusions they are claimed to support.

6. Put the argument’s main conclusion at the bottom of the diagram.
Diagramming Short Arguments

Linked Premises (Co-premises)
Premises that work together in a single argument to support conclusion

Independent Premises
Each premise would support the conclusion without having to rely on the other.

[1] Smoking is unhealthy, since [2] it can cause cancer. Furthermore, [3] it also increases the chance of heart attacks and strokes.
Diagramming Short Arguments

1. Find the main **conclusion** first.
2. Pay close attention to **premise and conclusion indicators**.
3. Remember that sentences containing the word **and** often contain two or more separate statements.
4. Treat conditional statements (if-then statements) and disjunctive statements (either-or statements) as **single statements**.
5. Don’t number or diagram any sentence that is **not a statement**.
6. Don’t diagram **irrelevant statements**.
7. Don’t diagram **redundant statements**.
Summarizing Longer Arguments

The goal of summarizing longer arguments is to provide a brief synopsis of the argument that accurately and clearly restates the main points in the summarizer’s own words.

Summarizing involves two skills:

• **Paraphrasing**
• **Finding missing premises and conclusions**
Paraphrasing

A **paraphrase** is a detailed restatement of a passage using different words and phrases. A good paraphrase is:

<table>
<thead>
<tr>
<th><strong>Accurate</strong></th>
<th>It reproduces the author’s meaning fairly and without bias and distortion.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clear</strong></td>
<td>Clarifies what an argument is saying. It often translates complex and confusing language into language that’s easier to understand.</td>
</tr>
<tr>
<td><strong>Concise</strong></td>
<td>It captures the essence of an argument, and strips away all the irrelevant or unimportant details and puts the key points of the argument in a nutshell.</td>
</tr>
<tr>
<td><strong>Charitable</strong></td>
<td>It is often possible to interpret a passage in more than one way. In such cases, the principle of charity requires that we interpret the passage as charitable as the evidence reasonably permits (e.g. clarifying the arguer’s intent in ways that make the arguments stronger and less easy to attack).</td>
</tr>
</tbody>
</table>
Paraphrasing – Accurate

Example:

Original Passage:
Europe has a set of primary interests, which to us have none, or a very remote relation. – Hence, she must be engaged in frequent controversies, the causes of which are essentially foreign to our concerns. – Hence, therefore, it must be unwise in us to implicate ourselves, by artificial ties in the ordinary vicissitudes of her politics, or the ordinary combinations and collisions of her friendships or enmities. (George Washington, “Farewell Address,” 1796)

Paraphrase:
Europe has a set of vital interests that are of little or no concern to us. For this reason, European nations will often become embroiled in conflicts for reasons that don’t concern us. Therefore, we shouldn’t form artificial ties that would get us involved in the ordinary ups and downs of European politics.
**Example:**

**Original:**

The patient exhibited symptoms of an edema in the occipital-parietal region and an abrasion on the left patella.

**Paraphrase:**

The patient had a bump on the back of his head and a scrape on his left knee.
Paraphrasing – *Concise*

**Example:**

**Original:**

The shop wasn’t open at that point of time, owing to the fact that there was no electrical power in the building. (23 word)

**Paraphrase:**

The shop was closed then because there was no electricity in the building. (13 words)
Example:

Original:
Cigarette smoking causes lung cancer. Therefore, if you continue to smoke, you are endangering your health.

Paraphrase:
Cigarette smoking is a positive causal factor that greatly increases the risk of getting lung cancer. Therefore, if you continue to smoke, you are endangering your health.
• [P1: Ingestion of alcohol, while shown to be harmful at any point in a pregnancy, is perhaps most harmful in the first trimester when most women will not look pregnant at all.]

• [P2: The woman herself may not know she is pregnant for several weeks.]

• [P3: How can liquor stores, bars and off-licences possibly execute such an order, if there is no visual evidence? Rely on gossip? Administer on-the-spot pregnancy tests? ("before you sip, show your stick"?) Or ban all women of childbearing age from buying alcohol?]

• P1: Alcohol is most harmful in the first trimester of pregnancy when most women will not look pregnant at all.

• P2: A pregnant woman herself may not know she is pregnant for several weeks after the start of pregnancy.

• P3: It is not feasible to rely on gossip about someone's being pregnant, to administer on-the-spot pregnancy tests or to ban all women of childbearing age from buying alcohol.
“The bigger the burger, the better the burger. Burgers are bigger at Burger King (BK).”

(Implied conclusion: Burgers are better at BK)

In real life people often leave parts of their argument unstated for different reasons (being obvious and familiar, concealing something, etc).
Finding Missing Premises and Conclusions

An argument with a missing premise or conclusion is called an *Enthymeme*.

Two (2) basic rules:

• **Faithfully interpret the arguer’s intentions.**  
  Ask: *What else the arguer must assume – that he does not say – to reach his conclusion.* All assumptions you add to the argument must be consistent with everything the arguer says.

• **Be charitable.**  
  Search for a way of completing the argument that (1) is a plausible way of interpreting the arguer’s uncertain intent and (2) makes the argument as good an argument as it can be.

Be generous in interpreting other people’s incompletely stated arguments as you would like them to be in interpreting your own.
Evaluating Arguments
Evaluating Arguments

General Guidelines

• Are the *premises true*? *relevant* to the conclusion?

• Is the *reasoning correct*? Is the argument *deductively valid* or *inductively strong*?

• Does the arguer commit any *logical fallacies*?

• Does the arguer express his or her points *clearly* and *precisely*?

• Are the arguer’s claims *logically consistent*? Do any of the arguer’s claims *contradict* other claims made in the argument?

• Is the argument *complete*? Is all relevant evidence taken into account (given understandable limitations of time, space, context and so on)?

• Is the argument *fair*? Is the arguer fair in his or her presentation of the evidence and treatment of opposing arguments and views?
# Evaluating Arguments

<table>
<thead>
<tr>
<th>7 Questions to help you analyze an argument:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there any inconsistency?</td>
</tr>
<tr>
<td>What is the claim and what are the supporting reasons?</td>
</tr>
<tr>
<td>Are the reasons acceptable?</td>
</tr>
<tr>
<td>Are the reasons relevant?</td>
</tr>
<tr>
<td>Are there any questionable hidden assumptions?</td>
</tr>
<tr>
<td>Are the meanings of all the words and phrases clear and consistent?</td>
</tr>
<tr>
<td>Are there good arguments against the conclusion which have been left out?</td>
</tr>
</tbody>
</table>
Evaluating Arguments

Does the Claim Come from a Credible Source?

• Is the source a **genuine expert** or authority?
• Does the source speak in his or her **area of expertise**?
• Is the source biased or has some other **motive** to lie or mislead?
• Is the **accuracy** of the source’s personal observations or experiences questionable?
Does the Claim Come from a Credible Source?

• Is the source contained in a source that is generally unreliable (e.g. gossip magazine)?

• Has the source been cited correctly or has been quoted out of context?

• Is the issue one that can be settled by expert opinion?

• Is the claim made by the source highly improbable on its face?
FACTS VS OPINIONS
Introduction

• Much of what you read in newspapers or magazines is a mix of factual information and the opinions of the author.

• Often the opinions are disguised as fact, to make the author's argument seem more believable.
• "Registration and control of firearms in Canada is not supported by the Canadian public, and will not lead to a decrease in gun-related crime in Canada."
• "Registration and control of firearms in Canada is not supported by the Canadian public, and will not lead to a decrease in gun-related crime in Canada."
• There is nothing wrong with mixing opinions and fact together in an argument, of course ... it's done all the time.

• What *is* important is that the reader be able to *distinguish the fact from the opinion*, in order to make a sound judgment about the information they are receiving!
Facts

- Statement of actuality or occurrence. A fact is based on direct evidence, actual experience, or observation.

- A statement of fact expresses only what actually happened, or what could be proven by objective data.

- A statement is a fact if you can answer yes to these two questions:
  - Is it true?
  - Can it be proved?
• Can the fact be verified by direct observation?
• Can the facts be trusted? How did the author come to the facts?
• Does the author have the skill and experience to make such a statement?
• Are the facts presented in an objective manner? (any bias evident or suspected?)
• Does the author make clear the sources of statements from authorities? Are these authorities reliable?
• Can the study which generates the facts be duplicated?
• Are the facts relevant to the point being made?
• Have unfavorable or negative points been left out? (are there counter-studies?)
• Do the facts prove the claim being made or do they merely suggest that the claim is reasonable?
What is an opinion?

• An opinion statement can be well thought out but can’t be proved true or false – it is always open to debate.

• Ask yourself:
  – Does this statement tell a thought or feeling?
  – Would the statement be true all the time?
    ❖ Look for signal words
Opinions

• A statement of opinion expresses an attitude toward something – it makes a judgment, view, or conclusion, or gives an opinion that cannot be proven true or false.

• Statement of belief or feeling. It shows one's feelings about a subject. Solid opinions, while based on facts, are someone's views on a subject and not facts themselves.
• Does the author use words that interpret or label, such as: pretty, ugly, safe, dangerous, evil, attractive, well-dressed, good, and so on?

• Are there words that clue you to statements of opinion, such as: probably, perhaps, usually, often, sometimes, on occasion, I believe, I think, in my opinion, I feel, I suggest?

• Can you identify differing opinions and their effect on the author's views?
Facts or opinion?

1. More and more women are deciding to give birth to their children at home. A hospital, after all, is not the best place for a baby to be born.

2. B. J. Vukovich, author of Claws, the best-written novel of the disaster genre, will speak at tonight’s “How I Became An Author” meeting.
Facts or opinion?

1. Philip Luttgen, satirical columnist for the Daily Views, will give a rebuttal entitled “What Is An Author?”

2. The national coal strike, now into its seventh week, has caused untold hardships on the miners, their families, and the rest of the winter-weary nation.

3. Janet Guthrie, world famous auto racer, was the least nervous driver at the Indy 500
• Once the cavity reaches the dentin (the hard, dense, bone-like material that composes the principal mass of the tooth), it must be cleaned and filled. Some researchers, however, are beginning to question whether periodic cleaning and checking of the enamel (the calcareous substance that forms a thin layer capping the teeth) plays a significant role in preventing tooth decay.
Opinion Caution

• Agreeing with a statement doesn’t make it true. For example:

   *Dairy Queen ice cream tastes better than ice cream you buy from the grocery store.*

• Why is this statement an opinion?
  - This is a personal judgment: someone else may not agree.
  - did you notice the signal word?
<table>
<thead>
<tr>
<th>Statement</th>
<th>Fact or Opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maryland is located in the United States</td>
<td>Fact</td>
</tr>
<tr>
<td>Reading is the most interesting subject in school.</td>
<td>Opinon</td>
</tr>
<tr>
<td>The character of Cinderella should marry the prince.</td>
<td>Opinion</td>
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<tr>
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Authors use facts to support opinions

• Ads promise that you’ll be happier if you buy certain clothes or toys.
• Articles try to talk you into believing an idea.
• Speeches and propaganda try to persuade you to change your mind to do something.
• These are examples of persuasive writing
  – In persuasive writing the writer’s goal is to explain why a reader should think, act, or feel the same way he or she does.
1. Abraham Lincoln was the greatest president.

2. Marilyn Monroe was a movie actress.

3. Tiger Woods is the best golfer who ever played the game.

4. Tiger Woods was the first African American to win the Masters Golf Tournament.

5. Dale Earnhardt died in a NASCAR race crash.

6. All Rap lyrics are offensive.

7. Charles Lindbergh was brave to attempt to fly solo across the Atlantic Ocean.
More and more women are deciding to give birth to their children at home. A hospital, after all, is not the best place for a baby to be born.

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INFERENCES
What can you infer from these photos?
• The people were celebrating some kind of festival.
• They were happy.
• The event was very “messy”.
• People threw tomatoes at random directions (that was why some wore goggles → to protect their eyes)
What is an inference?

• An educated guess / a reasoned guess about what you don’t know based on what you do know.
• When we make an inference, we draw a conclusion by reasoning from evidence.

**They inferred she was upset when she left the room.**

• How did they know that she was upset?
• She was hysterical.
• There were tears in her eyes.
• She ran out and ignored the others although they tried to calm her down.
• You see a seated man frequently checking his watch
  → you can infer that he is waiting for someone who is late

Your neighbours have regular habits and spend a lot of time at home. One day you notice that there have been no lights on in their house in the evening for at least a week
In an airport waiting room, you sit down next to a nun wearing a dark blue dress, starched white collar, and starched white head-dress. You notice she is reading a Playboy magazine.

You are looking at your wife’s closet for your missing shoe and notice a new and expensive man’s leather jacket hanging there.
Drawing Inferences from Careful Observation
• Why is the old lady sitting on the floor?
• Who is she?
• Where is this place?
• Why is she all alone?
• As you read, you also need to make inferences frequently. Authors do not always directly state exactly what they mean.

• Instead, they may only hint at or suggest an idea. You have to reason out or infer the meaning an author intends (but did not say) on the basis of what he or she did say.
For example:

As Agatha studied Agnes, she noticed that her eyes appeared misty, her lips trembled slightly, and a twisted handkerchief lay in her lap.

Inference: Agnes is upset slightly and on the verge of tears
Paul’s (1993) eight elements or building blocks which is basic to any reasoning process or task is a good model for developing critical thinking skills.

The eight elements are:

- The **purpose** of the thinking (that is goals, objectives)
- The **question** at issue or problem to be solved fundamental **concepts** (for example, ideas, theories, principles)
- **Information** (involving data, facts, observations)
- **Point of view** (involving frame reference, perspective)
- **Inferences** involving interpretations, conclusions, solutions)
- **Assumptions** (involving consequences)
- **Implications** (involving consequences)
SOCRATIC QUESTIONING

• There are six types of questions that Socrates asked his pupils.

• The overall purpose is to challenge accuracy and completeness of thinking in a way that acts to move people towards their ultimate goal.
Socratic Questioning

• Questions of Clarification
• Questions that Probe Assumptions
• Questions that Probe Reasons and Evidence
• Questions about Viewpoints or Perspectives
• Questions that Probe Implications and Consequences
• Questions about the Question
Questions that seek clarification:
- basic “tell me more” Qs that get you to go deeper

- Can you explain that …?  
  **Explaining**
- What do you mean by …?  
  **Defining**
- Can you give me an example of …?  
  **Giving Examples**
- How does that help …?  
  **Supporting**
- Does anyone have a question to ask …?  
  **Enquiring**
- How does this relate to our discussion?
- Why do you say that?
- Would this be an example?
- What is your main point?
- What do we already know about this?
Questions that probe assumptions:
- makes you think about the presuppositions and unquestioned beliefs on which you are founding your argument

- What else could we assume?
- How did you choose those assumptions?
- Why would someone make that assumption?
- How can you verify or disprove that assumptions?
- What are you assuming?
- Why have you based your reasoning on ___ rather than ___?
- You seem to be assuming ___. Do I understand you correctly?
Two Tough Questions

Question 1:

If you knew a woman who was pregnant, who had 8 kids already, three who were deaf, two who were blind, one mentally retarded, and she had syphilis; would you recommend that she have an abortion?
Ludwig van Beethoven
You will be happy with your Internet access if you sign up with Ampac. They are the world’s largest ISP with over 12 million subscribers.

• What is being assumed?
• Is biggest always the best?
• Just because Ampac is the largest ISP in the world, does it mean that they will provide the best Internet service?

The argument holds together only because this assumption was made. Should you accept it?
Questions that probe reason and evidence:

- Why is that happening?
- How do you know this?
- What do you think causes …?
- Could you explain your reasons to us?
- Are these reasons adequate?
- Can you explain how you logically got from … to …?
- Can you see the difficulties with reasoning here?
- Why did you say that?
- How does that apply to this case?
- Who is in a position to know that is true?
- Are there reasons to doubt that evidence?
Questions about viewpoints or perspectives:
- most arguments are given from a particular position. So, attack the position. Show that there are other, equally valid, viewpoints

- Can you or anyone else see this another way?
- What would someone who disagrees say?
- What is alternative? Is there another alternative?
- How are Ali’s and Anita’s ideas alike or different?
- Why is it better than …?
- What are the strengths and weaknesses of …?
- What would someone who disagrees say?
Questions that probe implications and consequences:
- the arguments given may have logical implications that can be forecast

- Then what would happen?
- What are the consequences of that assumption?
- What are you implying?
- What effect would that have?
- What is an alternative?
- What are the implications of …?
- What is the probability of this result?
- But if that happened, what else would happen as a result? Why?
- Would that necessarily happen or only probably happen?
- If this is the case, then what else would be true?
Questions about the question:
- get reflexive about the whole thing, turning the question on itself

- What was the point of asking that questions?
- Why do you think I asked this questions?
- What does that mean?
- How does … apply to everyday life?
- Is this the same issue as?
- Is this question easy or hard to answer?
- Does this question ask us to evaluate something? Why?
- What influenced you to think/feel this way?
- Is this your own idea or did you get it from someone else?
Socratic Questioning

- Read and analyse the content of the text given. Then answer the questions that follow using the Socratic questioning framework to probe the question further. Remember that there are questions within the questions.

1. What is the topic of the text?
2. What is the central message of the text?
3. What is the purpose the text?
4. What is the underlying concept?
5. What is the question at issue?
6. What can you infer from the text?
7. What evidence can you find in the text to support the issue?
8. What assumptions can you make?
9. What conclusions can you draw from the information in the text?
10. What are the implications of your conclusion?
Identifying Topic

• What the text is about.
• The main or central *subject* of the communication.
• You should not express it by a sentence.

**Identifying central message of text**

What is the overall message the writer is communicating about the topic?
Example

Give the topic and central message of the following text:

They guzzle water and nutrients while hastening wind erosion. But scientists at the Central Great Plains Research Station in Akron, Colo., found that planting winter wheat where sunflowers had just bloomed can reap 12 bushel more per acre. Still, the best sunflower is a dead sunflower: The stalks keep moisture and nutrients in the soil.

(Charles Fenyvesi, “They’re Not All That Bad,” U.S. News and World Report, January 27 1997)
Recognising Purpose

- When reading, part of the evaluation process involves recognizing the writer’s **purpose**, or *reasons for writing*.
- That can help you distinguish between facts and opinions, uncover bias, and assess the overall reliability of information.
- Readers can infer the motivations behind the text based on:
  1. Author’s background or affiliation
  2. Publication in which the writing appears
  3. The information itself
  4. How the information is presented
• **To inform** – a writer simply provides facts, data, or information about a given subject so that you can learn more about it.

• **To persuade** – the writer is trying to get the reader to think in a certain way or to take a particular action.

• **To entertain** – to bring enjoyment to readers by treating a topic in a light, cheerful, funny, or laughable manner.

Remember that the purposes of writing are not limited to the above three
Combination of Purposes

• Sometimes a writer has more than one purpose.
  e.g: provide factual information + persuade readers to accept his viewpoint and take action

• Try to uncover and concentrate on the writer’s overall or main purpose by focusing on the most important messages and the information that lends direct support to them
Concepts
Concepts - General ideas that we use to identify and organize our experience.

**Structure of Concepts:**

1) **Sign** - word/symbol that names the concept
2) **Referents** - examples of the concept
3) **Properties** - qualities that all examples of the concept share in common.

*Words are the vocabulary of language; Concepts are the vocabulary of thought.*
Aristotle once said that an intelligent person is a 'master of concepts'.
You form concepts by the interactive process of:

**Generalizing** - Focusing on the common properties shared by a group of things.

![Image of chairs and stools with the text: "Things we can sit on"]

**Interpreting** - Finding examples of the concept.

![Image of a hard hat with the text: What
- is used on the head
- protects the head from hard objects.
- is used at construction sites]
Forming Concepts: Example

Study the following dialogue on the concept of *Friendship*:

<table>
<thead>
<tr>
<th><strong>Amir</strong></th>
<th>Is 'friendship' what happens when two people meet and say hello?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alfonso</strong></td>
<td>No, I think 'friendship' takes time to develop.</td>
</tr>
<tr>
<td><strong>Amir</strong></td>
<td>Does 'friendship' occur after they have an interesting conversation?</td>
</tr>
<tr>
<td><strong>Alfonso</strong></td>
<td>I think 'friendship' involves an amount of trust and loyalty, which can hardly be established after just one interesting conversation.</td>
</tr>
<tr>
<td><strong>Amir</strong></td>
<td>So can I say that the relationship between my employee and I at work as a 'friendship'.</td>
</tr>
<tr>
<td><strong>Alfonso</strong></td>
<td>I think in a 'friendship', trust and loyalty is given willingly and unconditionally. It should touch on different aspects of people's lives; and not just work.</td>
</tr>
</tbody>
</table>
Forming Concepts: Example

By studying the dialogue, we can imply that in order to determine which concept to apply to a situation, we have to:

- Be aware of the properties that form the boundaries of the concept.
- Be sure that the experience meets the properties or requirements.
Applying Concepts

- **Applying concepts** means meeting the concept’s necessary requirements. In determining exactly what the requirements of the concept are, ask:

  Would something still be an example of this concept if it did not meet this requirement?

- When we are able to **identify all of the requirements** of the concept, we say these requirements are both necessary and sufficient for applying the concept.
Applying Concepts

• When you apply a concept to an object, idea, or experience, you are in effect classifying the object, idea, or experience by placing it into the group of things defined by the properties/requirements of the concept.

• The way you classify reflects and influences the way you see the world, the way you think about the world, and the way you behave in the world.

• The specific categories you use depends on the purposes of your classification.
Applying Concepts: Example

Some may attribute a girl's **BEAUTY** to her fair skin, rosy cheeks and long silky hair. Others, however, may attribute beauty to the kindness of her heart and considerate nature.

**How do you classify the concept of BEAUTY?**
Defining Concepts

Giving an effective definition of a concept means both:

• Identifying the **general qualities** of the concept, which determine when it can be correctly applied.

• Using **appropriate examples** to demonstrate actual applications of the concept. That is, examples that embody the general qualities of the concept.
Defining Concepts: Example

How would you define the word car?

What are the properties of a car?
Question at Issue

• The main or primary question the author asks and then goes on to answer.
  1. Must contain the topic
  2. Should be the main question author is trying to answer
  3. Should be a question that can be given an answer
  4. Should be a question that can be answered in at least two different ways.

If the author does not directly answer the question you have chosen as the issue, more than likely you have not correctly identified the author’s issue
Love began with motherhood. For mammalian young to survive, mothers must invest considerable time and energy in them. Of course, the varying growth rates of mammalian species require some mothers to invest more time and energy than others. An elephant seal suckles her pup for only a few weeks before abandoning it; other species, including elephants, some primates and especially people, lavish attention on their young for years.

Making inference

Why do you think the cat is in the tree?
Making inference

We don’t know exactly why the cat is in the tree, but looking at the picture, we can guess that the dog chased the cat up the tree.

The guess that we mad is called an inference.
Inferring from Text

• What is an inference?
• An educated guess / a reasoned guess about what you don’t know based on what you do know.
• When we make an inference, we draw a conclusion by reasoning from evidence.

They inferred she was upset when she left the room.

How did they know that she was upset?

- She was hysterical.
- There were tears in her eyes.
- She ran out and ignored the others although they tried to calm her down.
• As Agatha studied Agnes, she noticed that her eyes appeared misty, her lips trembled slightly, and a twisted handkerchief lay in her lap.

**Inference:** Agnes is upset slightly and on the verge of tears
The following questions can be powerful igniters of both text-to-text and text-to-self/world inferences. Ideally, we can figure out ways to make such inference-generating questions automatic:

- Who is doing the action? Why?
- How does a part fit into the overall text?
- What are the effects of an event, both psychological and physical?
- What feelings does a person experience?
- What is the author’s purpose?
- What if I had been in that situation?
- How does this apply to my life or the world around me?
- What does this word mean?
Easy Money

Bob and Sam Collect cans. They sell the cans to a recycling center. Lately business has been so good that they have divided their work in half. Bob’s area includes a park where teams play baseball everyday. Sam collects cans from office buildings and stores.

<table>
<thead>
<tr>
<th>Many people drink canned drinks</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sam’s route includes office buildings</td>
<td></td>
</tr>
<tr>
<td>Bob and Sam earn more money now than when they started</td>
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<table>
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<tr>
<th>Statement</th>
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<tbody>
<tr>
<td>Many people drink canned drinks</td>
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</tr>
</tbody>
</table>
What evidence can you find in the text to support the issue?

- Look for details within the text
- Include: Example of the sentence, lines & paragraph
Assumptions

• An assumption, is an unstated reason. It is something that must be true for an argument to work, but which is not explicitly stated in the argument.

• Part of your belief system. Something you don't question. Your mind takes for granted that your assumption is true
A woman gets home, screeches her car into the driveway, runs into the house, slams the door and shouts at the top of her lungs, "Honey, pack your bags! I won the Lottery!"

The husband says, "Wow, I can't believe it!! What should I pack, beach stuff or mountain stuff?"

"It doesn't matter", the wife yells back, "just get the HECK out!"
Situation: Sara has got an F for her July test.

Inference: Sara failed her English test.

Assumption: Sara did not study for her test.
Don’t Quote!

When answering a question that asks you to identify an assumption, unlike when answering other questions, you should never give a quote from the text; by definition, assumptions are unstated.
Conclusion

• Logical or reasonable if they are based on solidly on the information or evidence gathered

• How do you find the conclusion?
  1. Location
  2. Logical indicator words
Location

• When the city reconstructs our street next year, it should not widen it. I live on a hill and my current driveway is very steep where it connects with the street. If the city widens the street, my driveway will be so steep that I will scrape my tailpipe and bumper on the asphalt, ruining my car and gouging the new street. Keep the street that same width!
Logical Indicator of Words

“The current office holder has been in the Ministry for many years and holds a high office in the Party; therefore you should vote for him”.

therefore is the conclusion
Do You Agree? Why?

The National Education Blueprint is aimed at bringing about a major change in the education system. Below we compare the characteristics of a student today and what the blueprint promises in 2010 (NST, 18/01-2007).

<table>
<thead>
<tr>
<th>The Student in 2007</th>
<th>The Student in 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lacks confidence</td>
<td>Self-confident</td>
</tr>
<tr>
<td>Lacks communication skills</td>
<td>Able to communicate well</td>
</tr>
<tr>
<td>Lacks leadership skills</td>
<td>Has leadership skills</td>
</tr>
<tr>
<td>May not be able to speak proper English</td>
<td>Able to speak good English</td>
</tr>
<tr>
<td>Too dependent on tuition</td>
<td>Won’t be dependent on tuition</td>
</tr>
<tr>
<td>Does not mix freely with students of other races</td>
<td>Mixes freely with students of other races</td>
</tr>
<tr>
<td>Studies in a very exam-oriented environment</td>
<td>Studies in an environment that is not too exam-oriented</td>
</tr>
<tr>
<td>Not IT-savvy</td>
<td>Is IT-savvy</td>
</tr>
<tr>
<td>Not creative and innovative</td>
<td>Is creative and innovative</td>
</tr>
<tr>
<td>May not take part in co-curricular activities</td>
<td>Takes part in more co-curricular activities</td>
</tr>
<tr>
<td>May not know how to read, write and count</td>
<td>Has no problems with reading, writing or counting</td>
</tr>
<tr>
<td>Is not very marketable</td>
<td>More marketable</td>
</tr>
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Practice:

Which of the following claims would be best expressed by inductive reasoning?

a. Your first quiz grade usually indicates how you will do in the course.
b. Late papers will not be accepted.
c. *Gravity's Rainbow* is required reading in your course.
d. The final exam accounts for 30% of the course grade.
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