LESSON PLAN - FORM PERIOD (3rd stage of education)

Topic: Randomness in human life and key skills

Participants: secondary school or vocational school students, the lesson can also be conducted with other groups of young people over 14 years of age.

Duration: 45 minutes

Lesson objectives:
The student:
- empathises with the actual characters and has a deeper understanding of the realities of the Polish-Bolshevik War;
- understands that some literary works determine people's lives;
- expresses opinions and presents arguments;
- knows who Jan Kowalewski was and what he became famous for;
- familiarised himself with the educational game "Cyphers Game";
- understands which competencies are considered key nowadays.

Methods: exploratory, discussion, document analysis

Materials:

→ Cyphers Game - is an IPN gaming project that takes a closer look at the history of the Polish-Bolshevik War. It is available for free on Steam and is compatible with VR goggles, Windows PC and mobile devices supported by iOS and Android. It was developed as an FPP (first person perspective) game, consisting of three missions. They describe the course of the Polish-Bolshevik War and the influence of Polish cryptology on its victorious outcome. Each player can break the Bolshevik ciphers and destroy a Soviet armoured train. Players take on the roles of authentic soldiers of the 1920 Polish-Bolshevik War, operate complex communication devices from 100 years ago and save Europe from communist enslavement.

→ Jan Kowalewski's biography (Appendix no. 4)

→ Alternatively, small sticky notes for students to write down their ideas for acquiring the knowledge and skills they need to succeed in life and larger cards with the names of the key competences to stick on the board. If you do not want to use sheets of paper, you can use free mind map or diagramming software for this purpose.

→ Dictionary of the Polish language - you can use the publicly available online version

→ Deciphered Soviet dispatch

COURSE OF THE LESSON

No.	Course of the lesson	Time in minutes	Materials
1.	Students are introduced to “Cyphers Game” individually at home or during one of their form periods. https://ipn.gov.pl/pl/dla-mediow/materialy-do-pobrania/162352,Gra-szyfrow-najnowszy-projekt-gamingowy-Instytutu-Pamieci -Narodowej.html		“Cyphers Game”
2.	The teacher provides information on “Cyphers Game”, emphasising that it depicts the true fate of Polish cryptologists who contributed to defeating the Bolshevik invasion despite Russia’s overwhelming superiority.	2 min.	
3.	We define the concept of cryptology. You can also discuss the topic of breaking the Enigma code by Polish cryptologist Marian Rejewski. You can encrypt the word “cryptology” using a code known to the teacher, e.g. the Morse code -.- .-. -.-- .--. - --- .-.. --- --. .. .- Any message can be encrypted or decrypted using the Morse code online: https://morsedecoder.com/pl/ . If students have not played “Cyphers Game” before, they can play a section of the game available online, in which they have to decode a piece of the message using a comb.	5 min.	the encrypted word cryptology, traditional or online Polish language dictionary
4.	Students read Jan Kowalewski’s biography (Appendix no. 1)	5 min.	(Appendix no. 1)
5.	We talk about the fact that Jan Kowalewski’s first decoding experience was reading Edgar Allan Poe’s *The Gold-Bug.* Apparently, when he was replacing a sick colleague at work in the Cipher Section in August 1919, to pass the time he began to decipher a Soviet dispatch using a method of searching for sequences of repeated characters that he had read about in Poe’s book. It is worth mentioning that Kowalewski is not the only person who has literally used the descriptions in a book. Heinrich Schliemann, who found the ruins of ancient Troy on the basis of the descriptions contained in Homer’s *Iliad,* followed a similar path. If the students have not previously participated in a lesson concerning “Cyphers Game” in other classes, you can show them what a decrypted Soviet dispatch looked like (Appendix no. 2).	5 min.	(Appendix no. 2)

6.	You can talk to students about randomness in life. Do students think they will achieve more with their work and commitment or is luck a pre-condition for success? Depending on the interest of the students in discussing the topic, we can extend the discussion or postpone it to the next form period and organise, for example, an Oxford debate or a debate in another form. We reflect with the students on what events, knowledge, life decisions led Jan Kowalewski to become a cryptologist and contribute significantly to the prevention of Russian aggression against Poland during the Polish-Bolshevik War. Guiding questions: - What was Jan Kowalewski's education? - What languages could he speak? - What did he do during the First World War and what significance did this have later?	10 min.	
7.	What can young people do today to help them succeed in life? What areas of life cannot be neglected? What knowledge is useful in today's world? What skills should be trained? Depending on the time and commitment of the students, you can talk to them or create a map of future competences together. Students write on a piece of paper those competences which they feel are most needed in the future. They can be situated on cards with the names of the key competences developed in accordance with the EU Council Recommendation of 22 May 2018 on key competences for lifelong learning: a) competence in understanding and producing information b) multilingual competence a) mathematical competence and competence in science, technology and engineering b) digital competence c) personal, social and learning to learn competence d) civic competence e) entrepreneurship competence f) cultural awareness and expression competence	15 min.	Sticky notes, cards with the names of the key competences, magnets or access to a mind map

8.	An individual conclusion of the activity could be for students to reflect on which key skill is their strength and which they would like to work on - 2 minutes	3 min.	

Appendix no. 1

Jan Kowalewski - biographical note

The records of the Merchants' Assembly Trade School, which Jan Kowalewski attended in Łódź, provide his date and place of birth - 24 October 1892, Łódź. He lived on Piotrkowska Street and both this and the fact that photographs from a trip with his parents to Nice, France, have survived suggest that he came from a relatively well-to-do family. In his memoirs, he wrote about his uncle, who was a mining engineer working in the Dabrowa Basin. The uncle supplied the Combat Organization of the Polish Socialist Party with dynamite from mine depots during the 1904-1907 Revolution. The social and political gains achieved during this revolution made it possible to establish Polish schools in the Congress Kingdom of Poland, with Polish as the language of instruction. It was to such a school - the Merchants' Assembly Trade School - that young Janek went to. There he became involved with a student conspiracy focused on reading banned books and celebrating national anniversaries. The school had the qualification of a real lower secondary school (*Realgymnasium*) (i.e. in addition to providing general knowledge, also a real profession) with a Polish secondary school leaving exam, which, however, did not give the right to enter universities in Russia.

After completing secondary education in 1909, Jan went on to study chemistry at the University of Liege in Belgium. Already in secondary school, in addition to Russian and German, he learned French which was a prerequisite for studying abroad. He graduated in 1913 with a so-called half-engineer's diploma (equivalent to a bachelor's degree) in technical chemistry. He intended to work in the sugar industry - in the summer of 1913 he went to Ukraine for an apprenticeship in the local sugar mills. He was in Ukraine at the outbreak of the Great War, as World War I was called. As a Russian subject, he was mobilised into the Russian army and, as a chemist, sent to serve in the chemical formations. Along with other technical formations including telegraph and radiotelegraph, they were part of the engineering forces. Jan Kowalewski gained experience during his service in the Russian army in both carrying out and countering gas attacks (he was even poisoned and admitted to hospital) on the Romanian front, where he fought as part of the Ninth Army. He served as a communications officer on duty, was familiar with the pragmatics of the service, and encrypted and decrypted dispatches sent by Russian radiotelegraph stations, which became his asset in the subsequent decryption of Bolshevik radiotelegrams. After the February Revolution of 1917 in Russia, Jan Kowalewski co-founded the Union of Military Poles in the Russian army and then joined the Second Polish Corps, which was being organised in Ukraine, where he was assigned to the intelligence branch of the corps headquarters. After the Battle of Kaniów, he was active in the clandestine Polish Military Organisation, subordinate to Headquarters No. III in Ukraine. He then made his way from Ukraine to Kubań, where he joined the 4th Rifle Division, which was being formed at that time, and returned with it to Poland via Romania in June 1919.

In the Polish Army, he was assigned to the staff of General Józef Haller's Army in Volhynia, and then to the Second Division (Information and Intelligence) of the Supreme Command of the Polish Army. In August 1919, at the request of Lt. Bronisław Sroka, he replaced him on night duty at the General Staff, during which he broke the first Russian cipher "Dieliegiat", used by the 12th Soviet Army in Ukraine. As a consequence of this success, Lt. Kowalewski was entrusted with the task of organising Second Department of the Cipher Bureau, which dealt with decryption, i.e. breaking foreign ciphers. Thanks to their work, the Commander-in-Chief and the analytical cells of the General Staff of the Polish Army were able to access the secret correspondence of all parties to the armed conflict taking place in Ukraine

and Russia: the Red Army, the "white" Volunteer Army, the troops of the Ukrainian People's Republic and the Ukrainian Galician Army.
Based on partially preserved archival resources, by the end of the war, the Polish radio intelligence had broken more than 100 Soviet cipher keys and decrypted more than 3,500 - 4,000 ciphertexts. During the most heated period of Poland's war with Bolshevik Russia, in July and August 1920, about 400-500 of ciphertexts were decoded each month, i.e. a dozen per day. They provided a basis for making rational strategic, operational and political decisions and allowed to, at least partially, eliminate the huge advantage of the Red Army in terms of numbers and weapons.

After the end of hostilities with Bolshevik Russia, Lt. Jan Kowalewski served a line internship before being promoted to the rank of captain, commanding - in late 1920 and early 1921 - a company in the 6th Scout Infantry Regiment of the Central Lithuanian troops. He was then assigned to the Office for the Protection of the Upper Silesia Plebiscite (which was a secret Polish military headquarters), after which he headed the Intelligence Branch during the Third Silesian Uprising. At the time, he was breaking the German ciphertexts of the Reichswehr's border military districts. He also read the cipher correspondence of Czechoslovakia and possibly Lithuania. For his merits during the war against Bolshevik Russia, the fighting against Kaunas Lithuania and the Germans, he was awarded the Silver Cross of the Order of War Virtuti Militarii, three times the Cross of Valour. General Władysław Sikorski, familiar with Jan Kowalewski's achievements in the field of radio intelligence, when presenting him with Poland's highest military decoration said: - "This is for a victorious war, Captain!" and winked.

A group of Japanese officers (including Capt Yamawaki Masataka) were interned at the Polish Cipher Bureau. In 1923, Jan Kowalewski was posted to Tokyo, where he conducted several months of training in breaking Russian ciphers and helped to organise the Japanese Cipher Bureau and radio intelligence structures. For this he was awarded Japan's highest military decoration – the Order of the Rising Sun. After returning to Poland, he completed further line placements as battalion commander in the 60th Infantry Regiment in Ostrów Wielkopolski and the 74th Infantry Regiment, and after being promoted to the rank of major, between 1925 and 1927 he studied at the French Military Academy (Ecolesuperieurede guerre), receiving the title of a commissioned officer. Due to his excellent knowledge of military affairs in Bolshevik Russia, he became a military attaché in Moscow in 1928, but was considered persona non grata and forced to leave the post in 1933. He was transferred to neighbouring Romania for an identical position. He served as Poland's military representative there until 1937. On his return to Poland, he briefly became chief of staff of the Camp of National Unity, but felt uncomfortable in an organisation concerned with internal politics. He returned to intelligence matters with his appointment as director of TISSA - Strategic Raw Materials Import Society SA.

After the outbreak of the Second World War, he continued to be associated with Polish military intelligence and was active in the Bucharest Committee for the Assistance of Polish Refugees. He also maintained contacts with a network of Japanese military attaches in German-occupied Europe, which gave support to Polish intelligence networks. Thanks to his mediation, a group of officers from the Russian section of the Polish Cipher Bureau went to Tokyo, where - until December 1941 - they were engaged in breaking the Red Army's secret correspondence. After the defeat of France, Jan Kowalewski went to Portugal, where, on the authority of General Władysław Sikorski, he headed the so-called Liaison Post with the Continent. Among other things, he held talks with the military and diplomatic representatives of Romania, Hungary and

Italy ("Operation Tripod"), preparing the ground for the transition of these countries from the "Axis" side to the Allied side and the preparation of the political and military conditions for the landings and offensives in the Balkans. This was in conflict with the interests of Soviet Russia, for which the Balkans were to become an area of expansion. As a result of Stalin's pressure at the Tehran conference (it was the second time the Soviet dictator had personally intervened in Kowalewski's case), he was recalled from Lisbon to London in the spring of 1944. Until the end of the war, Colonel Jan Kowalewski remained an analyst for Polish military intelligence (especially on Russia and communism), and after demobilisation he remained in exile in the UK, working with the Józef Piłsudski and Gen. Władysław Sikorski institutes. Together with a group of English intellectuals and emigrants from countries that were behind the "Iron Curtain", from 1955 he was the publisher and editor of the monthly "EastEurope and Soviet Russia", presenting studies in the field of Sovietology. He was also associated with Radio Free Europe's Polish Broadcasting Service, where he broadcast programmes and memoirs on the war against Bolshevik Russia and World War II, as well as issues relating to the "Eastern Bloc". His last achievement in the field of cryptanalysis was - on the eve of the 100th anniversary of the January Uprising - the breaking of ciphers of the Polish National Government (the so-called Traugutt ciphers), stored in the British Museum's collection, used in correspondence with foreign representations and within the country.

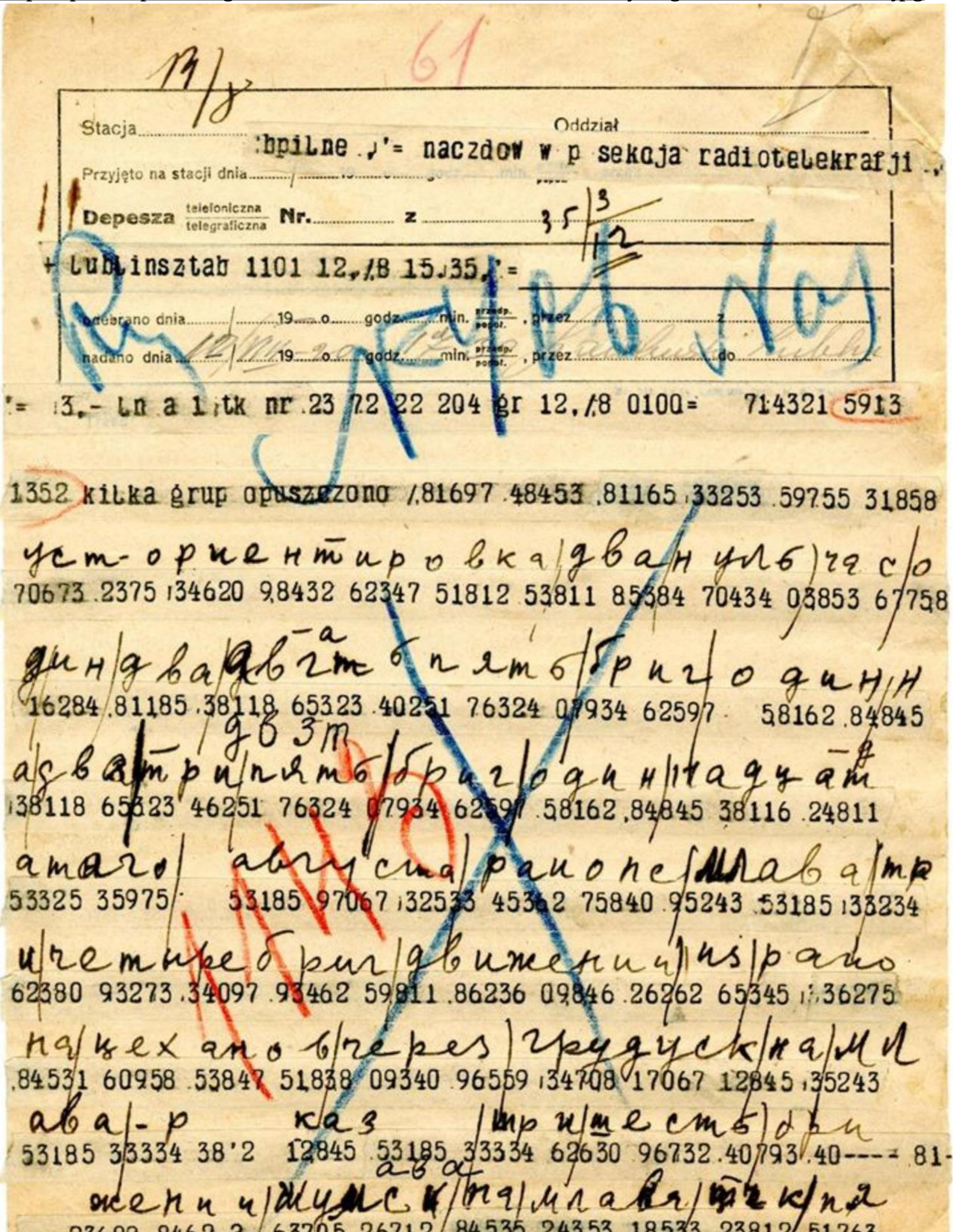
Jan Kowalewski died on 31 October 1965 in London. In 2012, the President of the Republic of Poland Bronisław Komorowski posthumously awarded Col. Jan Kowalewski the Grand Cross of the Order of Polonia Restituta. On 23 October 2014, a plaque was unveiled on the facade of the house on Piotrkowska Street in Łódź where Jan Kowalewski lived. By resolution of the Senate of the Republic of Poland of 17 October 2019, the year 2020 was declared the Year of Jan Kowalewski. The cryptologist's merits have not only inspired scientific studies, but also formed the plot of the drama *The Man Who Stopped Russia*, presented as part of the *Teatr Telewizji* series in 2018.

Grzegorz Nowik

https://niepodlegla.gov.pl/wp-content/uploads/2022/08/Jan-Kowalewski-biografia.pdf

Appendix no. 2

source of illustrations
https://upload.wikimedia.org/wikipedia/commons/b/b3/Kowalewski_1920.jpg
https://pl.wikipedia.org/wiki/Jan_Kowalewski#/media/Plik:Szyfrogram_sowiecki_1920.jpg



Stacja Oddział
:bpilne .,'= naczdow w p sekcja radiotelekrafji .,
Przyjęto na stacji dnia 19 o godz. min.
Depesza telefoniczna telegraficzna Nr. z
+ Lublinsztab 1101 12./8 15.35,'=
Oddano dnia 19 o godz. min. , przez z
nadano dnia 19 o godz. min. , przez do
'= 3.- Ln a 1 tk nr 23 72 22 204 gr 12./8 0100= 714321 5913
1352 kilka grup opuszczono /.81697 .48453 .81165 33253 .59755 31858
70673 .2375 34620 9.8432 62347 51812 53811 85384 70434 03853 67758
16284 .81185 .38118 65323 .40251 76324 07934 62597 58162 .84845
38118 65323 46251 76324 07934 62597 .58162 .84845 38116 .24811
53325 35975 53185 97067 32533 45362 75840 95243 53185 33234
62380 93273 .34097 .93462 59811 .86236 09846 .26262 65345 36275
.84531 60958 .53847 51838 09340 96559 34708 17067 12845 35243
53185 33334 38'2 12845 53185 33334 62630 96732 .40793 .40--- 81-
--- .23609 .8462-?- 63705 26712 .84535 24353 18533 .23812 51763

Ściśle tajne.

Tłumaczenie szyfrogramu.

Od: SztabuIV armji Do: SztabuZachodn. frontu Przejęto: 14/VIII. Odczytano: 15/VIII.

Rew. 441.

Uwagi	TREŚĆ
Oficerów /- równa się -„komandnyj sostaw", walczących - równa się -„bojaow"	ŁOMŻA. dn.13/VIII. DO Szefa Sztabu Zachodniego frontu.- Podaję meldunek o stanie liczebnym IV armji według danych, na 10/VIII. 12 dywizja strzelców : oficerów-518, bagnetów 2823,szabel - 376,walczących - piechoty: 3540,zaprowiantowanych - 9263,karabinów maszynowych - 86.Dział polowych - 24, ciężkich dział-3, koni - 3083,wozów - 837. 18-a dywizja strzelców: oficerów-482, bagnetów-4289, walczących - piechoty:- 6807, zaprowiantowanych - 11490.Karabinów maszynowych-97, automatów - 29, dział polowych - 23,koni-1606, wozów - 560. 53-a dywizja strzelców : oficerów-573, bagnetów - 2145, szabel - 62, walczących piech.-4593, zaprowiantowanych-10636,karabinów maszynowych -7.,automatów - 25,dział pol. - 24,koni-2530,wozów - 712. 54-a dywizja strzelców:oficerów- 660 , bagnetów - 3218,walczących piech.- 5624,szabel - 160,zaprowiantowanych - 13273, karabinów maszyn-118,automatów - 28,dział polowych - 6,koni -752, wozów - 237. 163 brygada strzelców:oficerów-206,bagnetów -1390,walczących piech.-2406, zaprowiantowanych - 3786,karabinów maszynowych - 35,dział polowych - 8, koni ..... (brak końca)

Deszyfrował:

Za zgodność z oryginałem: Kowalew

Naczelnik Wydz. 2.

NACZELNE DOWÓDZTWO W. P.
(SZTAB GENERALNY)
Oddział II. Biuro Szyfrowe
Sz. №35552. /II.

Warszawa, dnia 192

Rozesłano według rozdzielnika Nr. 1.

Kapitan i Szef Biura Szyfrowego.

Zakł. Graf. Nacz. Dow. Nr. 1480. 10000. 8.VII.20.