

Learners' Guideline

In Search for the 'Second' Earth – Will We Manage to Colonize Other Planets?



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**Learners' Guideline**

SCHOOL YEAR	2016-2017																				
LEVEL	grade 9																				
TERM																					
SESSIONS	28-32 h																				
TITLE	In Search for the 'Second' Earth – Will We Manage to Colonize Other Planets?																				
SUBJECTS	Mathematics, Science (Physics, Geography, Chemistry), English, Art, ICT, Design and Technology																				
UNIFYING THREADS DRIVING QUESTIONS	What makes life on Earth possible? What features would 'second' Earth need to have in order to support life?																				
KEY COMPETENCES	<p>A: TRANSVERSAL COMPETENCES</p> <table border="1"> <thead> <tr> <th>COMPETENCE (EU)</th><th>TASKS</th></tr> </thead> <tbody> <tr> <td>1.Learning to learn</td><td>6,8,9,10,11,12,13,15,16,17</td></tr> <tr> <td>2.Sense of initiative and entrepreneurship</td><td>6,7,14,21</td></tr> <tr> <td>3.Social and civic</td><td>1,2,4,5,7,14,20,21,22</td></tr> </tbody> </table> <p>B: SUBJECT COMPETENCES</p> <table border="1"> <thead> <tr> <th>COMPETENCE (EU)</th><th>TASKS</th></tr> </thead> <tbody> <tr> <td>4.Communicating in the mother tongue</td><td>10,14,15,16,20,22</td></tr> <tr> <td>5.Communicating in a foreign language</td><td>10,15,16,17,19,21</td></tr> <tr> <td>6.Digital</td><td>18,19</td></tr> <tr> <td>7.Mathematical, scientific and technological</td><td>8,9,10,11,12,13,15,16,18</td></tr> <tr> <td>8.Cultural awareness and expression</td><td></td></tr> </tbody> </table>	COMPETENCE (EU)	TASKS	1.Learning to learn	6,8,9,10,11,12,13,15,16,17	2.Sense of initiative and entrepreneurship	6,7,14,21	3.Social and civic	1,2,4,5,7,14,20,21,22	COMPETENCE (EU)	TASKS	4.Communicating in the mother tongue	10,14,15,16,20,22	5.Communicating in a foreign language	10,15,16,17,19,21	6.Digital	18,19	7.Mathematical, scientific and technological	8,9,10,11,12,13,15,16,18	8.Cultural awareness and expression	
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<p>DISCIPLINARY OBJECTIVES and CROSS-DISCIPLINARY OBJECTIVES</p> <p>What do we want students to understand?</p> <p>(COMPREHENSION GOALS)</p>	<p>Main objective:</p> <p>To realise how precious and complex our planet is and to become aware what factors are necessary to sustain the life of our species</p> <p>0.Main objectives:</p> <p>0.1.Learning to work in teams</p> <p>1.Science:</p> <p>1.1. Geography: Analyse and learn about the Earth's atmosphere and climate zones</p> <p>1.2. Physics: Learn about the gravity</p> <p>1.3. Physics: Learn the research methods used in astronomy.</p> <p>1.4. Physics: Learn the Copernican heliocentrism</p> <p>2.Mathematics:</p> <p>2.1. Calculating the area of 2-D shapes (square, rectangle, etc) and 3-D shapes (sphere), and the volume of a sphere</p> <p>2.2. Analysing statistical data in forms of charts, graphs, etc.</p> <p>2.3. Similarity. Scale factor.</p> <p>2.4. Scientific notation. Rounding</p> <p>3.English:</p> <p>3.1. Learn specific vocabulary: planets, atmosphere, climate, elements, weather,</p>																		



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	<p>landscapes, etc..</p> <p>3.2. Improve reading skills – skimming, scanning, etc.</p> <p>4. ICT:</p> <p>4.1. Learn to use software to make and edit videos</p> <p>4.2. Learn to make multimedia</p> <p>5. Art:</p> <p>5.1. Develop creativity in sketching and drawing 3-D objects</p> <p>6. Mother tongue:</p> <p>6.1. Improve communicating and writing skills</p> <p>6.2. Develop argumentative skills</p>
PROJECT PRESENTATION	The multimedia presentation created by students will be shown at school and uploaded on the project website.
FINAL PRODUCT	A multimedia presentation with text, videos and pictures/drawings about the 'second' Earth



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SEQUENCE OF TASKS

A. PREVIOUS TASKS

1. Task: Team dynamics
2. Task: Active listening - assertiveness
3. Task: Project presentation
4. Task: Creativity in problem-solving
5. Task: How to deal with stress and anxiety
6. Task: What I know, what I need to learn
7. Task: Planning group work and dividing the responsibilities

B. RESEARCH / DEVELOPING TASKS

8. Task: The importance of the force of gravity
9. Task: The Solar System
10. Task: Collecting, ordering, analysing and presenting data
11. Task: Scientific notation - from micro to macrocosm. Rounding.
12. Task: Calculating the area and circumference of a circle, and the surface area and volume of a sphere.
13. Task: Similarity. Scale factor.
14. Task: Work evaluation
15. Task: Why do we need atmosphere?
16. Task: In which climate zone do I live?
17. Task: What would our life in space look like?
18. Task: The 'second' Earth
19. Task: Producing the multimedia presentation.

C. FINAL TASKS

20. Task: Presentation of the final result
21. Task: Dissemination of the final product
22. Task: Final team planning assessment



INDICATORS

Main objective:

Realises how precious and complex our planet is and becomes aware what factors are necessary to sustain the life of our species in order to design the 'second' Earth

1. General objectives:

- 1.1.1. The student achieves team objectives.
- 1.1.2. The students achieves individual objectives
- 1.1.3. The student fulfils his/her responsibilities.

2. Science:

- 2.2.1. Identifies the influence of gravity and gravitational force
- 2.2.2. Recognises the GOALSstial bodies and their life-supporting properties
- 2.2.3. Knows the chemical composition, layers and functions of atmosphere
- 2.2.4. Recognises the climate zones on Earth

3. Mathematics:

- 3.2.1. Knows how to sort out, analyse and present data
- 3.2.2. Knows how to use scientific notation and rounding to write numbers
- 3.2.3. Calculates the area and circumference of a circle, and the surface area and volume of a sphere
- 3.2.4. Calculates the scale factor of two spheres

4. Foreign language – English:

- 4.2.1. States the names of planets in the foreign language.
- 4.1.1. States the names of climate zones in the foreign language.
- 4.1.2. Uses the second conditional in English to talk about imaginary situations

5. Art:

- 5.1.1. Draws planets and planetary systems
- 5.1.2. Creates a planetary model
- 5.1.3. Writes and performs songs

6. ICT:

- 6.1. Records videos





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6.2. Makes a multimedia presentation with videos, photos, drawings, etc.

7. Mother tongue:

7.1.1. Knows how to express and justify opinions

7.1.2. Knows how to take part in a debate, group discussion, etc.

TOOLS:

- **Rubrics**
- **Reflections and evidences**



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Previous tasks

1. Task: Group dynamics.			Session: 1 h
COMPETENCES	Social and civic	INTELLIGENCES	Interpersonal
GOALS	The students learn how to work in a group.		

Task description:

At the beginning of the class you will take part in a survey.

Sit in a circle and discuss the rules of cooperation that will apply during the project. After choosing the most important ones, write them down on a poster, vote their approval and put it up on the wall. Next, you will play a game 'Chair Swap' in which you will have to swap your seats when the person standing in the middle of the circle says e.g. 'Swap your seat with a person who likes chocolate.' There will be fewer chairs than participants so that every time there's someone left without a seat. You can play the game a few times. Afterwards, the teacher writes down the word 'group' on the board, and you will be asked to say what comes to their mind and writes down all the answers.

Next the class is divided into small groups of 4-6 people. Each group has to work on the topic: 'Imagine that you're going into space. Make a list of necessary things that you're going to take.' After a few minutes each group presents their ideas. Then, there will be a discussion about group work: how did you decide to make your choice?/ what helped and what made it difficult to decide? All the answers are written on the board. Then you have to decide what it takes to create a 'good' group which can work effectively. A volunteer writes down the features of a 'good' group on a poster and puts it on the wall.

Assessment tools (rubrics...):

Survey1.docx

2. Task: Active listening - assertiveness			Session: 1 h
COMPETENCES	Social and civic	INTELLIGENCES	Interpersonal
GOALS	Students are aware how important assertiveness is in developing a good relationship with others. They learn how to listen actively.		

Task description:

Try to remember the rules you formulated in the previous class. Play a game 'Chinese whispers'. The



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teacher starts the game by whispering a short message to one of the students, who in turn has to whisper it to the next person in the circle, and so on, until the last person says it out loud. Afterwards, you have to brainstorm ideas: what made it difficult to hear the message? what is necessary to listen carefully? - everything is written down on the board in two columns. Next, in groups of 4-6, you have to come up with the characteristics of a good and bad listener. Present your ideas.

After that, work in pair. You have to express your opinion on the following topic: 'what do you think about the conditions of life on Earth?' During the conversations try to use paraphrases, e.g. 'So you think that ...', 'If I understand you correctly ...', 'Do you mean that ...'. Afterwards, every participant repeats the opinions they heard and comments on the exercise.

Assessment tools (rubrics...):

Not assessed

3. Task: Presentation of the project.			Session: 1h
COMPETENCES		INTELLIGENCES	Verbal-linguistic
GOALS	To introduce the project		

Task description:

You will be introduced to the main topic of the project by reading an article and watching a video, an [interview](#) with professor Stephen Hawking, who warns us that humankind will not survive on Earth. Therefore it seems there's no other way but to find the 'second' Earth. The school headmaster and/or a physics teacher will assign you with a challenging task - researching the conditions which are necessary to support life on Earth and designing a new planet where humanity could move. The final project will be a multimedia presentation which will include your findings and designs of a planetary system and a new planet which could become the 'second' Earth. The presentation will be sent to Professor Hawking and space agencies around the world.

Assessment tools (rubrics...):

Not assessed

4. Task: Creativity in problem-solving			Session: 2 h
COMPETENCES	Social and civic	INTELLIGENCES	Interpersonal Visual-spatial Bodily-kinesthetic Logical-mathematical Verbal-linguistic
GOALS	Students learn about creativity. They are motivated to be imaginative.		



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Task description:

You will be divided into groups of 4-6. Get pieces of paper and brainstorm their ideas on 'what is creativity'. Write everything down and then present your ideas to the rest of the class, trying to come up with the definition of 'creativity'. Afterwards, the best definition is chosen, written on a poster and put up on the wall.

In the next activity, the teacher distributes among the groups an everyday object, e.g. a spoon, keys, a hammer, and asks you to think of unusual ways it could be used. You have to write down their ideas, decide on the best one and present it to the rest of the class. Next, you will discuss the importance of creativity in everyday life.

Get back in a circle and play a game, finishing the sentence 'Creativity is like ... because ...'. After a few minutes, get into small groups and a representative of each group draws a question, e.g. 'What would happen if ... the sun stopped shining?', 'What would happen if ... it was possible to live on Mars?'. Each group chooses the best answer and presents it to the rest of the class.

The last task involves writing a short text in the mother tongue (100 words) which includes the following words: man, water, moon, blue, earth, journey, life, planets, hippo, relax. When you finish, you read out your texts and put up on the wall.

Assessment tools (rubrics...):

Not assessed

5. Task: How to deal with stress and anxiety			Session: 1h
COMPETENCES	Social and civic	INTELLIGENCES	Interpersonal Intrapersonal
GOALS	Students learn how to deal with stress.		

Task description:

You will have a discussion about feelings. Create a list of feelings. Then answer the question 'What is stress?'. After a short discussion, start working in small groups - each has to answer a different question: 1 - What is the cause of stress? / 2 - What are the positive and negative results of stress? / 3 - What comes to your mind when you think of stress? What's its definition? / 4 - What are the symptoms of stress? how can you recognise it? / 5 - How to deal with stress (use your own experiences)? When you finish, present your answers and present them on a poster.

Assessment tools (rubrics...):

Not assessed



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6. Task: What I know, what I need to learn			Session: 1 h
COMPETENCES	Learning to learn Sense of initiative and entrepreneurship /	INTELLIGENCES	Interpersonal Intrapersonal
GOALS	Students learn to work in teams		

Task description:

Work in groups and brainstorm ideas on what you know about the suitable conditions for life on Earth and in space. Ask yourselves questions about what you need to learn in greater detail in order to solve the main problem. Representatives of the groups present their findings to the rest of the class and together you have to make a list.

Assessment tools (rubrics...):

Not assessed

7. Task: Planning group work and dividing the responsibilities			Session: 1 h
COMPETENCES	Social and civic Sense of initiative and entrepreneurship	INTELLIGENCES	Interpersonal Intrapersonal
GOALS	Students learn to work in teams		

Task description:

Now you have to plan your work. Discuss the project objectives and decide what your group objectives are. Fill in a survey so that later you can evaluate your work and progress.

Assessment tools (rubrics...):

Not assessed



RESEARCH / DEVELOPING TASKS

8. Task: The importance of the force of gravity			Session: 1 h
COMPETENCES	Learning to learn Mathematical, scientific and technological	INTELLIGENCES	Logical-mathematical Naturalistic
GOALS	<i>Students know how gravity influences objects, both on Earth and in space.</i>		

Task description:

In groups you have to guess what will happen when you drop objects, and which object will fall first – a pen or a small coin. Then you carry out the experiment – drop a pen and a small coin from the same height. In groups, discuss the outcome of the experiment. Later watch an online [presentation](#) or a PowerPoint (Gravity and Motion.ppt) and videos ([video1](#), [video2](#), [video3](#)) to learn about the gravity, what impact it has on objects and its importance in people's lives. Learn about the influence of the gravitational force on objects and people, and use the knowledge to solve the problems with forces on Earth and in space.

Assessment tools (rubrics...):

gravitation rubric.doc.

9. Task: The Solar System			Session: 1 h
COMPETENCES	Learning to learn Mathematical, scientific and technological	INTELLIGENCES	Logical-mathematical Visual-spatial Naturalistic
GOALS	<i>Students know what the Solar System is, what celestial bodies it includes and what properties are necessary to support life. Students know who created the heliocentric theory.</i>		

Task description:

In groups make a mindmap about what you know about the Solar System. Then watch videos ([videoENG1](#), [videoENG2](#), [videoENG3](#)) and use your science coursebook in order to learn about the theories on the Solar System and their creators. Afterwards fill in the rubric (Planets table.doc)– each group chooses one planet. You have to discuss if it would be possible to live there. Present the result to the rest of the class.

Assessment tools (rubrics...):

Not assessed.



10. Task: Collecting, ordering, analysing and presenting data			Session: 1-2 h
COMPETENCES	Learning to learn Mathematical, scientific and technological Communicating in the mother tongue Communicating in a foreign language	INTELLIGENCES	Visual-spatial Logical-mathematical Verbal-linguistic
GOALS	<i>Students can sort out data and present it in various forms. Students learn how to analyse data in order to be able to investigate the features of the planets.</i>		

Task description:

Take part in a poll to see how many of you spent their summer holidays in the mountain, at the lake, at the seaside or at home. Then brainstorm your ideas on the ways to present the collected data. Write your ideas on the blackboard and ask the teacher to add other methods. Next, present the collected data using a table, a histogram (bar chart) and a pie chart. Give your opinion which method is the clearest. The teacher will present other methods, e.g. graphs and pictograms.

You will be divided into 8 groups. Each group gets a description of 1 planet in English (planets texts.doc) and analyses the data, filling in the rubric (Planety writing gaps.doc) and completing the table (Planets table.doc). You have to communicate with other groups to fill in the whole table. In a group discussion you have to decide on the best way to present one chosen category of data so that they can be compared in a context. Each group presents their choice to the other students, justifying their decision, and then they carry out the analysis.

Assessment tools (rubrics...):

Planets table.doc

11. Task: Scientific notation - from micro to macrocosm. Rounding.			Session: 1-2 h
COMPETENCES	Learning to learn Mathematical, scientific and technological	INTELLIGENCES	Logical-mathematical Naturalistic Visual-spatial Verbal-linguistic
GOALS	<i>Students learn how to write very large numbers using scientific notation and how to round numbers off in order to realize the position of the Earth in the universe.</i>		

Task description:

While watching a video <https://youtu.be/oNb3H9kICbA> try to work out the way to present very large and very small numbers, using the power of number 10, and the necessity to round off numbers. Next the watch another video <https://www.youtube.com/watch?v=tvunIFwIWm4> or listen to a song



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<https://www.youtube.com/watch?v=AWof6knvQwE> so as to understand the way scientific notation works. Fill in the rubric (notacja.docx). Next present the rules of rounding and fill in the table (rounding.docx).

Work in pairs, writing the diameter of the planets and their distance from the Sun, using the table from the previous lesson or the video <https://youtu.be/GoW8Tf7hTGA>. Revise the names of large numbers: 10^9 is billion, 10^{12} - trillion, 10^{15} - quadrillion, 10^{18} - quintillion, a 10^{21} - sextillion, etc. Next round off the distance of planets from the Sun to the nearest 10 000 000.

Assessment tools (rubrics...):

notacja.docx, rounding.docx

12. Task: Calculating the area and circumference of a circle, and the surface area and volume of a sphere.			Session: 1 h
COMPETENCES	Learning to learn Mathematical, scientific and technological	INTELLIGENCES	Bodily-kinesthetic Logical-mathematical Naturalistic Visual-spatial Verbal-linguistic
GOALS	<i>Students can calculate the area and circumference of a circle, and the surface area and volume of a sphere so that they can design the 'second' Earth.</i>		

Task description:

Recall the formulas to calculate the area and circumference of a circle. Next try to figure out how to calculate the surface area and volume of a sphere. Next carry out the experiments with the string or orange to check for yourselves. (Later you can watch the videos to learn various ways to calculate the area of the sphere https://youtu.be/Bbf3agEH_3M, <https://youtu.be/FB-acn7d0zU> and the volume <https://youtu.be/xJuY0QT0Z8M>).

Working in 8 groups, choose one planet from the previous lesson and calculate the circumference of its largest cross-section (the length of the equator in the case of the Earth), its surface area and volume. Use scientific notation and rounding. Present and compare your findings to the other groups and draw conclusions.

As the final task, each group designs a planet which could be our new home. Present it to the rest of the class and have a discussion.

Assessment tools (rubrics...):

The teacher evaluates the last task and the accuracy of the calculations.



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13. Task: Similarity. Scale factor.			Session: 2 h
COMPETENCES	Learning to learn Mathematical, scientific and technological	INTELLIGENCES	Naturalistic Logical-mathematical Visual-spatial Verbal-linguistic
GOALS	Students can calculate the scale factor of two spheres. Students study the relationship between the scale factor of spheres and their area and volume in order to design a new planet system.		

Task description:

Using a coursebook, study what similar figures are and how to calculate the scale factor. In groups, come up with ideas which 2-D and 3-D shapes are similar. Next, calculate the areas and volume of similar figures, e.g. 2 cubes and 2 spheres.

In groups, brainstorm ideas how to use the scale factor. Then watch a video <https://youtu.be/d27tOwET0SU> and have a discussion on the practical use of scale factor.

Express your opinions if it's possible to make a model of the solar system with proper distances between planets, using scale factor. Watch a video <https://youtu.be/zR3lgc3Rhfg> to find out. If you are really interested, you can also watch another video https://youtu.be/usYC_Z36rHw.

After watching the videos, set about to design models of the planets in an appropriate scale. Work in groups and calculate the diameters of the planets in the chosen scale so that it's possible to do and the planets have accurate proportions. Next, have a discussion between groups about the best choice of scale factor to do the task.

Finally, design a new planet system.

Assessment tools (rubrics...):

The teacher evaluates the last task and the accuracy of the calculations.

14. Task: Work evaluation (self-evaluation)			Session: 1 h
COMPETENCES	Sense of initiative and entrepreneurship Social and civic Communicating in the mother tongue	INTELLIGENCES	Verbal-linguistic
GOALS	Students self-reflect about their work in the project and try to evaluate it in order to improve it.		

Task description:

Take part in a debate which will help you to evaluate what has been achieved in the project so far. It is based on the 'Six Thinking Hats' by Edward de Bono. It will enable you to creatively deal with problems, focusing on six different perspectives from which they can be analysed. During the debate, assess your work and



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involvement in the project from different viewpoints, depending on the colour. It will introduce a certain order by focusing on one aspect at a time. Different colours symbolise different approaches to dealing with a problem. By changing the colours, you should try to change your way of thinking. All the conclusions, ideas and comments should be written down.

The meaning of the colours:

The Red Hat signifies feelings, hunches and intuition. When using this hat you can express emotions and feelings and share fears, likes, dislikes, loves, and hates.

The White Hat calls for information known or needed. It's the opposite of the 'red hat'. Its motto is "The facts, just the facts." The participants focus just on facts.

The Black Hat is judgment - the devil's advocate or why something may not work. Spot the difficulties and dangers; where things might go wrong. Probably the most powerful and useful of the Hats but a problem if overused.

The Yellow Hat symbolizes brightness and optimism. Under this hat you explore the positives and probe for value and benefit.

The Green Hat focuses on creativity; the possibilities, alternatives, and new ideas. It's an opportunity to express new concepts and new perceptions.

The Blue Hat is used to manage the thinking process. It's the control mechanism that ensures the Six Thinking Hats guidelines are observed.

Assessment tools (rubrics...):

Not assessed

15. Task: Why do we need atmosphere?			Session: 1 h
COMPETENCES	Learning to learn Mathematical, scientific and technological Communicating in the mother tongue Communicating in a foreign language	INTELLIGENCES	Visual-spatial Musical-rhythmic Naturalistic Verbal-linguistic
GOALS	Students learn how the chemical composition, layers and functions of atmosphere influence life on Earth		

Task description:

The lessons starts with a brainstorming activity - you have to answer the questions 'Why do we need atmosphere?'. Then in groups, study each layer - you can use your science coursebooks or the websites (<https://scied.ucar.edu/atmosphere-layers>, http://www.geography4kids.com/files/atm_intro.html <http://www.windows2universe.org/earth/Atmosphere/overview.html> , etc.)

Next, each group prepares a presentation for the rest of the class about their layer. You have to decide on the form of your presentation – a poster, a rap song or a skit, etc.



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Assessment tools (rubrics...):

At the end of the lesson the students fill in one or more of the work sheets (check-out-the-atmosphere.pdf, atmosphere.jpg, atmosphere2.jpg). The teacher evaluates their work according to the atmosphere rubric.doc.

16. Task: In which climate zone do we live?			Session: 2 h
COMPETENCES	Learning to learn Mathematical, scientific and technological Communicating in the mother tongue Communicating in a foreign language	INTELLIGENCES	Visual-spatial Naturalistic Musical-rhythmic Verbal-linguistic
GOALS	Students know in which climate zone they live. They can recognise the other zones and know which are the most suitable for human existence.		

Task description:

Work in groups – discuss the climate zone you live in and share your observations with the rest of the class. Next, watch a [video](#) in order to learn about the other climate zones. Using your geography coursebook, or reading the following [text](#), each group studies one climate zone in detail.

Next, each group prepares a presentation for the rest of the class about their climate zone, focusing on the positive and negative aspects of human existence. Decide on the form of presentation – a poster, a rap song or a speech with a slideshow, etc.

Assessment tools (rubrics...):

Assessed according the rubric climate.doc

17. Task: What would our life in space look like?			Session: 1-2 h
COMPETENCES	Learning to learn Communicating in a foreign language	INTELLIGENCES	Verbal-linguistic
GOALS	Students can use the second conditional in English to express hypothesis about living in space.		

Task description: / *Opis zadania:*

Take a look at the worksheet (2nd_conditional_quizzes.pdf) and do exercise 1. Compare your answers in pairs. Next, you have to come up with a rule of forming the second conditional. After you find the answer, write it on the board and continue with exercise 2. Now, try to figure out when the second conditional is used in English.

Next, in groups, play a game 'What would our life in space look like?'. Ask each other questions, using the second conditional, e.g. 'What would you eat if you lived in space?' / 'What games would you play in your



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free time if there was zero gravity?'. Next, read the [article1](#), [article2](#), [article3](#) to find the answers to your questions and learn about different aspects of life in space.

The final task is to read an [article](#) and hold a debate 'Is the Moon a good place to live?' where you are divided into the supporters and opponents of the idea. You have to express your opinions, giving examples and justifications.

Assessment tools (rubrics...):

For the assessment, students could do some interactive exercises ([1](#), [2](#), [3](#)) and be evaluated according to the system used at school.

18. Zadanie: 'Druga' Ziemia			Session: 2-3 h
COMPETENCES	Mathematical, scientific and technological Digital	INTELLIGENCES	Visual-spatial Naturalistic Musical-rhythmic
GOALS	Students design and create models of 'second' Earth.		

Task description:

Use your knowledge and research done in previous classes to design a model of the planetary system and 'second' Earth. You can make drawings, pictures, 3-D models, etc. You should divide the tasks between the groups.

Assessment tools (rubrics...):

Not assessed

19. Task: Producing the multimedia presentation.			Session: 1-2 h
COMPETENCES	Digital Communicating in a foreign language	INTELLIGENCES	Logical-mathematical Visual-spatial Verbal-linguistic
GOALS	Students learn to make a multimedia presentation to show the results of their project work.		

Task description:

Collect all the materials that you have created in the previous classes (songs, posters, presentations, slideshows, skits, etc). In ICT class, choose software to make a multimedia presentation which will document your work and findings. Finally, make the presentation.

Assessment tools (rubrics...):

Not assessed



FINAL TASKS

20. Task: Presentation of the final result			Session: 1h
COMPETENCES	Communicating in the mother tongue Social and civic	INTELLIGENCES	Verbal-linguistic Interpersonal Intrapersonal
GOALS	Students present their multimedia presentation.		

Task description:

During a school assembly you will present your project and the final result to your school friends and guests. You should share your experiences, talk about what you learnt, what was the most difficult/the easiest part, and what you managed to achieve.

Assessment tools (rubrics...):

Assessed according to the school system

21. Task: Dissemination of the final product			Session: 1 h
COMPETENCES	Communicating in a foreign language Social and civic Sense of initiative and entrepreneurship	INTELLIGENCES	Verbal-linguistic
GOALS	Students disseminate the result of the project.		

Task description:

Write a letter in English to Professor Hawking and Space Agencies in which you will explain your project, its aims and final result. Send the letters.

Assessment tools (rubrics...):

Not assessed

22. Task: Final team planning assessment			Session: 1 h
COMPETENCES	Communicating in the mother tongue Social and civic	INTELLIGENCES	Interpersonal Intrapersonal
GOALS	Students learn to evaluate their work.		





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Task description:

Carry out the evaluation of the project, your participation and the final result. Fill in a questionnaire and have a discussion about your participation in the project.

Assessment tools (rubrics...):

Survey2.docx



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