

Thematics of the RIDE teacher training

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Topics	Methods, forms of work	Learning materials and equipment	Lessons - Theory	Lessons - Practice
1. Pedagogical and psychological background of the RIDE method				
1.1. Early school leaving in the case of SEN students	Group work	Early School Leaving and Learners with Disabilities and or Special Educational Needs: Final Summary Report.pdf https://www.european-agency.org/sites/default/files/ESL-Summary-ENelectronic.pdf	0,5	
1.2. Possibilities and value of inclusive education	Lecture	Video on the RIDE website	0,5	
1.3. What teachers of general subjects can do for the development and the integration of SEN students	Brainstorming	Jamboard, IdeaBoardz, Padlet, Mentimeter		0,5
1.4. The place and steps of development of computational thinking and life-skills	Lecture	Video on the RIDE website https://www.riderobotics.eu/methodology/Possibilities of development of computational thinking through different methods and activities https://youtu.be/uGOB7OABosQ	0,5	
1.5. Possibilities of usage ICT in the special education teachers' work	Lecture and brainstorming	Video on the RIDE website https://www.riderobotics.eu/methodology/		0,5

		<i>Use of ICT options for developmental teachers in their work</i> https://youtu.be/Z8OdDSY4zYM		
1.6.How involvement of robotics into the teaching process can assist and facilitate the development of strong side of the students (talent development) and weak side of them (competence development)	Lecture, case studies	Video on the RIDE website https://www.riderobotics.eu/methodology/ <i>How involvement of robotics into the teaching process can assist and facilitate the development of strong side of the students (talent development) and weak side of them (competence development)</i> https://youtu.be/Pjlq6YthNQU	0,5	

2.The RIDE method and the module matrix				
2.1.The philosophy behind the method	Lecture	Video on the RIDE website https://www.riderobotics.eu/methodology/ <i>The philosophy behind the RIDE project</i> https://youtu.be/IXbDL_pW350	0,5	
2.2.The Pan-European aspect of the RIDE method	Lecture	https://www.riderobotics.eu/stories/ https://www.riderobotics.eu/wp-content/uploads/2023/01/Teachers-Guide_EN-1.pdf	0,5	
2.3.What the structure of the module matrix is and how it can be used on the lessons.	Group work	Teacher's Guide https://www.riderobotics.eu/wp-content/uploads/2023/01/Teachers-Guide_EN-1.pdf Video on the RIDE website https://youtu.be/jRYhAaKz_W8		1
2.4.How to prepare for an ICT-assisted lesson	Lecture and brainstorming	Video on the RIDE website https://www.riderobotics.eu/methodology/ <i>How ICT can be used in the teaching of other subjects</i> https://youtu.be/Z351gVOkzpo		0,5
2.5.How the elaborated modules can be connected to curricular requirements of general studies	Group works	https://www.riderobotics.eu/stories/ Padlet, Jamboard		0,5
2.6.Differentiation in the education and in the RIDE method. How to use the variations for inclusive development	Lecture and group work	Video on the RIDE website https://www.riderobotics.eu/methodology/ <i>A few examples of robotics being applied in classroom differentiation</i> https://youtu.be/NMSnt9XjSLI	0,5	0,5

		https://www.riderobotics.eu/stories/		
2.7.Analyzing the goals and focuses at different age groups and needs of children	Groupwork	https://www.riderobotics.eu/wp-content/uploads/2023/01/Teachers-Guide_EN-1.pdf	0,5	
2.8.How to use the evaluation methods. Results of the impact assessment.	Lecture	https://www.riderobotics.eu/methodology/ <i>Documentation of evaluation methods and test hours</i>	0,5	
2.9.Possibilities of development in different fields with ArTeC robots	Lecture based on case studies	https://www.riderobotics.eu/ride-robotics-experiences-map/	0,5	
2.10.Building and programming ArTec robots	Lecture	Video on the RIDE website https://www.riderobotics.eu/methodology/ <i>Testing</i> https://youtu.be/DVk2OrMOGh0	0,5	

3. Training in robotics				
3.1 The Studuino software -parts and functions of the user interface -blocks, palettes DC motor -DC motor blocks -Simple movements forward, backward, turning with different power, turning with different direction of motor rotation -moving head, arm, tail, door with DC motor -simple choreography -driving along a specified route -wait -pick random	Discussion in a frontal setting, followed by individual work with teacher assistance	Robots, computers, task sheets Programming Guide https://www.riderobotics.eu/wp-content/uploads/2023/01/Artec_programming_guide_EN.pdf Technical Corner https://www.riderobotics.eu/wp-content/uploads/2021/04/Technical-Corner_EN.pdf		3
3.2 Touch sensor -test mode – how it detects touching (0,1) -simple program that starts when Touch sensor is pushed -start a movement when T.s. is pushed and finish it when pushed again -moving robot with a „remote control” of 4 touch sensors, usage of extension cable -forever -if, building the condition -wait until	Discussion in a frontal setting, followed by individual work with teacher assistance	Robots, computers, task sheets Programming Guide https://www.riderobotics.eu/wp-content/uploads/2023/01/Artec_programming_guide_EN.pdf Technical Corner https://www.riderobotics.eu/wp-content/uploads/2021/04/Technical-Corner_EN.pdf		2
3.3 LED -Connecting and programming LED-s -LED block -Blinking with 1 LED and with 2 LED-s -Lighting and movements, blinking and movements -port settings -repeat	Discussion in a frontal setting, followed by individual work with teacher assistance	Robots, computers, task sheets Programming Guide https://www.riderobotics.eu/wp-content/uploads/2023/01/Artec_programming_guide_EN.pdf		1,5

		Technical Corner https://www.riderobotics.eu/wp-content/uploads/2021/04/Technical-Corner_EN.pdf		
3.4 Buzzer -simple sound signs -sound of a car with siren -simple tones -building a piano -buzzer blocks -functions	Discussion in a frontal setting, followed by individual work with teacher assistance	Robots, computers, task sheets Programming Guide https://www.riderobotics.eu/wp-content/uploads/2023/01/Artec_programming_guide_EN.pdf Technical Corner https://www.riderobotics.eu/wp-content/uploads/2021/04/Technical-Corner_EN.pdf		1,5
3.5 IR photoreflector -testing, understanding it's way of operation -reacting on obstacle near to the robot -avoiding obstacle -stopping at a line -line tracing -staying inside a circle -forever -if, if else, building the condition -wait until, repeat until	Discussion in a frontal setting, followed by individual work with teacher assistance	Robots, computers, task sheets Programming Guide https://www.riderobotics.eu/wp-content/uploads/2023/01/Artec_programming_guide_EN.pdf Technical Corner https://www.riderobotics.eu/wp-content/uploads/2021/04/Technical-Corner_EN.pdf		3
3.6 Servo motor -technical notes (angles of the motor, calibration, how one can damage it, some building possibilities) -servo motor blocks -testing the servo motor -programming the servo motor	Discussion in a frontal setting, followed by individual work with teacher assistance	Robots, computers, task sheets Programming Guide https://www.riderobotics.eu/wp-content/uploads/2023/01/Artec_programming_guide_EN.pdf		2

-some example: animals (heads, tails), figures' arms, gates, catapult, barrier, etc.		Technical Corner https://www.riderobotics.eu/wp-content/uploads/2021/04/Technical-Corner_EN.pdf		
3.7 Light and Sound sensor -testing, understanding it's way of operation -similarities to IR photoreflector -robot starts when clapping -robot reacting on the intensity of sound (eg. the more sound intensity more LED to be turned on) -Light sensor built in into a ramp or truck -forever -if, if else, building the condition -wait until, repeat until	Discussion in a frontal setting, followed by individual work with teacher assistance	Robots, computers, task sheets Programming Guide https://www.riderobotics.eu/wp-content/uploads/2023/01/Artec_programming_guide_EN.pdf Technical Corner https://www.riderobotics.eu/wp-content/uploads/2021/04/Technical-Corner_EN.pdf		2

4. Projektmegvalósítás a RIDE módszertannal				
4.1 Possibilities of development of text comprehension and digital story telling using RIDE methodology and pedagogical toolset. Learn about the student and teacher documents and robot tools that are part of the toolkit	Lecture	Teacher's computer, projector, toolset, task sheets Modules https://www.riderobotics.eu/stories/ Teacher's Guide https://www.riderobotics.eu/wp-content/uploads/2023/01/Teachers-Guide_EN-1.pdf Programming Guide https://www.riderobotics.eu/wp-content/uploads/2023/01/Artec_programming_guide_EN.pdf Technical Corner https://www.riderobotics.eu/wp-content/uploads/2021/04/Technical-Corner_EN.pdf	1	
4.2 Bringing texts to life with mobile robots -modelling actors' movements, voices and interactions with ArTeC robots -building and programming robots using the task sheets	Group work with teacher assistance	Robots, computers, task sheets Modules https://www.riderobotics.eu/stories/ Programming Guide https://www.riderobotics.eu/wp-content/uploads/2023/01/Artec_programming_guide_EN.pdf	2	

		Technical Corner https://www.riderobotics.eu/wp-content/uploads/2021/04/Technical-Corner_EN.pdf		
4.3 Bringing texts to life - using robots like puppet theatre or modelling terrain and buildings. -deepening the programming of servomotors -building castles, houses and opening and closing structures	Group work with teacher assistance	Robots, computers, task sheets Modules https://www.riderobotics.eu/stories/ Programming Guide https://www.riderobotics.eu/wp-content/uploads/2023/01/Artec_programming_guide_EN.pdf Technical Corner https://www.riderobotics.eu/wp-content/uploads/2021/04/Technical-Corner_EN.pdf		2
4.4 Ideas and technical help for presentation	Lecture based on study cases, followed by a brainstorming	Ideas and technical help for presentation https://www.riderobotics.eu/wp-content/uploads/2023/01/Ideas_for_presentation_EN.pdf Blog https://www.riderobotics.eu/ride-robotics-experiences-map/	1	