

Unit : 3 Critical Thinking

Activity 1 : As you Assume it!

Theme: Critical thinking enables one to analyze information and experiences in an objective manner. But there are certain barriers to it. We need to break free these barriers and think without biases.

Time Required: 1 period

Materials Needed: 'As you Assume it' Handouts A, B and C

Mode: Groups of four to five students

Life Skills to be enhanced: Critical Thinking, Creative Thinking and Problem Solving

Objectives: Students will be able to:

- develop critical thinking skills;
- examine issues critically.

Getting Started: Discuss with students:

- Social Assumptions** are ideas adopted by groups of people about other groups who are different. They often shape our views about others and can be dangerous because many times they are not true. Social assumptions can eventually lead to stereotypes.
- Stereotypes** label groups of people in a way that may actually be incorrect. Mostly these labels are negative and can be damaging to the social health of a community.

Process:

- Divide students into groups.
- Inform students that they are going to discuss social assumptions to build on their critical and creative thinking.
- Encourage students to discuss the first three assumptions on the Facts and Causal Factors list (Handout A).
- Let students suggest at least one alternative explanation for each statement. Then, let them discuss the last two assumptions (Facts and Relationships) (Handout B).
- Administer the quiz that offers facts and social assumptions and encourage students to give alternative explanations (Handout C).





- Review the quiz.
- Sum up the activity with key messages.

Key Messages

1. Critical thinking enables us to analyze information and experiences in an objective manner.
2. It helps us to find alternative solutions.

As you Assume it! Handout A

Social Assumptions are ideas adopted by groups of people about other groups of people who are different. They often shape our views of others and can be dangerous because often they are not true. Social assumptions can eventually lead to stereotypes.

Stereotypes label groups of people in a way that may actually be incorrect. Mostly these labels are negative and can be damaging to the social health of a community.

Look at the facts and their corresponding stereotypes below:

FACT 1: Children who grow up in a metro city do not do as well in school as children in small towns.	STEREOTYPE: With lots of reasons to distract, less monitoring due to social apathy and nuclear family set up, the city environment affects children's mental abilities.
FACT 2: Most traffic crashes happen within two miles of the driver's home.	STEREOTYPE: Drivers are careless on familiar roads.
FACT 3: The suicide rate is higher in large cities than in small towns or rural areas.	STEREOTYPE: People who live in rural areas are well balanced; people who live in cities are disturbed.
FACT 4: Women tend to stay at home as the main childcare providers.	STEREOTYPE: Women are not as successful as men in the workforce and therefore are meant to be at home.
FACT 5: Many men don't feel comfortable crying in public.	Stereotype: Men who show their emotions are weak.

Think and Discuss:

- Are these stereotypes fair and balanced analyses of the facts?
- What motivates stereotyping?
- Why do people stereotype others?





As you Assume it! Handout B

Social Assumptions: Alternative Explanations

One or two possible explanations are given for each fact. Can you think of any other probable explanations?

Fact 1—Alternative explanations:

Metro city families spend less money on toys, books, and even lesser time together than small town families.

In metro city schools, teachers feel apathy towards students, compared to small town schools.

Fact 2—Alternative explanations:

Drivers spend more time driving near their homes than on more distant roads. The laws of probability may, in part, explain the number of accidents.

Fact 3—Alternative explanations:

City conditions such as noise, over-crowding, and competition are causes of higher suicide rates.

Pace and quality of life in rural areas are calmer than in the city.

Fact 4—Alternative explanations:

Women have historically been discriminated against in the workforce where men have traditionally dominated.

Because women are often discouraged from pursuing careers out-side the home, they are forced to depend on men in the workforce.

Fact 5—Alternative explanations:

Men are often pressurised to be “strong,” that any lack of strength is a failure. Thus, men who show their emotions are made fun of, so they hide emotions to appear more masculine, and more successful in their gender roles.





As You Assume it!: Quiz Handout C

Read each fact, stereotype, and alternative explanation. Decide where these stereotypes might have originated. Do you think the alternative explanations are reasonable and appropriate? Can you think of any more explanations?

Fact 1: CCE (Continuous Comprehensive Evaluation) gives students a chance to participate in lots of activities.

Stereotype: Because of too many activities, students lose focus on academics.

Alternative Explanation: The skills being learnt in the process of participation help in holistic development of the students and they acquire skills needed to lead a happy and successful life.

Fact 2: Many men are poor housekeepers. This is because men do not have the ability to cook, clean, or do the laundry.

Alternative Explanation: Household skills take time to learn and men (and boys) spend their time learning other skills.

Fact 3: The highest number of deaths are caused by heart attacks. Now-a-days people eat a lot of junk food containing fats that lead to increased cholesterol. We can conclude that cholesterol causes heart attacks.

Alternative Explanation: There may be a relationship between heart attacks and diet, but the diet alone usually does not cause heart attacks without interacting factors such as lack of exercise or strain on the heart due to sudden, excessive activity.

Suggested Further Activity:

Let students think of other stereotypes? What facts do these stereotypes come from? Also encourage them to suggest any other alternative explanation.

Fact: _____

Stereotype: _____

Alternative Explanation: _____





Activity 2 : Stating Statements

Theme: Critical thinking is the ability to think clearly and rationally. It is a type of reflective thinking that is aimed at deciding what to believe or what to do. Critical thinkers know NOT to take things at face value. They realize that there is a difference between appearance and reality, and can easily detect the difference.

Time Required: 1 period

Material Needed: 'Stating Statement' Handout

Mode: Two groups

Life Skills to be enhanced: Critical Thinking, Creative Thinking and Problem Solving

Objectives: Students will be able to:

- develop critical thinking skills;
- examine issues critically;
- differentiate between fact, personal statement and value judgment.

Getting Started: An ice-breaker activity.

Process:

- Divide students into two teams. Challenge each member of both the teams thrice:
 - ◆ To identify a type of statement
 - ◆ To formulate a type of statement.
- Provide examples of factual statements, statements of personal taste, and value judgments (Handout).
- Read any statement from the list and challenge students to identify the type of statement: fact, personal statement, value judgment.
- Encourage students to give an example of each one of the three types of statements.
- Discuss their answers.
- Encourage students to give more examples.
- Conclude with the help of key messages.

Key Messages

1. Critical thinking means employing analytical skills.
2. Critical thinking skills help in identifying different types of statements.





'Stating Statement' Handout

What are the different types of statements?

FACTUAL STATEMENTS

1. There are many kinds of computers.
2. Coffee is one of the major exports of Puerto Rico.
3. Library records show that more non-fiction books have been borrowed this year than last year.
4. A bad case of measles can cause blindness.
5. My mother gets angry if I wear dirty socks for a week.
6. Students who 'bunk' class usually get called to the Principal's office.
7. Cricket is a popular sport in India.
8. My mother told me that my bedroom is untidy.
9. The Moon is the only natural satellite of the earth.
10. I spent ₹ 100/- today.

STATEMENTS OF PERSONAL TASTE

1. I prefer to use an Apple computer.
2. I like chocolate eclair but I hate chocolate cake.
3. My favourite author is Enid Blyton.
4. Don't sneeze on me! I'd hate to catch a cold.
5. I'd like to go barefoot in summer.
6. I would like to 'bunk' Mathematics class.
7. I enjoy playing dominos.
8. I enjoy rock music.
9. I like Italian food.
10. As far as I'm concerned, ₹ 500/- an hour is very little as pocket money.

VALUE JUDGEMENTS:

1. Computers should be built to last.
2. People with bad taste should get fashion advice.





3. You shouldn't believe everything you read.
4. All children ought to be vaccinated against serious diseases.
5. Yogesh is the best swimming coach at the DDA pool.
6. It is important to attend school regularly.
7. It is better to be involved in games than watching it.
8. Students should develop good work habits.
9. It is wrong to accuse a person without very good reasons.
10. It is wrong to spend more money than you earn.



Suggested Further Activity:

Encourage students to write five new statements for each of the following:

1. Factual Statement
2. Personal Statement
3. Value Judgement





Activity 3 : Keep Balloon up in Air

Theme: Critical thinking helps to analyse issues critically and form opinions on them. The learning of facts is the essential first step to thinking critically.

Time Required: 1 period

Materials Needed: Name list (for facilitator) and a virtual balloon using chairs etc.

Mode: Groups of four to five students

Life Skills to be enhanced: Critical Thinking, Creative Thinking and Problem Solving

Objectives: Students will be able to:

- develop critical thinking skills;
- examine issues critically.

Getting Started: An ice-breaker activity.

Process:

- Create a list of people with very different backgrounds. These may be famous individuals, characters or types of people from the present day or historical figures.
- Give each student a person to be or let them choose by picking a name from a bowl.
- Explain that the group is in a make believe hot air balloon which is losing height. To stay in the air, a person must leave the balloon.
- Taking turns, ask each student to explain why their character should be allowed to stay in the balloon.
- Once everyone has spoken, instruct the group to decide who should be evicted from the balloon. This can be done by taking a vote and the student with most votes leaves the balloon.
- Start the process again. As the hot air balloon is still losing height so another student must be evicted until there is only one student left. Each time the students should think of a different reason why they should stay.
- At the end of the debate, discuss with students why the students left the balloon in the order they did, what were the characteristics or skills and attributes of the people who seemed to be the most and least valuable to society.



- Tell students that even when their character is no longer in the balloon, it is important to listen to the debate so that they can participate fully in the discussion at the end.

Key Message

Critical thinking helps to look into things critically and form opinions on them.

Name List

- | | |
|--------------------|---------------------|
| ● Mahatma Gandhi | ● Kalpana Chawla |
| ● Manmohan Singh | ● Emperor Akbar |
| ● Amitabh Bachhan | ● Lata Mangeshkar |
| ● Sachin Tendulkar | ● Kiran Bedi |
| ● Mother Teresa | ● Indira Gandhi |
| ● Barak Obama | ● Swami Vivekananda |
| ● Bill Gates | ● Isaac Newton |
| ● Ratan Tata | ● Aryabhatta |
| ● Arundathi Roy | ● A.R. Rehman |
| ● Jatin Das | ● Vijendra Kumar |

Suggested Further Activity:

Encourage students to make a list of famous persons (who are no more in this world) belonging to any field and from any country who have done something novel in their field. Instruct them to choose any two whom they wish were alive giving reasons for their choice.





Activity 4 : Media makes it all

Theme: There are differences of opinion among local, national and international media. This is because they want to make a difference and want a chance to be creative in presenting their news items.

Time Required: 1 period

Materials Needed: A wide selection of newspapers and magazines, display boards and cards with topics

Mode: Groups of four to five students

Life Skills to be enhanced : Critical Thinking, Creative Thinking and Problem Solving

Objectives: Students will be able to:

- develop critical thinking skills;
- evaluate information presented by media critically.

Getting Started: Discuss with students about media and their structure, what news means to them and how news is created and presented.

Process:

- Discuss the headlines / news in the newspapers and magazines.
- Prepare a list of key topics to be investigated on cards.
- Place each card, one at a time, in the centre of a display board.
- Instruct students to look through all the papers and magazines and cut out any news related to the topics that they find- for example, articles, headlines, stories, photos, advertisements, etc.
- Place relevant items on the board around the topic card.
- Once all the publications have been looked at or the time for the task is up, let students share their opinion on the results of their findings by considering the following questions:
 - a. How are different topics viewed by different media?
 - b. How much coverage is given to different topics?
 - c. Is there a difference of opinion in local, national and international media?





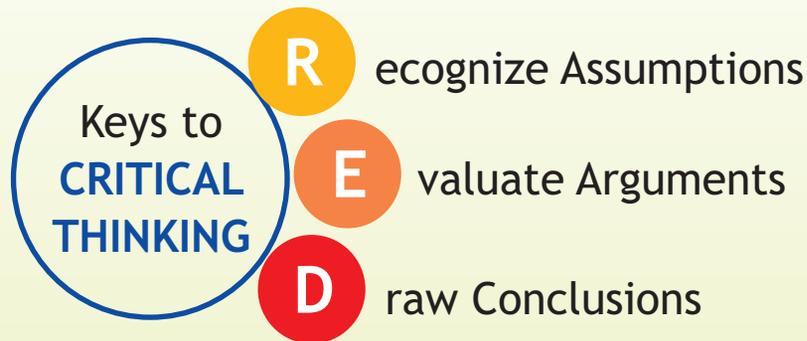
Key Messages

1. Media likes to sensationalize even the simplest of happenings which it feels will get readership.
2. Different media approach the same piece of news in different ways.
3. They change their viewpoints depending on circumstances and evidences.

Suggested Further Activity:

Choose one topic to be followed over several weeks in the media so that changes in attitudes / reporting of the topic can be traced. This can also help the students explore papers and magazines that they would not normally read.

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Activity 5 : Why and What of Choosing

Theme: Critical thinking is a reflective thinking that facilitates good judgment. It involves both cognitive skills and dispositions (attitudes or habits of mind). It includes analyzing and making inferences which helps us choose certain activities or practices and reject others.

Time Required: 1 period

Materials Needed: Flash cards and marker pens

Mode: Groups of four to five students

Life Skills to be enhanced: Critical Thinking, Creative Thinking and Problem Solving

Objectives: Students will be able to:

- develop critical thinking skills;
- reason out when they make choices.

Getting Started: An ice-breaker

Process:

- Instruct students to sit in a circle on the floor. Leave space at the centre for this exercise.
- Call for two volunteers to the centre of the circle. Give them a stack of flash cards and markers.
- Encourage students to call out activities or practices that may be common in their peer group, for example, going to party, sports, or reading.
- As they call out, instruct the volunteers to write each suggestion on a flash card. Try and get a mix of negative and positive activities or practices.
- Stop after ten to fifteen activities or practices.
- Instruct the volunteers to arrange the flash cards on the floor in a vertical line.
- Encourage students to state the reasons for doing/participating in an activity or practice. Instruct the volunteers to note these on the flash cards as well.
- Limit the reasons to eight to ten. If the students agree, similar reasons may be clubbed together.





- Instruct the volunteers to place these “reason” flash cards horizontally.
- Ask the volunteers to draw a matrix using the vertical and horizontal placement of the cards. As a result, there should be a table with rows and columns on the floor.
- Explain that each activity or practice will be analyzed according to the reasons mentioned by the students.
- Start with the first activity and analyze it against all the reasons mentioned. Then, move to the next and analyze it according to all the reasons mentioned. Complete all the rows, one after the other, in this fashion.
- Instruct students to analyze each activity, they could give scores to show which reason is the most important for each one.
- Once the matrix is complete, the students will be able to see why they choose certain activities over others.
- The quality of the discussion is dependent on the facilitator's ability to read the matrix and ask open -ended questions. For example,

So, the most important reason for going to a party is to be with friends, and I can see that the most important reason for using abusive language or expletives is also to be with friends. Why is that so? It is for having fun. Why is this so?

Key Messages

1. Critical thinking is an ability to analyze information and experience in an objective manner.
2. It enables one to make the maximum use of one’s senses and ensure the maximum learning.

Suggested Further Activity:

Let students do a similar exercise on their own to analyze their choice of personal activities/ practices according to the reasons for participating in them.





Activity 6 : May be... still

Theme : We must critically analyze and look for the best option available. We should be able to challenge other people's ideas spontaneously and think of better alternative solutions.

Time Required: 1 period

Material Needed: May be...still handout

Mode: Groups of four to five students

Life Skills to be enhanced: Critical Thinking, Creative Thinking and Problem Solving

Objectives: Students will be able to:

- develop critical thinking skills;
- examine issues critically.

Process:

- Sit in a big circle with the students.
- Provide a problem or an issue. Then ask, "*Are there any (better) ideas?*" or "*What do you think?*"
- Instruct students to consider the problem, thinking critically. Nominate someone to provide a better alternative.
- The next student says '*hmm, maybe, but*' and then offers his/her own alternative.
- The next student thinks about this alternative and says '*hmm, maybe, but...*' and then offers his/her perspective, and so on, until everyone in the circle has spoken.

Sample flow:

Facilitator- "*Many people think that girls are better than boys. How do you think that we can change this perception and tell everyone that girls and boys are really equal?*"

Next student on right- "*Hmm, maybe, but... I think that boys are more industrious than girls...*"

Next student on right- "*Hmm, maybe, but... the boys are also stubborn, especially when they do not like to do the work assigned to them...*"

Next student on right - "*Hmm, maybe, but... girls can also be stubborn when they do not feel like working...*"

And so on.

- Conclude with the help of key messages.





Key Messages

1. Critical thinking demands rational and analytical thinking.
2. It is always advisable to deeply look into the matter before forming an opinion.
3. Our decisions should be led by critical thinking not by assumptions.

Handout Sample Problems

- 1 It is not proper for girls to stay out till late, with boys it is still fine. What are your ideas about this?
- 2 Many young people today find it hard to talk openly and honestly with their parents. How do you think young people should talk to their parents and why?
- 3 Wearing low waist jeans or shorts is nothing but a way to look different and seek attention. What is your opinion?
- 4 It is better to focus on academics in the secondary classes than on co-scholastic activities. Do you agree? Give reasons.
- 5 Parents should give children more liberty in making career choices. Give your view about this.
- 6 Girls and boys must deal with their emotions everyday. How should they do this?
- 7 Many adults think that young people should just stay quiet and follow them without thinking. Do you agree with this statement?

Suggested Further Activity:

Encourage students to think of a similar "May be ... still" situation which they might have faced at home. What were the opinions of each member of their family including them regarding that issue?

