



**HANDBOOK**  
FOR ELEMENTARY SCHOOL PUPILS

**Critical  
Thinking  
Skills**

# Content

Project summary	3
How to work with this Handbook and interactive presentation	4
Introduction to the lesson	5
Critical thinking	6
The Dunning-Kruger effect	7
What are cognitive distortions	8
Cognitive distortions	9
Examples of cognitive distortions I	10
Black and white thinking	11
Filtering	11
Exaggeration x downplaying	12
Justification based on emotions	12
Examples of cognitive distortions II	13
Ostrich effect	14
Stereotyping	14
I always have to be right	15
Blaming	15
How to use critical thinking	16
Logical fallacies	19
Examples of logical fallacies I	20
Emphasis on the tradition, widespread opinion	21
Distracting attention	22
Herd behaviour	22
Social (information) bubble	23
Examples of logical fallacies II	23
Emphasis on authority	24
Attack on a person	24
Slippery slope	25
Hasty generalization	25
Concrete examples of logical fallacies I	26
Intimidation	27
Emphasis on widespread opinion	27
Flattery	28
Concrete examples of logical fallacies I I	28
Emphasis on unknown authority	29
Emphasis on tradition	29
Arousing compassions	30
The End	31
Reading List	32
References	33

# Project Summary

Citizen's competence is of crucial importance for active political participation, which is one of the main components of good governance and sustainable democracy. Especially in the Eastern part of the Danube region, political participation is stagnating. Particularly worrisome are the apathy and lack of political interest on the side of younger population. Furthermore, in the last years, we witness political developments that result in deterioration of democratic standards in many parts of the region. The core element of the citizen's competence is high level of media literacy. It is necessary for citizens' reflection of social reality and their resilience to negative media phenomena, like hate speech and fake news.

The main objective of the project is to improve democratic transnational governance by developing a transnational media literacy observatory, based on cooperation between different relevant stakeholders. In many countries of the Danube region the development of competences of media literacy and active citizenship are far behind more developed parts of Europe. This observatory will serve as a mechanism for increasing media literacy and thus strengthening citizens' competences what will contribute to development of sustainable democracy. The main target groups are the youth and the people who work with them. For the purpose of strengthening it, the observatory will provide tools, available for both young people as well as their educators.

The project will establish an observatory for media literacy that will provide instruments for scrutinising media contents, training tools and policy recommendations for upgrading media literacy in relation with other civic skills. Outputs include: capacity building and training tools, web-based interface and policy recommendations. The core activities of the project are: mapping of practices and dissemination of information, developing learning system, designing web training platforms, and pilot testing.

# How to work with this Handbook and interactive presentation

Dear pupils,

you have just received a handbook that is designed for you and for your work with the presentation in the class. You will find information on how to work with individual slides, what is their main goal and you will find some interesting tips for a better understanding of the topic.

The handbook also includes a list of literature, thanks to which you can acquire or expand knowledge that relates mainly to a specific topic of the presentation.

If you see an “i” icon on the slide in the lower left corner, click on it. Under it, there is additional information or examples that will help you better understand the issue.

Some slides have interactive elements in addition to the „i“ button. These elements are highlighted. When you click on them, you will learn more information (there can for example an audio sample, video or additional information). You will also find an audio icon in the presentation. Some slides contain sound. If necessary, you can click on the sound icon to mute or reactivate the sound in the presentation.

Click on the right arrow for the next slide. If you want to go back in the presentation, click on the left arrow. To go back to the very beginning of the presentation, click on the house icon.

For better orientation in the text, individual slides are gradually displayed with additional educational material and further expansion of teaching. The text is interspersed with **Definitions**, because you come across some terms for the first time and it is advisable to remember them. Also pay attention to the **Interesting Facts**.

Caption to the texts in the handbook:



**INTERESTING  
FACT**



**DEFINITIONS**

# Introduction to the lesson

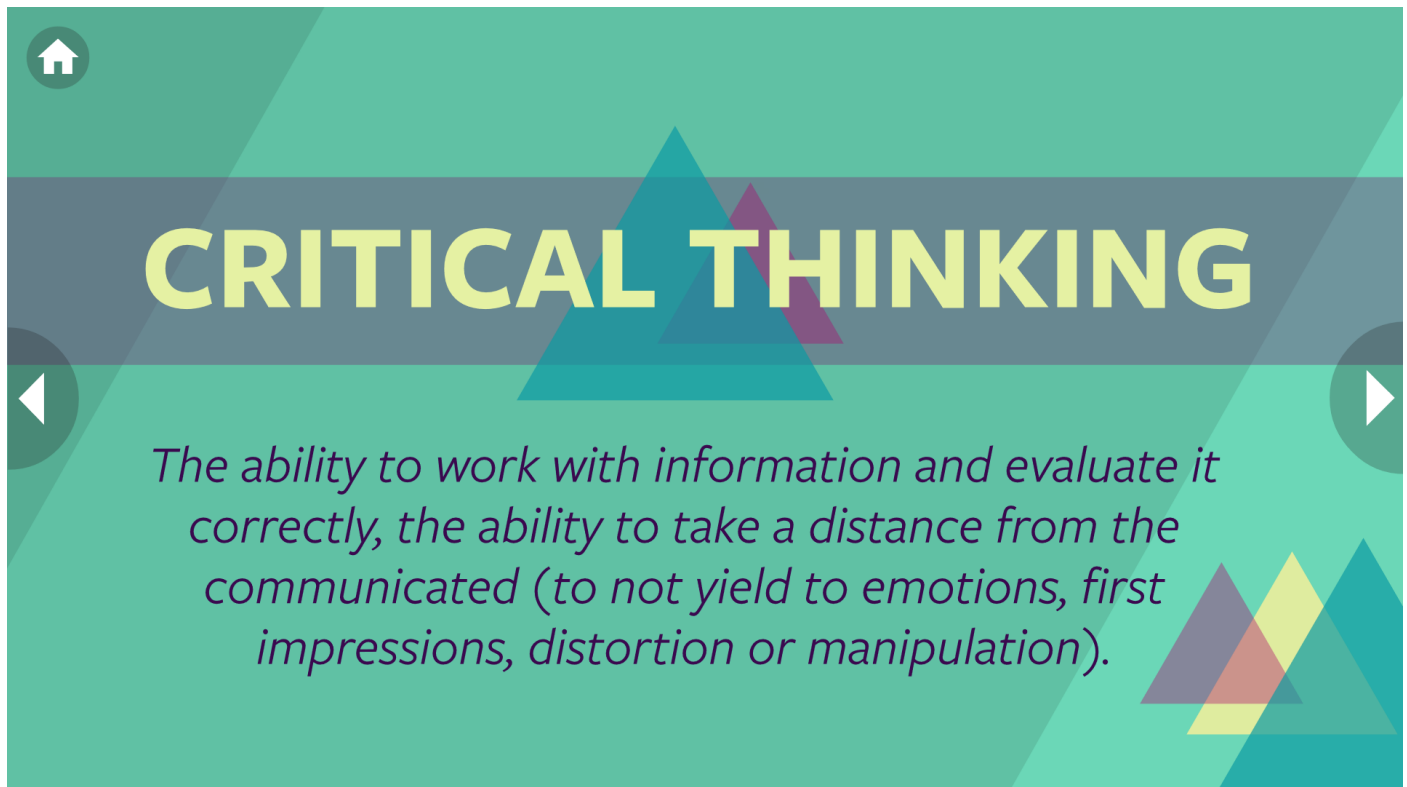
People often perceive the online world as one of the main sources of information that significantly shapes their world view. They simplify information, they tend to stereotypes and abbreviations, which often force them to interpret things in a way that confirms their own beliefs and world views. Strengthening critical thinking is essential to maintaining common sense in evaluating information, including politically related information.

You will learn what are cognitive distortions and logical fallacies, what is critical thinking and what is beneficial for it and what is not. In the second part of the presentation, you will practice the information obtained on specific examples.

# Critical thinking

We must pay more attention to who is telling us the truth and who is just trying to make the words look like the truth.

On the slide we will learn about critical thinking. **What does it mean?**  
Look for the answer on the slide.

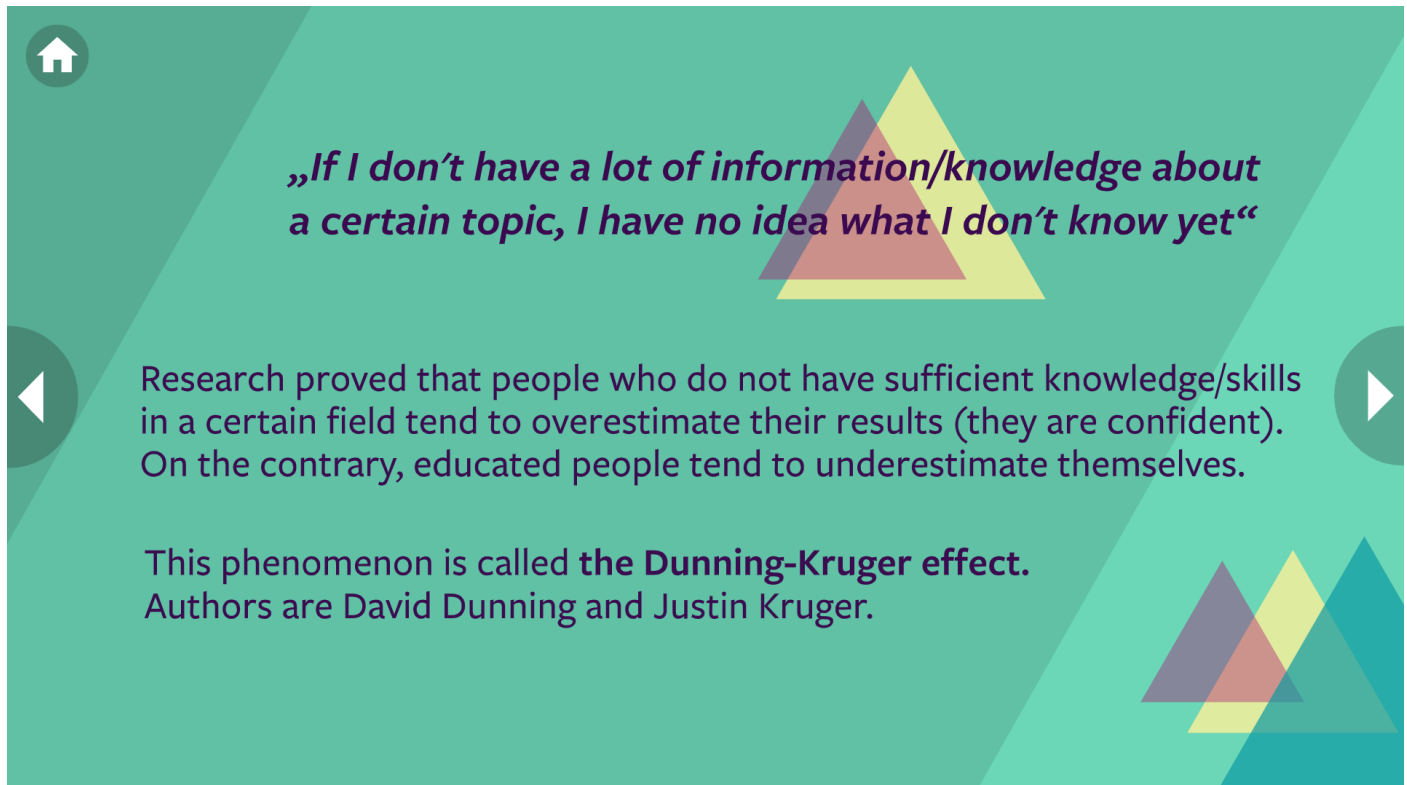


Remember: Critical thinking doesn't mean we should criticize anyone.

We need to **be critical** of media content and try **to see if through** a particular blogger, singer or politician is just playing a strange game on us.

# The Dunning-Kruger effect

Read on the slide what the Dunning-Kruger effect is. Think about the first sentence in quotes.



„If I don't have a lot of information/knowledge about a certain topic, I have no idea what I don't know yet“

Research proved that people who do not have sufficient knowledge/skills in a certain field tend to overestimate their results (they are confident). On the contrary, educated people tend to underestimate themselves.

This phenomenon is called **the Dunning-Kruger effect**.  
Authors are David Dunning and Justin Kruger.

If I don't have enough information or knowledge about a topic (for example, when talking to my parents about politics), I can't possibly know what I don't know yet.

Therefore, information needs to be evaluated, both general and political. If a politician on the news is explaining a position or advocacy to you, you need to listen well to the style in which he or she presents the information. In the following slides you will learn how we can be manipulated.

# What are Cognitive distortions

Describe women on the slide - what are their characteristics, interests, professions...

**Which one would you prefer as an instructor on a ski course or as a camp leader? Why?**

The slide features a teal background with a white home icon in the top left, a yellow information icon in the bottom left, and navigation arrows on the sides. The title 'Cognitive distortions' is centered in yellow. Two images are shown side-by-side: on the left, a woman in a white blouse and dark skirt looks at a tablet held by a man in a grey suit; on the right, a woman in a white tank top and jeans sits on a couch, smoking a cigarette and holding a glass of wine.

The brain can convince us of something that is not true. Look at the definition in the info button, what cognitive distortions are and what it means in practice.



# Cognitive distortions

**Cognitive distortions** = *unconsciously formed erroneous beliefs that we form in our heads because they sound logical.*

The brain can convince us of something that is not true.

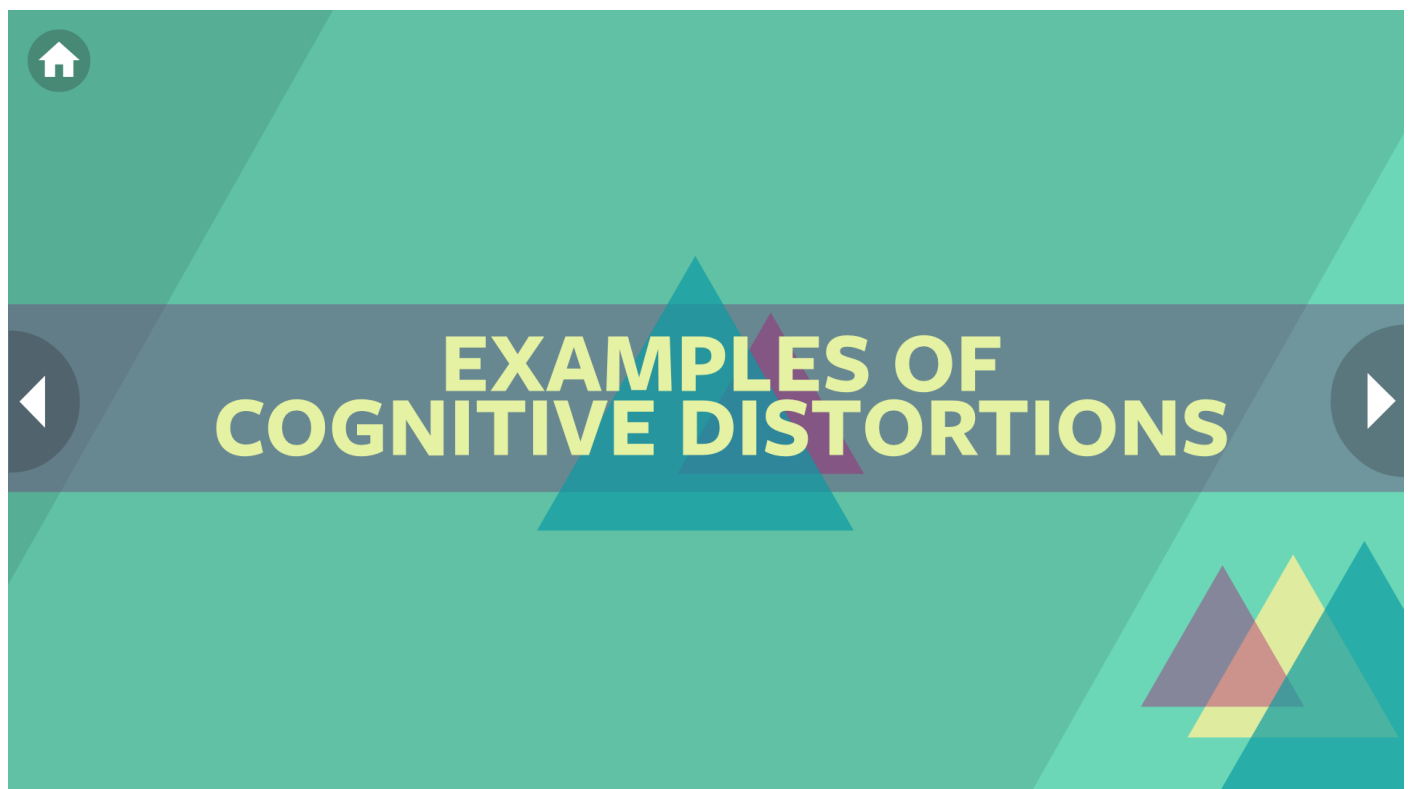
In the case of the women in the picture, it can be, for example, drawing hasty conclusions or generalizing, pigeon-holing.

The first information we learn works as an anchor for us - we remember it well. It affects our further perception and we often judge other, similar situations according to it.



## Cognitive distortions

This slide introduces the examples section. Go to the next slide and learn specific examples of cognitive fallacies and their explanations.



# Examples of cognitive distortions I

You see four symbols on this slide. Click on one of them to view it. View one by one. After you read the examples, think about the symbolism of the pictures. Do the words and the picture have a connection? The visuals should help you remember the examples.



## How do you display them?

Click on the symbol and a section in the same colour will expand. On it is the name of the cognitive bias and the specific example. We've selected ones that you may have encountered in your life. Once you've read it, click on the box again and it will disappear. Click on the next symbol to see them all in turn.

Try to brainstorm more examples for specific cognitive distortions.

# Black and white thinking



**Example:** *“My presentation was a complete failure. I was stuttering all the time, I blushed, and in the end I didn’t even have time for questions.”*

**Black and white thinking**  
everything is either absolutely great or completely useless.

# Filtering



**Example:** *“My presentation was a complete failure. Carl told me that I was speaking way too fast and it didn’t make sense to him.”*

**Filtering**  
we emphasize unsuccessful details, we forget about successful moments and we do not attach much importance to them.

# Exaggeration × downplaying



**Example:** *“Thank you very much, you helped me a lot, I am forever in your debt...”*

**Exaggeration × downplaying**  
most often in relation to work done or when helping another person.

# Justification based on emotions



**Example:** *“He’s a terrible chef, I’ve never eaten such disgusting food.”*

**Justification based on emotions**  
we believe that our feelings reflect reality.

# Examples of cognitive distortions II

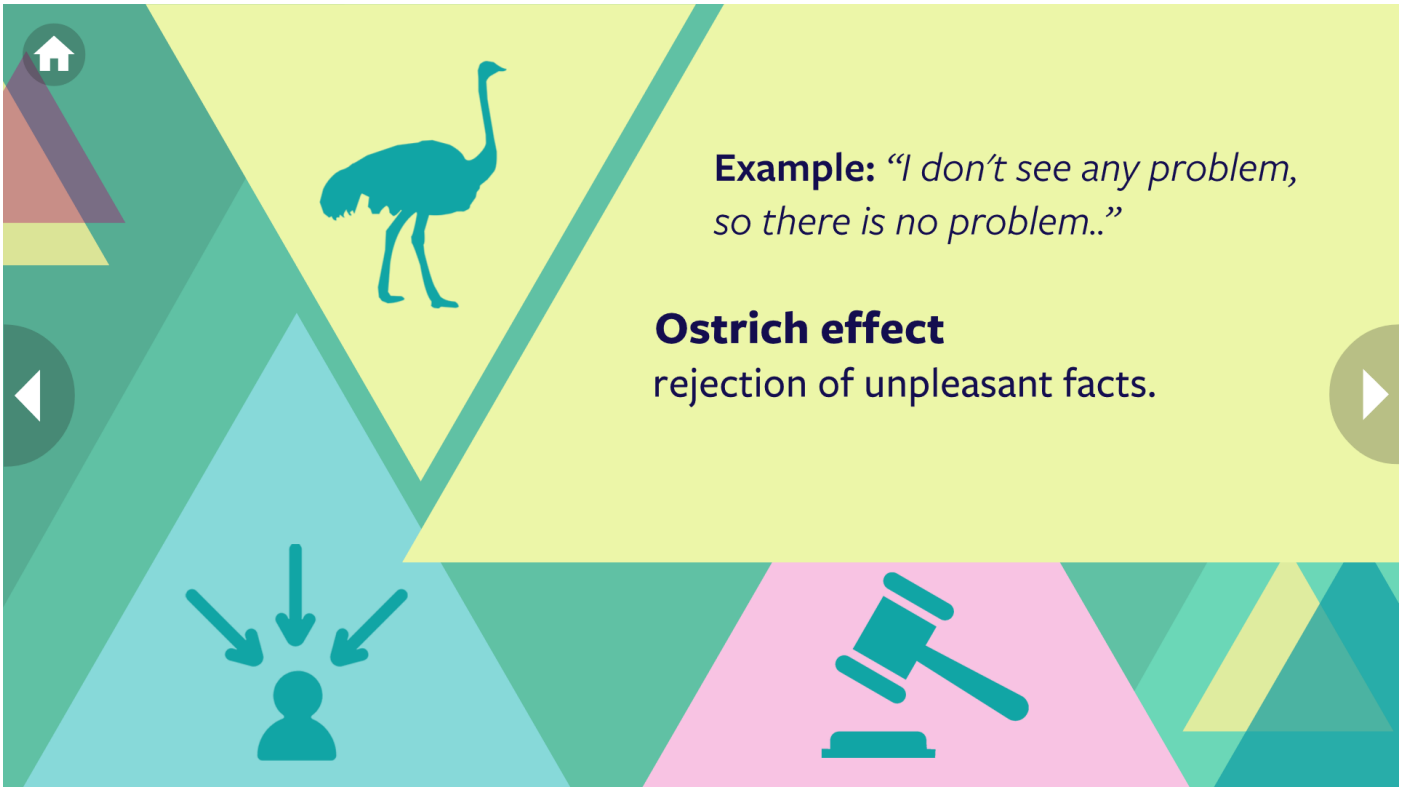
There are many more cognitive distortions. Here are four more examples. Proceed as before.

You see four symbols on this slide. Click on one of them to view it. View one by one. After you read the examples, think about the symbolism of the pictures. Do the words and the picture have a connection? The visuals should help you remember the examples.

See the slides below for specific examples.



# Ostrich effect



This slide features a yellow background with a teal ostrich icon in the upper left. Below the ostrich, there is a teal silhouette of a person with three arrows pointing towards them. To the right of the person icon, there is a teal gavel icon. The slide includes a home button in the top left, a left arrow in the middle left, and a right arrow in the middle right.

**Example:** “I don’t see any problem, so there is no problem..”

**Ostrich effect**  
rejection of unpleasant facts.

# Stereotyping



This slide features a teal background with a teal high-heeled shoe icon inside a triangle in the upper right. Below the shoe icon, there is a teal silhouette of a person with three arrows pointing towards them. To the right of the person icon, there is a teal gavel icon. The slide includes a home button in the top left, a left arrow in the middle left, and a right arrow in the middle right.

**Example:** “No woman can drive a car properly.”

**Stereotyping**  
groups of people have certain characteristics.

# I always have to be right



**Example:** *“I don’t care what you think, but I’m right.”*

**I always have to be right**  
we are constantly trying to prove that our opinions and actions are right.

# Blaming



**Example:** *“You’re the reason I have a headache. Because you’re making me worry again.”*

**Blaming**  
we blame other people for our pain, or we blame ourselves for every problem.

Maybe some of them looked familiar. Maybe you've heard or even said something similar. **Remember, manipulative speech is not right**, but it can be corrected. Just be aware of what you want to say and how you can say it. And if someone talks to you like that, at least you'll recognize it and notice that they're not being direct.

# How to use critical thinking

We've imaged your brain on the slide. Imagine it's your brain.

**If you're getting information, you're evaluating it in some way.**

On the left (blue) are the stimuli that are good for critical thinking.

On the right, the ones that don't.

## Critical thinking

- to work with information
- to not believe everything right away
- to not get upset
- to think about it

- to defend your point of view
- to comment on everything
- to trust the tradition
- to go on intuition

Click on the blue part to see the details. Similarly, you can click on the right part and read the negative influences.

See also the info button for more interesting things.





# Critical thinking

We must pay more attention to who is telling us the truth and who is just trying to make the words look like the truth.

**Critical thinking** = the ability to work with information and evaluate it correctly, the ability to take a distance from the communicated (to not yield to emotions, first impressions, distortion or manipulation).

We need to **be critical** of media content and try to **see through** if a particular blogger, singer or politician is just playing a strange game on us.



Always try to justify why a particular action does not/contributes to critical thinking. Have you ever encountered anything like this in your life? Do you have experience of this in your own environment?



# Critical thinking

- to work with information

- to not believe everything right away

- to not get upset

- to think about it

to verify that the information is true and what sources it is based on

to not spread information on the basis of headlines or incomplete information

to approach information calmly, to look for causes and consequences

to ask questions and look for answers, to look at things from different angles



## In order to think critically about something, we need:

- ▶ to work with information and use it in the right context
  - ▷ to verify that the information is true and what sources it is based on
- ▶ to not believe everything right away
  - ▷ to not spread information on the basis of headlines or incomplete information
- ▶ to not get upset
  - ▷ to approach information calmly, to look for causes and consequences
- ▶ to think about it
- ▶ to ask questions and look for answers, to look at things from different angles

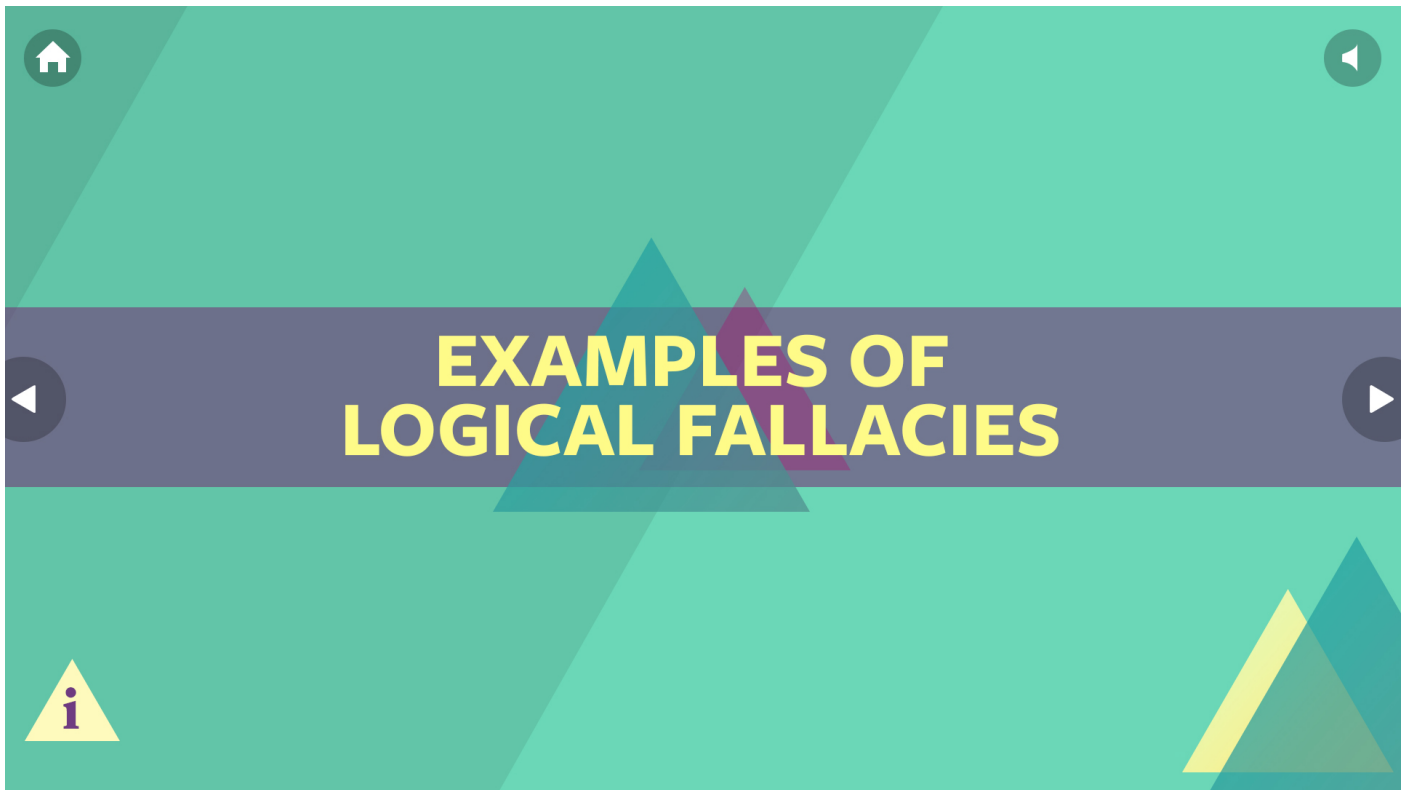


## On the contrary, it is useless for critical thinking:

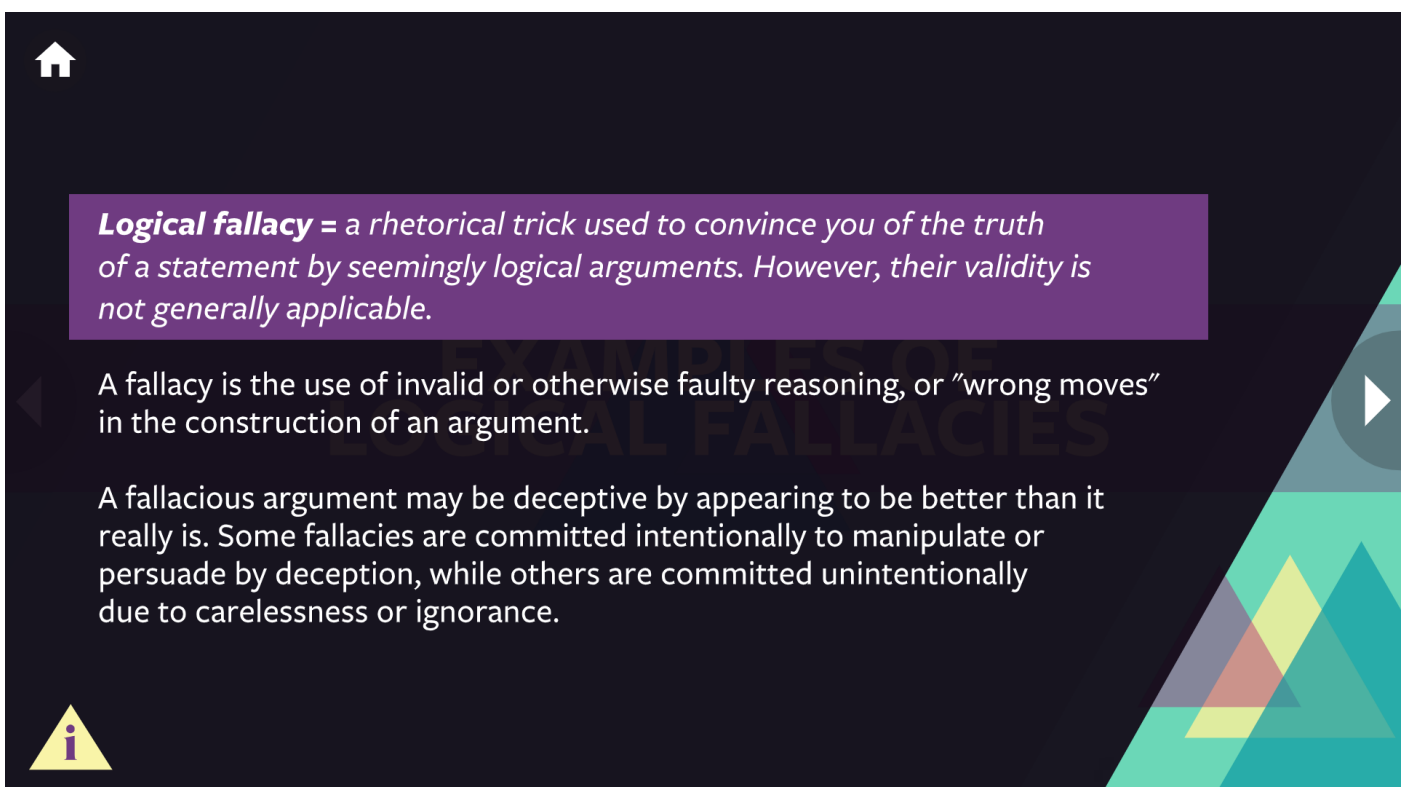
- ▶ to defend your point of view
  - ▷ to look for an explanation of why my opinion is correct
- ▶ to comment on everything
  - ▷ to communicate my point of view on different topics publicly
- ▶ to trust the tradition
  - ▷ to focus on what we are used to
- ▶ to go on intuition
  - ▷ to judge and evaluate on the basis of inner feeling

# Logical fallacies

This slide introduces the examples section. Go to the next slide and learn the explanation of logical fallacies.



You can learn more about what a logical fallacy is in the info button. Click on it now.



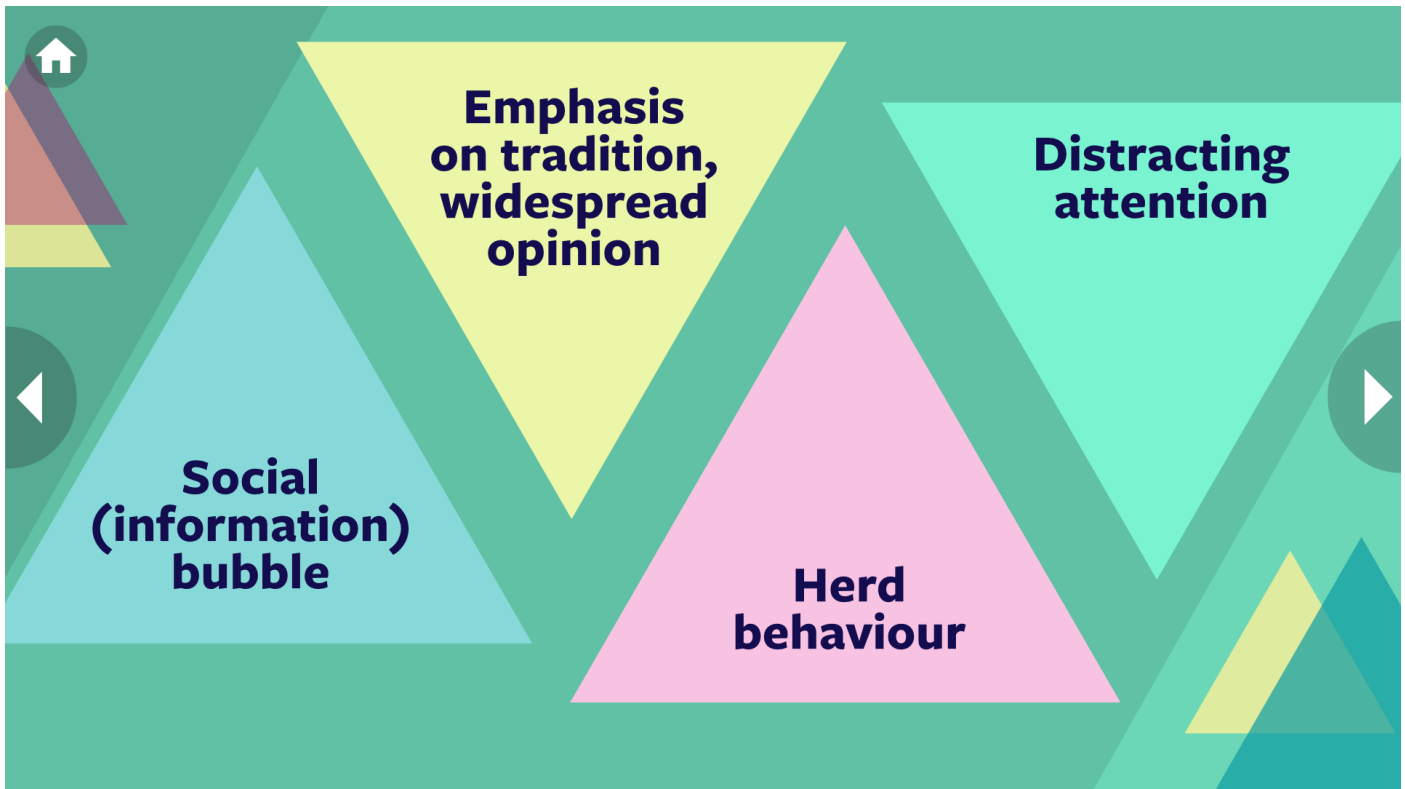
# Examples of logical fallacies I

Now we're talking about **logical fallacies**. You can be sure that these formulations are not used by people to better communicate with you. The goal is more often an attempt to persuade you or manipulate you...



**Logical fallacy** = a rhetorical trick used to convince you of the truth of a statement by seemingly logical arguments. However, their validity is not generally applicable.

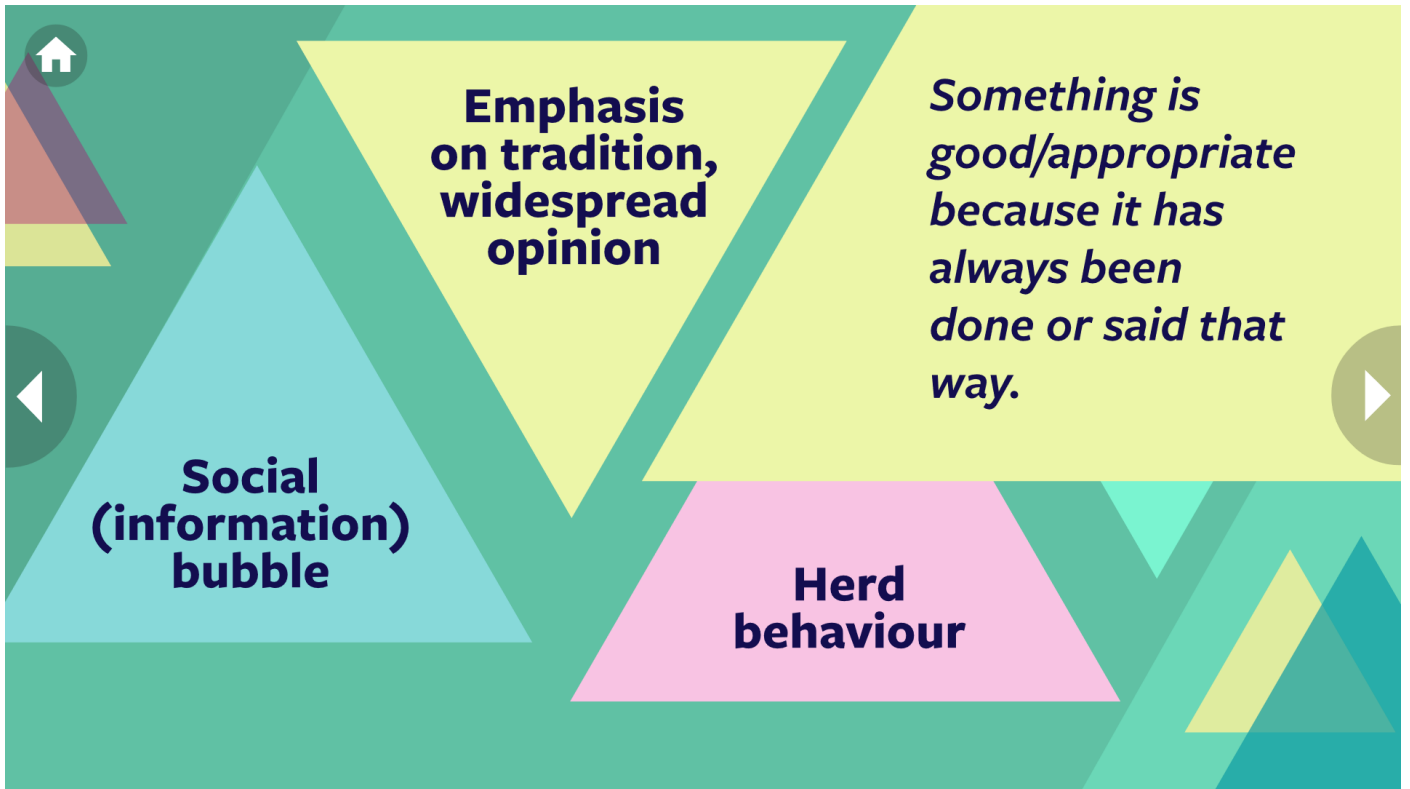
You see four triangles on this slide. Click on one of them to view it. View one by one. After you read the explanation.



## How do you display them?

Click on the symbol and a section in the same colour will expand. On it is the name of the logical fallacy and the specific explanation. We've selected ones that you may have encountered in your life. Once you've read it, click on the box again and it will disappear. Click on the next symbol to see them all in turn.

# Emphasis on the tradition, widespread opinion



# Distracting attention

**Distracting attention**

*Turning the conversation to another topic.*

**(information) bubble**

**Herd behaviour**

This slide features a teal background with geometric shapes. A large teal triangle on the left contains the text 'Turning the conversation to another topic.' Below it, a blue trapezoid contains '(information) bubble'. A pink trapezoid in the center contains 'Herd behaviour'. A teal triangle on the right contains 'Distracting attention'. Navigation icons (home, back, forward) are visible.

# Herd behaviour

**Herd behaviour**

*A tendency to accept an opinion just because others have it too.*

**Emphasis on tradition, widespread opinion**

**Distracting attention**

This slide features a teal background with geometric shapes. A large pink triangle on the left contains the text 'A tendency to accept an opinion just because others have it too.' Above it, a yellow trapezoid contains 'Emphasis on tradition, widespread opinion'. A teal triangle on the right contains 'Distracting attention'. A pink trapezoid in the center contains 'Herd behaviour'. Navigation icons (home, back, forward) are visible.

Remember this expression. You will also hear about it in the lesson “Manipulation and Propaganda”. You will see how it can be used in practice and in a political context.

# Social (information) bubble

**Social (information) bubble**

*The individual is surrounded by people who have similar opinions and, to some extent (often unconsciously), isolates himself from those who does not agree with him.*

**Emphasis on tradition, widespread opinion**

**Distracting attention**

The slide features a teal background with geometric shapes. A large light blue triangle on the left contains the title. A yellow triangle at the top center contains the text 'Emphasis on tradition, widespread opinion'. A light green triangle at the top right contains 'Distracting attention'. A central light blue area contains the definition in italics. Navigation icons (home, back, forward) are visible on the left and right sides.

# Examples of logical fallacies II

**Attack on a person**

**Emphasis on authority**

**Slippery slope**

**Hasty generalization**

The slide features a teal background with geometric shapes. A large light blue triangle on the left contains the title 'Attack on a person'. A yellow triangle at the top center contains 'Emphasis on authority'. A pink triangle at the bottom center contains 'Slippery slope'. A light green triangle at the top right contains 'Hasty generalization'. Navigation icons (home, back, forward) are visible on the left and right sides.

# Emphasis on authority

**Emphasis on authority**

*Information is true because it is claimed by a respected, educated or well-known person.*

**Attack on a person**

**Slippery slope**

# Attack on a person

**Emphasis on authority**

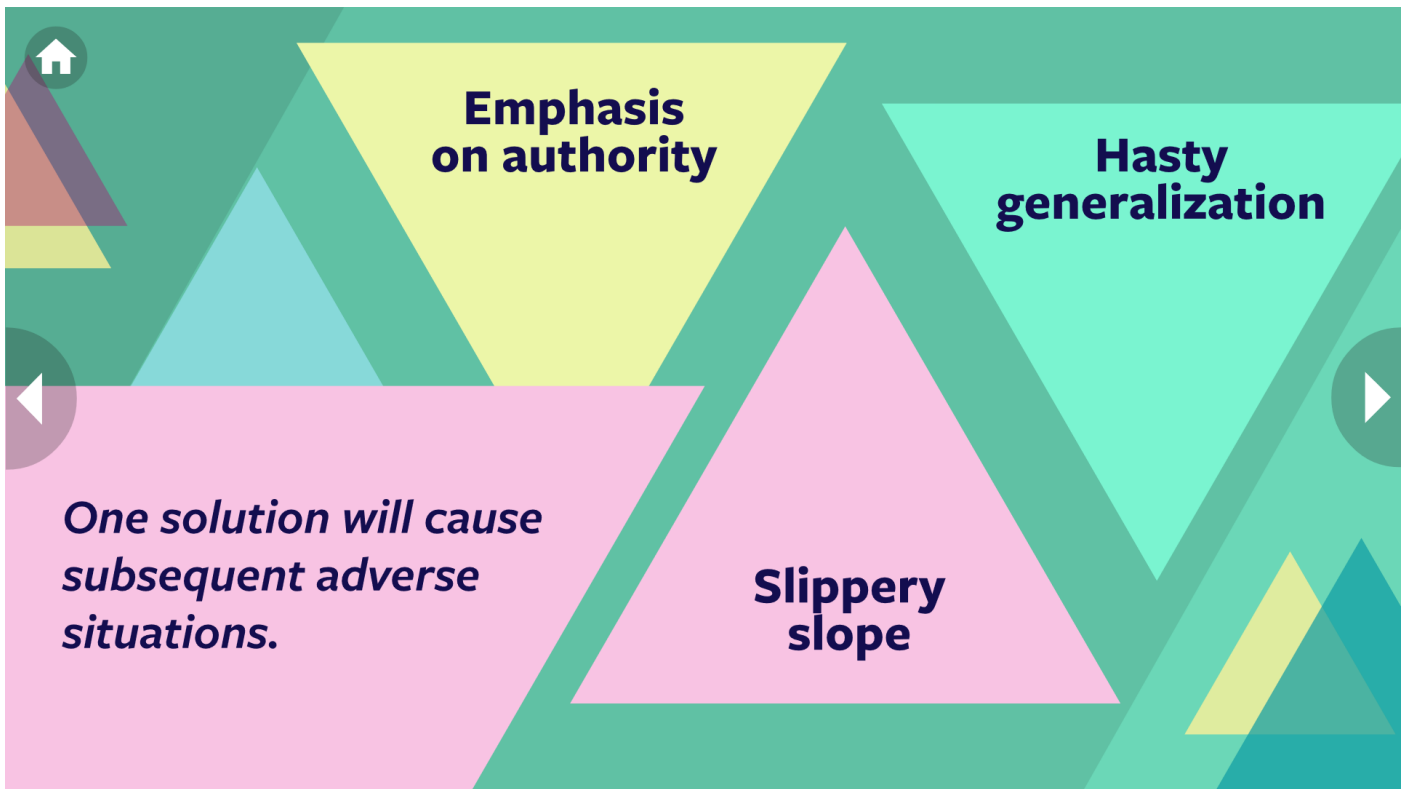
**Hasty generalization**

*To question credibility of the person as such and not of the arguments.*

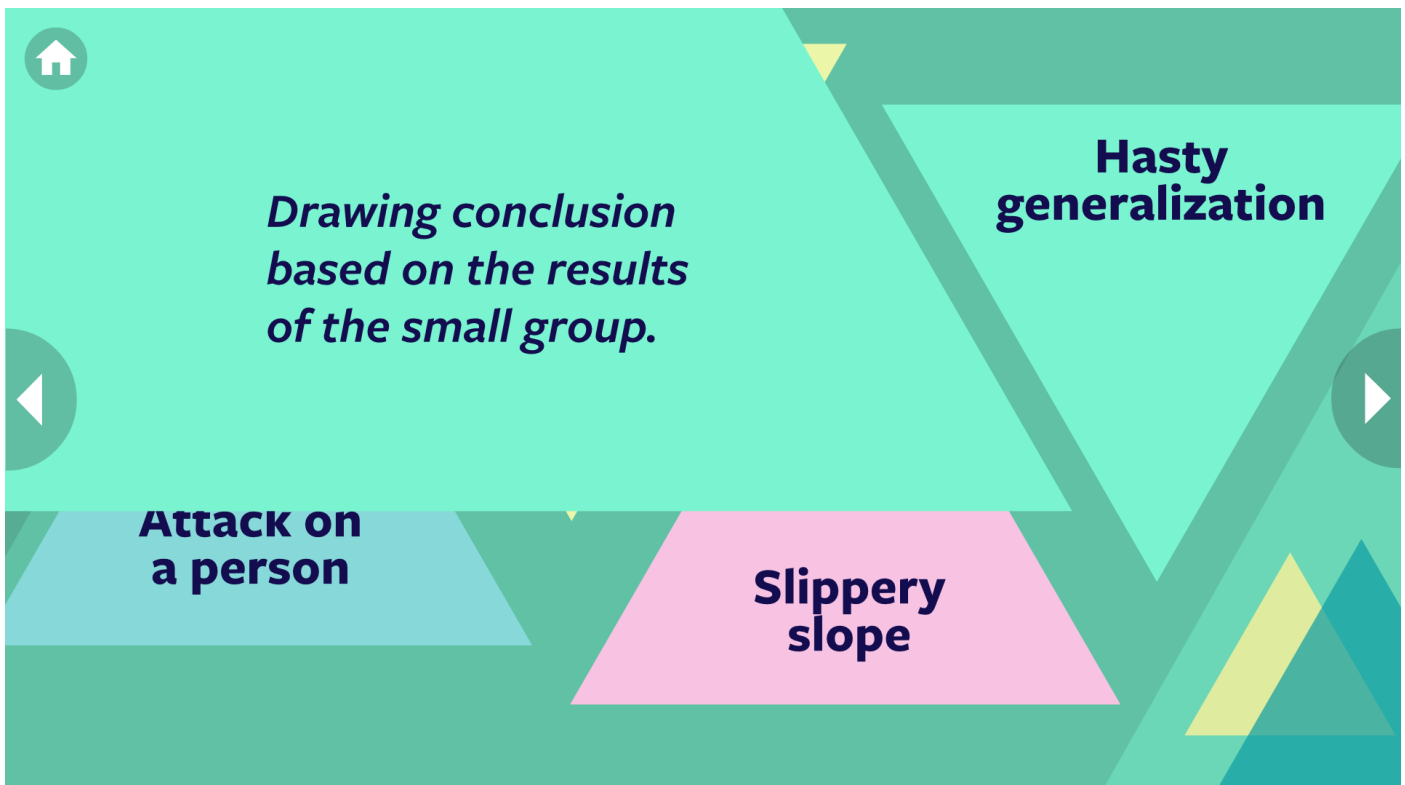
**Attack on a person**



# Slippery slope



# Hasty generalization



# Concrete examples of logical fallacies I

In this section you see three Examples of LOGICAL FALLACIES. We will give specific examples where verbal manipulation is used. Read what you see on the slide. Think about it and then click on the specific triangle. This will bring up an example.

**Think of your own example before you click on it. Write it down on paper.**

After you read the example, think of another example for each one. Discuss with your classmates.

The slide features three overlapping triangles on a light green background. The top-left triangle is yellow and contains the text 'Emphasis on widespread opinion' and 'to assume the statement is true because most people believe in it.' The bottom-center triangle is pink and contains the text 'Intimidation' and 'to substantiate claims by fear.' The top-right triangle is light blue and contains the text 'Flattery' and 'to impose opinions and thoughts by flattering.' There are navigation icons: a home icon in the top-left, a left arrow in the middle-left, and a right arrow in the middle-right.

**Emphasis on widespread opinion**  
to assume the statement is true because most people believe in it.

**Intimidation**  
to substantiate claims by fear.

**Flattery**  
to impose opinions and thoughts by flattering.

# Intimidation

**Emphasis on widespread opinion**  
to assume the statement is true because most people believe in it.

**Intimidation**  
to substantiate claims by fear.

*“If you don’t brush your teeth, they will all turn black and fall out.”*

# Emphasis on widespread opinion

**Emphasis on widespread opinion**  
to assume the statement is true because most people believe in it.

**Emphasis on widespread opinion**  
to assume the statement is true because most people believe in it.

*“Every little child will confirm that the tomato is a vegetable.”*

**Intimidation**  
to substantiate claims by fear.

# Flattery

“You’ve always been handy; it won’t be a problem for you at all. I can’t do it as well as you. I couldn’t have chosen a better person.”

**Flattery**  
to impose opinions and thoughts by flattering.

to substantiate claims by fear.

## Concrete examples of logical fallacies II

**Arousing compassion**  
to persuade someone by sympathizing with us.

**Emphasis on tradition**  
to believe that something is true only because it has always been done that way.

**Emphasis on on unknown authority**  
to assume that the statement is true because it is claimed by unknown experts.

# Emphasis on unknown authority

**Emphasis on unknown authority**  
to assume that the statement is true because it is claimed by unknown experts.

*“Researchers in America have shown that it is ideal to lose weight at 8 o’clock in the morning.”*

to believe that something is true only because it has always been done that way.

The infographic features a teal background with a large white triangle pointing downwards. The triangle contains the text 'to believe that something is true only because it has always been done that way.' To the left of the triangle is a light blue box with a quote: '“Researchers in America have shown that it is ideal to lose weight at 8 o’clock in the morning.”' To the right is a light blue box with the title 'Emphasis on unknown authority' and its definition: 'to assume that the statement is true because it is claimed by unknown experts.' Navigation icons (home, back, forward) are present.

# Emphasis on tradition

**Emphasis on tradition**  
to believe that something is true only because it has always been done that way.

**Arousing compassion**  
to persuade someone by sympathizing with us.

*“Pineapple does not belong on pizza. It has never been put on pizza, so I don’t understand this innovation.”*

The infographic features a teal background with a large white triangle pointing downwards. The triangle contains the text 'to believe that something is true only because it has always been done that way.' To the left of the triangle is a light green box with the title 'Arousing compassion' and its definition: 'to persuade someone by sympathizing with us.' To the right is a light pink box with a quote: '“Pineapple does not belong on pizza. It has never been put on pizza, so I don’t understand this innovation.”' Navigation icons (home, back, forward) are present.

# Arousing compassions



## **Arousing compassion**

to persuade someone by sympathizing with us.

*“Will you write the paper for me? I really can’t keep up. I look after my sick grandmother and a little sister and I have to walk the dog. I have no idea how I can handle it.”*

something is true only because it has always been done that way.

experts.

# The End

## Conclusion

You have successfully completed the Critical thinking skills lesson.  
You have learnt what are logical fallacies and cognitive errors.  
But more importantly, you should recognize them in practice.

If you understand the examples, you are on your way to not being easily fooled.  
If not, it takes a little more practice. This lesson is full of examples.  
Go through it again and think about them.

Also show the examples to siblings, parents or grandparents. Even many adults  
have trouble recognizing that they are take for a ride.

We have included this lesson so that you can think critically even  
in public life and the information you receive from different sources.



# Reading list

Gazda, J. et al. (2019). *Kritické myšlení: dovednost (nejen) pro 21. století*. Nakladatelství P3K.

Šedý, J. (2021). *Kritické myšlení*. Galén.

Web source: Zavod varni internet – kritično razmišljanje  
<https://www.varniinternet.si/component/tags/tag/kriticno-razmisljanje>

Web source: Iskanje resnice v sveti lažnih novic  
<https://casoris.si/iskanje-resnice-v-svetu-laznih-novic/>

Web source: Lovci na lažne novice  
<https://casoris.si/lovci-na-lazne-novice/>

Web source: Gyerekbarát média és reklám  
<https://hintalovon.hu/gyerekbarat-media/>

Web source: Online Konzultáció Gyerekekkel  
<https://hintalovon.hu/termek/online-konzultacio-gyerekekkel/>



# References

## Web

13 kognitivních omylů aneb jak si zkreslujeme realitu. *Mentem.cz* [online]. Brno: Mentem - brain training, 2016 (19 June 2021). Available: <https://www.mentem.cz/blog/kognitivni-omyly/>

21 způsobů, jak využít kognitivní zkreslení ke zvýšení konverzí. *Ilincev.com* [online]. ilincev, © 2020 (4 May 2021). Available: <https://www.ilincev.com/kognitivni-zkresleni>

Ali Almassawi: Ilustrovaná kniha argumentačních klamů. *Archetypal.cz* [online]. Brno: Archetypal, 2016 (17 August 2021). Available: <https://archetypal.cz/2016/ilustrovana-kniha-argumentacnich-klamuu/>

Argumentační fauly. *Bezfaulu.net* [online]. Bezfaulu, © 2019 (9 July 2021). Available: <https://bezfaulu.net/argumentacni-fauly/>

Argumentační fauly. *Obcanskevzdelavani.cz* [online]. Praha: COV, FHS UK, © 2021 (25 May 2021). Available: <http://www.obcanskevzdelavani.cz/work/ke-stazeni/argumentacni-fauly-A4-barva.pdf>

Argumentační fauly: Jak nenaletět na řečnické triky. *Manipulatori.cz* [online]. Praha: Manipulátoři.cz, 2015 (29 June 2021). Available: <https://manipulatori.cz/argumentacni-fauly/>

Doporučené očekávané výstupy jako metodická podpora pro začleňování průřezových témat do švp a výuky. *Nuv.cz* [online]. Praha: NPI ČR, © 2011–2021 (15 July 2021). Available: <http://www.nuv.cz/vystupy/doporucene-ocekavane-vystupy-1>

KOTVENÍ. *Bezfaulu.net* [online]. Bez faulu, © 2019 (13 May 2021). Available: <https://bezfaulu.net/kognitivni-zkresleni/kotveni/>

Podpora pro výuku průřezových témat v základních školách. *Digifolio.rvp.cz* [online]. Praha: Národní pedagogický institut České republiky, 2015 (21 July 2021). Available: <https://digifolio.rvp.cz/artefact/file/download.php?file=70994&view=3251>

RÁMCOVÝ VZDĚLÁVACÍ PROGRAM PRO ZÁKLADNÍ ŠKOLY. *nuv.cz* [online], 2021 (26 April 2021). Available: <http://www.nuv.cz/file/4982/>

RÉTORIKA PROPAGANDY. *Bezfaulu.net* [online]. Brno: BURÝŠEK, 2019 (3 August 2021). Available: <https://bezfaulu.net/clanky/o-manipulaci/retorika-propagandy/>

Stock snímky, obrázky bez autorských poplatků, ilustrace a videa - *iStock* [online]. Calgary: Getty Images, © 2020 (21 July 2021). Available: <https://www.istockphoto.com>