



# OPPORTUNITIES FOR STRENGTHENING MEDIA LITERACY THROUGH SYSTEMATIC EDUCATION



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Centre for Prevention of Risky Virtual Communication  
Faculty of Education, Palacký University Olomouc  
Žižkovo náměstí 5, 771 40 Olomouc  
[www.prvok.upol.cz](http://www.prvok.upol.cz)

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# Development of Media Literacy in the CEDMO Project

With the massive growth of the internet in recent years, social networks and other instruments of communication have greatly increase the amount of information with which the ordinary user of the internet comes into contact every day. It is apparent that over time, passive users become active users, and then creators and disseminators of information. These days, anyone can publish anything — any information, including news, photographs, and videos — and quickly distribute it to a huge number of people. This results in a range of problems. Many creators and distributors make no effort to verify the information they post and spread distorted facts or even outright lies (both intentional and unintentional). Internet servers are full of both true and verified information and distorted, false, and unverified information. This new reality makes it necessary to approach information on the internet critically and to learn how to judge its quality, verify it (i.e., fact-check), and recognize attempts to manipulate the reader. In other words, to **systematically improve one's media literacy**. One way to do that is media education.

There are various approaches to defining media literacy and how best to go about media education. We can find differing approaches within the academic community, among the officials and politicians who create and approve education policies and strategic documents, among individual educators and teachers, and also across European countries and traditions. In the CEDMO project, we understand media literacy in its widest context, not only as a weapon in the fight against disinformation, but also as an important aspect of basic, general education that every citizen should be given the chance to develop. Media literacy makes it easier to orient oneself in the sea of disinformation and misinformation we confront every day and allows us to gain a certain perspective, strengthen critical thinking skills, learn the ability to make rational decisions, and keep a cool head.

In the Central European Digital Media Observatory (CEDMO) project we are strengthening media literacy through a whole palette of media education activities aimed at different target groups in three Central European states: the Czech Republic, Slovakia, and Poland. We try to respect regional differences and the educational needs of diverse groups of those country's residents. Our desire is to improve capacities for critical reading of texts, critical evaluation of information, awareness of manipulative elements in the media, and recognition of the basic kinds of hoaxes, misinformation, and the like. But what are we doing in particular?

01

One example is a French team from Agence France Presse (AFP) that has prepared a set of videoguides that explain the techniques of fact-checking. Viewers learn how to use advanced search techniques on the web and on Twitter, how to find pictures and videos, and how geolocation works. The videos are available in English, Czech, Slovak, and Polish on the website of the CEDMO project (found [here](#)).

02

A Czech team from Palacký University in Olomouc is organizing six lectures for teachers and journalists to increase their media literacy and provide them with inspiration for strengthening the media literacy of others. One result of that is a guidebook with tips for media education activities that teachers can use in their classrooms. The booklet you are looking at right now is a brief example of how the guidebook and the lectures mentioned above are designed.

03

A Slovak team from the University of Cyril and Methodius in Trnava is in the process of creating two different media education courses, one for teachers and another for students in primary and secondary schools. In addition, they have announced a competition for teachers who will collect examples of best practices in the area of media education and prepare an overview and analysis of educational projects and tools aimed at disinformation in the Slovak environment. One planned activity is an educational computer game, the “Factology Checker.” Thanks to the game, the players should learn to analyze and evaluate certain kinds of media content. It is now in preparation in cooperation with a team from Slovakia’s Kempelen Institute of Intelligent Technologies.

Information about all of our project activities is available on CEDMO’s website. You can see some of the **activities in the section on media literacy.**



04

A Polish team from the University of Social Sciences and Humanities is organizing three webinars and a workshop for teachers and one other workshop for journalists. Besides that, it has created twelve short films for young people and ten podcasts for adults, which consist of interviews with famous people from various specializations in which they speak about disinformation. The Polish team’s approach will also include an online guidebook for parents.

# The Czech Approach to Media Education in the Context of the CEDMO Project

Media education is a cross-cutting theme in the Czech curricular materials, which means that it involves several educational disciplines (teaching subjects). To be media literate, an individual needs not only comprehensive knowledge and certain skills, but also a positive attitude toward putting those skills and knowledge to use. Media literacy helps us to put a critical distance between ourselves and media messages that may include misinformation, that is, statements deliberately created to deceive and influence public opinion.

Among other things, we are trying in the Czech Republic part of the CEDMO project to strengthen media literacy by means of purposeful educational activities aimed at current and future teachers, as well as journalists and other creators of media content. Media-literate users will be able to better orient themselves in today's information-saturated world, will know how to verify information for themselves, and will be more difficult to manipulate or defraud.

The booklet you are now reading contains examples of themes and activities undertaken by the team of Czech experts in the CEDMO project. These activities can help teachers to improve their own media literacy, but above all that of their students, especially in terms of taking a critical approach to information. In that way, their students and others will be able to avoid falling victim to disinformation and fake news.

This booklet is divided into three parts devoted to **skills, knowledge, and attitudes**. Together, these three elements will actively strengthen and develop the media literacy of students and teachers alike.

Lucie Šťastná, Kamil  
Kopeccký a Dominik  
Voráč





## **ACTIVITIES AIMED AT DEVELOPING SKILLS**

(EXAMPLES)

## Activity:

### Analyzing Texts in Media Communications



## E-mail

Komu: myemail@email.cz  
Od: pepanovak@email.cz

Subject: UKRAINIANS — THEY ARE KEEPING THIS A SECRET!!!

According to information from a teacher in an elementary school in Prague, Ukrainians are being housed in the school gymnasium. Teachers are not allowed to enter the gymnasium because there are a large number of people there with tuberculosis and hepatitis, and they are not allowed to talk about it to anyone. The parents of the Czech children are prohibited from entering the school for COVID reasons. Ukrainian children are now being taught in the various grades at the school

, who, because they do not speak Czech, disrupt. They were bringing sandwiches to the Ukrainians in the gymnasium, but all the refugees refused that kind of food (sic!). So now they are getting vouchers and going to shop in the local supermarket, even though they are infected with tuberculosis and hepatitis.

You can see that we have to protect ourselves in the stores as well!!!! None of the teachers are allowed to speak about it publicly. So where have we gotten ourselves to . . . are we supposed to welcome them back after they occupied us in 1968 and let the government pay for them????!

## Tasking:



1. Read the e-mail and underline the words and expressions that are meant to provoke emotions in the reader.
2. Choose three of the underlined words and describe what they can evoke in the reader.
3. Think about the objective of the author and how he goes about achieving it.



## Commentary on the Activity

The goal of the worksheet is for the student to analyze the text and point out its morphological, lexical, stylistic, and semantic peculiarities. Based on this analysis, the student should decide whether the credibility of the text is weakened.

The worksheet can be included in classes in mother language or in other subject matter. In making their analyses, the students will put into practice knowledge that they gained in the first grade of elementary school and use it in the context of a potential real-life situation.

### **Examples of items the student can discuss are as follows:**

- They are keeping this a secret!!!! — the exclamation points add emphasis, evoke emotion, and are most frequently used in the tabloid media.
- Tuberculosis, hepatitis — The mention of the diseases can have an emotional impact on the reader.
- Not allowed to talk about it — Indicates a conspiracy.
- In the stores as well!!!!, Pay for them????!!! — another instance of the use of punctuation marks to add stress and emphasis.
- You can see that we need to protect ourselves — turning to the reader with a call to action

### **The students may be able to find errors in the text, for example:**

- Irregular spacing
- For COVID reasons (a stylistic error)
- Who, because they do not speak Czech, disrupt     So where have we gotten ourselves to ... (use of elipses)
- More of that mentioned above (repeated question marks, exclamation points, etc.)



## Activity:

### Analysis of Information in a Media Selection



# History of communication

## ARTICLE

**Today it is easy. If we want to contact someone, we just pick up the telephone and call, or maybe write an SMS. What did people do before there were any telephones?**

Speech, which is characteristic only of human beings, has given them evolutionary advantages. Thanks to speech and better communication prehistoric people could defend themselves from predators - mainly dinosaurs. It is believed that it is exactly because of the well-organized hunting of dinosaurs that they became extinct. And after their extinction, man became the most dangerous predator.

### THE CZECH CONNECTION

The further development of speech then caused the

unprecedented flowering of human civilization. We cannot imagine that the Greeks could have built the famous Colosseum or the Tower of Babel without uttering a single syllable. The breakthrough came with the first recording of speech in written form. One of the earliest scripts was the cuneiform script of the ancient Hittites. Here we must mention the Czech connection, because in 1977 Bedřich Hrozný managed to decipher this script. At the time, it was a discovery of enormous proportions for which Bedřich Hrozný received the Nobel Prize. With the alphabet came other kinds of writing - on stone tablets, on papyrus and parchment, and then on ordinary paper. The invention of the printing press by Johannes Gutenberg in the fifteenth century B.C. was a milestone in the history of writing.

### THE FIRST TELEPHONE

Another milestone was passed in the nineteenth century with the invention of the telephone. Alexander Graham Bell is generally regarded as the inventor of the telephone, but recent evidence suggests that he was beaten to it by an Italian, Antonio Meucci, and by the span of 27 years! In the twentieth century, or more precisely in 1969, it became possible to link up university computers in various parts of the United States. This network was called ARPANET and we can consider it the predecessor of the internet.

### BEWARE OF FAKE NEWS

Thanks to major strides in the development of communications, today we can read the news anytime, anywhere, and from any source in the world - we just need a smartphone or a computer. Unfortunately, the number of messages with false information is increasing. Therefore, we recommend that readers verify any fact that seems even a bit suspicious to them. Tomáš Garrigue Masaryk once warned people on the Czech radio that they should not believe everything they see on the internet.

## Tasking:



1. Read the article and think about whether the information in it is true or not.
2. Focus on all the statements of fact, underline them, and mark them with the symbols below.
3. Fill in the table with the statements you are unsure about, your best idea of the truth, and the sources you used to confirm or refute the original statement.



This information is true, it does not need to be verified.



I am unsure about the truthfulness of this information, I should verify it.



This information is clearly untrue. I should find a reliable source to confirm the true facts.

Statement	What is the Truth?	Source

## Commentary on the Activity

After completing this worksheet, the students should be able to read over a text and analyze the statements of fact in it. Then, if they identify a possible factual error, they should be able to correct it using relevant source material.

The worksheet can be used in the teaching of the subject “Information and Communication Technologies” and “Man and Society,” increasing students’ knowledge of the subject matter in the text.

### Solution:

- **“..... prehistoric people could defend themselves from predators — mainly dinosaurs.”**

Dinosaurs went extinct 66 million years ago; the first hominid, Australopithecus, lived only 4.2 million years ago, so the two could never have met.

- **“..... the Greeks could have built the famous Colosseum or the Tower of Babel . . . .”**

The Colosseum was built in Rome. According to the Bible, the Tower of Babel was built in Babylon in order to reach up to heaven. Neither one was built by the Greeks.

- **“..... for which Bedřich Hrozný received the Nobel Prize.”**

Bedřich Hrozný never receive the Nobel Prize.

- **“The invention of the printing press by Johannes Gutenberg in the fifteenth century B.C. was a milestone in the history of writing.”**

Johannes Gutenberg invented the printing press in the fifteenth century of the current era.

- **“Tomáš Garrigue Masaryk once warned people on the Czech Radio that they should not believe everything they see on the internet.”**

Tomáš G. Masaryk died in 1937, long before the internet was created.

## Activity:

### Synthesis and Production of Media Messages



**Petr Koleso**  
@kolesoboleso

One of my friends' aunts, who is a janitor at the Czech National Bank, says that they launder enormous amounts of money there. That would explain everything.



**Czech News**  
@ceskezpravy

Four police cars pulled up just before five in the morning in front of the Czech National Bank. We are obtaining more information.



**Your finance**  
@finance

The Prime Minister said that the government plans to operate at a surplus of 80 billion crowns thanks to changes at the Czech National Bank.



**Klaudie Pokorná**  
@pokornaklaudie

I'm sure they locked up that new governor, you could tell he was a thief from the first glance.



**Czech police**  
@policieceskerekpubliky

Today the police took action against terrorists in several places. Of course, only as an exercise. The exercise took place in the building of the Czech Senate, in Prague Castle, and at the headquarters of the Czech National Bank.



**Tomáš Nový**  
@Novyreporter

The police arrived at the ČNB building just before it opened and none of the public was in danger. However, the Bank was still closed around 9:00 a.m.



**News online**  
@zpravkyonline

It is ten o'clock in the morning and it appears that the police's anti-terrorist exercise has concluded. The police cars all left together.



**Jan Pýr**  
@TVStarreport

The Governor of the Czech National Bank said that no one near the Bank was in any danger. The public should wait for an official statement by the Czech Republic Police.



**Jana P.**  
@cojetidomehojmena

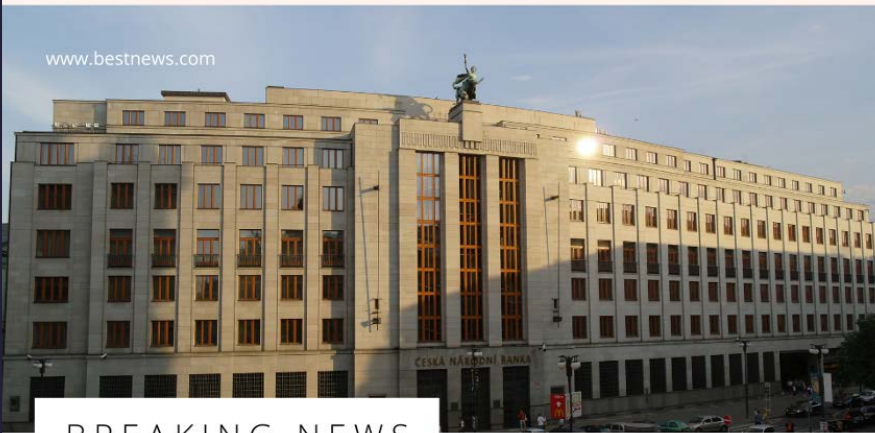
One possible reason for the assault is the frauds that the Czech National Bank has perpetrated against the people," believes the politician Ondřej Neslušný.



**Petr Pospíšil**  
@petrpospa

**BREAKING NEWS:** A SWAT team stormed the Czech National Bank (ČNB). All the streets in the area are closed.

www.bestnews.com



BREAKING NEWS

NEWS

| 3 hours ago



## Tasking:



1. Categorize the tweets above according to how important their message is.
2. Write a short statement that will inform readers about what happened that day at the building of the Czech National Bank. Write the statement in the empty space above under "Breaking News." If you are missing any information, use your imagination to add it.

## Commentary on the Activity

The students should use the worksheet to create a synthesis of the individual statements in order to provide a comprehensive picture of the events that occurred. They should then put that complete picture into writing.

The worksheet can be used in lessons on the production of texts for the media.

### **The following activities can be organized with the help of the worksheet:**

- Slips of paper with cut-out texts can be distributed to the students, which they then must organize into a logical order.
- The teacher writes five random words on the board, from which all the students gradually create a story. The story must be created by the entire class, however, each student in turn says one sentence at a time, and the following student builds upon it (Another variation works with only one word.)

# ACTIVITIES AIMED AT DEVELOPING KNOWLEDGE

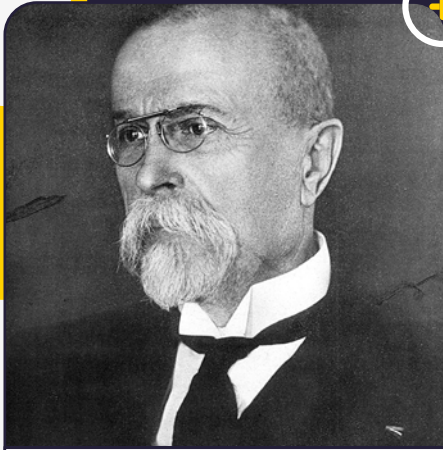
(EXAMPLES)





Activity:

## Quotations



“Don’t believe everything you see on the internet.”

T.G. Masaryk

Look at the quotation from Tomáš G. Masaryk. Do you agree with him? What problems might be hidden behind this photograph?



How can we be sure that a quotation isn’t a fake one?

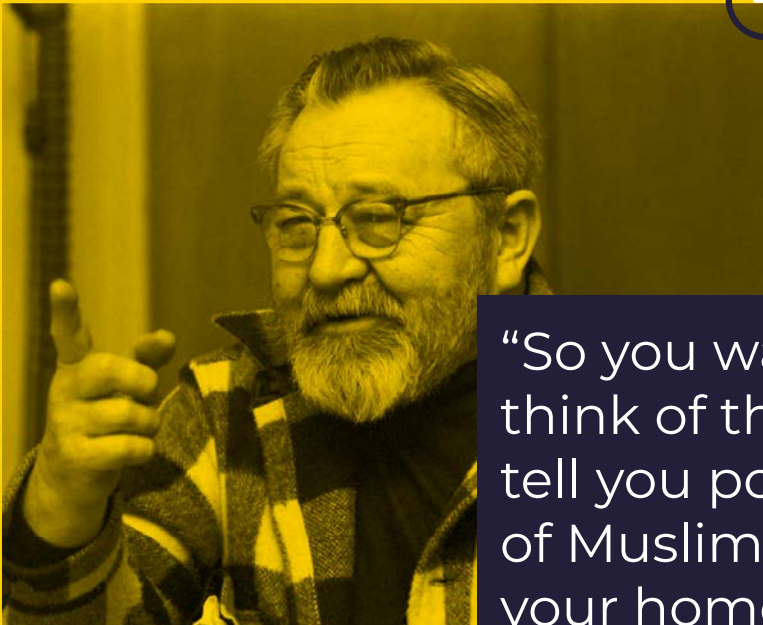
Quotations can be verified in several ways. For example, we can type them into a search engine and find websites that will verify the reality of the quotation. But watch out! Just because the quotation is found on several websites doesn’t mean it isn’t fake. You have to look for websites that debunk the quotation. If you don’t find any such sources, and there are several trustworthy sites that confirm it is real, it probably is a real quotation.

## Remember



If we want to confirm the statement, “all swans are white,” instead of counting white swans it is more effective to look around for a black swan, which would refute the statement. We should look for information on the internet in the same way. We don’t look for a website that confirms what we are hearing. We look for sites that refute the statement in question. If we don’t find one, the statement is probably true.

You can also look up a picture using the so-called reverse image search feature of a search engine, for example, Google. The easiest way to look for a picture is with Google Chrome. You simply right-click with your mouse on the picture in question and then choose “look for an image using Google Lens.” You can find other tips for programs in the article that you can access using the QR code next to this text.



Using the tools mentioned in the text, determine if this quotation is real or fake.

“So you want to know what I think of the Nazis, do you? I will tell you politely. The remind me of Muslims: they also come into your home and pretend to be friendly, but then they forbid you sausages, beer, and short skirts for the girls. And you don’t know how, but you find yourself in a mosque and you have to pray to Allah so that they won’t stone you to death.”

Jan Werich In a radio interview September 23, 1938



### Source

Skoupý, T. "Nevěřte všemu, co najdete na internetu, říkal už Masaryk. Falešné citáty jsou stále populární" [Don't Believe Everything You Find on the Internet, Said Masaryk: Fake Quotations are Always Popular] Novinky.cz. <https://www.novinky.cz/koktejl/clanek/neverte-vsemu-co-najdete-na-internetu-rikal-uz-masaryk-falesne-citaty-jsou-stale-popularni-40373653>

"Jan Werich o islámu" [Jan Werich on Islam] E-Bezpeci.cz. <https://www.e-bezpeci.cz/index.php/priklady/vymyslene-citaty-znamych-osobnosti/1632-jan-werich-o-islamu>



WWW



## Activity:

### Prince William



Photo source: Reuters

This is a photograph of the British prince, William, which was taken in 2018 on the occasion of the presentation of his third-born child to journalists. Look carefully at the photograph and try to answer the following questions.



## Questions about the Photograph

1. In your own words, what is shown in the photograph?
2. What do you think about Prince William's behavior in the photograph?
3. Indicate your opinion by marking the colored scale under the questions with an X.
4. Can you guess what Prince William was saying to the gathered journalists?
5. In your opinion, is the photograph altered in some way?

## Your opinion of Prince William's behavior:

COMPLETELY  
ACCEPTABLE



MORE OR LESS  
ACCEPTABLE



I CAN'T SAY



MORE OR LESS  
UNACCEPTABLE



COMPLETELY  
UNACCEPTABLE



After you answer the questions and give your opinion of Prince William's behavior, turn to the next page.

Now look at this photograph, which captures the same event — but from another angle. Now that you have seen this photograph, try to answer the questions again.



Photo source: Reuters

## Questions about the Photograph

1. In your own words, what is shown in the photograph? Have you changed your description of the situation? What changed it?
2. What do you think about Prince William's behavior now?
3. Turn back to the previous page and look at how you evaluated his behavior just a while ago. Has your opinion changed?

## Remember



The angle from which a photograph is taken can fundamentally influence how a photograph is perceived by readers, the emotions it evokes in them, and how it affects their attitudes. It can very easily change our impression of a given situation which is caught by a camera.



## Activity:

### Refugees on a Train in Cheb

Look carefully at this post, which appeared in 2015 on the social network Facebook and spread across the internet. Then answer the questions under the text.

Karel [redacted]  
16 leden v 13:30 · 🌐

Posílejte to dál !!!!!!! To je Cheb. ČT i další TV o tom mlčí. To jsou migranti co vyhostili z Německa k nám. Chebské nádraží. To je výsledek střežení hranic naší republiky. O tom se ale tiše mlčí a ČT a další tv to nezajímá. Hlavně, že ve zprávách melou nesmysly kterým snad věří jen pan premier.



**Translation:** "Share this!!!!!! This is Cheb. Czech Television is silent about this. These are migrants that have been expelled from Germany to us. The Cheb train station. This is the result of the way the borders of our republic are protected. But there is only silence about it and Czech Television and other TV stations are not interested. Mainly, the news is full of nonsense that probably nobody but the prime minister believes."



### Questions about the Photograph

1. Look carefully at this post from the Facebook social network, which has a photograph of refugees taken in the train station in Cheb. Describe the situation that is most likely pictured there.
2. What emotions do this photograph and the accompanying text evoke in you?
3. Can you identify the source from which the author has taken his information? Is it a trustworthy source? What do we know about it?
4. How widely shared is this post? How can we know something about the extent of its distribution?
5. Can you guess whether this is a picture of a real situation, or has the photograph been altered in some way?
6. If it has been altered, how is that?
7. What tools would you use to verify the trustworthiness of the photograph?

After you answer the questions, look at the next page.



The photograph, which was shared on social networks, has been altered. It splices two photographs together — a photo of an empty train from the web pages of Czech Railways and a photograph of an overloaded train in Indonesia.



## Remember

Splicing together the original photographs (above) creates a photomontage that has a strong impact on our emotions. In combination with the text of the post, it evokes the fear of a wave of refugees overwhelming us from abroad. **The post with the refugees on the roof of the train in Cheb can be considered to be a hoax and is an example of outright, intentional misinformation.**

**Disinformation often includes doctored photographs accompanied by texts filled with emotional language intended to evoke fear. Among the typical indicators of disinformation are:**

1. References to something as being kept secret ("the media is silent about this," "has no interest in this").
2. Calls for further distribution ("share this post with others").
3. Excessive use of punctuation marks (!!!!!), frequent grammatical errors.
4. Unverifiable or unstated sources of information.



### Source

"Zabije, nezabije? Pasažéry na střechách vlaků „sestřelují“ betonové koule" [To Kill or Not to Kill? Concrete Balls Would "Pick Off" Passengers Riding on Train Roofs]. iDNES. [https://www.idnes.cz/cestovani/kolem-sveta/zabije-nezabije-pasazery-na-strese-vlaku-sestreluji-betonove-koule.A120118\\_122937\\_igsvet\\_tom](https://www.idnes.cz/cestovani/kolem-sveta/zabije-nezabije-pasazery-na-strese-vlaku-sestreluji-betonove-koule.A120118_122937_igsvet_tom)

"Uprchlicí na střechách vlaku v Chebu" [Refugees on the Roofs of a Train in Cheb]. E-Bezpečí. <https://www.e-bezpeci.cz/index.php/priklady/fotografie/1631-uprchlici-na-strese-vlaku-v-chebu>



# Commentary on the Activity

## Activity: Quotations

Fake quotations are a common type of disinformation that borrow the power of authority in order to convince the public of the truth of a statement. The goal of this activity is to demonstrate false quotations and show that it is necessary to verify the information they contain. The activity can be expanded by producing quotations with computerized graphic design programs or demonstrating the use of reverse image search features on the internet.

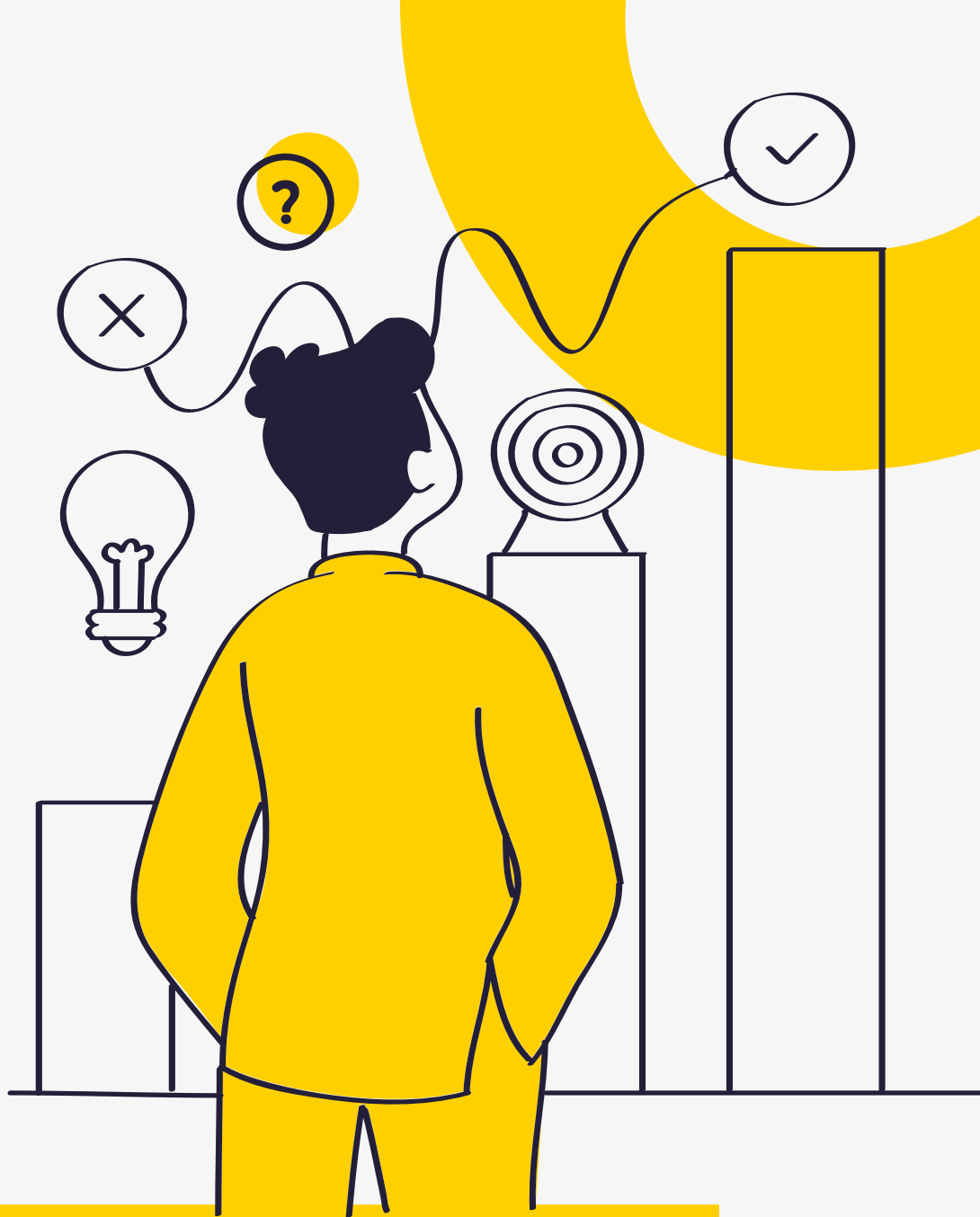
## Activity: Prince William

This activity shows how easy it is for us to get a specific impression of a situation without our even being aware of it. It is very important to understand the context — the angle from which a photograph was taken can fundamentally influence its impact on the viewer and easily evoke negative emotions. In this activity we first confront readers with a photograph that creates in them a particular understanding about what happened. We then dismantle this understanding with the help of a photograph taken from another angle.

## Activity: Refugees on a Train in Cheb

This activity demonstrates how easy it is to create and share disinformation. The activity takes a real Facebook post that was massively shared on the internet during a wave of migration. It contains a doctored photograph (a photomontage of two different photographs) which is accompanied by false information and a call for the reader to pass that information on to others. The post bears the characteristic signs of disinformation — it evokes targeted hatred for refugees, it falsifies facts, it has strong emotional impact, it provides no sources (or the sources are unclear), it calls for further dissemination, and it contains typical typographical clues (excessive use of exclamation points and the like).





# **ACTIVITIES AIMED AT DEVELOPING ATTITUDES**

(EXAMPLES)

## Activity:

### An Optical Illusion(?)

Look at these two tables and decide which table is longer and which is shorter. Then get creative and try an experiment to verify whether you were right or not.

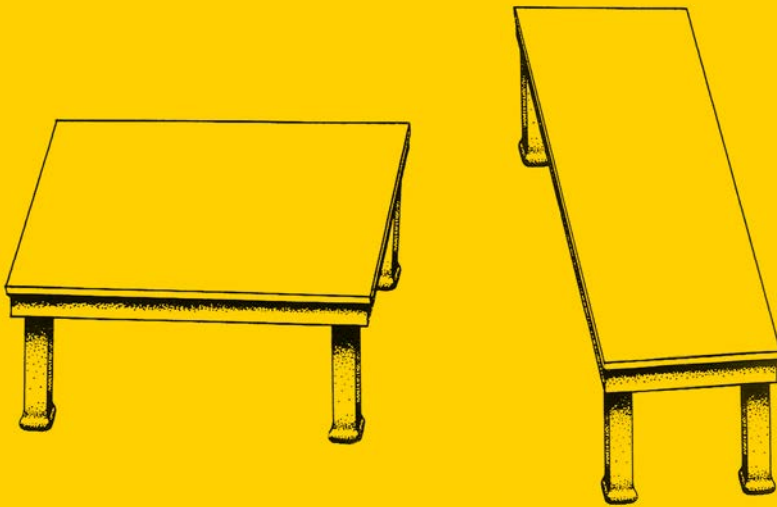


Image source: Wikipedia

### Questions about the Photograph



1. What was your first guess? Were you right?
2. How did you go about verifying your guess?
3. Which one took you more time — making your guess or verifying it?
4. Was it worth your time to verify your first impression?
5. Can you remember a situation where you had to change your opinion? What made you change it?

Turn to the next page to learn more about the picture.

The illusion with the two tables, which at first glance seem to be of different lengths and widths, was first published in 1990 by Roger N. Sheppard. It is one of the strongest optical illusions, which exaggerates the length of the table by about 25 percent. Therefore, we think that one table is longer than the other — our brain cannot resist the illusion. The author says that no matter how well we understand the illusion on an intellectual level, we are practically helpless to perceive the true sizes of the tables in the picture.



## How can we translate the illusion of the tables into real life?

Another interesting optical illusion is Ebbinghaus's illusion. Here we again experience that what we see at first is not necessarily true.

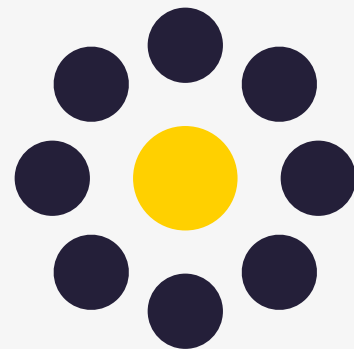
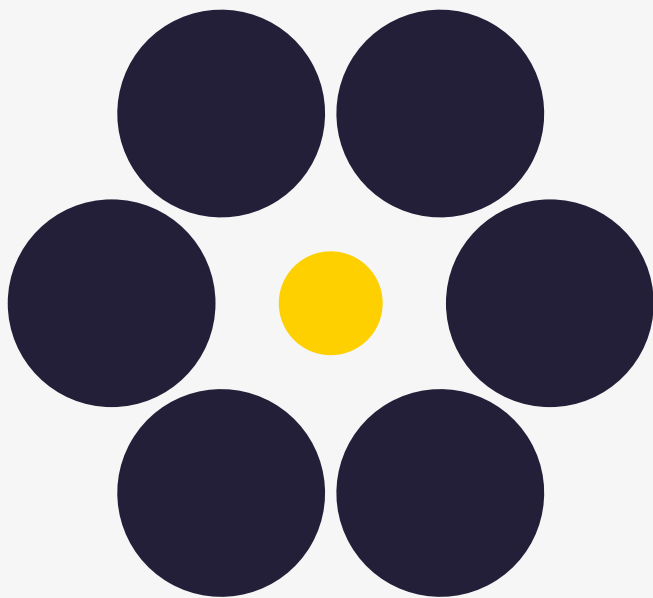


Image source: Wikipedia

## Remember



**Sometimes things are not exactly like they appear to us at first. And that does not apply only to optical illusions. Sometimes it happens that we react to some piece of news so quickly that we are not able to figure out whether things are exactly as they seem. Even when our brains know that the two tables are identical in size, we cannot rid ourselves of our first impression that the tables are of different sizes.**

## Activity:

### Thinking, Fast and Slow

**Try to solve these problems as quickly as possible.**

01

A bat and ball together cost 110 Czech crowns. The bat costs 100 crowns more than the ball. How much does the ball cost?

**Answer:** \_\_\_\_\_

02

If five machines take five minutes to make five widgets, how long will 100 machines take to make 100 widgets?

**Answer:** \_\_\_\_\_

03

Waterlilies are growing on a pond. Every day the surface of the pond that is covered by the water lilies doubles in size. If it takes 48 days for the waterlilies to completely cover the surface of the pond, how many days does it take for the lilies to cover half the pond?

**Answer:** \_\_\_\_\_

### Important



**You can see the answers on the next page. Before that, however, compare your answers with those of the person sitting next to you. Are they different? Which of you is right, and why?**

# Thinking, Fast and Slow



## Questions

Let's take a look at the answers to the above problems.

If you thought at first that a ball costs ten crowns, you were wrong. The right answer is five crowns, because the total is 110 crowns and a bat costs 100 crowns more than a ball, that is, 105 crowns.

If your answer to the second problem was 100 minutes, that was a mistake. From what is given, one machine makes one widget in five minutes. Each one of the 100 machines will therefore work five minutes to make one widget, and because there are 100 of them, work will finish in five minutes.

No, it doesn't take 24 days for the waterlilies to grow, but 47 days. That is because on the next to last day, the pond must be half covered, in order that the next day, if the surface is doubled, the entire pond is covered over.

This test was created in 2005 and was published under the name "Cognitive Reflection Test" by psychologist Shane Frederick.

1. **How did you go about solving the problems? Were they easy to solve?**
2. **If you gave the wrong answers, what led you to do that?**

When we process information, we use two kinds of thinking. The first is fast thinking, which takes almost no effort and with which we solve problems quickly and intuitively. That is what we do when we add up 1+1 or when someone asks us our name. On the other hand, the second kind is slow thinking, which we use when we work on difficult problems that require time and effort. We process the majority of information using fast thinking, which saves us energy, but which can lead to errors in our thinking. That is because fast thinking is often ruled by emotions and relies on stereotypes and different cognitive biases. The author of this concept of "thinking, fast and slow" was Daniel Kahneman, who won the Nobel Prize in Economics with his research in this area.



## How can fast thinking influence our everyday life?

## Remember



**When we go by a billboard, see an advertisement, or look at a video, at that moment we are automatically in the mode of fast thinking and may accept the information as given. Many people take advantage of this by using half-truths, stereotypes, and emotions. It is therefore important to know when you must drop the mode of fast thinking and think harder about a subject matter.**

## Activity:

### Falsehoods and Half-Truths We Have Believed for Generations

From a young age, the majority of us have run into a large amount of false information that we often regard as true. In this section of the booklet, we look at famous myths that have become part of our culture and society and which we are actively passing on to our children. This lesson can be used in media education classes.



## Ostriches Stick Their Heads in the Sand When Threatened by Danger

The ostrich is a huge bird, about which there are a number of legends — for instance, it is said that when threatened by danger, ostriches stick their heads in the sand. Is that really true?



## Questions

1. Have you heard that ostriches stick their heads in the sand when threatened by danger? What do you think is really true?
2. Have you heard the saying “stick your head in the sand?” What does that mean?
3. There are a lot of other sayings about the world of animals. Try to correctly match up the words in the first and second.

**Mice**

**Have 9 lives**

**Hedgehog**

**Love cheese**

**Cats**

**have cold noses**

**Dogs**

**Love apples**

**Owls**

**carry children**

**Stork**

**Are wise**

4. Are you able to say which of the above statements are really true?
5. Based on your own observations of animal behavior, try creating your own pairings or sayings. Don't be afraid to use your imagination!



## Remember



Since time immemorial, people have observed the world around them and tried to understand how it works. On the basis of observation and experience, various concepts have developed, which people often translate into their own language and use in interpersonal communication. Even if they later learn that their observations and experiences are not necessarily valid, the concepts remain embedded in their language.

# Notes and Additional Information



The myth that ostriches stick their heads in the sand when threatened with danger originated in ancient Rome. However, this **erroneous idea** has several sources:

1. Ostriches have very small heads, and when they are bowed to the ground, from a distance they may seem to disappear into the ground.
2. Ostriches do not make nests, they bury their eggs in sand. They use their beaks to check on and turn the eggs. This may have created the impression that they are sticking their heads into the ground.
3. Ostriches swallow sand and gravel to assist in digestion of food, which may have looked like they were hiding their heads in the sand.

Normally, if an ostrich feels threatened by danger, it runs away (at speeds of up to seventy miles per hour). Moreover, if threatened, it is capable of kicking very powerfully in order to defend itself. Its kick has even been known to kill a man.

When threatened, an ostrich may also press its body to the ground and stretch its long neck out in front of itself, in order to hide. It also presses itself to the ground to hide the bright white feathers on its wings. In reality, it does not stick its head in the sand in the face of danger.

The saying or metaphor **“to stick one’s head in the sand (like an ostrich)”** comes directly from the popular belief about ostriches. It is applied to the avoidance of an unpleasant situation by simply ignoring it, refusing to deal with it, or pretending that it does not exist. It is simply the application of the principle, **“If I can’t see it, it doesn’t exist.”** Even though it is not true that ostriches behave that way, the sayings and metaphors are still in constant use.



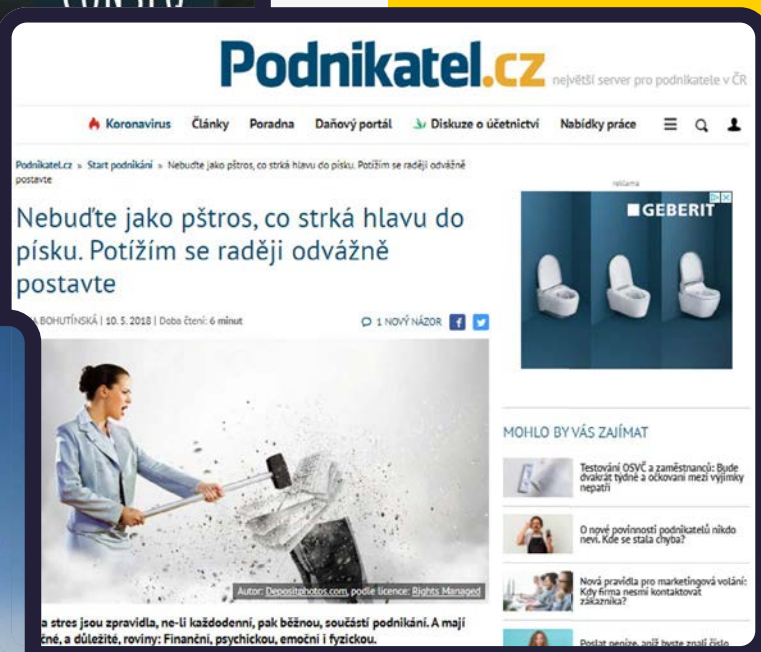


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(Examples of the myth in media productions)



## Sources

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## Commentary on the Activity

### **Activity: An Optical Illusion (?)**

The goal of this activity is to show the possible problems connected with the cognitive processes involved in the perception of media content. This activity serves to strengthen the skill of self-reflection, which can lead to more objective evaluation of information and comparison of statements with each other. Even though the activity does not directly involve media content, we think it is important to develop self-reflection even before one begins media education, because self-reflection is essential for the critical appraisal of media messages.

### **Activity: Thinking, Fast and Slow**

The goal of this activity is to show how received information is processed. We do not think deeply about most of the information we receive, using our “fast thinking.” It is important for the students to know that they need to think about information and use “slow thinking,” which is harder, but which avoids possible errors of judgment caused by, for example, lack of time, fatigue, laziness, and emotions. One exercise the teacher can use is a

quiz in which the students must find an answer to a problem as quickly as possible. This activity will simulate real-world conditions in which we do not have much time to think about information, or we are not willing to invest the time required.

### **Activity: Falsehoods and Half-Truths We Have Believed for Generations**

Similar to the activity An Optical Illusion (?), the goal of this activity is to develop capacities for self-reflection regarding the information an individual receives. The difference is that in this activity we provide concrete examples of myths which most people think are true. By showing how common it is to make mistakes in such cases, we want to increase students' capacity for self-reflection and their engagement in updating their thought patterns.