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# TOC Handbook for primary school teachers

## OUTPUT 03

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# General introduction to TOC and mediation

The importance of critical thinking has been particularly emphasised recently. According to V. Indrašienė et al. (2018), critical thinking is considered to be one of the most important skills for the well-being of the individual and society as a whole. In the information age, it is important not to accumulate knowledge, but to be able to think rationally, reasonably and independently (Developing Students' Thinking Skills, 2013), as subject knowledge acquired at school quickly becomes obsolete. Targeted development of critical thinking and problem-solving skills and the ability to learn must help society not only to respond to the challenges of the 21st century, but also to take advantage of the new opportunities that arise (Prakapas, Čepaitė, 2013).

D. Penkauskienė (2016) argues that the concept of critical thinking is derived from the Greek words "kritikos" and "kriterion" - a criterion, or a certain measure, standard. Combining these two concepts, it could be argued that for the ancient Greeks, critical thinking meant insightful reasoning or reasoning based on certain criteria.

In the academic literature, three groups of definitions of critical thinking can be identified:

1. N. Venskuvienė (2017), in her analysis of the scientific literature, argues that some researchers, in explaining what higher-level thinking is, distinguish between the following types of thinking: analysing, comparing, evaluating, drawing conclusions, creating, making assumptions, finding new solutions, applying information in a new context. Other scholars distinguish and emphasise thinking as an intellectual capacity: analytical, creative, practical; causal, integral, deep.
2. Critical thinking as purposeful, strategic thinking. It is characterised by the process of discovering meaning, considering different perspectives, testing old assumptions (Developing Students' Thinking Skills, 2013).
3. Critical thinking - holistic, systemic thinking. It enables students to make sense of their ability to use investigative strategies, to question, to consistently and systematically search for answers, both in defence of their own views and in relation to the views of others (Pupil Thinking Skills Development, 2013).

Based on the interpretation of the concept of critical thinking, the following traits of a critical thinking personality can be identified: curiosity, openness, courage to take risks and assume responsibility, healthy scepticism, the inclination and ability to investigate, reflexivity, the courage to make mistakes and to confess them, and the ability to delay judgements and decisions if they are questioned (Penkauskienė, 2016). A person who is able to think critically is able to differentiate between facts and opinions, determine the reliability of information, and the accuracy of a definition. The results of such thinking are logically sound and comprehensive. Hence, this thinking refers to the ways in which knowledge is processed and reflected upon (reflection) (Developing Students' Thinking Skills, 2013).

Critical thinking is described as a process. According to V. Indrašienė et al. (2018), critical thinking is a cognitive and reflexive thinking process that includes components of cognitive abilities and dispositions that enable students to identify, analyse, justify judgements and arguments, make decisions, and present the problems under consideration.

At school, critical thinking skills are not subject-specific, nor are they linked to age or experience. D. Penkauskienė (2016) argues that critical thinking is not a separate subject that can be taught as a formula, but rather a process, i.e. a pathway of thought, the cultivation of experience, the comprehension of new knowledge and content, and the integration of existing information with newly acquired information and reflection.

In summary, the recent emphasis in schools has been on the development of students' critical thinking skills, with the ability to identify, analyse, justify judgements and arguments, to make decisions and solve problems, to apply existing knowledge and to create new knowledge in new situations.

The Theory of Constraints (TOC) was developed and described by Israeli physicist Dr. Eliyahu M. Goldratt (1947-2011). Since 1980, the Theory of Constraints has become an effective methodology for managing business enterprises, which has helped many companies to overcome crises and become profit-generating companies. The methodology is used by companies such as Boeing, Motorola and Ford. The Theory of Constraints is an advanced methodology for effective thinking and productive performance (Nagarkatte and Oley, 2013).

For many, IOC is known as the most effective methodology for managing business enterprises, which has not only helped to save many companies from crises, but has also helped them to become extremely profitable. It is used by companies such as Boeing, Motorola and Ford (Nagarkatte and Oley, 2013).

The basic idea of IOC could be described in the following statements (Baniene, 2018):

- Any system or organisation has at least one constraint or a small number of constraints that limit the whole system. This means that systems, processes or organisations are vulnerable because the weakest point or part will always degrade, damage or at least negatively affect the results;
- the constraints that exist provide room for improvement. The IOC takes a positive view of constraints, stating that they allow the assessment of weaknesses in a system or organisation, which, if identified, can lead to improvements.

The Theory of Constraints is a methodology that logically identifies and overcomes the fundamental constraints or barriers that prevent a person, an organisation or a system from achieving its goals. Despite good intentions, dedication and widespread use of methods, many barriers still prevent us from improving our ability to achieve our goals. For as Eliyahu M. Goldratt states, "Every improvement is a change, but not every change is an improvement" (Suerken, 2014). According to the Theory of Constraints (TOC), three questions must be answered to ensure desired and continuous improvement:

- What do we want to change? (problem identification)

- What or whom do we want to change? (strategy)
- How will we implement the change? (solution).

Since 1995, the ideas of the IOC theory have been put into practice in education, with Eliyahu M. Goldratt founding IOCFE, a global non-profit organisation. U. Nagarkatte, N. Oley (2013) point out the main assumptions that led to the establishment of TOCFE. The authors argue that despite the changes and good intentions in the education system, educators face the following barriers:

- Many educators find it difficult to make teaching engaging, with an emphasis on academic knowledge;
- many students do not know how to solve their problems;
- many pupils fail to control their impulsive behaviour;
- many pupils try to learn by rote instead of understanding what they are learning;
- many pupils are not able to apply their knowledge to everyday life;
- many pupils do not understand the importance of learning;
- many pupils do not take responsibility for their learning and behaviour.

The purpose of TOCFE is to promote the tools of logical thinking and communication and the Theory of Constraints among educators in order to leave a better world behind, to help people find win-win solutions to conflict situations. Students can be taught to think critically and creatively from a very young age. At the same time, pupils learn to say what they think and to think logically and systematically, taking responsibility. The tools of the Theory of Constraints are such that they can be used by pre-school children as well as by top managers in organisations. Since its inception, more than 250,000 people in 22 countries have been trained in the use of Theory of Constraints. The moral code of the theory - The tools of the Theory of Constraints have been developed to find win-win solutions and to ensure that neither side is harmed by a particular action. The tools of the Theory of Constraints cannot be used for any other purpose. Most educators aim to develop responsibility and efficacy in learners of all ages now and in the future (Ean, 2015).

TOCFE methods are very simple, effective methods for children's critical thinking, problem solving: logical branch, evaporating cloud, ambitious goal.

At the heart of our thinking processes is discovering the laws of cause and effect, using tools such as logic diagrams to help explain our intuition. Using a logic branch diagram develops students' logical thinking and helps them discover cause-effect relationships. The cloud method is used to resolve conflicts and internal dilemmas, to understand wants and needs, to test assumptions and to find a "win-win" solution. The ambitious goal approach is a planning approach that helps to set a goal, identify obstacles, plan time and responsibilities (Suerken, 2014). K.C Ean (2015) argues that TOCFE methods are tools for effective thinking and harmonious communication.

In summary, it is not easy to make teaching in school attractive to students. Of course, every teacher tries to engage students, but often there is too little time and more emphasis on academic goals, so TOCfE methods are one way to help achieve the educational goals and make teaching engaging. The core principles of TOCfE are to teach students to think, to find the causes of problems, to set goals, to resolve conflicts, so the teacher's goal is not to drown his/her students in a wealth of information, but to provide them with the tools for thinking and learning, so that they are able to learn as quickly as possible, without the need for us as teachers: to find the information, to draw conclusions and to make decisions independently.

In other available materials developed as part of the Impetus TOC project (e.g. General TOC and mediation guideline, Training materials for teachers, Parent`s handbook), TOC tools are described in detail, while scenarios are provided later in this handbook dedicated to early education teachers (6-9 years old) including specific setting and demands of young learner as well as to older students (10-15 years old) including specific demands of subject curriculum.

## RECOMMENDATIONS

Recommendations for educators on the application of the TOCfE methodology to develop students' critical thinking:

- It is recommended to apply the TOCfE methods of the Theory of Constraints in different subjects and for the development of students' emotional social competences.
- Apply the logical branch method to work with students with special educational needs.
- To increase teachers' knowledge of TOCfE methods through self-learning.
- To disseminate good practice in the use of TOCfE methods to develop students' critical thinking.

We wish you much success and satisfaction in using these tools.



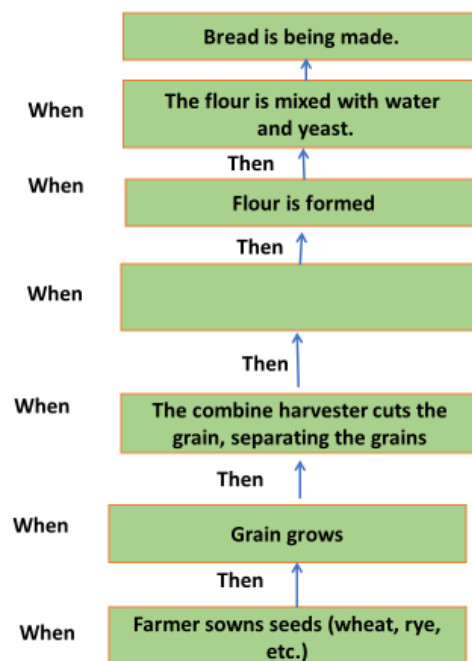


# 1. How bread is made?

## LESSON PLAN

### TEMAT: How bread is made?

<b>Subject</b>	Early education grade I-III
<b>Age</b>	8-9
<b>Topic</b>	How is bread made?
<b>Objectives</b>	Student speaks out smoothly and logically, understands how the bread is made, can explain the process of formation of bread and understands it.
<b>Materials</b>	Pictures with descriptions of how bread is made. Children bring loaves of bread, or slices of bread. Presentation created for the lesson, attached to lesson plan.
<b>Development</b>	Children watch the illustrations and explain them.  Teacher gives children elements of the logic branch, they put it in the proper order, they fill in the gaps, they add elements that are missing. When the logic branch is ready, children read the logic branch, they add the explanations, “if...the...because”. Students do their logic branch in copy books, they embellish, graphically note.





## 2. Text tasks - mathematic maps

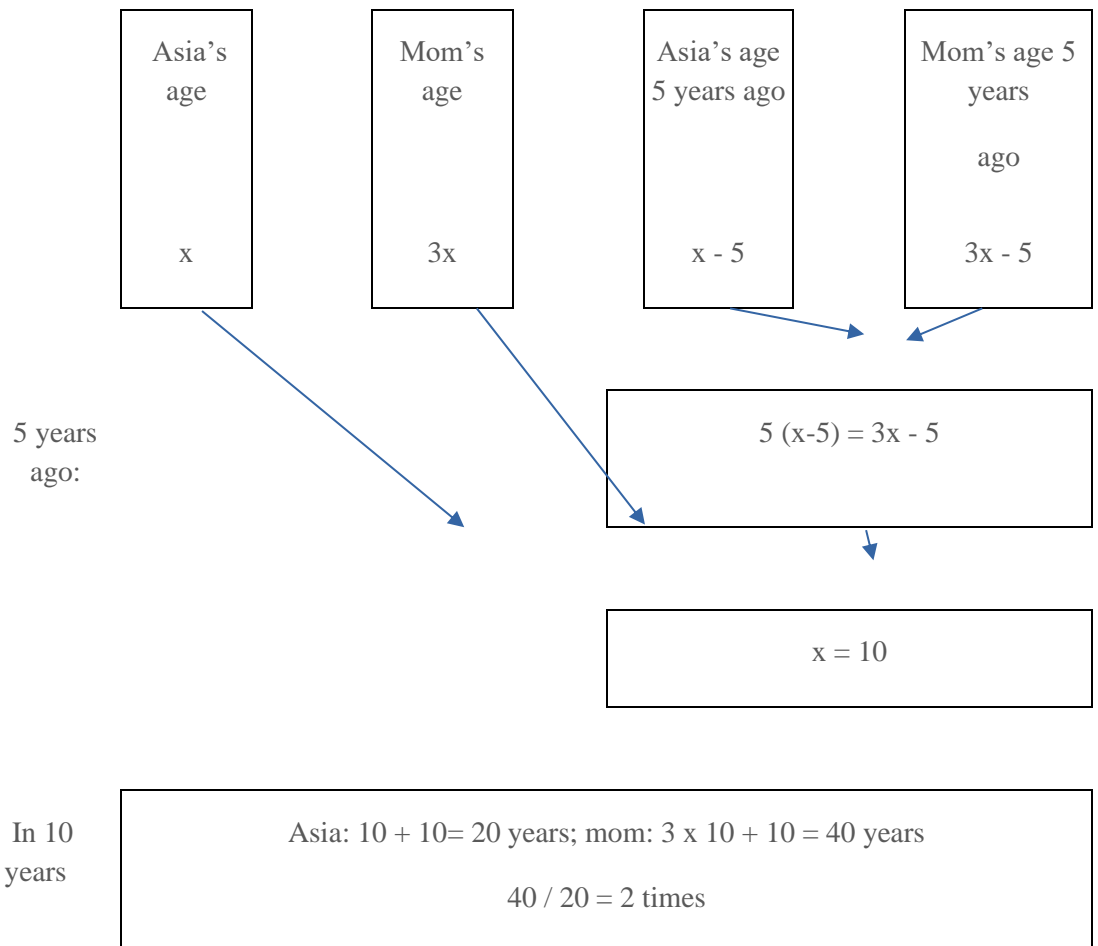
### LESSON PLAN

Subject	Mathematic
Age	11+ year olds
Aim	Showing students that solving problems using mathematical maps and equations is one of the effective methods.
Topic	Mathematical maps in mathematics text tasks
Skills	The student is already able to arrange equations for text tasks The student will be able to solve text tasks with mathematical maps using equations
Lesson	<p><b>Example 1.</b></p> <p>Kasia and Basia are twins. When they were born, their mom was 28 and their dad was 30. Currently, they are all 126 years old in total. How old are the twins now?</p> <div style="display: flex; justify-content: space-around; align-items: center;"><div style="border: 1px solid black; padding: 5px; text-align: center;">Kasia's age  x</div><div style="border: 1px solid black; padding: 5px; text-align: center;">Basia's age  x</div><div style="border: 1px solid black; padding: 5px; text-align: center;">mom's age  x+28</div><div style="border: 1px solid black; padding: 5px; text-align: center;">daddy's age  x+30</div></div> <p style="margin-left: 20px;">TOTAL :</p> <div style="border: 1px solid black; padding: 5px; margin-left: 20px; text-align: center;"><math>x + x + x + 28 + x + 30 = 126</math></div> <div style="text-align: center; margin: 5px 0;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-left: 20px; text-align: center;"><math>4x = 126 - 28 - 30</math></div> <div style="text-align: center; margin: 5px 0;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-left: 20px; text-align: center;"><math>4x = 68</math></div> <div style="text-align: center; margin: 5px 0;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-left: 20px; text-align: center;"><math>x = 17</math></div>



**Example 2.**

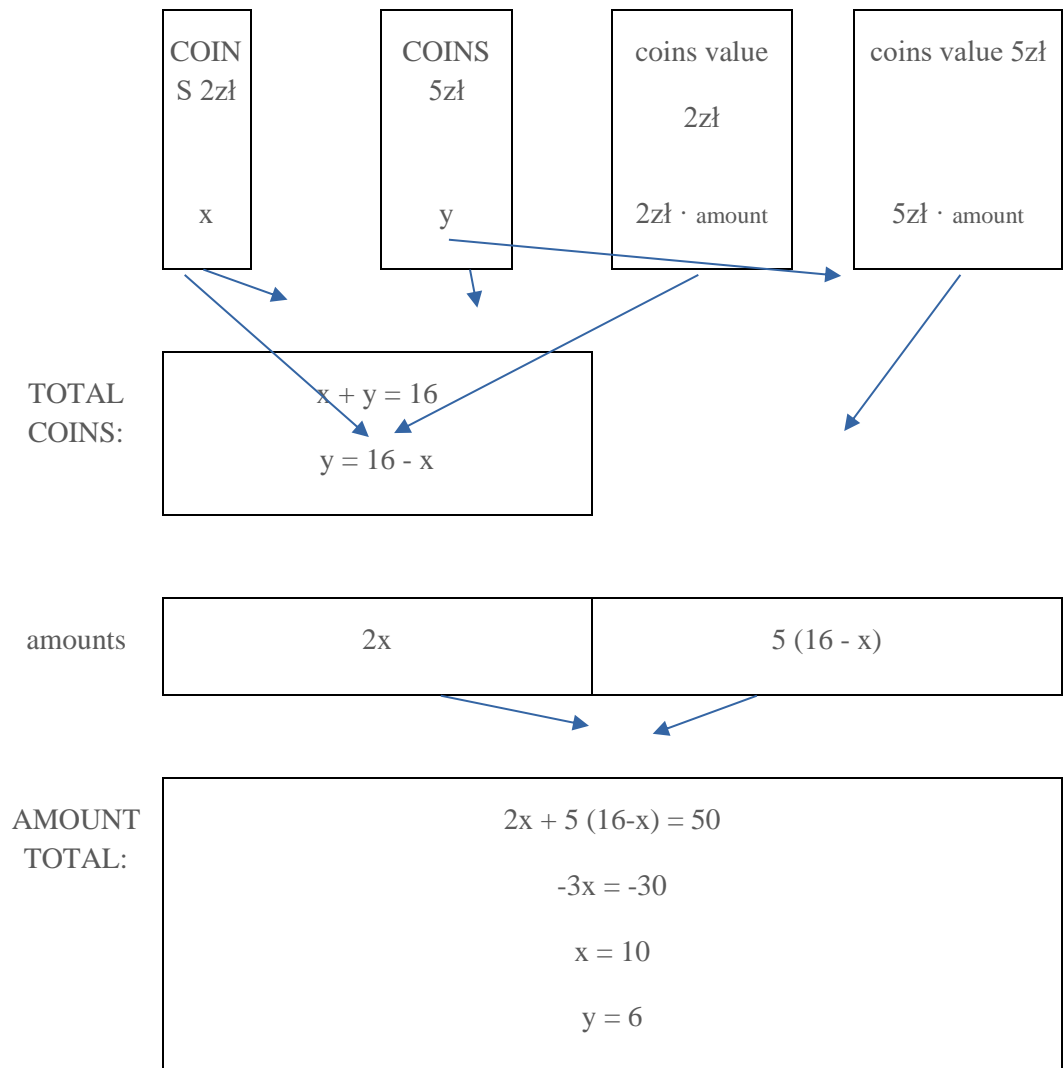
Mom is 3 times older than Asia. 5 years ago she was as much as 5 times older than her. How many times older than Asia will Mom be in 10 years?





### Example 3.

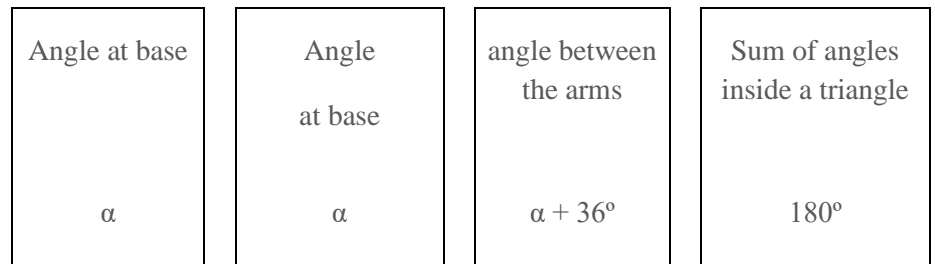
Tadek has 50 zloty in 2 zloty and 5 zloty coins. There are 16 coins in total. How many 2 zloty coins and how many 5 zloty coins has he got?





**Example 4.**

In an isosceles triangle, the angle between the arms is  $36^\circ$  greater than the angle at the base.  
Calculate the measures of the angles of this triangle.



PROPERTIES:

$$\alpha + \alpha + \alpha + 36^\circ = 180^\circ$$

ANGLE MEASURES

$$3\alpha = 180^\circ - 36^\circ$$

$$3\alpha = 144^\circ$$

$$\alpha = 48^\circ$$

$$\alpha + 36^\circ = 84^\circ$$



**Text tasks:**

1. Anna and Robert are siblings. Anna is 5 years older than Robert. In total, they are 33 years old. How old is Anna?
2. Wojtek bought a notebook, a pencil and post-it notes. The notebook was three times more expensive than the pencil, and the post-it notes were one zloty more expensive than the pencil. Wojtek paid a total of 15 zlotys. How many zlotys did the notebook cost, how many zlotys did the pencil cost, and how many zlotys did the post-it notes cost?
3. A tourist walked 72 km in three days. On the first day he walked the most, on the second day 2 times less than on the first day, and on the third day - half of what he walked on the first and second day in total. How many kilometers did the tourist walked each day?
4. There are 82 plums in four baskets. In the first and second baskets there are the same number of plums in each, in the third - 3 times more than in the first, and in the last - 22 plums less than in the third basket. How many plums are in the first basket?
5. In a class of 7a, with 24 students, from a test in mathematics, the students received twice as many very good grades as good grades and good grades by 6 more than sufficient grades. Two students got excellent grades. Calculate how many students received a good or very good grade if it is known that no one received an acceptable or failing grade.
6. The auditorium of the Chamber Stage at the Polish Theater in Wroclaw can accommodate a total of 262 spectators. There are 178 seats on the first floor, while there are five rows of seats on the balcony. The first row on the balcony has one less seat than each of the other rows. How many seats are in the first row on the balcony?
7. The human spine consists of 24 pre-sacral vertebrae, 5 sacral vertebrae, fused into a single bone, and 4 vestigial caudal vertebrae, forming the coccyx. Pre-sacral vertebrae are divided into cervical, thoracic and lumbar vertebrae. There are 2 more cervical vertebrae than lumbar vertebrae, and there are as many thoracic vertebrae as cervical and lumbar together. List the numbers of vertebrae in all sections of the spine.
8. One of the sides of a square was lengthened by 3 cm, and the other was shortened by 1 cm, and a rectangle with a perimeter of 32 cm was obtained.
  - (a) Calculate the area and perimeter of the initial square.
  - (b) Calculate the area of the resulting rectangle.
9. In a triangle with a perimeter of 41 cm, one of the sides is twice as long as the shortest, and another side is 13 cm longer than the shortest. Give the lengths of the sides of this triangle.
10. A wire of length 44 cm was cut into two parts. From each of them a frame was made: one square, the other rectangular. One side of the rectangle is equal to half the side of the square, and the other side of the rectangle is 1 cm longer than the side of the square. Calculate the sum of the areas bounded by the frames made of this wire.



### 3. Sequence of operations-brunch

Subject	Mathematic
Students' age	10-12 year-olds
Aim	<ul style="list-style-type: none"><li>• Mastering the ability to calculate the value of an arithmetic expression according to the principle of the order of operations</li><li>• Specific objectives: students know the order of execution of operations in arithmetic expressions when there are no and parentheses are present the students are able to give the correct order of operations for arithmetic expressions</li></ul>
Topic	Sequence of operations
Materials	paper and a pen



**Lesson**

**SKILLS**

The students are able to:

- add and subtract two-digit or larger natural numbers in memory
- add a single-digit number to any natural number and subtract from any natural number
- multiply and divide in memory (in the simplest examples) a natural number by a one-digit, two-digit or three-digit natural number
- calculate the squares and cubes of natural numbers

The students will be able to:

- apply the rules for the order of operations

**LESSON:**

**I. Introductory part.**

Familiarizing students with the notation of an arithmetic expression with multiple operations

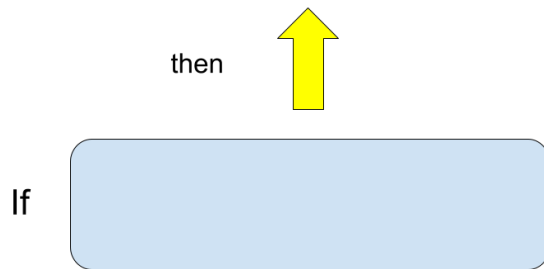
**II. The actual part.**

1. writing down the procedure for performing actions with a logical branch
2. students complete the next steps of the procedure
3. checking the correctness and logicity of this branch
4. Attempt to solve with the method of the logical branch the example actions

**III. Summary part.**

Mathematical riddles

sample student logic branch:



logic branch	example
	-2
	18 - 20
	18 - 4 · 5
	18 - 2 <sup>2</sup> · (5)
	18 - 2 <sup>2</sup> · (3 + 4)





**Make the logic branch using its pattern**

**Task 1**

- a)  $(7 + 5) \cdot 2$
- b)  $24 : (3 + 5)$
- c)  $(13 - 4) \cdot 2$
- d)  $(12 - 8) : 4$
- e)  $(14 - 2) : 3$
- f)  $6 \cdot (3 + 2)$

**Task 2**

- a)  $12 : 3 \cdot 2$
- b)  $9 - 5 + 3$
- c)  $30 : 5 \cdot 3$
- d)  $2 \cdot 6 : 3$
- e)  $2 + 14 - 8$
- f)  $10 - 4 + 3$

**Task 3**

- a)  $3 \cdot 4 : 6 \cdot 2$
- b)  $8 - 4 + 2 - 1$
- c)  $12 - 1 + 7 + 3$
- d)  $18 : 3 \cdot 2 : 4$
- e)  $8 : 2 \cdot 4 : 2$
- f)  $8 + 5 + 12 - 4$

**Task 4**

- a)  $12 + 8 : 4$
- b)  $6 \cdot 3 - 2$
- c)  $6 + 9 : 3$
- d)  $9 - 3 \cdot 2$
- e)  $21 + 14 : 7$
- f)  $8 + 2 \cdot 5$

**Task 5**

- a)  $2 \cdot 3 + 4 \cdot 6$
- b)  $21 : 7 - 16 : 8$
- c)  $5 \cdot 6 + 15 : 3$
- d)  $32 : 4 - 3 \cdot 2$
- e)  $3 \cdot 5 + 8 : 4$
- f)  $16 : 4 + 4 \cdot 8$

**Task 6**

- a)  $30 : 2 \cdot 3 - 4 \cdot (6 + 4 - 1)$
- b)  $(16 + 28) : 4 - 8 + 2^2 \cdot 8$
- c)  $6 \cdot 3^2 - (4 \cdot 23 + 4)$
- d)  $[4^2 + 2 \cdot (6 + 3)] : 2$
- e)  $2^3 + 2 \cdot (98 : 7 + 5 \cdot 3)$
- f)  $\{[75 - (29 + 31)] : 5\} \cdot (48 : 12)$



### Mathematical riddles:

#### Task 1

Rewrite, inserting brackets so that you get the given result.

a)  $3 \cdot 12 + 4 - 7$

result 41

b)  $2 \cdot 7 + 21 : 7$

result 5

c)  $24 - 6 \cdot 2 + 5$

result 17

d)  $6 + 5 \cdot 9 - 3$

result 36

#### Task 2

Guess which of the expressions has the highest value and which has the lowest value. Calculate and check your guess.

$20 - 3 \cdot 2 + 4$

$(20 - 3) \cdot 2 + 4$

$20 - (3 \cdot 2 + 4)$

$(20 - 3) \cdot (2 + 4)$

$20 - 3 \cdot (2 + 4)$

$(20 - 3 \cdot 2) + 4$

#### Task 3

Form a text task that can be solved using the given expression. Solve your task.

a)  $2 + 3 \cdot 4$

b)  $2 \cdot (12 + 8) - 3$

c)  $(2 + 3) \cdot 4$

d)  $2 \cdot 12 + 8 - 3$

#### Task 4

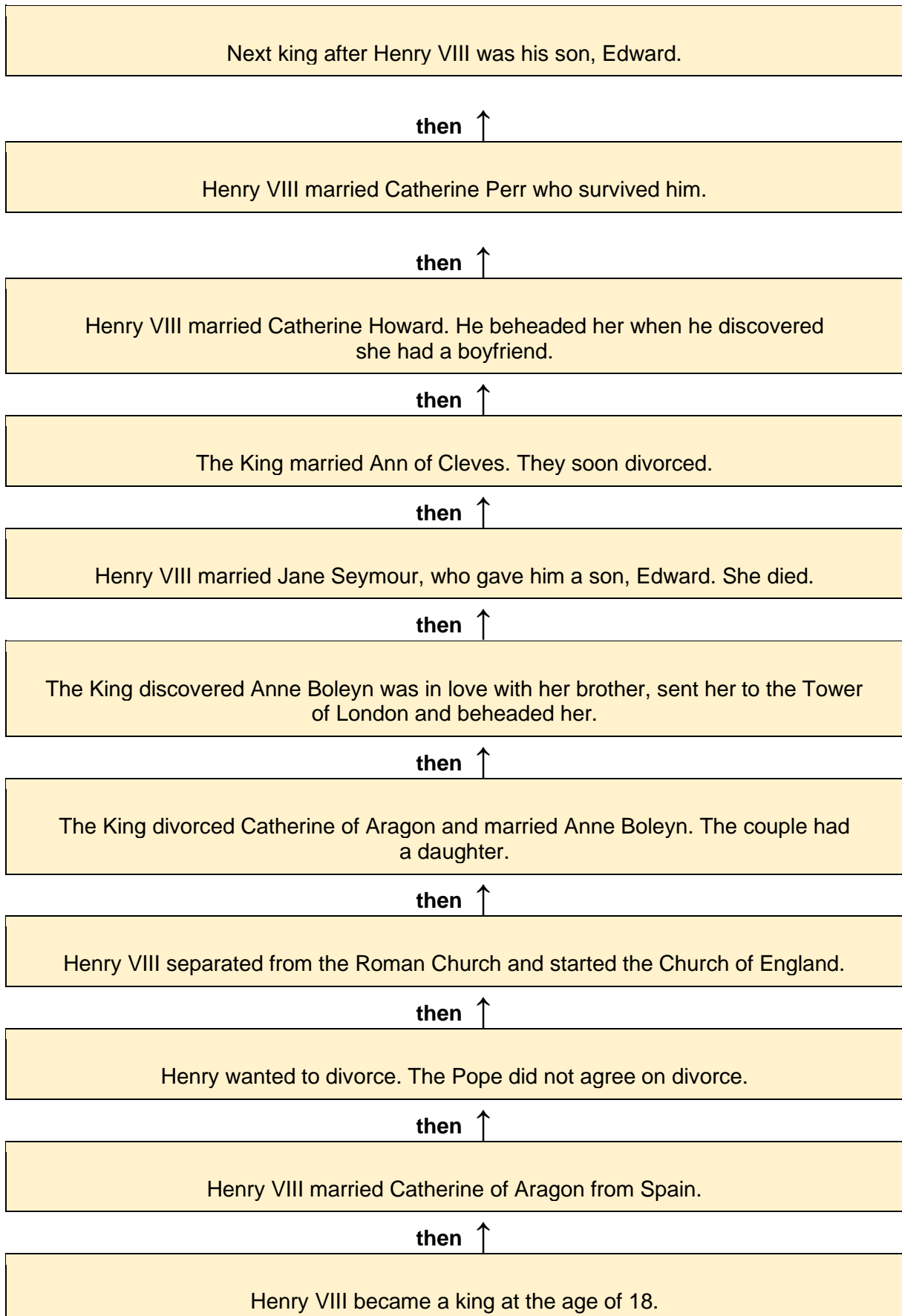
Using only the digit 2, operation signs and brackets, write expressions which values will be all natural numbers from 0 to 10. In each expression, you are allowed to use the digit 2 at most 5 times, but for this you can create multi-digit numbers from it (for example, 22 or 222).

## 4. Henry VIII

Subject	Social science/English/ history
Topic	Power - authority. King Henry VIII.
Aim	The goal of the lesson is to talk about authority and power. As an example is the English King Henry VIII.
Age	Suitable for students 12-16 year old (Sample lesson completed with 7th grade).
Materials	Presentation / <i>pictures</i> / other materials presenting King Henry VIII
Procedure	<p>1. Teacher talks with children about power, authority, management, ways and systems of ruling the country. Who uses power, where, why. Who rules over who, for example who rules at school, at your classroom, at home. What are the other places we experience power over us? Ask questions such as: Can authority be overused, where? Give some examples. Do you overuse your position?</p> <p>2. In Groups students talk about advantages and disadvantages of having power over a country, group of people.</p> <p>3. Short presentation or tekst about King Henry VIII.</p> <p>4. Story of King Henry VIII, for example from the book: <i>British History Highlights, Henry VIII, p.12.</i></p> <p>5. TOC tool branch to memorize history of King Henry VIII.</p> <p>[To be read from the bottom to the top ↑]</p>



Examples:



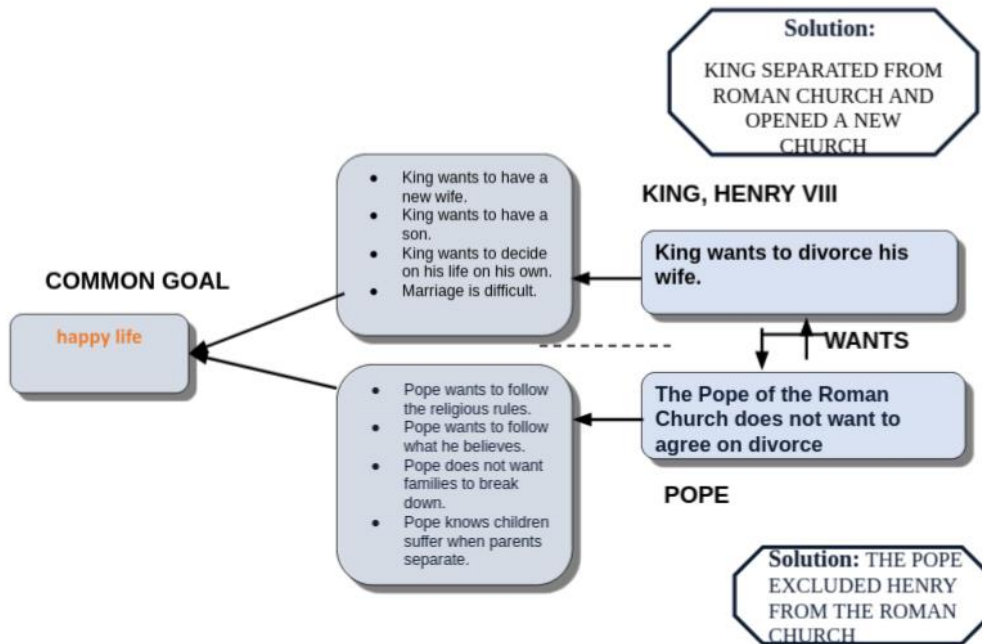


If

6. TOC tool CLOUD to present the dilemma and disagreement between the king and the pope.

\*In this situation we can inform students that it is very difficult to resolve problems connected with values. The Pope represents religious rules such as holiness of marriage, unity of married people, Holy Bible, the ideal of following Jesus. King represents such values as using power and fulfilling his wishes through divorce and death.

Example of cloud proposed by 7th grade students, school in Sopot, Poland



Conflict situation:

- King Henry VIII wants to divorce his wife.
- The Pope as a ruler of the Roman Church did not agree on divorce.

- King wants to have a new wife.
- King wants to have a son.
- King wants to decide on his life on his own.
- Marriage is difficult.
- The Pope wants to follow the religious rules.
- The Pope wants to follow what he believes.
- The Pope does not want families to break down.
- The Pope knows children suffer when parents separate.

KING

**Solution:** KING SEPARATED FROM ROMAN CHURCH AND OPENED A NEW CHURCH

POPE

**Solution:** THE POPE EXCLUDED HENRY FROM THE ROMAN CHURCH

COMMON GOAL: happy life

## 5. Conflict at distance education

Subject	Parenting hour, Psychosocial education/group and individual meetings
Students' age	11+
Aim	Awareness of the importance of rules to order the life of a social group in the circumstances of remote learning.
Topic	The traps of remote learning.
Materials	Sheet of gray paper, markers, pens, cards. Conflict cloud template.



## Lesson

### Situation:

During distance learning, there was a conflict between classmates in one class. Three boys write comments to a classmate in the chat room sending him unpleasant icons, smiley faces, unpleasant, offensive remarks, unpleasant words, expressing their dislike towards him ....

During a conversation with a psychologist on the subject, the students frankly admit that they have done so because they dislike him and are angry with him because of a certain situation. Namely, they believe that during a remote lesson, someone is present in his room. They guess that it is one of his parents, who prompts him and helps him solve tasks.

According to them, these incidents repeat in various lessons: math, English, biology. The boys feel that this is unfair, because thanks to this their classmate gets higher grades with someone's help, which they have to earn on their own. In addition, they feel embarrassed by the presence of a stranger from outside the class in their lessons. They feel judged, overheard, and lose their sense of security and comfort. The presence of another adult disrupts the intimacy in their classroom.

The whole situation generates in them a lot of frustration and anger at the colleague. They were annoyed that the adult's presence was implicit, revealed by glances over the monitor, whispers, and occasional microphone muting.

This anger engaged the boys so much that instead of focusing on the lesson, a lot of energy was spent on controlling their colleague's behavior to confirm their suspicions.

These negative comments and chat posts to a colleague were the result of their frustration and inability to solve the problem.

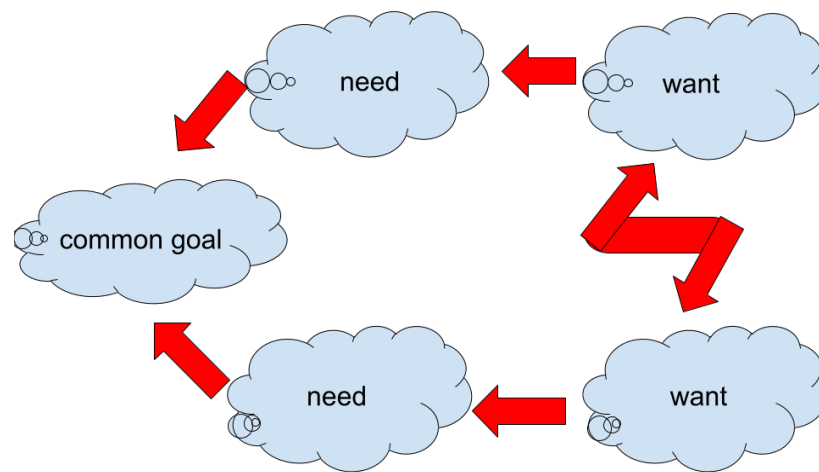
The teacher's suggestion to break down the conflict using the TOC tool: a conflict cloud.

An example of a conflict cloud so that both sides can visualize and name what the conflict is about.



### Conflict situation:


1. We write in a cloud schema (wants):
  - we do not invite anyone outside the class without the knowledge of the class to lessons
  - we invite whoever we want without the class's permission to lessons
2. We look for needs (both sides)
3. We look for a common goal.
4. At the end we make a list of common agreements.





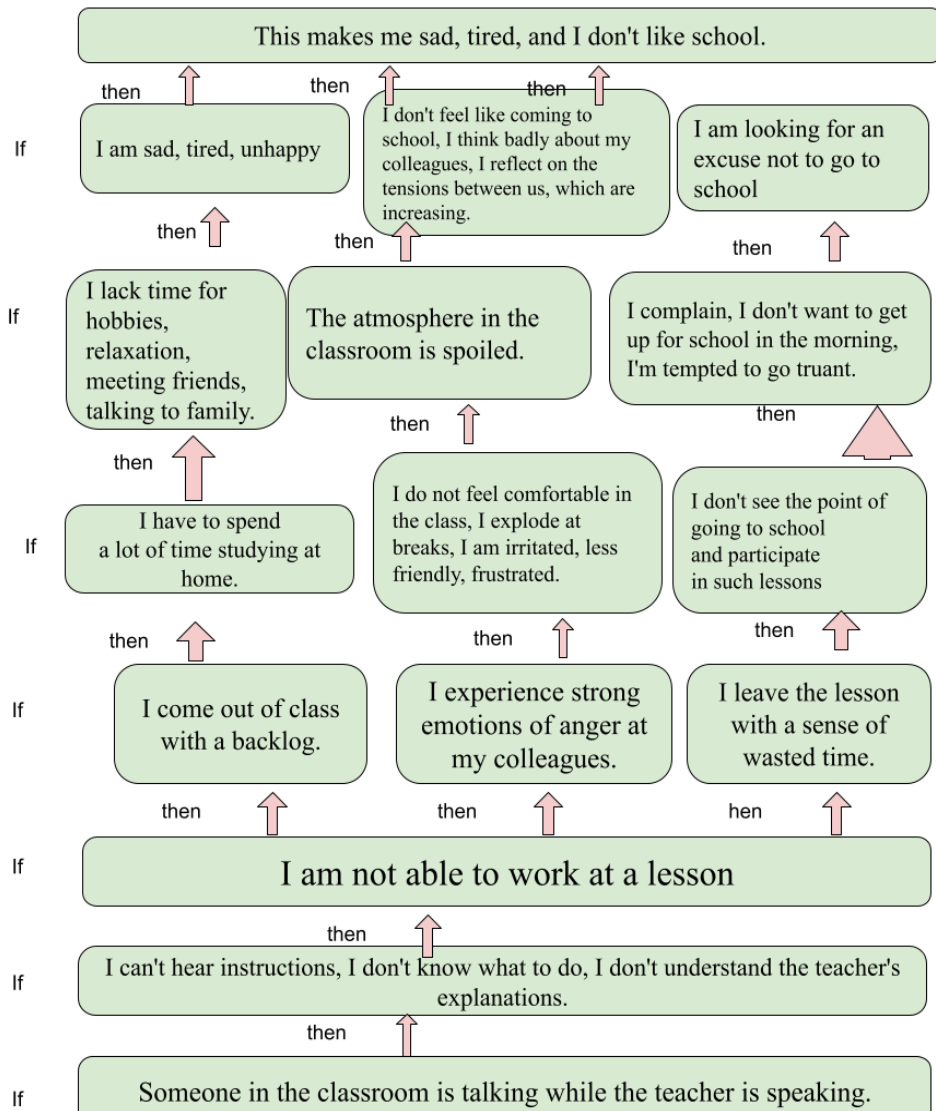


## 6. Lesson desorganization through small group

Subject	Psychoeducation, Psychosocial education/ group and individual meetings.
Students' age	10+ (IV-VIII class)
Aim	Raise awareness of behaviors that interfere with the flow of the lesson.
Topic	Self-awareness (my emotions and needs), interactions with peers, communication and establishing a common position/goal with peers.
Materials	A sheet of gray paper, markers, pens, sheets of paper.
Lesson Time: 90 minutes	<p>Situation: There is a problem in the classroom where the behavior of a small group of students is disrupting the flow of the lesson. Several students during the lesson are talking loudly, commenting on the teacher, fooling around, joking, throwing notes, etc. This behavior distracts the teacher and disorganizes the lesson. The rest of the class is unable to hear the instructions given to them and participate in the lesson. Despite wanting to be active during the lesson. Ultimately they have a sense of loss and discord and are tired of the noise around them.</p> <p>The topic is taken up during the class. (1) The teacher starts by suggesting that the students individually write out the <u>logical thinking branch</u> so that everyone has an opportunity to realize the consequences of such behavior. The teacher suggests starting the <u>logical thinking branch</u> with the sentence: <i>If someone in the classroom is talking when the teacher is talking to the students, then ...</i></p> <p>The neutrality of the first sentence allows both groups of students to follow the path of consequences. Both those who were disruptive and those who wanted to actively participate in the lesson and follow the school rules.</p> <div style="text-align: center; margin-top: 20px;"> <p>then </p> <p>If <span style="border: 1px solid black; border-radius: 15px; padding: 5px 20px; display: inline-block;">somebody talks, when the teacher runs the lesson</span></p> </div>



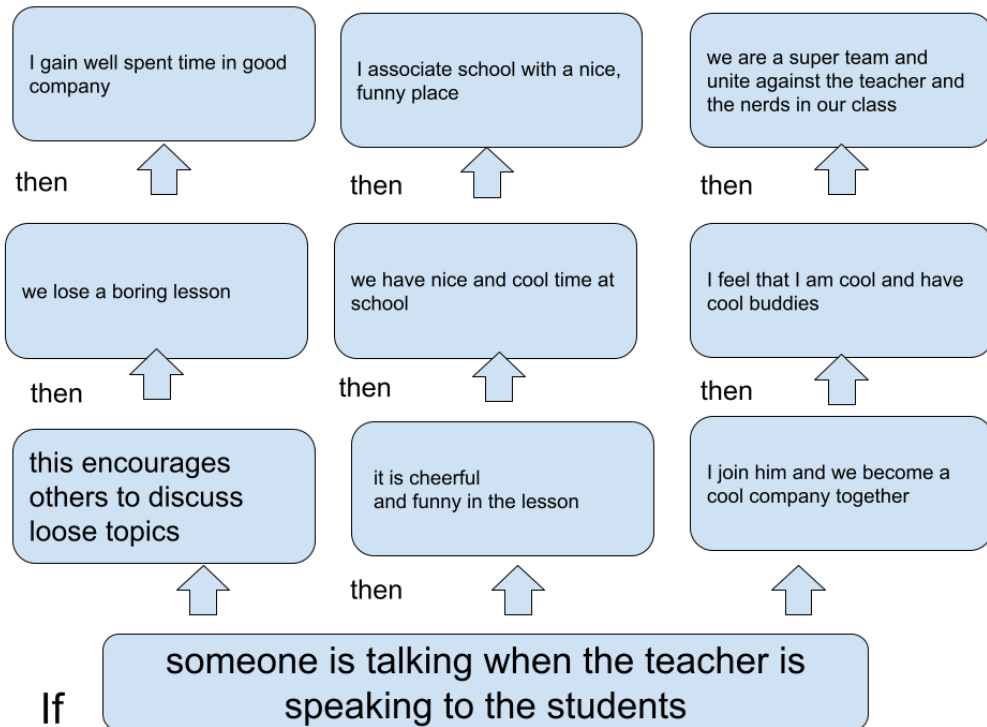
**Example of a logical branch 1.**





### Example of a logical branch 2.

Below, that is only one part of the logical branch, that can be continued as far as the students find what may happen next. Example of a common conclusion to the three paths is: I want to live and am happy to go to school.



2. Those who are willing read their logical thinking branch to the class. The teacher gives suggestions for discussion on the topic so that students can learn each other's positions.

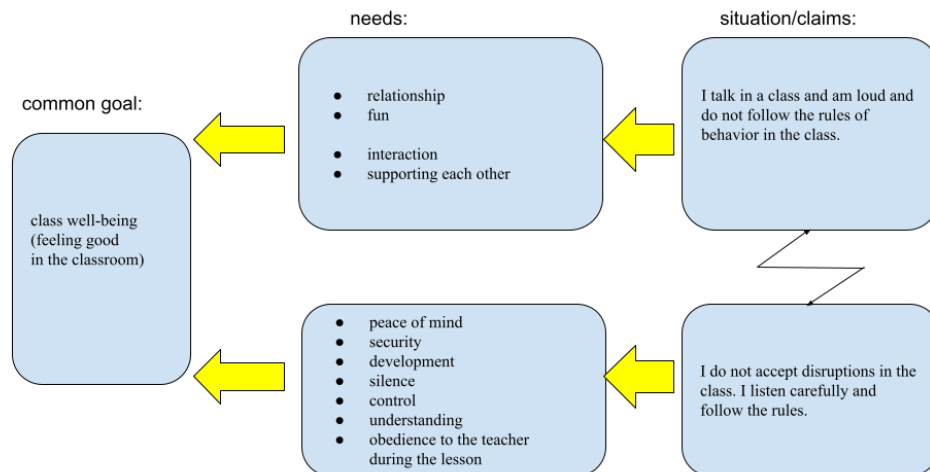
The teacher encourages as many students as possible to read their logic branch. The teacher may paraphrase the final consequences.

#### Comment

*The greatest value of such activities is through the students having a chance to hear each other and see a different perspective. In doing so, they begin to gain sensitivity one to the other and become aware of their different needs. We notice that there are those in the class who have a sense of loss of the lesson and resent being disrupted, and those who engage in activities that make them have fun and thus satisfy their need for relationships with their classmates.*



### III. A conflict cloud



#### Summary:

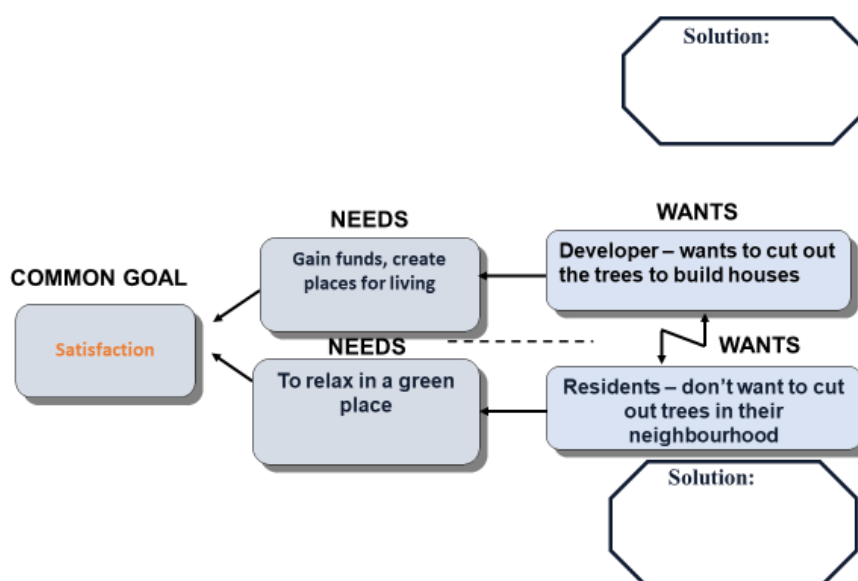
- A conversation about how we can achieve a common goal without seeking compromise, but to the full satisfaction of both parties;
- Examples of conclusions and strategies developed: when you make too much noise, it's hard to stop;
- Establishing common rules, when it is acceptable to make jokes and laugh in class and when we want to stop;
- When and how we stop so that we don't have to do too much homework at home;
- Asking the principal for one longer break;
- Asking for the opportunity to spend the night together at school to saturate the relationship;
- Meet after school;
- The teacher is a human being, we want to treat him/her well;
- We don't want extra assignments and homework.

# 7. Trees in the city

## LESSON PLAN

### TOPIC: TREES IN THE FOREST.

<b>Subject</b>	Early education I-III, grade IV
<b>Age</b>	8-10
<b>Topic</b>	Trees in the city.
<b>Objectives</b>	Students understand the meaning of the existence of trees in the ecosystem, understand the role that trees in the city and the role that trees play in human well-being.
<b>Materials</b>	Story to read, photos of trees in cities
<b>Development</b>	<ol style="list-style-type: none"> <li>1. Teacher asks students about the role of trees in the forest, show pictures of trees, parks, squares in big cities.</li> <li>2. Teacher describes a story about residents in one of the districts in a big city, where a property developer wants to cut trees around the square, to build houses. Residents don't like it, because it is a place where they like to rest in the shadow of the trees.</li> <li>3. Students write cloud, and think about needs and common goal. zastanawiają się nad potrzebami i wspólnym celem.</li> <li>4. Students search for solutions that fulfil the needs of both sides. They write them down.</li> <li>5. Students create a plan of the neighbourhood that includes solutions given earlier.</li> </ol>





## 8. Ernest Malinowski

### LESSON PLAN

#### TOPIC: PROMINENT POLISH PEOPLE – ERNEST MALINOWSKI

<b>Subject</b>	Early education grade I-III, grade IV
<b>Age</b>	8-10
<b>Topic</b>	Prominent Polish – Ernest Malinowski.
<b>Aims</b>	Development of logical thinking, knowledge about famous scientists and designers, overcoming obstacles, knowledge about reaching goals.
<b>Materials</b>	Part of history about life of Ernest Malinowski, photographs, power-point presentation for the lessons
<b>Development</b>	<p>8. The teacher reads fragment of history of Ernest Malinowski from the book „Akademia super bohaterów” by T. Rożek.</p> <p>9. The teacher shows to the students pictures of buildings, that were designed in the times of Ernest Malinowski.</p> <p>10. Description of ambitious target for E. Malinowski – TO BUILD TRAIN in the Andes.</p> <p>11. Students search for obstacles, that the character may face.</p> <p>12. Students discuss how he managed to overcome the obstacles and what actions he took.</p> <p>13. Creative, construction task.</p> <p><b><u>Bridge over the precipice</u></b></p> <p>The teacher divides class into groups – 4 students each. Puts two chairs within a distance of 60-80cm between each other. (For each group the same distance). Next, the teacher gives around 15 pages of paper from magazines or newspapers.</p> <p><b><u>INTRODUCTION:</u></b></p> <p>Imagine that the two chairs are two steep, dangerous mountains, and between them there is a deep abyss. At the foot of one of the mountains there is a beautiful village and a shelter was built at the slope of the second mountain. The residents of the village decided to build hanging bridge over this chasm, that enables them reaching faster the shelter and could be attraction for the tourists.</p> <p><b>Instruction for the task:</b></p> <p>Your task is to <b>build only from the materials you have received, hanging bridge</b> between mountains = chairs. The newspapers you can roll, tear, hole, join together, etc., as you wish, only discuss the solution in your group. The bridge cannot be supported or propped up by anything, has to hang independently. You have 10 minutes.</p>



After the time is finished, I will say **STOP** and you have to finish creating your bridge. Then the testing part is beginning, as there will be people walking on the bridge it needs to be safe.

**BRIDGE TESTING:**

You have one minute for the test. When the teacher says start the team puts slippers of the members of the team on the bridge.

Testing lasts until one minute is over.

**Score :**

Cooperation in the group : 1-10 points

Each slipper laid: 3 points

**Attention!!!** A team can gain additional 8 points if during building and designing the bridge, create rhyming slogan for the opening of the bridge and will present it before testing.



## 9. Disability

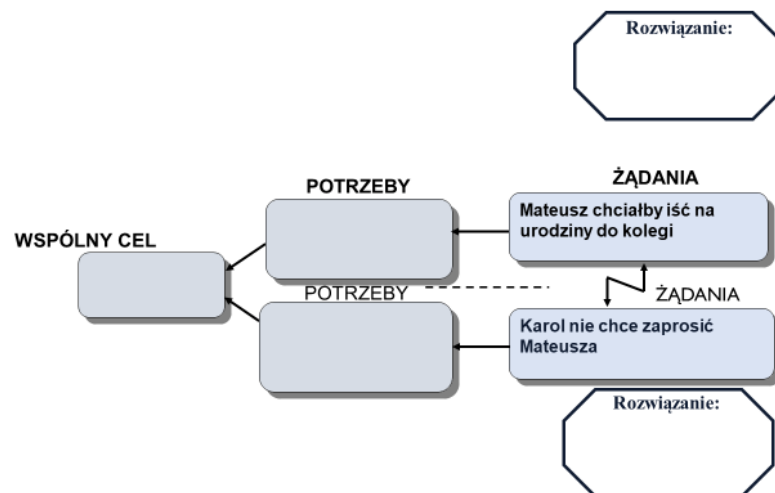
Subject	Early education, Communication
Students' age	7-11 year-olds
Aim	Sensitizing to the problem of disability, otherness. Developing empathy and openness to people struggling with various deficits. Developing attitudes of engagement and readiness to help.
Topic	Disability
Materials	<p>For each group of four, a set:</p> <ul style="list-style-type: none"> <li>• plastic cup</li> <li>• sheet of paper</li> <li>• scissors</li> <li>• 3 paper clips</li> <li>• 3 rubber bands</li> <li>• plastic bag</li> <li>• 2 plastic straws</li> <li>• piece of duct tape</li> <li>• underwear buckle</li> <li>• a meter of string</li> </ul> <p>a few blank sheets of paper</p>
Lesson	<p><b><u>Part 1 – TOC</u></b></p> <p>Teacher invites children to sit in a circle and reads a short story (can be modified according to the educational needs)</p> <p><i>Matthew is a 4th grade student. He is a really nice and friendly boy. He has many passions, but he especially likes listening to music. He also loves going to the cinema, and his great fascination is Star Wars movies.</i></p> <p><i>Matthew has a problem with learning though, he's much slower than the other students. It can be said that he reads poorly and often gets confused when reading. He also has problems with learning math, it's difficult for him to understand and solve mathematical problems, but even simple multiplication or division operations are often a challenge for him. Matthew has Down's Syndrome.</i></p> <p><i>Some time ago, one of Matthew's classmates named Charles was celebrating his birthday. He spent a long time planning the birthday party because he wanted his classmates to be excited and everyone to have a great time. In the end, he decided to invite his classmates to a climbing wall, and then they were all going to a nearby restaurant for pizza. Charles invited all his classmates... except Matthew. He was worried about whether Matthew would be able to climb. However, Matthew dreamed of being with his friends at the party together, when he found out that he was not invited, he was very sad.</i></p>





[In a spontaneous dialogue, we invite children to express their thoughts, observations, suppositions, etc. We touch upon the sphere of emotions, e.g.: *How did Matthew feel?*, *How did Charles feel?*, the sphere of thoughts, speculations, until we finally direct the children with the question: "What needs did each of the boys have?". We then allow the children to determine what the boys might have had in common, until finally we invite them to look for common solutions to their classmates in the story cited].

See the TOC conflict cloud diagram:



## **PART 2 - CREATIVE THINKING**

Construction and communication task : *Empathic Guide*

Introduction :

Today we are talking in the class about various disabilities that affect our colleagues, friends, other people or ourselves. It is good to be able to empathize a little with a person with a disability and understand their perception of the world. This task will bring you closer to the challenges that a blind person has to face.

Imagine that your task is to lead your blind friend safely to five shelters (he/she will be blindfolded). The shelters are numbered from 1 to 5 and will be placed on the floor by the teacher only when the group is ready to complete the mission and the chosen group member is already blindfolded. (The teacher shows the class 5 numbered A4 sheets of paper and, for example, places them anywhere on the floor). The order of visiting the shelters is important



here, you have to "pass" them from the first to the last, one by one. It is not allowed to change the order of the shelters.

**Task Instructions :**

**1. Get into groups of 4 people**

**2. This will be a two-stage task. In the first stage, each group will receive the same set of materials:**

- **a plastic cup**
- **a sheet of paper**
- **scissors**
- **3 paper clips**
- **3 rubber bands**
- **a plastic bag**
- **2 plastic straws**
- **a piece of duct tape**
- **a clothespin**
- **a meter of a cord**

**3. Your task will be to construct a "Sounder" that will guide a blind member of the group from the first shelter to the last one by producing sounds. (Here the teacher can show the class what kind of sounds can be produced e.g. by moving a pair of scissors, tearing a piece of paper, crushing a cup etc.) Attention: The "Sounder" has to be one unit, it can't be e.g. a set of three separate sounders.**

**At this stage you should also agree among yourselves who will be the Blind Man and who will be the Guide and how your beacon will work. Agree on how you want to guide the blind man, what signals you need to give to lead him to the shelter (e.g. turn left, turn back, stop...?).**

**You have 10 minutes to complete this stage of the task.**

**4. When the time is up I will say STOP and you all have to finish your work.**

**5. Now it will be time for the second stage of the task. The groups will line up on the starting line (show the place on the floor marked with painter's tape) and when the teacher blindfolds the blind man and the group is ready, he/she will put the "shelters" in the chosen places (for each group in different places) and turns on the stopwatch. You then have 2 minutes to complete the task, which is to lead your Blind person along a route through all the shelters using sounds only. No communication with each other is allowed at this stage apart from the established sounds!**



**SCORE:**

- *For each shelter safely passed 2 points*
- *For teamwork 1-10 points*
- *For ingenuity of the device 1-10 points*
- *For comfort and care for the blind person 1-10 points*
- *For each attempt to communicate with anyone in an unauthorised way during the second stage (- 1) penalty point*

*Do you have any questions?*

**Go!**



## 10. China

Subject	Geography/Science/ Social Education/ Travel Club
Students' age	8-10 years-old
Aim	To encourage children to develop their knowledge about the world, various countries and places. At this lesson the aim is to get to know China, as a diverse country rich in nature and culture. Encouraging children to learn about the world, marvel at its diversity and show the multidimensionality and richness of many countries.
Topic	China – the middle state.
Materials	Materials about China, presentation, maps, books, videos about China on youtube channel. Instruction - a set of questions for each group; a set of information about China; A3 sheet of paper for each group; photos of chosen places, important from the point of view of history, geography, nature, e.g. tea, rice, ginger; e.g. Forbidden City, Great Wall of China, selected cities, Gobi Desert, Guilin National Park, Zhangjiajie National Park, etc.
Lesson	<p>The scenario can be used both: as a single lesson about China and as a block of lessons devoted to Asia or within a Travel Club.</p> <p>Part one: Getting to know China - getting information about the Middle State.</p> <ol style="list-style-type: none"> <li>1. Introduce the topic in a fun way. For example: loose associations shown with gestures or words connected with China.</li> <li>2. Preliminary diagnosis: what do the children already know about China, maybe someone has been to China or knows someone personally who lives in China, what stereotypes do the children have about China and the Chinese?</li> <li>3. The teacher divides the group into teams of four.</li> </ol> <p>Each group gets instructions, the task is to make a clear, aesthetically pleasing poster, enriched with photos, with the answers from the given set of questions. If time permits and you can devote the whole day to this lesson, students give answers to all the questions and enrich them with drawings or photographs. If there is less time, then students choose five questions to answer on their own.</p> <ol style="list-style-type: none"> <li>4. The teacher hangs information about China and props (e.g. porcelain bowl, compass, noodles, ...) in the classroom and corridor. Pupils find places where there is a prop and information answering the questions they are interested in.</li> <li>5. The children exchange their knowledge, present their posters and discuss the different elements.</li> </ol> <p>Part two: working on the basis of the acquired information.</p> <ol style="list-style-type: none"> <li>6. On the basis of the acquired knowledge, we point out how life in the countryside and in the city is different. Using the <u>conflict resolution cloud</u> we</li> </ol>



look for an answer to the dilemma whether to live in the countryside or move to the city.

7. Summarizing the message using the TOC tool logical branch, proposed initial sentence: If I learned new information about China, then....

8. Using the ambitious target tree, plan a trip to China.

Objective:

I will visit China and learn about selected places in China. Examples of difficulties to overcome: getting funds, buying a ticket, identifying which part of China I want to go to, how I will overcome language difficulties, etc.

This part can be extended with the reading of travelers' stories.

9. Extended task: On the basis of this lesson I'm going to make a multimedia presentation or a poster about a country in Asia.

Ambitious goal:

I will make a presentation containing information about a selected Asian country e.g. Laos, Cambodia, Vietnam, Japan, Armenia, Iraq or another Asian country of my choice.

Refers to 7. The logical branch. Some phrases to inspire students with:

*If I learned new information about China, then... I want to learn more about other countries, I want to know more about the Great Wall of China, I want to meet a Chinese person, I want to visit a nearby Chinese restaurant and taste Chinese specialities, I want to learn how to eat with chopsticks, I want to find out what ginger tastes like and whether tea is only from China, I want to get interested in Chinese writing and culture.*

Some basic information about China for younger children to use:

FLAG: describe how it looks, explain the meaning of the elements.

The capital of China is Beijing.

China is home to nearly 1.5 billion people.

CURRENCY

Chinese money is the yuan.

TRADITIONS/ CUSTOMS:

Meals are eaten at the table, with chopsticks, and no knife or fork is used. A cleaver is used to prepare the meal and then no more food is cut at the table.

For breakfast in China, one likes to eat soup.

The Chinese do not use the alphabet but characters.

The Chinese greet each other with a bow.

Chinese people like to give each other gifts and favors.

When hungry people are waiting for a seat at a restaurant, they nibble on a sunflower.

INVENTIONS:

paper, clock, gunpowder, compass, noodles, ice cream, kites, fireworks, and more;



#### CHINA FACTORY:

pencil, pen, eraser, shirt, shoes, jacket, tablet, toy, phone - many items made in China. The label on the tag says MADE IN CHINA.

#### POPULATION

About one in five people live in China. The Chinese are the most populous nation in the world.

#### BIG CHINESE CITIES

- 1) Beijing - the capital, in Beijing lies the Forbidden City.
  - 2) Guangzhou - a large city in the Pearl River delta, a port city.
  - 3) Hong Kong - one of the most populated cities in the world. Formerly it belonged to Great Britain.
- Shanghai - the largest city in China.

#### HOLIDAYS

Hainan Island - a vacation destination for many Chinese, a tropical island.  
Sunshine, palm trees, azure water, beautiful beaches.

China is famous for its millions of cyclists.

Crops, e.g.

China grows rice, ginger, peanuts, and tea.

Bamboo and khaki grow in China.



# 11. Pandemic COVID19

Subject	Social classes
Students' age	8-10 year olds
Aim	Tension-lowering activities, discussing what happens to us in a difficult situation, like a pandemic.
Topic	What aspects of our lives and what aspects of our behavior have been changed by Pandemic Covid 19.
Materials	Blank sheets of paper or cards with a graphic diagram of a logic branch, pencils, pens, a comfortable place to write.



Lesson

1. A short introduction by the teacher, in which he chimes in, shows his curiosity about how each child reacts to covid-19 pandemic and connected with it changes.
2. The teacher asks what has happened in students' lives. T. asks such questions like: if there is something different for you since there is covid, what is it? He asks everyone to think about it for a while in silence and then write the answers on slips of paper.
3. The teacher hands out blank pieces of paper or, if a student prefers, a piece of paper with a logic branch template; T. explains that one cause can cause more effects than one, and that students can add frames to a simple logic branch diagram.
4. Students share what they have written and find out how their classmates are experiencing the pandemic. They learn from each other how their lives have changed.
5. If a teacher discovers disturbing information, he or she can bring it up at a tutoring meeting with parents or at an individual meeting with the student.

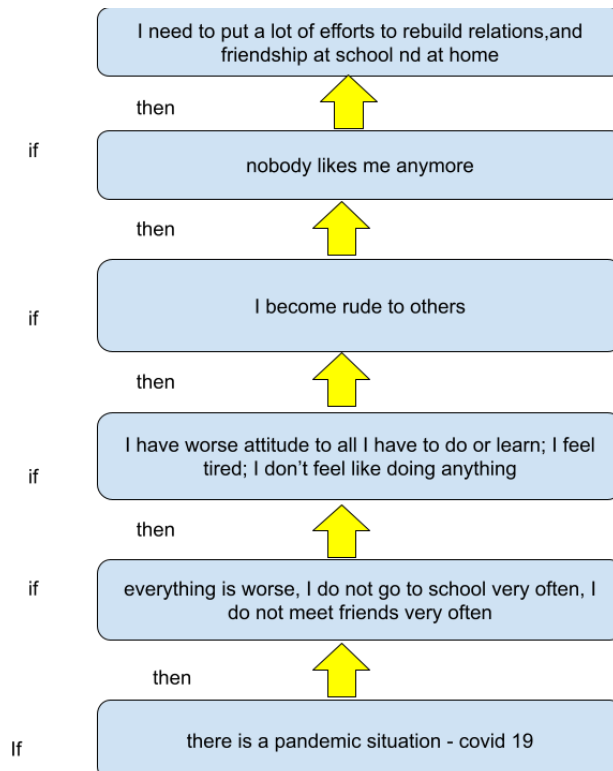
The logic brunch may begin with a sentence:

IF there is a pandemic COVID 19, THEN →

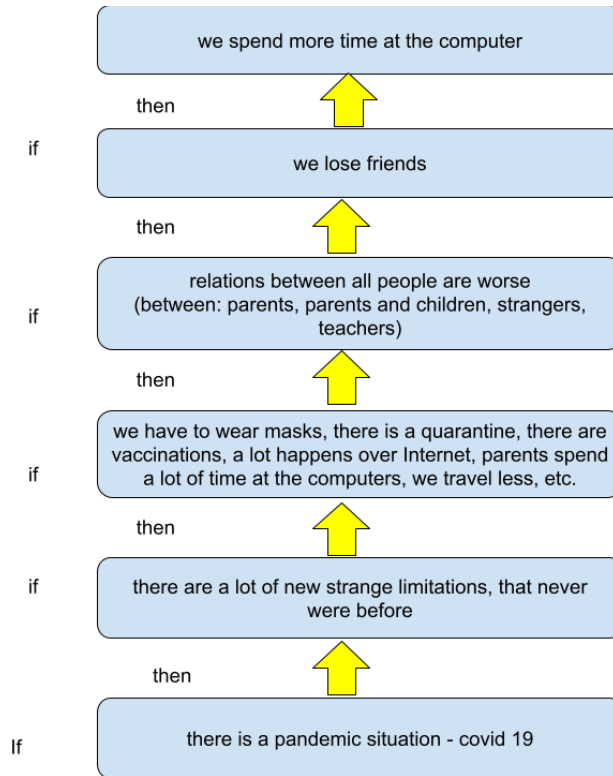
You can find sample logic brunch done by Polish, 10 years old students.

After talking with students and analyzing the logical branches, you can plan a series of activities on the subject of health anxiety, hygiene of time spent in front of computers and electronic devices, talking about relationships in the family, tensions that arise between people, stress and work under pressure, hygiene, the meaning of touch and intimacy as human needs, culture, etc.

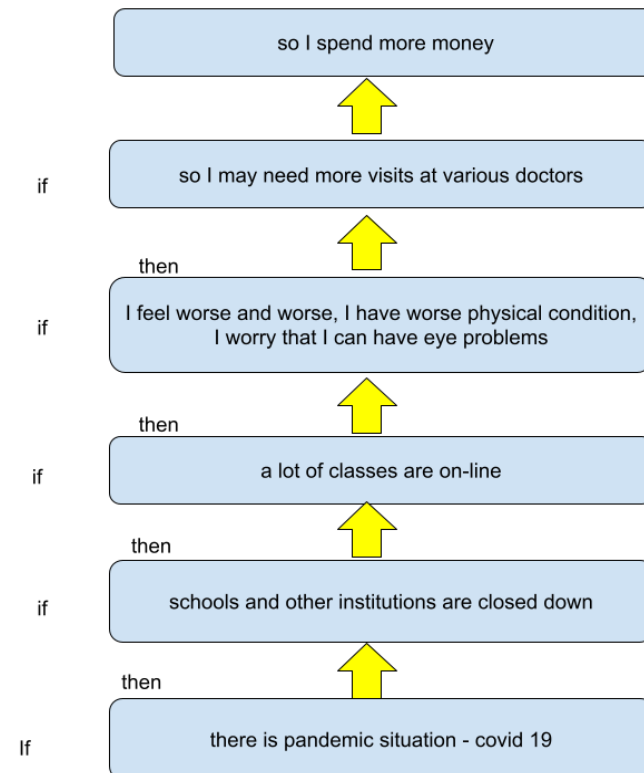
Example 1.





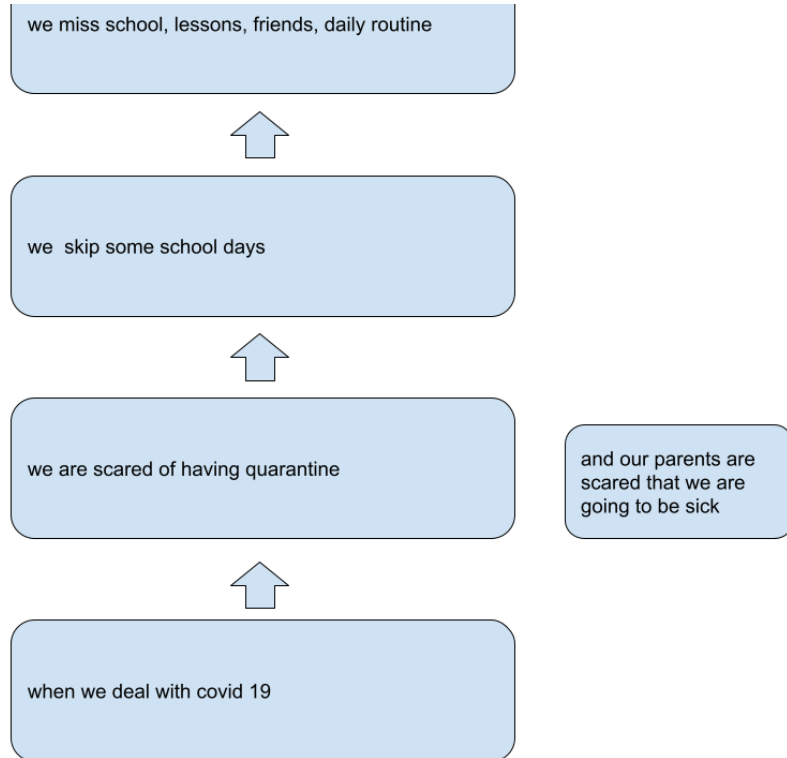


Example 2.

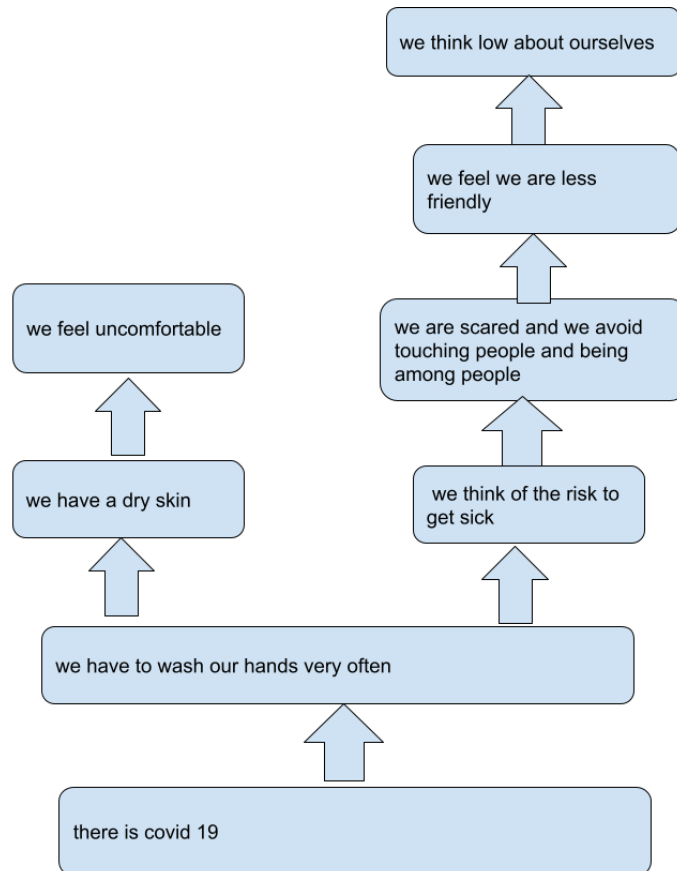




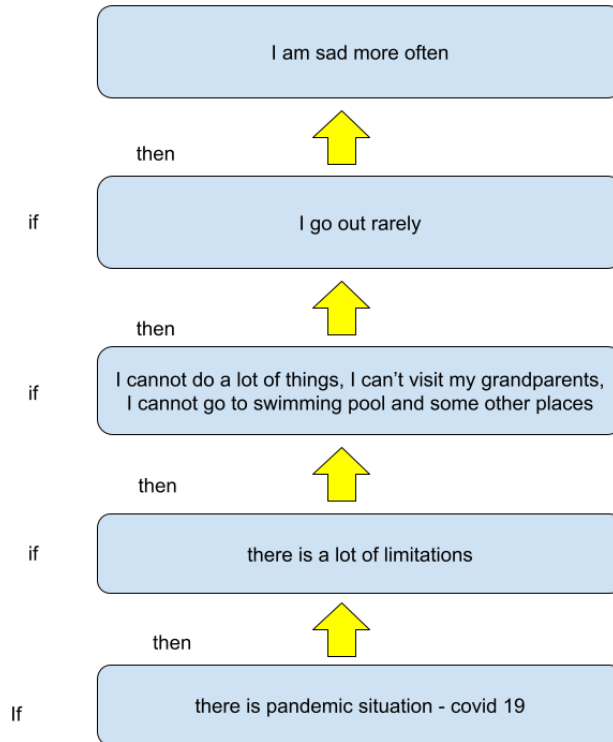
Example 3.



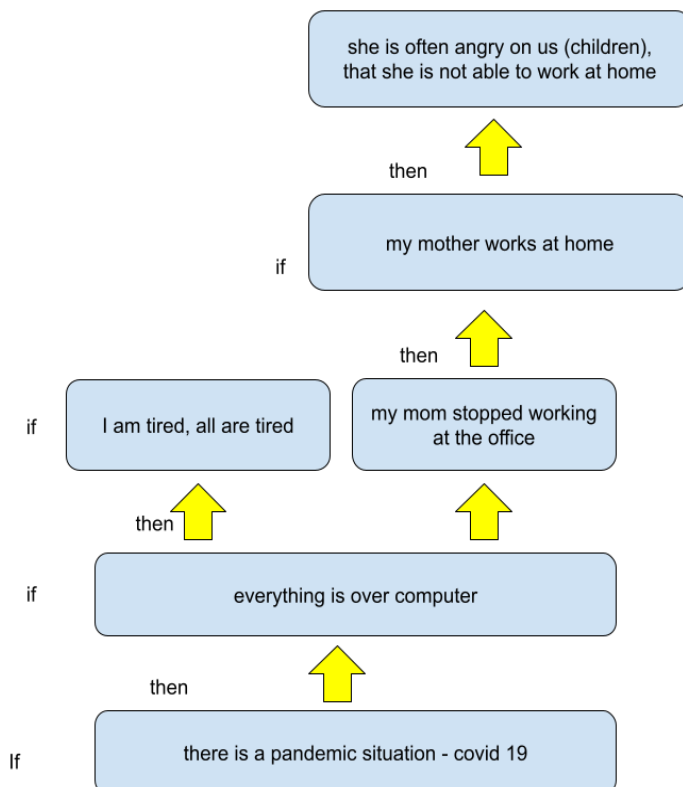
Example 4:



Example 5:




Example 6:





## 12. Art and craft

Subject	Group integration, arts and crafts, day care activities.
Students' age	8-10 year-olds
Aim	Artistic reflection of a given environmental ecosystem, 3D work, group cooperation, precision work.
Topic	Selected living environment - artwork, work in groups.
Materials	For each group of 4-5 people: a sheet of a3 paper, several sheets of a4 paper, glue, markers, markers, pastels;
Lesson	<ol style="list-style-type: none"> <li>1. Divide into groups of 4-5 people.</li> <li>2. Take a large blue sheet of paper.</li> <li>3. From the white paper you create life on the ocean, for example, islands with cities, parks and everything we can find in the city bordering the water, what your imagination tells you: beaches, and on them umbrellas; you reflect what life is like, there can be people, cars, water sports, work, leisure, communication, institutions; volcanic islands; nature; on the water aircraft carriers platforms, ships;</li> </ol> <p>Sample excerpt from the work of grade 4 students, NSP Lokomotywa, February 2022.</p>  <p>All groups can form an ocean, but you can also propose other environmental ecosystems, such as deserts, forests, cities, meadows, etc. An alternative can be to create an ecosystem invented or inspired by games, movies, etc.... Make sure that there are as many details as possible specific to the landscape.</p> <p>Work with an Ambitious Target Tree:</p> <ul style="list-style-type: none"> <li>• Determine as a group what the goal of your work is, what ecosystem you choose;</li> <li>• How you will divide the tasks in order to succeed;</li> </ul>



- List any obstacles that may arise;
- Write out intermediate goals;
- Write down a plan in bullet points of how you will work. unnumbered points are part of the written contract

WHEN discussing the quality of a group's work, you can analyze how the behavior of individual students affects the work of the class. A great tool for this analysis is the Logic Branch.

Example sentences starting Logic Branches:

If I don't engage in the work and I walk around the classroom THEN ....

If I don't bring glue and stationery to classes that require it THEN ...

If I want only my ideas to be implemented THEN...

#### STAGE 1.

Example Ambitny Target Tree and obstacles

Ambitious goal: Working together we will create a spatial artwork.		
obstacles	intermediate objectives IO	plan
we don't have any art materials		
we do not know how to join into groups		
we do not have any idea, what to do		
we may not be motivated enough		
some children may make fun of the class and each other will not work, will walk in the classroom instead of working		
some will not want to give up their idea and follow the idea of the rest of the group		
some will be offended		
some can push their ideas and rule over others		
some will not want to cooperate and get involved		
some students may not like to share their school materials, school articles, like glue sticks, scissors, etc.		



STAGE 2.

Example of Ambitious Goal, Obstacles and IO Intermediate objectives

Ambitious goal: Working together we will create a spatial artwork.		
obstacles	intermediate objectives	plan
we don't have any art materials	we have prepared workstations	
we do not know how to join into groups	we will get into equal groups, taking care of the place for everyone	
we do not have any idea, what to do	we will look for inspiring materials	
we may not be motivated enough	we will try to be patient and supportive	
some children may make fun of the class and each other will not work, will walk in the classroom instead of working	we will not be discouraged by the attitude of others, we will try to focus on our work	
some will not want to give up their idea and follow the idea of the rest of the group	we will establish common parts of the work and parts where everyone can implement their ideas	
some will be offended	we know that different emotions can arise	
some can push their ideas and rule over others	we respect each other and each other's ideas	
some will not want to cooperate and get involved	we will try to share tasks	
some students may not like to share their school materials, school articles, like glue sticks, scissors, etc.	everyone will have access to glue and other necessary paper materials	



**STAGE 3.**

Example of Ambitious Goal, Obstacles, IO Intermediate objectives and working plan.

We choose which actions from the work plan we will do first. We set the order

Ambitious goal: Working together we will create a spatial artwork.

<b>obstacles</b>	<b>intermediate objectives</b>	<b>plan</b>
we don't have any art materials	we have prepared workstations	2. we will bring our pencil cases, check if they are properly equipped with glue and scissors, use class paper
we do not know how to join into groups	we will get into equal groups, taking care of the place for everyone	3. we will match into groups finding a way how to match, we will pay attention to accept less popular children into the group, we will make sure there is a place to everyone
we do not have any idea, what to do	we will look for inspiring materials	1. we will watch albums, websites, books
we may not be motivated enough	we will try to be patient and supportive	4. we will try to work in a good atmosphere, encourage group members to work together, take responsibility for each other
some children may make fun of the class and each other will not work, will walk in the classroom instead of working	we will not be discouraged by the attitude of others, we will try to focus on our work	5. we will set breaks to rest and meal breaks, we will work in 30 minutes blocks, the second break will be longer and it will last 20 minutes; we will ask the teacher to help with discipline
some will not want to give up their idea and follow the idea of the rest of the group	we will establish common parts of the work and parts where everyone can implement their ideas	6. we will write a contract that everyone agrees to; we will pick an idea that the majority agrees to, we'll try to



		get everyone to implement the passage the way they want to
some will be offended	we know that different emotions can arise	we will try to give the right to experience good and difficult emotions, such as joy, satisfaction as well as frustration, anger. we do not agree on action that can be destructive to us and our work
some can push their ideas and rule over others	we respect each other and each other's ideas	determine that we agree to the idea of a person whose idea has not yet been implemented, in clockwise order
some will not want to cooperate and get involved	we will try to share tasks	students will declare what they want to be responsible for
some students may not like to share their school materials, school articles, like glue sticks, scissors, etc.	everyone will have access to glue and other necessary paper material	we use our own tools, and if we want to use someone else's we ask permission first





# 13. Tree frog

Subject	Science/ English as a second language
Students' age	7-10 years old Early education students
Aim	Fostering cognitive curiosity, knowledge of the world, learning about animal species.
Topic	<i>We learn about the world's animals and their adaptations. Agalychnis callidryas or red-eyed tree frog.</i>
Materials	basic information on tree frog from National Geographic Kids <a href="https://kids.nationalgeographic.com/animals/amphibians/facts/red-eyed-tree-frog">https://kids.nationalgeographic.com/animals/amphibians/facts/red-eyed-tree-frog</a> or any other sources, like: <a href="https://www.greelane.com/pl/nauka-tech-math/fauna--flora/red-eyed-tree-frog-facts-4580231/">https://www.greelane.com/pl/nauka-tech-math/fauna--flora/red-eyed-tree-frog-facts-4580231/</a> or any science books and articles.
Lesson	<ol style="list-style-type: none"> <li>Getting familiar with information about the red-eyed tree frog on the basis of the text and on the basis of a short film, e.g. National Geographic.</li> <li>Working with a map, identifying the location of the red-eyed tree frog - Central America.</li> <li>Arranging questions to the text about interesting facts about the frog. Students independently or in pairs arrange 2-3 questions about interesting facts.</li> <li>Arranging logical branches based on the questions arranged by the students.</li> <li>Summary of the lesson. In a circle, each student, in turn, talks about one piece of information that is new or important to him or that inspires him to further research.</li> </ol> <p>Logical branch - example 1. Tree frog development site.</p> <div style="border: 1px solid black; background-color: #e0f2e0; padding: 5px; margin-bottom: 10px;"> <p>It is after a few months that colorful frogs come out of the water and live for about 5 years.</p> </div> <p style="text-align: center;">then ↑</p> <p>if</p> <div style="border: 1px solid black; background-color: #e0f2e0; padding: 5px; margin-bottom: 10px;"> <p>During metamorphosis, they transform from brown and yellow frogs into red, blue, yellow and green colored frogs with red eyes.</p> </div> <p style="text-align: center;">then ↑</p> <p>if</p> <div style="border: 1px solid black; background-color: #e0f2e0; padding: 5px; margin-bottom: 10px;"> <p>Tadpoles are in the right environment for them. They can develop there and undergo metamorphosis into a frog.</p> </div> <p style="text-align: center;">then ↑</p> <p>if</p> <div style="border: 1px solid black; background-color: #e0f2e0; padding: 5px;"> <p>When tadpoles hatch from the eggs, they fall directly into the water.</p> </div> <p style="text-align: center;">then ↑</p>



if

It finds a leaf directly above the water, where it lays its eggs.

then ↑

if

During the mating season, the tree frog wants to lay its eggs is to look for a suitable place.

Logical branch - example 2. *What is the significance of vivid colors for the tree frog.*

Can survive even as long as five years in the jungle

then ↑

if

the frog escapes with his life through defense mechanisms

then ↑

if

she can escape from the claws of predator

then ↑

if

the predator can hesitate it to eat the frog

then ↑

if

a predator may be convinced that it is poisonous

then ↑

if

the tree frog has vibrant colors

If



# 14. Dokta Wanda Błęńska

## LESSON PLAN

Subject	Language and Social Education
Age	7-9 year olds
Aim	Getting know Wanda Błęńska as a great scientist, missionary, doctor, a person who fulfills her dreams and helps people in need
Theme	Wanda Błęńska - Polish scientist and doctor in Africa
Materials	a book, article, story, short movie about Wanda Błęńska
Lesson	<ol style="list-style-type: none"> <li>1. Discussing the story about Wanda Błęńska with some of artistic engagement of students</li> <li>2. Introducing basic information about Africa - as a continent and Uganda as a country. Places where Wanda was living and working.</li> <li>3. Recreating a selected story from the reading using a logic branch.</li> <li>4. The life of Wanda Błęńska, Mother of Lepers consisted of many choices. We write out sample dilemmas together with the children. We write them out in the form of a conflict cloud.</li> <li>5. CONFLICT: to touch/not to touch people with leprosy - we look for needs and a common goal, then we look for solutions.</li> <li>6. CONFLICT: treat people in Poland/treat people in Uganda.</li> </ol> <p>Logical branches can be about how to achieve your dreams, such as:            If Wanda wanted to become a doctor → TO            If Wanda wanted to help leprosy patients → TO            If someone comes to Wanda's house → TO</p> <p>Branches can illustrate individual stories of events taking place in Buluba, e.g. (Buluba March 14, 1979, p. 44 in a book "Docta").</p> <p><b>Example logical branch 1.</b></p> <div style="border: 1px solid black; background-color: #d9ead3; padding: 5px; margin-bottom: 10px;"> <p>We are happy and want to remember this joyful moment and not think how terrible it was when Lutalo disappeared</p> </div> <p style="text-align: center;">THEN↑</p> <div style="border: 1px solid black; background-color: #d9ead3; padding: 5px; margin-bottom: 10px; margin-left: 40px;"> <p>with daddy's help Lutalo came out of the huge pit on the ladder</p> </div> <p style="text-align: center;">THEN ↑</p> <div style="border: 1px solid black; background-color: #d9ead3; padding: 5px; margin-bottom: 10px; margin-left: 40px;"> <p>we got a ladder to get him out</p> </div> <p style="text-align: center;">THEN↑</p>

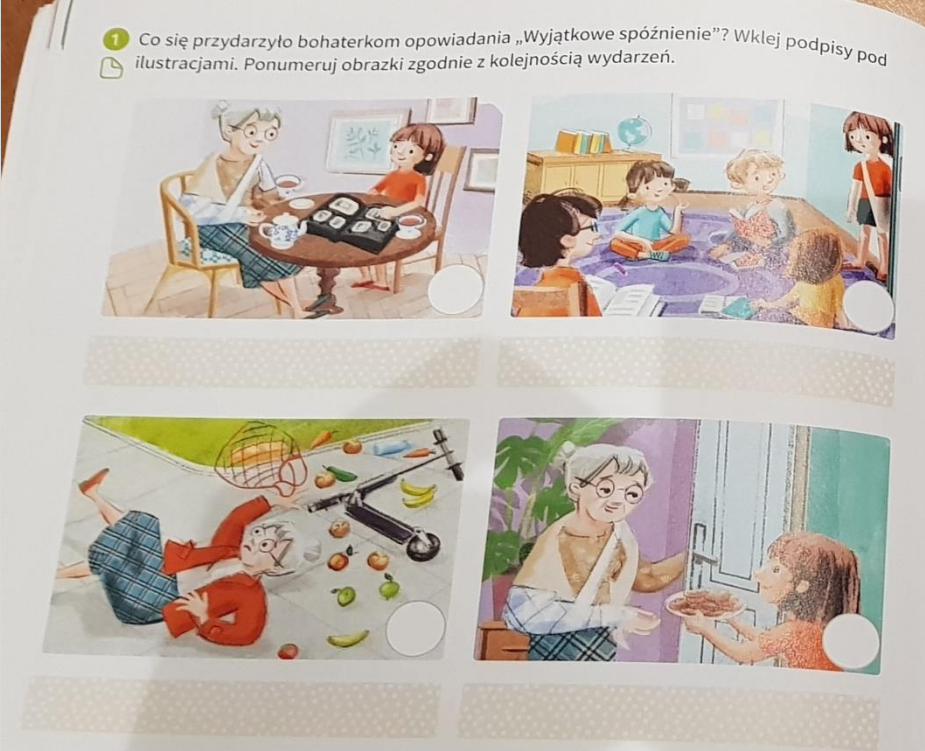


	I saw Lutalo fall into a huge pit
	THEN ↑
	If I heard his cry and ran with all my might in the direction from which Lutalo's voice came
	THEN ↑
	If together with daddy we looked everywhere for him, riding bikes, we looked into all nooks and crannies nearby our house
	THEN ↑
If L strayed away from home, nobody could find him	
THEN ↑	
If Lutalo did not listen to mom	
THEN ↑	
If Mom asked that Lutalo, my little brother, not to stray away from home	
If	
Each child can choose an event to present to others using a logic branch.	



# 15. Early Education picture story

## LESSON PLAN

Subject	Early education
Age	7-9 year olds
Aim	<p>Language education/ literacy skills: forming and improving the ability to tell a story based on an illustration, using a logical branch.</p> <p>Social education: pro-social attitudes.</p>
Topic	To be for others
Materials	<p>Manual 2 SP, <i>Wielka Przygoda</i>, Publisher, Nowa Era, 2021, part 2, p.30.</p> <p>Picture story based on this idea.</p>  <p>1 Co się przydarzyło bohaterkom opowiadania „Wyjątkowe spóźnienie”? Wklej podpisy pod ilustracjami. Ponumeruj obrazki zgodnie z kolejnością wydarzeń.</p> <p>● Zapisz wydarzenia we właściwej kolejności.</p> <p><sup>1</sup> The picture story comes from the manual to the second class primary school, <i>Wielka przygoda</i>, publisher: Nowa Era, 2021, part 2, p.30. Subject “<i>Wyjątkowe spóźnienie</i>” - <i>Exceptionally delay</i></p>



Lesson

1. Talking with students about the illustration, naming the characters and rehearsing the events.
2. Determining the order of events.
3. Writing down the sequence of events in the form of a logical branch.
4. Storytelling on the basis of an individually created logical branch.
5. Checking the logical sequence in the constructed story.

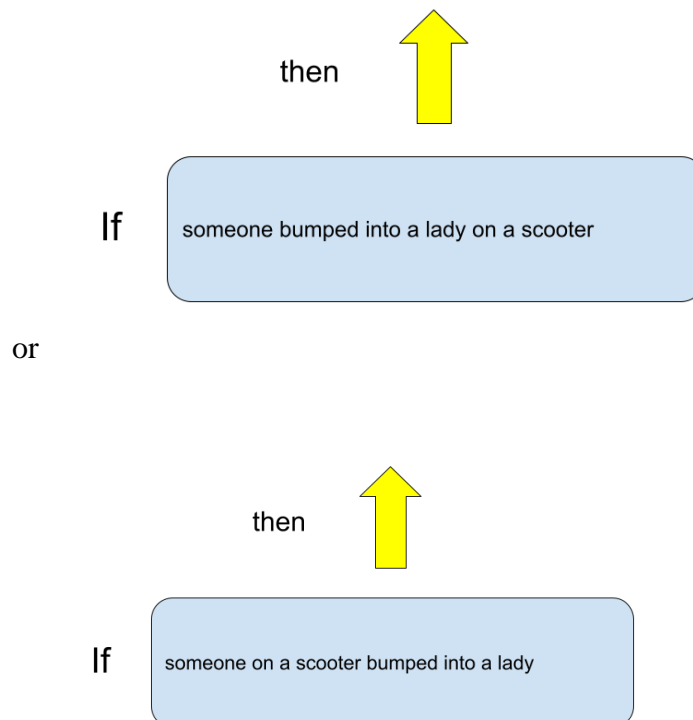
Commentary and examples:

*From the stickers attached in the textbook, the captions to the story, we know that Mrs. Susanna, who suffered an accident, is Ania's neighbor. We also know about Ania that she is a helpful girl who showed cordiality and interest in her neighbor. She spent time with her after the accident, which is why she was late for school.*

*The story begins with an accident, and we don't know what exactly happened, because in the illustration that begins the story we see Ms. Susanna fall, scattered shopping and a scooter.*

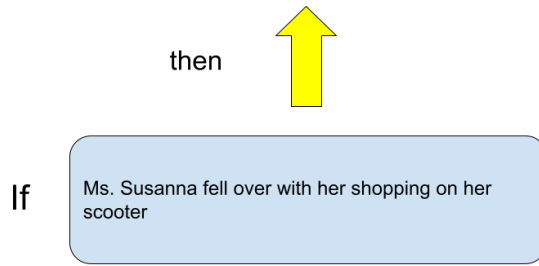
*Children liked the arbitrariness of the first illustration, so the sentence starting at the logic branch can look different. Here are some children's suggestions:*

**Suggestion 1:**

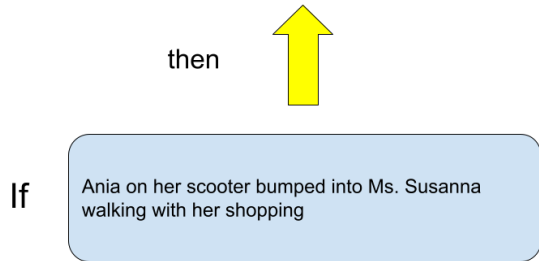




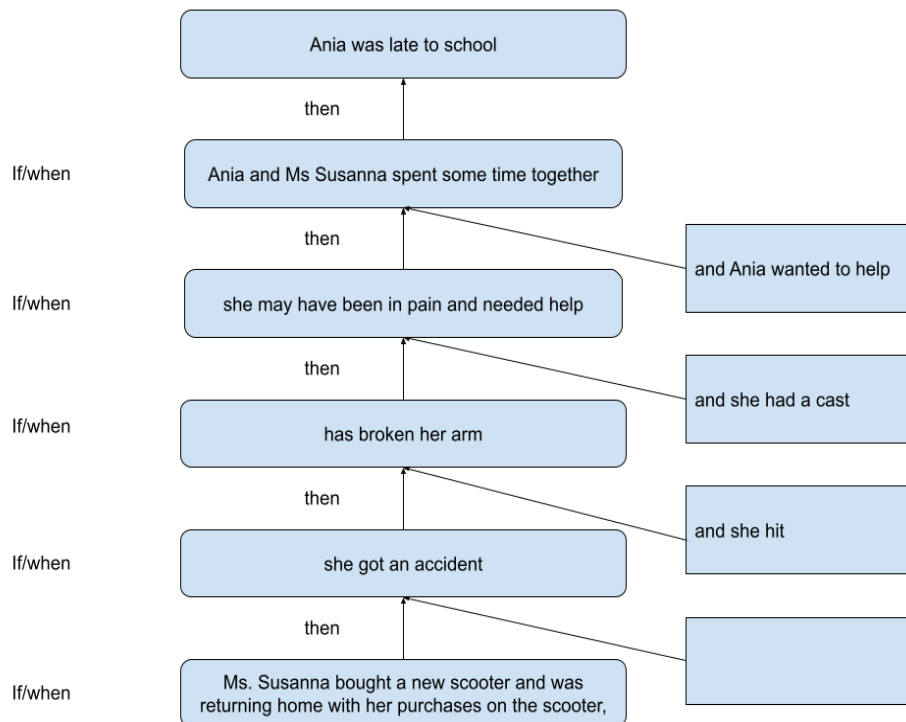
**Suggestion 2.**



**Suggestion 3.**



**Example logic branch:**





# 16. Universe

Subject	Science, astronomy																							
Student's age	7-10 year olds Early education																							
Aim	Fostering cognitive curiosity, knowledge of the world, Earth's place in the solar system.																							
Topic	<b>Universe</b>																							
Materials	Information from books, articles and textbooks about the Solar System. Popular science films on the development of the universe, the Solar System.																							
Lesson plan	<p>The aim of the lesson in students' language: I understand that all the celestial bodies in the Solar System are <u>inter</u>dependent. I understand that all the celestial bodies in the Solar System are interdependent.</p> <p>Success criteria, or how I will know in a measurable way that I have learned something new and that I have done my tasks well. At the end of the class, with each success criterion, I will mark the evaluation box with the appropriate color.</p> <ul style="list-style-type: none"> <li>• In green - those boxes where I have done everything, I can do and I am satisfied with my work.</li> <li>• In yellow - those boxes, where I still need the teacher's support, more time to complete the work or have some doubts.</li> <li>• In red - those fields that are definitely to work, the content of which I do not understand, the task I have not completed.</li> </ul> <p>Criteria for success:</p> <table border="1"> <thead> <tr> <th>Task</th> <th>mark to colour</th> </tr> </thead> <tbody> <tr> <td>I know the order of the planets in the Solar System.</td> <td></td> </tr> <tr> <td>I can explain what gravitation is.</td> <td></td> </tr> <tr> <td>I know what an Earth satellite is and what role it plays.</td> <td></td> </tr> <tr> <td>I understand the meaning of the Sun in the Solar System.</td> <td></td> </tr> <tr> <td>I know what celestial bodies are.</td> <td></td> </tr> <tr> <td>I can tell the difference between stars and moons.</td> <td></td> </tr> <tr> <td>I know what an Earth satellite is and what role it plays.</td> <td></td> </tr> <tr> <td>I can name rocky and gaseous planets.</td> <td></td> </tr> <tr> <td>I can choose a topic that interests me and present the most important information in the form of a logical branch.</td> <td></td> </tr> <tr> <td>I learn new terms related to space: asteroids, star systems, black holes, galaxies, celestial bodies, galaxy systems,...</td> <td></td> </tr> </tbody> </table>		Task	mark to colour	I know the order of the planets in the Solar System.		I can explain what gravitation is.		I know what an Earth satellite is and what role it plays.		I understand the meaning of the Sun in the Solar System.		I know what celestial bodies are.		I can tell the difference between stars and moons.		I know what an Earth satellite is and what role it plays.		I can name rocky and gaseous planets.		I can choose a topic that interests me and present the most important information in the form of a logical branch.		I learn new terms related to space: asteroids, star systems, black holes, galaxies, celestial bodies, galaxy systems,...	
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**Task 1.**

I choose a topic about the Solar System, the one that interests me. Based on the text and videos, I create a logic branch.  
(Example branch below).

**Task 2.**

Summary of activities.

Color the boxes in the table of success criteria. Use the color green, yellow or red evaluating your knowledge and the degree of completion of tasks. If necessary, ask colleagues or the teacher for help. Arrange to complete the tasks if you have not completed any.

**Task 3.**

Write in your notebook what was difficult for you during the class and which elements of the lesson gave you the most satisfaction and joy.

**Example logical branch 1.**

The moon orbiting the Earth is proof that there is an attraction between celestial bodies

THEN ↑

If

means that the Earth's gravity does not allow it to fall off and separate from the Earth

THEN ↑

If

means that it orbits the Earth

THEN ↑

If

we call it a satellite

TO ↑

If

Earth has a moon

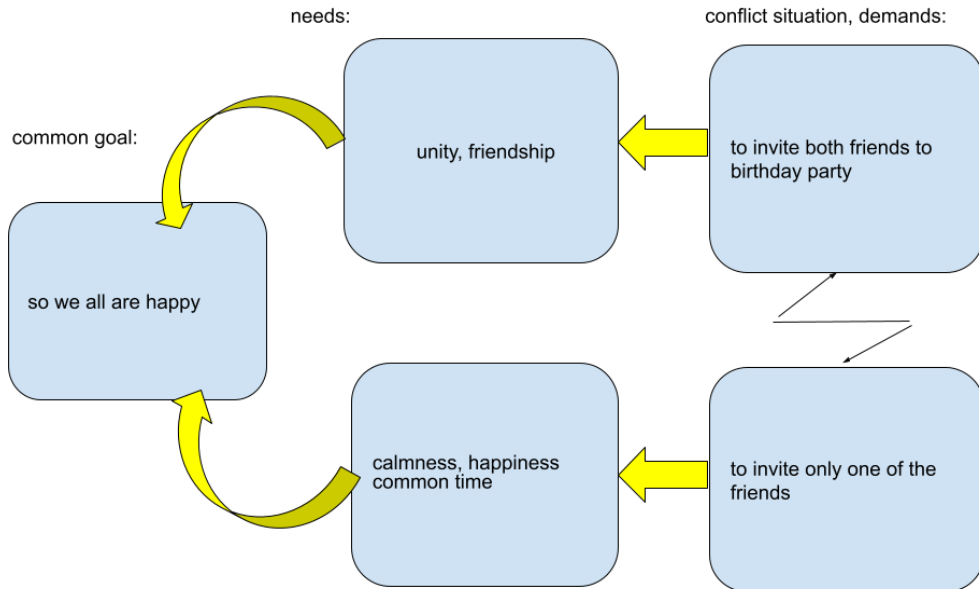
If



# 17. Dilemmas in Friendship

## LESSON PLAN

Subject	Social Education
Age	12+ year olds
Aim	Resolve conflicts, talk frankly about problems that arise. Talk about loyalty and devotion in friendship.
Topic	Dilemmas in Friendship
Materials	Sheet of gray paper, markers, pens, sheets of paper
Lesson	<p>Situation:</p> <p>A great intimacy developed between three students in one of the classes. Unexpectedly, something in the relationship changed. One friend began to push away the third person in the pack while expecting her friend to also abandon the acquaintance, and to be friends only with her. However, the second person does not want to choose between friends. She likes both parties and cares very much about this common friendship. I don't want to put anyone off.</p> <p>The third person doesn't understand what's going on, what's the point, that suddenly the girls don't want to hang out with him, joke around, talk. He senses the tension.</p> <p>The birthday of the person currently uniting the three friends is approaching. The birthday girl wants to invite both friends, she cares a lot about it, and at the same time feels a lot of discomfort and awkwardness in inviting a third person from the pack, because her friend does not want their mutual friend to attend the birthday party.</p> <p>We illustrate the dilemma using the TOC tool, the conflict cloud:</p> <p>1. Internal dilemma:</p> <ul style="list-style-type: none"> <li>• From one side: I would very much like to be friends with both parties. I want to invite both friends to my birthday.</li> <li>• On the other hand: It will be awkward, or my friend won't come at all, so I don't want to invite both friends.</li> </ul> <p>Other possible conflicts to illustrate with a cloud:</p> <ul style="list-style-type: none"> <li>• I want to explain <i>versus</i> I don't want to explain the cause of the conflict and the split in the friendship</li> <li>• I will invite to a birthday party <i>versus</i> I will not invite both friends to a birthday party</li> <li>• I want to make friends <i>versus</i> I do not want to make friends</li> </ul>



**Observations:**

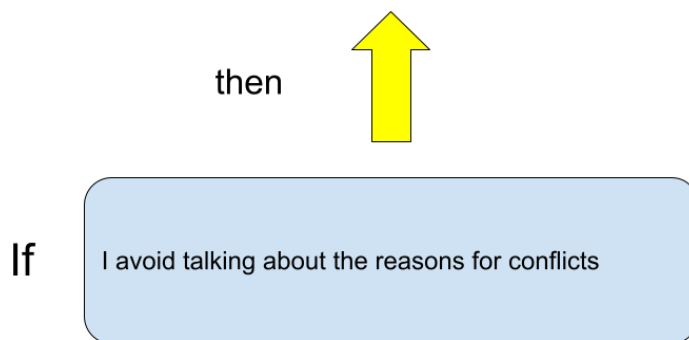
This is one of many school situations where we have conflicting children on two sides of a conflict. We conclude that simply allowing a conversation that reveals the needs of the students involved relieves them, lowers tensions and generates possible solutions to their problems.

The children had a chance to hear each other's emotions and needs. The cloud allowed us to accurately name and visualize the conflict.

It is worthwhile to anticipate more than one meeting without expecting immediate solutions, because the revealed problems and punctuated needs usually work strongly in them and eventually children find bridges of understanding in everyday school life. It should be taken into account that it takes time before a child is ready to accept a solution.

The role of the teacher is important here, who tries to remain neutral, paraphrases statements, accompanies rather than directs solutions, and does not judge.

The next stage of educational work is to create a branch of logic with the students, which will allow them to illustrate the consequences of their own behavior and choices. E.g.





# 18. Math text tasks

19. Subject	Mathematics
Age	8 year olds (class 1 and 2)
Topic	Text tasks, building a rule
Aim	<p>The goal of the lesson is that children understand how to deal with the text tasks, and they can set the rules and visualize them.</p> <p>Suitable also for children with learning difficulties.</p>
Materials	Text tasks
Lesson	<p>Teacher chooses 3 text tasks and solves them with children step by step. Then all the class together builds the logic branch that says how we deal with this kind of tasks.</p> <p>Example of the logical branch:</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">We double check, if we answered the question we were asked.</div> <p style="text-align: center;">then ↑</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">We write down the answer.</div> <p style="text-align: center;">then ↑</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">We do the calculations.</div> <p style="text-align: center;">then ↑</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">We write down all the data.</div> <p style="text-align: center;">then ↑</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">We look for needed data.</div> <p style="text-align: center;">then ↑</p> <div style="border: 1px solid black; padding: 5px;">We read the task carefully at least once and think about what we are asked for.</div>



**If**

Options / Suggestions:

1. Teachers can support some children by writing down the ideas and then making children put the frames in order.
2. Make the children read the branch aloud.
3. Teacher can write just one of the frames and the students do the rest on themselves.



# 19. Arctic fox

Subject	Science Education This lesson can also be used for teaching English as a second language
Students' age	6-9 years old
Aim	To awaken natural knowledge of the world. To learn about the species of the polar fox and its adaptation mechanisms for living in harsh conditions.
Topic	We learn about the animals of the world - the arctic fox.
Materials	<a href="https://kids.nationalgeographic.com/animals/mammals/facts/arctic-fox">https://kids.nationalgeographic.com/animals/mammals/facts/arctic-fox</a>
Lessoni	<p>1. To watch short movie about arctic fox  <a href="https://kids.nationalgeographic.com/animals/mammals/facts/arctic-fox">https://kids.nationalgeographic.com/animals/mammals/facts/arctic-fox</a>  <a href="https://www.youtube.com/watch?v=1Kb-vdaurao">https://www.youtube.com/watch?v=1Kb-vdaurao</a></p> <p>2. Discuss how the arctic fox has adapted to the harsh conditions in which it lives.          Creating a logical branch:          Objectives: perceiving logical relationships in nature; adaptation of living organisms to the conditions in which they live; memorizing facts about the polar fox by visualizing and briefly naming information;          Summarizing the lesson's messages by listing new acquired information about the polar fox.</p> <p>[NOTE : reminder, the logical branch is created and read from the bottom up, as indicated by the arrows]</p> <p><b>Logic branch example 1.</b>  <i>Adaptation of the polar fox for life in cold temperatures - fur.</i></p> <div style="text-align: center;"> <p style="border: 1px solid black; background-color: #f8d7da; padding: 5px; width: fit-content; margin: 0 auto;">He can survive the Arctic winter</p> <p style="margin: 10px 0;">then ↑</p> <p>If</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; background-color: #f8d7da; padding: 5px; width: 40%;">it is able to conserve energy</div> <div style="border: 1px solid black; background-color: #f8d7da; width: 40%; height: 20px; margin-left: 5px;"></div> </div> <p style="margin: 10px 0;">then ↑</p> <p>If</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; background-color: #f8d7da; padding: 5px; width: 60%;">he is warm in spite of the very hard frost</div> </div> <p style="margin: 10px 0;">then ↑</p> <p>If</p> </div>



his fur is very thick and his tail has a covering property like a quilt and he has a special coat on his feet

then ↑

If

it needs to develop defense mechanisms in body structure

then ↑

If

the arctic fox is expected to survive the Arctic winter in temperatures below -17C

If

**Logic branch example 2.**

*Adaptation of the arctic fox for life in cold temperatures - j diet.*

He can survive the Arctic winter

then ↑

If

he can survive when he finds it and eat it	it is also able to "hibernate" to survive the most difficult 2 weeks when he does not find them
--	---

then ↑

then ↑

If

it eats rottens	it eats insects, blueberries, carrion in the form of polar bear leftovers and its own droppings
-----------------	---

then ↑

then ↑

If

he is able to conserve energy, he has adapted by eating available food

then ↑

If



it must eat a lot to gain energy

then ↑

If

the arctic fox is expected to survive the Arctic winter in temperatures below -17C

If

**Logic branch example 3.**

*Adaptation of the arctic fox for life in cold temperatures - camouflage to avoid predators.*

he can survive the Arctic winter

then ↑

If

the bigger animals that hunt on him will not find him

then ↑

If

is invisible to bears, eagles and other animals that might hunt it

then ↑

If

is as white as its surrounding

then ↑

If

it must be invisible to other predators

then ↑

If

the arctic fox is expected to survive the Arctic winter in temperatures below -17C

If





**Logic branch example 4**

*Adaptation of the arctic fox for life in cold temperatures - camouflage to get food.*

he can catch a rodent, eat it up and survive the Arctic winter

then ↑

If

rodents can't hear him [because the fox: has a special structure of the steppe, muffling his steps].	rodents can't see him
--	-----------------------

then ↑

then ↑

If

it must be as white as its surrounding and to creep very quietly

then ↑

If

it must not be visible or audible to the rodents that it hunts

then ↑

If

it must get food

then ↑

If

the arctic fox is expected to survive the Arctic winter in temperatures below -17C

If



## 20. Africa Kazika

### LESSON PLAN

Subject	Early Education																					
Age	7-9 year olds																					
Aim	Getting know Polish traveler Kazimierz Nowak. To understand the concepts of continent and country on the example of Africa. To arouse interest in Africa, its diversity, culture, nature.																					
Topic	Polish Traveler - Kazimierz Nowak and his adventures																					
Materials	<ul style="list-style-type: none"> <li>• a book Ł. Wierzbicki, <i>Kazik in Africa</i></li> <li>• some materials about culture, places, people, nature in Africa,</li> <li>• maps of Africa</li> </ul>																					
Lesson	<p>1 .The NaCoBeZu card sets goals for the student at the beginning of class. The student knows what is expected of him. Preferably if the card is developed together with the students. At the end of the class it has a diagnostic function - the student evaluates himself and sees what he has achieved and what he still needs to work on.</p> <p><i>Kazik in Africa - evaluate yourself, draw in colors: green if you can give a full answer; orange if you know a lot but you would like to learn more or you feel you do not understand some aspects fully; red - if you have to study the subject matter.</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 85%;">I know who wrote the book <i>Kazik in Africa</i>.</td> <td style="width: 5%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td>I know who Kazimierz Nowak was and what he has done.</td> <td></td> <td></td> </tr> <tr> <td>I can tell the chosen story of Kazik.</td> <td></td> <td></td> </tr> <tr> <td>I know that Africa is a Continent, on which there is a lot of countries. I know the names of at least 4 African countries.</td> <td></td> <td></td> </tr> <tr> <td>I can show the Nile River on a map. I know that it is the longest river in Africa.</td> <td></td> <td></td> </tr> <tr> <td>I can name 10 animals living in Africa.</td> <td></td> <td></td> </tr> <tr> <td>I know that the largest desert in Africa is ..... I know that there are other deserts, such as Namib, Denakil and many others).</td> <td></td> <td></td> </tr> </table>	I know who wrote the book <i>Kazik in Africa</i> .			I know who Kazimierz Nowak was and what he has done.			I can tell the chosen story of Kazik.			I know that Africa is a Continent, on which there is a lot of countries. I know the names of at least 4 African countries.			I can show the Nile River on a map. I know that it is the longest river in Africa.			I can name 10 animals living in Africa.			I know that the largest desert in Africa is ..... I know that there are other deserts, such as Namib, Denakil and many others).		
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I know that the equator cuts the globe into 2 hemispheres, the northern and southern. On the equator lies the Congo Basin - a humid equatorial forest, evergreen, without seasons.

WRITE DOWN HERE WHAT NEW AND WHAT IMPORTANT TO YOU HAVE YOU LEARNED ABOUT AFRICA:

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[There is a lot more to be added the list is just an inspiration - follow the interest of children you teach]

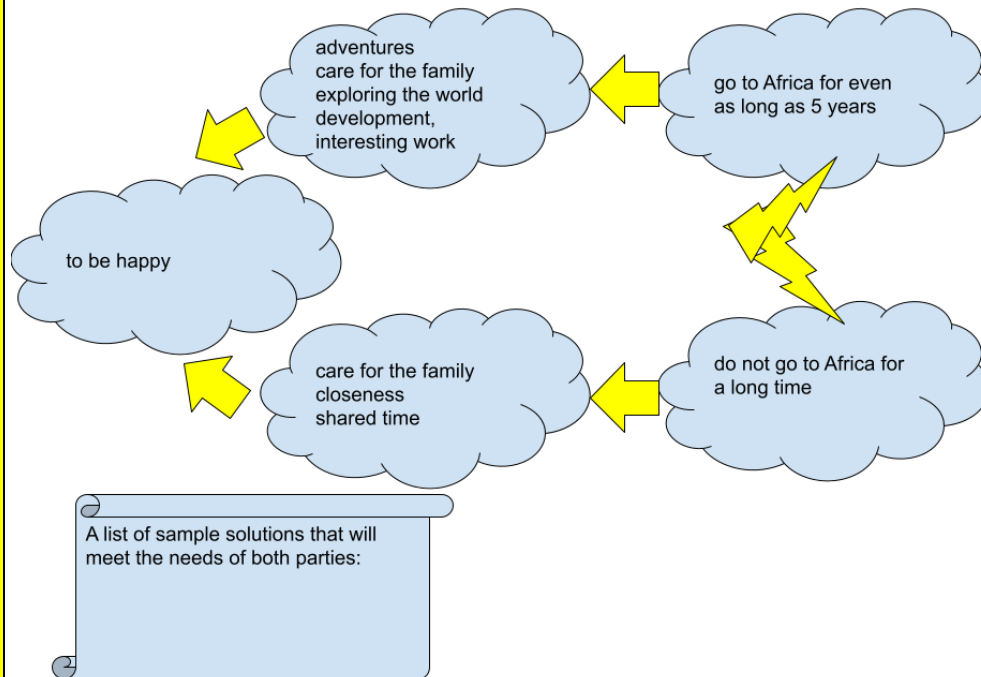
2. Work with the reading: Kazik's Africa, for example, using the lapbook method. Sample guidelines for the task, what should be included in the lapbook, ideally, if determined together with students.

1. Write down the title of the book and its author.
2. Write down who Kazimierz Nowak was and what he accomplished.
3. Describe chosen adventure of Kazik.
4. Illustrate Kazik's adventure, choose the one you like most, or the one that was most dangerous in your opinion.
5. Write down the names of 4 African countries, choose one and draw its flag.
6. Write down as many names of African animals as possible.
7. Write some message about Africa, new to you.
8. Draw symbols that you associate with Africa.
9. Write out the names of the longest river and the largest desert.
10. write and illustrate the information of your choice.

3. Kazimierz Nowak was a Polish traveler and went to Africa. He sent reports from there. Kazimierz's family was very poor. For Kazik, traveling in Africa was a form of earning money and supporting himself, his wife and their two children. Decisions to leave the country for several years to travel and leave the family at home to a wife with young children is not easy.

Conflict clouds from the perspective of Kazik, children, wife - can be done in groups, or each student doing their own if the children are experienced in the TOC working method.

From the right we write: demands, needs, and a common goal.



Cloud can also be used to show Kazik's much smaller dilemmas on the road:  
e.g. buy a gift for the children of the trip, not to buy (in a situation of poverty)

- sell dearly a camel for breeding/ give cheaply to good hands
- go through the desert/ choose another road
- help the little boy/ drive on
- look for gold/ don't look for gold

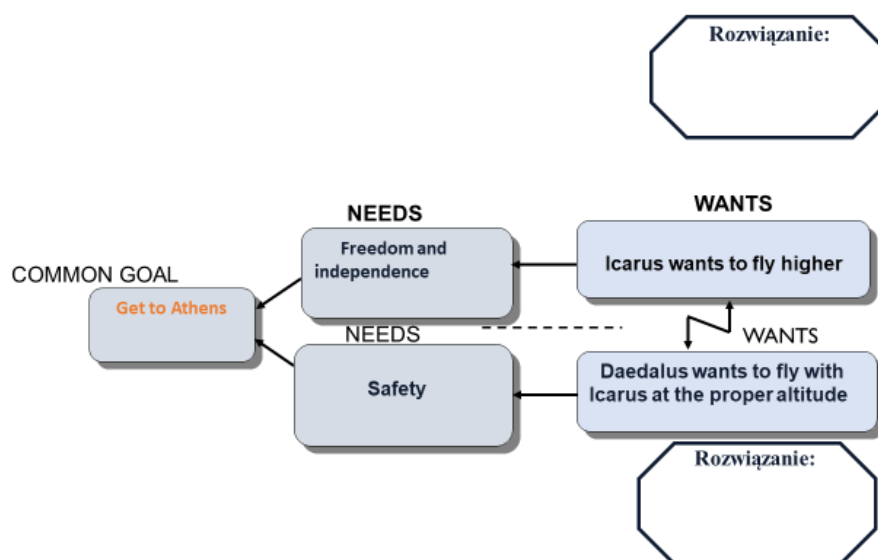
Virtually most of Kazik's adventures contain small dilemmas that can be dissected by seeing what needs are behind them and what consequences they bring to Kazik. Many of Kazik's adventures can be told with a logical branch.

# 21. Daedalus and Icarus

## LESSON PLAN

### TOPIC: DAEDALUS AND ICARUS

<b>Subject</b>	Early education, grade III
<b>Age</b>	9-10
<b>Topic</b>	Myth of Daedalus and Icarus.
<b>Objectives</b>	Student knows the myth of Deadalus and Icarus, student refers to action of other people, refers to norms and values, acquiring ability of solving conflicts.
<b>Materials</b>	Myth of Daedalus and Icarus
<b>Development</b>	<ol style="list-style-type: none"> <li>1. Teacher reads to children the myth of Daedalus and Icarus.</li> <li>2. Teacher asks students about conflict that appeared in the myth, asks children to name the conflict, whom it concerns, what are the wants of both sides.</li> <li>3. Students together fill in the cloud, they reflect on the needs of Daedalus and Icarus</li> <li>4. Brain storm – searching for solutions, that fulfil the needs of Daedalus and Icarus.</li> <li>5. Teacher asks students to reflect on the their own life, if they had similar situations in their life, or they heard stories with similar plot. Conversation about breaking certain rules, why situations like this happen and how to prevent them.</li> <li>6. Work in groups – construction task „Build the parachute” Materials: rubber bands, paper straws, paper clips, toothpicks, plastic bags, corks, plasticine, pieces of paper.</li> </ol>



## 22. Great Geographical Discoveries

### LESSON PLAN

Subject	Early education
Age	7-9 year olds
Aim	<p>To widen historical knowledge about the discovery of new lands of the XVth/XVIth centuries. To broaden knowledge about pirates, about great explorers, e.g. Christopher Columbus.</p> <p>To practice skills in the use of maps, explore knowledge about sailing.</p>
Topic	Great Geographical Discoveries
Materials	<ul style="list-style-type: none"> <li>• books and films about pirates,</li> <li>• books and films about the great discoveries of new lands,</li> <li>• picture books about XV century fashion,</li> <li>• pictures, books, movies about ships, navy, fleet from XV/XVI c.</li> </ul>



## Lesson

The activities can be extended to an entire project. This lesson plan is limited to showing the work of TOC tools in a project on the Great Geographical Discoveries.

### Teacher's introduction:

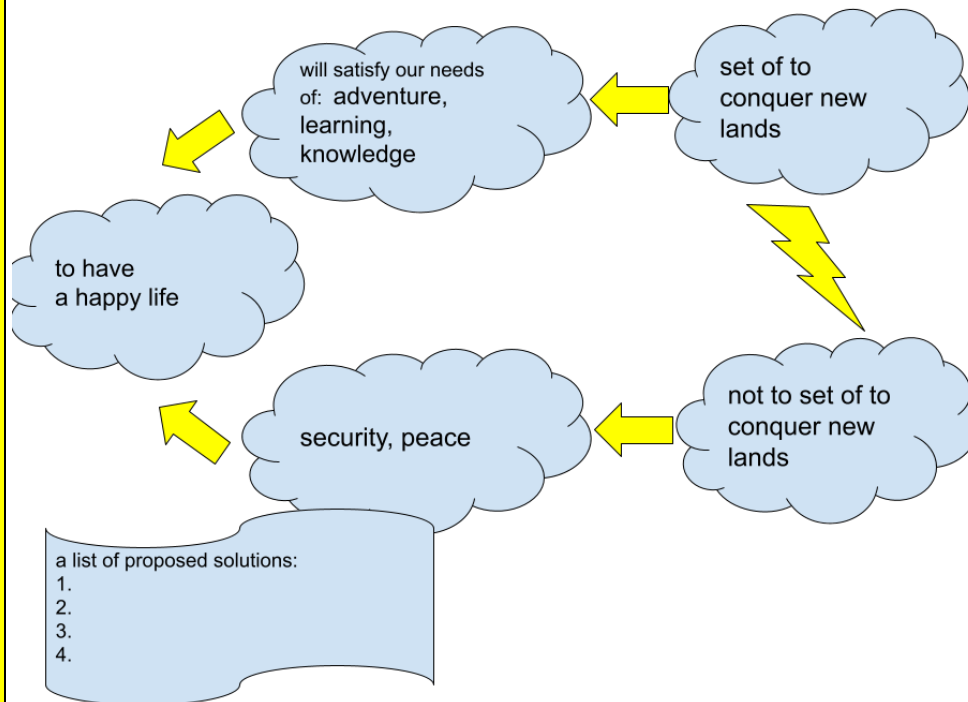
Explorers, we have been given an assignment by the King. He will grant us an ocean voyage. He will give us a chest of gold and 2 equipped sailing ships. We are getting ready with our whole group of 20 people (our class) for a great expedition. Our goal is to discover what the ocean hides. What questions do we need to ask ourselves that will allow us to prepare well for the expedition?

Students formulate a list of questions.

Sample questions from children:

- Will we reach a neighboring country after 1 day of sailing on the ocean?
- What will we eat?
- How many days will we swim?
- How will we transport drinking water and how much must we have?
- What will we eat?
- What is the toilet on the ship like? Where will we wash and take care of our needs?
- What will we take care of?
- How will we know how to read a map?
- Who will be the leader of our expedition?
- What do we need to learn before we leave?
- What groups do we need to divide into and what will our tasks be?
- Do we need to have a board book?
- What dangers do we need to protect ourselves from?
- Is it true that there are pirates at sea and ocean and what can they do to us? Can they rob us? Or even kill us?
- Can pirates attack us and will they take over our ship? ...
- What if we get sick?

We have studied many of the dangers and inconveniences that can befall us at sea. We need to consider whether we want to set sail. For this we will use the conflict cloud to see what demands and needs we have.



With the cloud, we can picture other internal and external conflicts that appear to us in this situation.

Using the Ambitious Target Tree, we can see what obstacles we have and how we want to overcome them, if we set out to do so.

- We clearly define our **AMBITIOUS TARGET**
- We name the obstacles that hinder us from achieving it
- We name the intermediate goals
- We name the actions and number the order in which we want to take them

Ambitious Target Tree\_ STEP 1.

Ambitious Target Tree: Set sail to discover new land

OBSTACLES	IO Intermediate objectives
we don't know how to sail	
we do not have maps	
we do not have motivated crew	
we cannot faith	
we do not have a cook	
we are afraid of pirates and water monsters	





**Ambitious Target Tree \_ STEP 2**

OBSTACLES	IO INTERMEDIATE OBJECTIVES	
we don't know how to sail	we get knowledge about sailing, we study	
we do not have maps	we get maps, we draw them, we search in libraries in the kingdom, we ask cartographers for help	
we do not have motivated crew	we invite all brave people to cooperate, we promise them awards	
we cannot faith	we will learn to faith, we will take care to get stronger	
we do not have a cook	we will find a cook, we will learn how to cook	
we are sacred of pirates and wild water monsters	we are not scared of pirates and monsters any more	

**Ambitious Target Tree \_ STEP 3**

OBSTACLES	IO	ACTIONS
we don't know how to sail	we get knowledge about sailing, we study	zaplanujemy serię spotkań z żeglarzem, odwiedzimy marinę, obejrzymy filmy szkoleniowe dotyczące życia na statku i
we do not have maps	we get maps, we draw them, we search in libraries in the kingdom, we ask cartographers for help	we draw maps, we search in libraries for maps, we arrange a meeting with a cartographer or someone who will tell us more about maps and how to read them; we learn to use a compass
we do not have motivated crew	we invite all the brave man, we promise them they will	Everyone involved in the project can deal with the subject matter and explore those areas of knowledge that are of interest to them. We share tasks.
we cannot faith	we learn how to faith, we practice judo and karate	we will ask the coach / gym teacher to organize additional sports activities for us, where we will practice physical fitness, learn about martial arts



we do not have a cook, we cannot cook	we will find a cook, we will learn how to cook	Together we will make some dishes, learn what food we can store in jars
we are afraid of pirates and water monsters	we are not afraid of pirates and water monsters, we know how to prepare to the meeting with the monsters and pirates	read about pirates, get support to be stronger than pirates, gather knowledge, skills and weapons and support in the form of other ships we write an application/letter to the King asking him to retrofit us

Using the logic branch we analyze the consequences of our decisions (example logic branch)

we all will die

THEN ↑

we won't have anything to drink and eat

if

THEN ↑

we will be robbed of water, food and money

if

THEN ↑

the pirates can attack us

if

THEN ↑

pirates exist

If

[We keep the children in the atmosphere of a XVth century expedition, we can take care of costumes and build a ship or decorate the interior of the classroom].

If the pirates are such a big threat, and we want to go on a voyage, explore lands and contribute to the glory of our King, we must convince the King to send a second ship with us, on which there will be a royal army. Some of the King's men will also sail on our ship to protect us and train us in the use of weapons and fighting.



Based on the activities from the Ambitious Target Tree, we divide the tasks and arrange the work plan for the whole week within all branches of education. The listed activities are only examples, the list can be expanded with the interests, ideas of children and availability of experts.



## 23. The Soldier Bear

### ACTIVITY PLAN

TOPIC: The Soldier Bear

Przedmiot	Early Education
Wiek uczniów	7- 9 year olds
Cel	Familiarizing children with the story of Wojtek the bear, who became a soldier in General Anders' Army during World War II
Temat	Niedźwiedź Wojtek, the bear who became a soldier
Potrzebne materiały	books, stories, short movies about Wojtek the Soldier Bear
Przebieg lekcji	<ol style="list-style-type: none"> <li>1. We read excerpts from the book Dziadek i Niedźwiadek by Ł. Wierzbicki together in class. 10-15 minutes a day. Depending on the children's age and reading sophistication, sometimes a passage is read aloud by the teacher, some passages are read silently by pupils for 15 minutes.</li> <li>2. Put together logic twigs for selected stories of soldiers and bears. Individually or in small groups, according to pupils' preferences and interests.</li> <li>3. Using a conflict cloud, we illustrate the complexity of the situation and the needs that may be behind given decisions or events.</li> <li>4. The reading work can be extended to include historical and geographical knowledge - the teddy bear was obtained from a Persian boy.</li> <li>5. Make a map with pupils of places in Poland or the world where there are monuments to Wojtek the bear.</li> <li>6. Make a virtual trip with pupils to Edinburgh and the zoo there, where Wojtek the soldier bear lived after the war.</li> </ol> <p>Example conflict clouds:</p> <ul style="list-style-type: none"> <li>• incorporate/not incorporate a bear into the army</li> <li>• buy/do not buy a bear from a Persian boy</li> <li>• leave the bear/ take it to Europe</li> <li>• engage Wojtek/do not engage Wojtek to carry ammunition</li> </ul> <p>Example logic twigs depicting stories and events in the life of Wojtek the Bear.</p> <p>Example of a logic branch (simplified for children) based on text from Wikipedia:</p>



One of Wojtek's more memorable exploits was a situation cited in the memoirs of many soldiers that occurred while the Corps was stationed in Iraq. At the time, Bear single-handedly caught an Arab spy who was doing reconnaissance before a planned attack by saboteurs who wanted to steal weapons. Very fond of bathing (water was hard to come by in Iraq), the bear saw the bathhouse door open and immediately entered it: as it turned out, he had cornered the penetrating spy inside the camp. The spy, terrified by the sight of the bear, started to shout and surrendered without resistance to the soldiers. As a reward, Wojtek got the bathhouse at his disposal for the whole evening<sup>[4][5]</sup>.

Wojtek was rewarded with a stay in the bath water for rescuing the soldiers

Then ↑

then the soldiers were safe

If

Then ↑

the spy's task was foiled [and no weapons were stolen from the soldiers]

If

Then ↑

it was the soldiers who discovered the presence of a spy in the camp because he betrayed himself by shouting

Then ↑

was horrified by the sight of the bear and began to shout loudly

If

Then ↑

met Wojtek the bear there

If

Then ↑

hid in the bathhouse

If

Thrn ↑

an Arab spy came to the camp

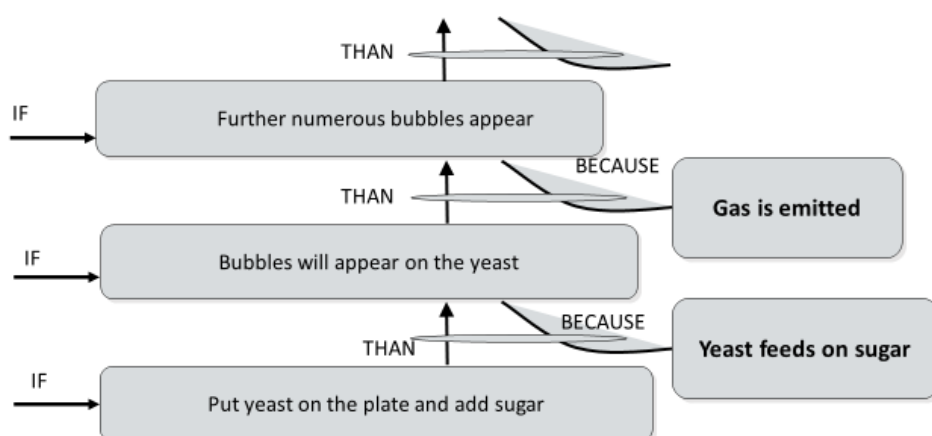
When

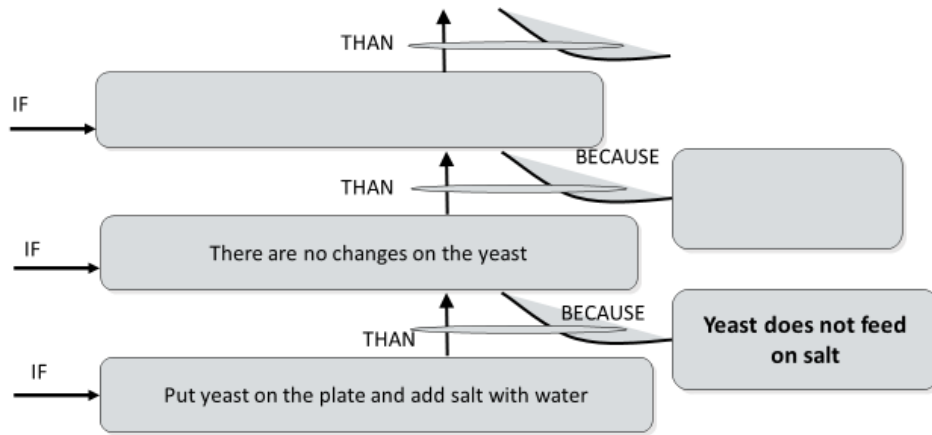
## 24. Experiment with yeast

### LESSON PLAN

#### TOPIC: EXPERIENCE WITH YEAST

<b>Subject</b>	Early education grade II-III
<b>Age</b>	8-10
<b>Topic</b>	We check the properties of yeast.
<b>Objectives</b>	Planning, performing simple observations, experiments and experiments on natural objects and phenomena, creating notes on observations, explaining the essence of observed phenomena according to the process of cause and effect and time.
<b>Materials</b>	Materials competition „Świetlik” <a href="http://2017_Doswiadczenia_Klasa2.pdf">2017_Doswiadczenia_Klasa2.pdf</a> ( <a href="http://swietlik.edu.pl">swietlik.edu.pl</a> )  Necessary materials: fresh yeast, sugar, salt, oil, 3 small plates, 2 spoons, bottle of water.  Activity sheet with logical branch to fill in.
<b>Development</b>	<ol style="list-style-type: none"> <li>1. The teacher reads the instructions and asks the students to hypothesize what will happen when we sprinkle yeast with sugar, salt, pour oil. Students come up with hypotheses. They write down their hypothesis on a worksheet.</li> <li>2. Students carry out the experiment according to the instructions <a href="http://2017_Doswiadczenia_Klasa2.pdf">2017_Doswiadczenia_Klasa2.pdf</a> (<a href="http://swietlik.edu.pl">swietlik.edu.pl</a>).</li> <li>3. They share their observations, they take notes.</li> <li>4. The teacher asks why there are bubbles on the yeast after adding sugar. The students try to draw conclusions.</li> <li>5. They note observations in form of logical branch.</li> </ol>







# 25. Hansel e Gretel

## Lesson Plan

<b>Subject</b>	<b>Fields of Experience</b> (Prevailing: Speeches and words; Images, sounds and colors)
<b>Age</b>	<b>Four years</b>
<b>Topic</b>	<b>Hansel e Gretel</b>
<b>Objectives</b>	<b>Developing the ability to listen and reflect, focusing attention on the consequences of actions.</b>
<b>Materials</b>	<ul style="list-style-type: none"><li>● Book</li><li>● Role Playing</li><li>● Flashcards</li><li>● Logic Branch</li></ul>
<b>Development</b>	<ul style="list-style-type: none"><li>● Mimed reading of the fairy tale</li><li>● Dramatization</li><li>● Brainstorming</li><li>● Preparation of the fairy tale in sequence through the use of flashcards and directional arrows</li><li>● Use of the Logic Branch</li></ul>





## 26. Influence of relief on climate

### LESSON PLAN

**TOPIC:** Influence of relief on climate

<b>Subject</b>	Geography
<b>Age</b>	13–14 years old
<b>Topic</b>	Influence of relief on climate
<b>Objectives</b>	To introduce students to the influence of relief on climate. Students explain the process based on the text of the textbook, understand it.
<b>Materials</b>	Geography textbook; TOC methodology tool "Logical Branch" (the templet) Logic branch Magnets for attachment
<b>Development</b>	Students make a task:  Working in groups, fill in the logical branch "The influence of terrain on climate".  Students read the text of the textbook and complete the logical branch.



## INFLUENCE OF RELIEF ON CLIMATE

All the rivers in this region are flooding

Then

It has been raining non-stop here for several months

Then

The ridges are located in such a way that the moist air masses that get between them cannot escape

Then

It meets an obstacle - the Himalayas

Then

If the monsoon blows north from the Indian Ocean in summer

# 27. The Earth's surface is constantly changing

LESSON PLAN

**TOPIC:** The Earth's surface is constantly changing

<b>Subject</b>	Geography
<b>Age</b>	12–13 years old
<b>Topic</b>	The Earth's surface is constantly changing
<b>Objectives</b>	To introduce students how snow is formed . Students explain the process based on the text of the textbook, understand it.
<b>Materials</b>	Geography textbook; TOC methodology tool "Logical Branch" (the templet) Logic branch Magnets for attachment
<b>Development</b>	Students make a task: Working in groups, fill in the logical branch "Snow". Students read the text of the textbook and complete the logical branch.



## SNOW

Falling snowflakes on the ground form a snow cover

Then

As they fall, they stick together and turn into snowflakes

Then

Small ice crystals form from water droplets

Then

If the air temperature in the clouds drops sharply in winter



## 28. Drug/alcohol use

LESSON PLAN

**TOPIC:** Drug/alcohol use

<b>Subject</b>	Biology
<b>Age</b>	11 years old
<b>Topic</b>	Drug/alcohol use
<b>Objectives</b>	To introduce students with the negative consequences of drug/alcohol use. Students understand the influence of drug/alcohol on health.
<b>Materials</b>	Biology textbook; TOC methodology tool "Logical Branch" (the templet) Logic branch Magnets for attachment
<b>Development</b>	Students make a task:  Working in groups, fill in the logical branch "Drug/alcohol".  Students read the text of the textbook and complete the logical branch.



## DRUG/ALCOHOL USE

A person can die early

Then

Alcohol damages the brain and liver

Then

A person becomes addicted to alcohol

Then

If alcohol is used excessively

# 29. The path of food through the digestive tract

## LESSON PLAN

**TOPIC:** The path of food through the digestive tract

<b>Subject</b>	Biology
<b>Age</b>	14 years old
<b>Topic</b>	The path of food through the digestive tract
<b>Objectives</b>	To introduce students with food digestive process; how food travels through the digestive tract.
<b>Materials</b>	Biology textbook; TOC methodology tool "Logical Branch" (the templet) Logic branch Magnets for attachment
<b>Development</b>	Students make a task:  Working in groups, fill in the logical branch " The path of food through the digestive tract ".  Students read the text of the textbook and complete the logical branch.



## THE PATH OF FOOD THROUGH THE DIGESTIVE TRACT

Food is digested into small soluble molecules

Then

Digestion of food begins as the pancreatic duct opens to allow digestive enzymes

Then

The liquid puree enters the front part of the small intestine

Then

The food lump is soaked with digestive juices and a liquid puree is formed.

Then

If food enters the mouth, it is crushed, swallowed, and moves down the esophagus to the stomach.



# 30. The First World War and its consequences

LESSON PLAN

**TOPIC:** The First World War and its consequences

<b>Subject</b>	History
<b>Age</b>	14 years old
<b>Topic</b>	The First World War and its consequences
<b>Objectives</b>	To introduce students with First World War and its consequences.
<b>Materials</b>	Biology textbook; TOC methodology tool "Logical Branch" (the templet) Logic branch
<b>Development</b>	The text of the textbook is read, visual material is discussed. Students are offered to make a logical branch in pairs and illustrate it. Children with special needs are given statements from which they must make a logical branch. 15 minutes are allocated for work. Pairs present their logical branches to the class.



## THE FIRST WORLD WAR AND ITS CONSEQUENCES

In 1918 in November Germany capitulates and the war ends

THEN

The United States enters the war on the side of the Entente

THEN

Russia has a revolution and withdraws from the war

THEN

Many countries enter the war

THEN

In 1914 August 1 the war begins

THEN

Austria-Hungary and Germany attack Serbia

THEN

The heir to the throne of Austria-Hungary is assassinated



# 31. Bullying

LESSON PLAN

**TOPIC:** Bullying

<b>Subject</b>	English
<b>Age</b>	12 years old
<b>Topic</b>	Bullying
<b>Objectives</b>	To talk and discuss with students about the bullying; what is bullying and how to avoid it.
<b>Materials</b>	Sheets with text from the British Council: Learn English Teens; colored sticky notes; prepared and cut sentences logical branch leaves (templet).
<b>Development</b>	<p>A brief discussion about bullying.</p> <p>Pupils read the text aloud, find out the unknown words.</p> <p>A task is assigned to work in groups of 3-4: create a logical branch by yourself, by writing sentences on sticky notes, or by using ready-made and in cut-out sentences.</p> <p>2 representatives from each group go to the logical branch templet and stick sticky notes on it.</p> <p>Discussed and supplemented.</p> <p>Retells the text using a logical branch.</p>



## BULLYING

Key understands that Becky is the bully

THEN

Key comes to Becky.

THEN

Key runs away from school.

THEN

Key finds nasty photos on her computer

THEN

Becky says, that Ollie is the bully

THEN

Some more messages come

THEN

She tries to block the messages

THEN

Katie gets a nasty message



## 32. Charlie's success story

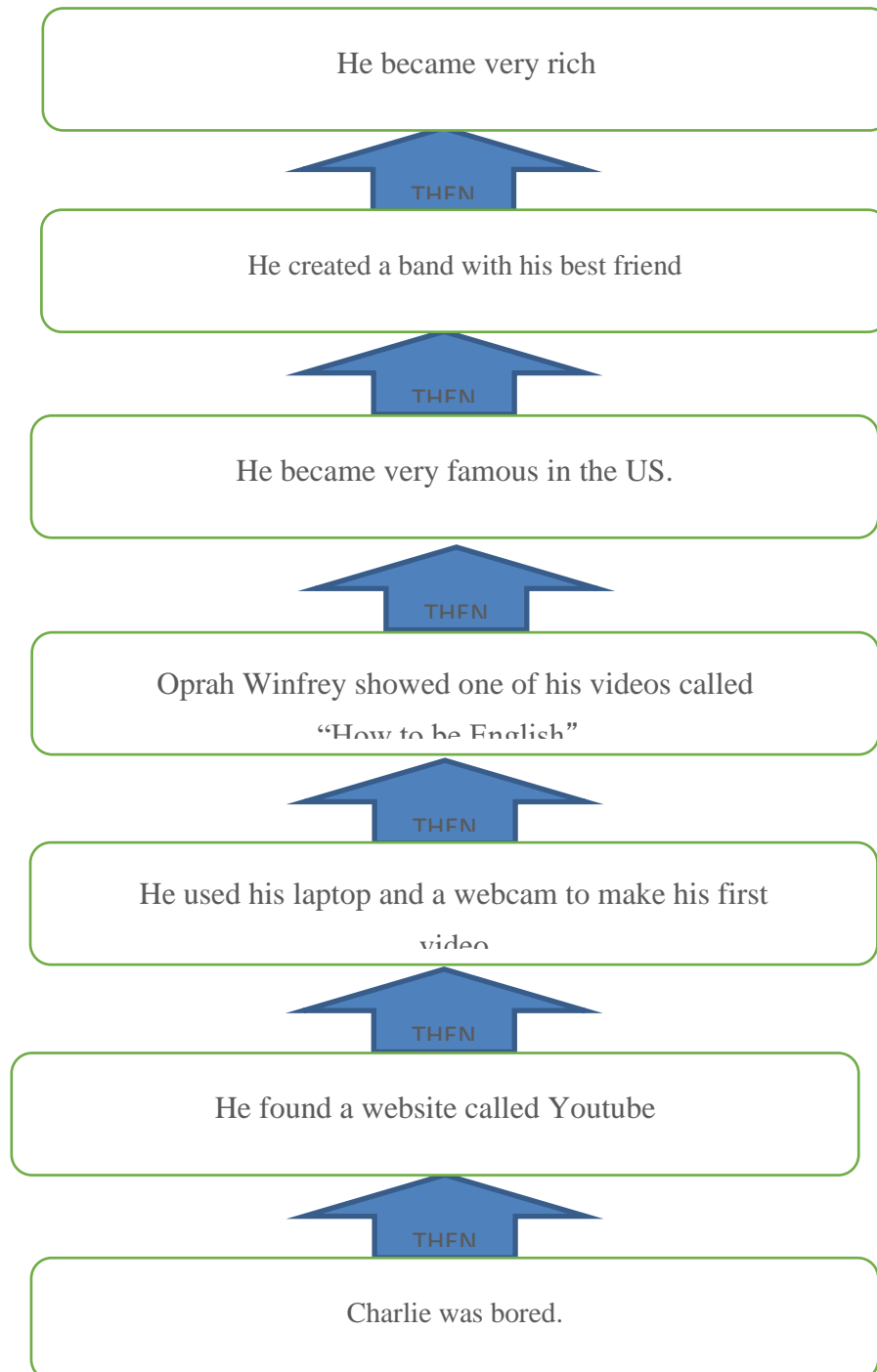
LESSON PLAN

**TOPIC:** Charlie's success story

<b>Subject</b>	English
<b>Age</b>	12 years old
<b>Topic</b>	Charlie's success story
<b>Objectives</b>	Understanding the text, retelling the text
<b>Materials</b>	<p>Sheets with text from British Council: Learn English Teens: Brendan Dunne „Why Charlie was so cool...like?“  <a href="https://learnenglishteens.britishcouncil.org/study-break/reading-zone/b2-graded-reading/why-charlie-so-cool-b2">https://learnenglishteens.britishcouncil.org/study-break/reading-zone/b2-graded-reading/why-charlie-so-cool-b2</a></p> <p>colored sticky notes;          prepared and cut sentences          logical branch leaves (templet).</p>
<b>Development</b>	<p>Students read the text, new words and phrases are found out, several questions are asked to check whether the students have understood the text.</p> <p>A task is assigned to work in groups of 3-4: make a logical branch by yourself, writing down a sentence on sticky notes in a logical sequence, or, in case of difficulties, using already prepared and cut sentences, putting them in order;</p> <p>Each group comes to the stencil of the logical branch and, pasting the sheets,</p> <p>reads aloud sentences with If ... then</p> <p>Discussed and supplemented.</p> <p>Several volunteers are asked to retell the text using a logical branch.</p> <p>Logical branches made by students</p>



## CHARLIE`S SUCCESS STORY



# 33. How to make a sand painting?

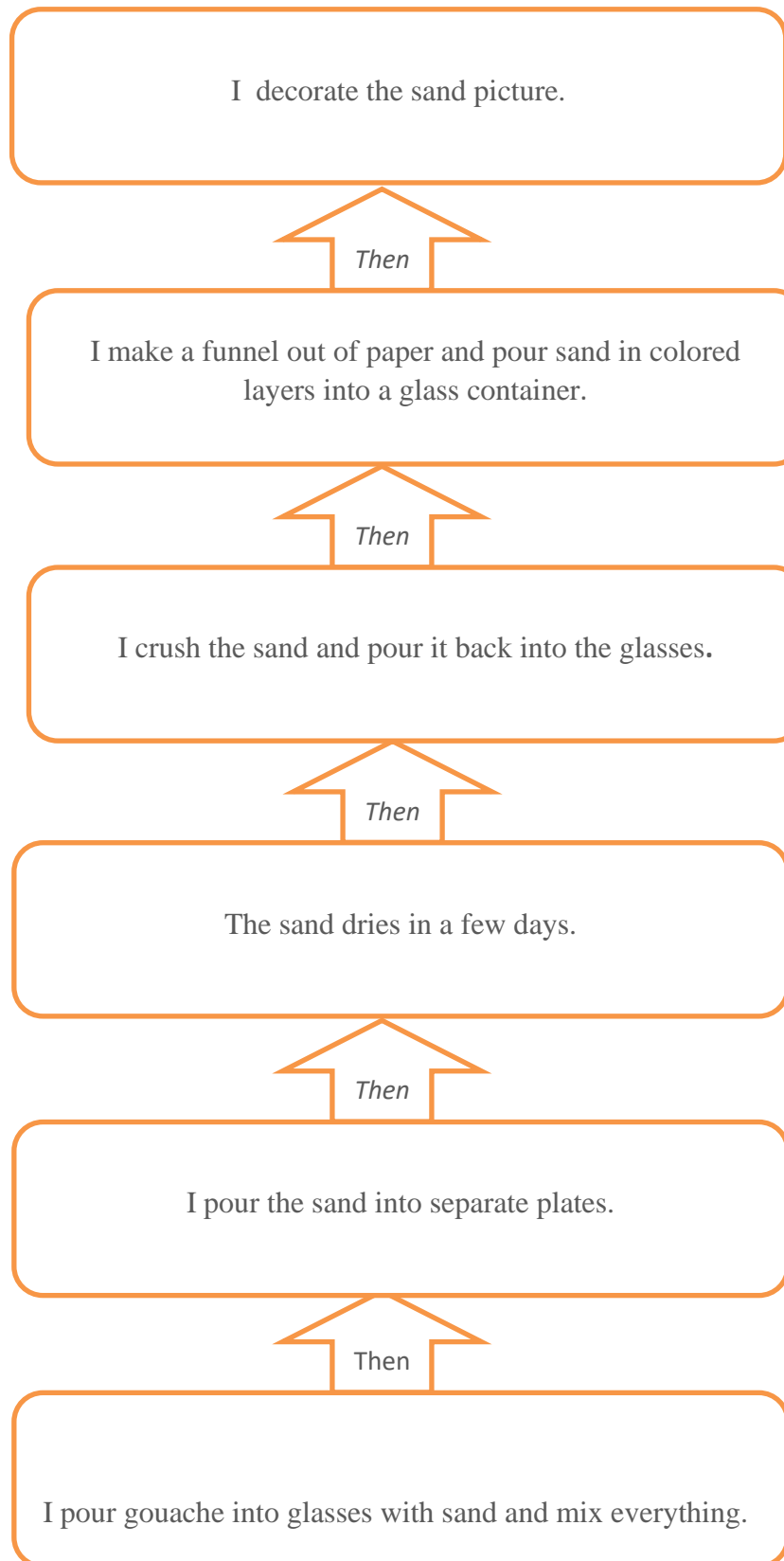
LESSON PLAN

**TOPIC:** „Sand painting“

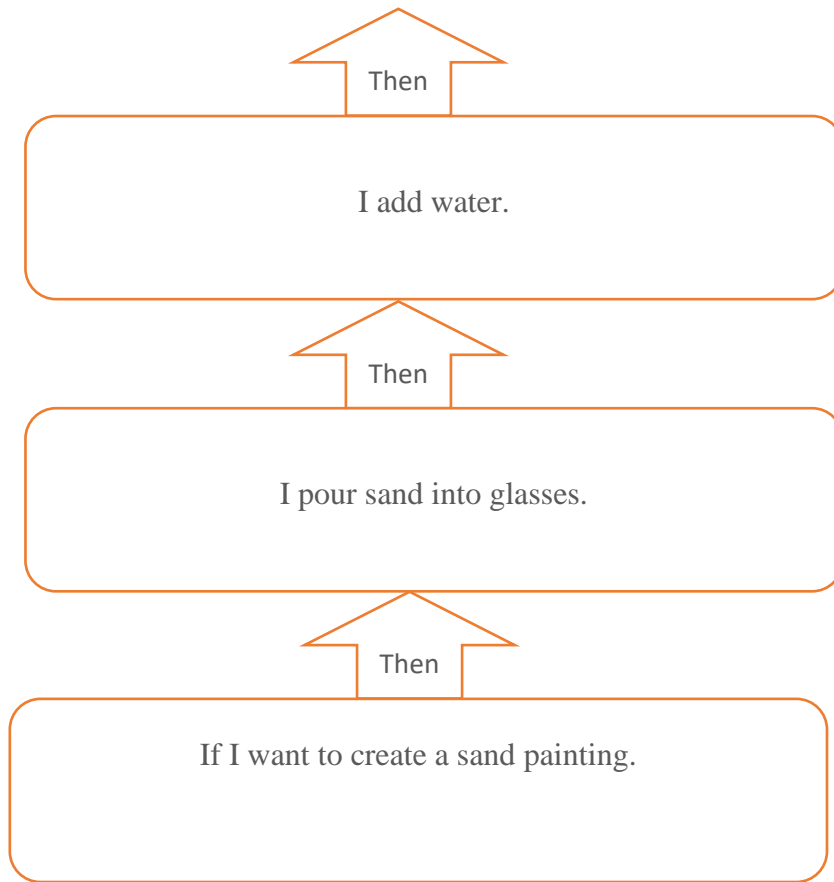
<b>Subject</b>	Integrated art and technology lesson
<b>Age</b>	13 years old
<b>Topic</b>	„Sand painting“
<b>Objectives</b>	Students speak how to make a sand picture, understand how to make a sand picture, can explain how to make a sand picture.
<b>Materials</b>	TOC methodology tool "Logical Branch" (the templet) Logic branch
<b>Development</b>	Students work in groups, complete the logical branch "How to make a sand picture?" Students complete the logical branch.



## SAND PAINTING







# 34. How does Pippi Longstocking celebrate her birthday?

LESSON PLAN

**TOPIC:** How does Pippi Longstocking celebrate her birthday?

<b>Subject</b>	Early education grade II-III
<b>Age</b>	8-9 years old
<b>Topic</b>	How does <u>Pippi Longstocking</u> celebrate her birthday?
<b>Objectives</b>	Student read the part "Pippi Longstocking celebrates her birthday" from Astrid Lindgren's book " <u>Pippi Longstocking</u> ", understanding the text, retelling.
<b>Materials</b>	TOC methodology tool "Logical Branch" (ready form for students) Logic branch templet
<b>Development</b>	Students are assigned a task: Working in groups, fill in the logical branch "How <u>Pippi Longstocking</u> celebrate her birthday?" Students complete the logical branch.



## HOW DOES PIPPI LONGSTOCKING CELEBRATE HER BIRTHDAY?

Everyone are glad and enjoying by celebrating birthday.

THEN

Pippi receives presents and it makes her very happy, at the same time she decides to surprise her friends by giving the presents

THEN

They come to the birthday.

THEN

Tommy and Anika read the invitation and are very happy.

THEN

Pippi writes a postcard to friends and puts it in the postbox.

THEN

She decides to invite Tony and Anika.

THEN

If Pippi decides to celebrate her birthday.

# 35. How does water travel?

## LESSON PLAN

**TOPIC:** How does water travel?

<b>Subject</b>	Early education grade III
<b>Age</b>	9 years old
<b>Topic</b>	How does water travel?
<b>Objectives</b>	<p>With the help of the teacher, draw a circle of water circulation; to explain how well, river, lake water fills up.</p> <p>Understand and explain how the water cycle occurs by looking at the cycle in nature.</p>
<b>Materials</b>	<p>TOC methodology tool "Logical Branch" (ready form for students)</p> <p>Logic branch templet</p> <p>Teapot, cup, saucer, water</p>
<b>Development</b>	<p>Students observe the experiment to clarify the concepts of "evaporate" and "condensate".</p> <p>Watching and discussing the video "The Journey of a Drop of Water" (<a href="http://www.youtube.com">www.youtube.com</a>)</p> <p>Works in pairs and explains the textbook material.</p> <p>Forms a logical branch of "How water travels".</p> <p>3 couples present their work. Compares with the branch made by the teacher, makes conclusions.</p>



## HOW DOES WATER TRAVEL?

The water returns to the oceans and seas again.

ΤΑΔΑ

Part of the precipitation seeps into the groundwater, part of it flows into the rivers or lakes.

ΤΗΝ

Water falls from the clouds back to the ground

ΤΗΝ

Clouds form from droplets.

ΤΗΝ

The rising vapor cools and turns into droplets.

ΤΗΝ

It begins to steam, rises to the top

ΤΗΝ

The water of oceans, seas and rivers warms up.

ΤΗΝ

If the sun heats the earth's surface.

## 36. How to improve the achievements?

### ACTIVITY PLAN

**TOPIC:** The discussion the results of 1st trimestre

<b>Subject</b>	Class meeting
<b>Age</b>	14 years old
<b>Topic</b>	The discussion the results of 1st trimestre
<b>Objectives</b>	Improve at least one evaluation of a subject in the II trimestre
<b>Materials</b>	Sheet of paper Writing tool I trimestre results table Ambitious target templet
<b>Development</b>	A task is assigned to the students. Each student fills Ambituios target Discussion with each student.

Obstacles	Intermediate objective	Actions
I am lazy	I am not lazy	Convince myself not to be lazy
I have no time	I will find time	I will go out less often
I forget	I will not forget	I'll write it down so I don't forget
Play with telephone	I will not play with telephone	I'll keep my phone in my backpack
I do not concentrate to the subject	I will concentrate to the subject	I will listen carefully during the lesson



Attending to many activities	I will attend less activities	I will give up one activity
Talking during the lessons	I will not talk during the lesson	I will listening teacher
Sometimes want to sleep during the lesson	I will not be sleepy during the lesson	I will go to bed earlier
I communicate with my friends when I need to study	I will not communicate with my friends when I need to study	I will spend more time for the studying

## 37. How to organize excursion for class?

ACTIVITY PLAN

**TOPIC:** Organization of the excursion

<b>Subject</b>	Class meeting
<b>Age</b>	14 years old
<b>Topic</b>	Organization of the excursion
<b>Objectives</b>	Improve planning, cooperation, decision-making skills.
<b>Materials</b>	Sheet of paper Writing tool Ambitious target templet
<b>Development</b>	A task is assigned to the students. Students are divided into groups of 4-5 students. Each group prepares an ambitious target Presents to other students. Discussed and debated.

<b>Obstacles</b>	<b>Intermediate objective</b>	<b>Actions</b>
We do not know where to go	We search the internet for ideas	We consult with each other and propose an idea to the teacher
We do not know which objects to visit	We listen to friends, search for information on the Internet	We consult with each other and propose an idea to the teacher
It is not known how much money will be needed for the trip.	Find out what the prices are	By contacting a travel agency or viewing the websites of the visited objects and calculating how much the visited objects would cost per person





Parents not agreeing	Nice to ask parents	Do good work, try harder to study in order to be allowed to go on an excursion.
We don't have transportation to use.	We ask the teacher for help	We choose the most suitable option
It is not clear who will be responsible for organizing the travel documents and paying the money	Find out who will be responsible	The teacher takes responsibility for organizing travel documents, paying money in museums, to the bus driver

# 38. Educational solidarity action "Support for Ukrainian children"

ACTIVITY PLAN

**TOPIC:** Educational solidarity action "Support for Ukrainian children"

<b>Subject</b>	Class meeting
<b>Age</b>	10-15 years old
<b>Topic</b>	Educational solidarity action "Support for Ukrainian children"
<b>Objectives</b>	<p>To organize an educational, solidarity action aimed at supporting Ukrainian children</p> <p>To develop students/children's critical thinking.</p> <p>Develop entrepreneurship, problem solving skills.</p> <p>Develop solidarity, compassion</p>
<b>Materials</b>	Pupils make handicrafts and sell/realize them at their parents' workplaces/communities.
<b>Development</b>	<p>A task is assigned to the students. Students are divided into groups of 4-5 students.</p> <p>Each group prepares an ambitious target</p> <p>Presents to other students.</p> <p>Discussed and debated.</p>

Obstacles	Intermediate objective	Actions
It is not clear idea	Agreed on the idea	A handiwork/artifact is agreed upon during class hours
It is not known what tools need to be made for the handicrafts	Refined handcraft design and layout	A list of tools/materials from which the handcraft will be made has been compiled
It is not known where to get the tools/materials	Possibilities of using secondary raw materials have been considered	It is agreed who will take care of it and by what means; what



		tools a particular student brings
It is not known where the handicrafts will be produced	Location agreed	During art, technology classes/clubs, classroom hours/after school etc.
Unknown time	Set the time	Specific dates and period for production are provided
Uncertain quantity (how many items to make?)	Estimated, counted quantities of handicrafts	It is agreed how much each student can "sell" at their parents' workplaces
It is not clear how to package/present the item		It is agreed how aesthetically/attractively the product will be packaged
It is not clear how to collect donations	The clear idea	An envelope, box, etc. where donations will be collected is agreed upon
It is unclear who will be responsible for collecting money/donations	Agreed and shared responsibility	A group of students has been formed and is responsible for collecting/counting and handing over the donations/money



# 39. Storytelling “Little Red Riding Hood”

## ACTIVITY PLAN

TOPIC: Storytelling “Little Red Riding Hood”

<b>Subject</b>	Italian - Civic Ed.
<b>Age</b>	Six years
<b>Topic</b>	Storytelling: “Little Red Riding Hood”
<b>Aim</b>	Developing the ability to listen and reflect through the consequences and self-directed changes to behavior
<b>Tools</b>	Book Flashcards Flowchart Logic Branch Ambitious Target
<b>Steps</b>	<ul style="list-style-type: none"> <li>● Daily actions in sequence</li> <li>● Reading and dramatization of the fairy tale</li> <li>● Flow chart of the story in sequence</li> <li>● Use of the Logic Branch</li> <li>● Use of the Ambitious Target</li> </ul>



# 40. Storytelling “The little three pigs”

## ACTIVITY PLAN

TOPIC: Storytelling “The little three pigs”

<b>Subject</b>	Italian - Civic Ed.
<b>Age</b>	Six Years
<b>Topic</b>	Storytelling: “The little three pigs”
<b>Aim</b>	Developing the ability to listen and reflect through the consequences and self-directed changes to behavior
<b>Tools</b>	<ul style="list-style-type: none"> <li>● Book</li> <li>● Flashcards</li> <li>● Flowchart</li> <li>● Logic Branch</li> </ul>
<b>Steps</b>	<ul style="list-style-type: none"> <li>● Daily actions in sequence</li> <li>● Video viewing and dramatization of the fairy tale</li> <li>● Flow chart of the story in sequence</li> <li>● Use of the Logic Branch</li> </ul>



# 41. Primates

## ACTIVITY PLAN

TOPIC: Primates

<b>Subject</b>	History
<b>Age</b>	Eight years
<b>Topic</b>	Primates
<b>Aim</b>	Analyzing the cause and effect relationships of the events that led to the appearance of the Primates
<b>Tools</b>	<ul style="list-style-type: none"><li>● Textbook and internet</li><li>● Scoop-Scepter</li><li>● Logic Branch</li></ul>
<b>Steps</b>	<ul style="list-style-type: none"><li>● Problem Solving</li><li>● Couple work for text analysis and web searches</li><li>● Laboratory activity for the realization of the scepter-shovel</li><li>● Use of the Logic Branch</li><li>● Clil: If-Then</li></ul>

## 42. Storytelling “The adventure of Tom Sawyer”

### ACTIVITY PLAN

TOPIC: Storytelling “The adventure of Tom Sawyer”

<b>Subject</b>	English - Italian - Civic Ed.
<b>Age</b>	Nine Years
<b>Topic</b>	Storytelling: “The adventures of Tom Sawyer”
<b>Aim</b>	Developing the ability to listen, reflect and solve problems by encouraging teamwork, critically analyzing the consequences of concrete concepts and actions.
<b>Tools</b>	<ul style="list-style-type: none"> <li>● Textbook</li> <li>● Brainstorming</li> <li>● Team work</li> <li>● Logic Branch</li> <li>● Ambitious Target</li> </ul>
<b>Steps</b>	<ul style="list-style-type: none"> <li>● Reading and dramatization of the story</li> <li>● Guided conversation</li> <li>● Laboratory activities</li> <li>● Flow chart (If / then)</li> <li>● Use of the Logic Branch</li> <li>● Use of the Ambitious Target</li> </ul>



# 43. The adventures of Pinocchio

## ACTIVITY PLAN

TOPIC: The adventures of Pinocchio

<b>Subject</b>	Italian - English - Ed. Civic - Art and image
<b>Age</b>	9-10 years
<b>Topic</b>	The adventures of Pinocchio
<b>Aim</b>	Developing the ability to identify solutions to resolve internal and external conflicts.
<b>Tools</b>	<ul style="list-style-type: none"> <li>● Tale of Pinocchio and the Internet</li> <li>● Clouds and Arrows</li> <li>● Template of Ambitious Target</li> </ul>
<b>Steps</b>	<ul style="list-style-type: none"> <li>● Reading and analysis of history.</li> <li>● Viewing of the film "Pinocchio" by Matteo Garrone.</li> <li>● Guided analysis and reflection of the first part of the story.</li> <li>● Working in small groups to analyze the other parts of the story.</li> <li>● Sharing and comparison between groups.</li> <li>● Creation of drawings for the realization of the final product (TOC Storytelling).</li> <li>● Laboratory activity for the creation of clouds and arrows</li> <li>● Using the Ambitious Target template</li> <li>● Clil: Need-Want-Goal</li> </ul>



# 44. Storytelling: “Thumbelino fairy tale” based on French: “Le Petit Poucet”

## ACTIVITY PLAN

TOPIC: Storytelling: “Thumbelino fairy tale” based on French: “Le Petit Poucet”

<b>Subject</b>	Italian-Maths-Citizen education
<b>Age</b>	7-8 years old
<b>Topic</b>	Storytelling: “Thumbelino fairy tale” based on French: “Le Petit Poucet”
<b>The aim</b>	The aim of this fable is that by cunning and goodness you can achieve many things even if you are very young. Thumbelino also teaches to be united with people to overcome difficulties.
<b>Tools</b>	Book Flow chart Clouds Logic Branch
<b>The steps of the lesson</b>	<ul style="list-style-type: none"> <li>● Listening and watching the fairytale on the Digital blackboard</li> <li>● Role Playing</li> <li>● Sequence flowchart of the story</li> <li>● Teacher-structured worksheets on counting skills</li> <li>● Logic Branch tool</li> <li>● Clouds tool</li> </ul>

# 45. Storytelling “The ugly duckling”

## ACTIVITY PLAN

TOPIC: Storytelling “The ugly duckling”

<b>Subject</b>	Italian- Citizen education- Art
<b>Age</b>	8-9 years old
<b>Topic</b>	Storytelling “The ugly duckling”
<b>The aim</b>	The Ugly Duckling is the fairy tale that teaches you to believe in yourself and never lose faith in your abilities.
<b>Tools</b>	Digital Book Flow chart Clouds Logic Branch
<b>The steps of the lesson</b>	<ul style="list-style-type: none"> <li>● Brainstorming of the fairy tale: What do you remember about this story?</li> <li>● Listening and watching the fairytale on the Digital Blackboard (<a href="https://www.youtube.com/watch?v=TyrmcD8Yml0">https://www.youtube.com/watch?v=TyrmcD8Yml0</a>).</li> <li>● Role Playing</li> <li>● Sequence flowchart of the story</li> <li>● Producing drawing of the story in sequences</li> <li>● Logic Branch tool</li> <li>● Cloud tool</li> </ul>