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Using Authentic Online Resources in Russian for STEM Coursework for Novice through Superior Level Learners

Molly T. Blasing
University of Kentucky, mtblasing@uky.edu

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1. Introduction

In Fall 2020, as the COVID-19 pandemic raged across the world and upended so many aspects of our lives, I was faced with two completely new pedagogical challenges. Like many world language instructors, I was teaching language courses online for the very first time. Fall 2020 was also the semester I was scheduled to teach the pilot version of a course that I have been developing for Advanced level learners of Russian at the University of Kentucky called Languages for Special Purposes: Russian for STEM. In this article I have two main goals: to make a case for increased inclusion of STEM language instruction in a Humanities framework in Russian programs across the country; and to offer models of asynchronous learning activities at all levels using content from STEM fields. These activities, on topics such as climate change, epidemiology and vaccine development, and the past and future of space exploration, are based on authentic online resources and could be used either in online instruction or as preparation for face-to-face engagement.

I first began to imagine a Russian language course designed around material from STEM fields in 2015, when a chemistry major in my second-year Russian course was preparing a presentation on Mendeleev and the Periodic Table. As we worked together to access the language she needed to talk about this tool at the Intermediate level, I had important realizations about student-instructor partnerships in STEM language learning. As we pored over the Periodic Table in Russian and conceived of how to explain its structure, we were essentially on equal footing: I had more facility reading and writing Russian, but she knew the chemistry. The student reminded me how the Table of Elements was organized, and I used internet resources on chemistry to find the right verbs to express these key concepts in Russian. Working together, we developed a simplified definition that she was able to use in her presentation. Two lessons remain with me from that time: how enthusiastic and motivated this student was to be able to talk about

her intellectual passion in a second language, and how it was possible for me to collaborate with other people to combine STEM content knowledge and language pedagogy in productive ways.

My Russian for STEM course is taught at the Advanced level (ACTFL 2012), and its content modules incorporate field-specific lexical development, advanced work with numbers, the language of experimental design and data analysis, and historical and sociocultural aspects of the topics we study. In Fall 2020, my students worked through units on COVID-19 vaccine development, climate change and the Russian Arctic, and the history and future of space exploration with a focus on Mars. They also interviewed science and engineering graduate students at Skoltech, a graduate institute on the outskirts of Moscow, as part of a virtual exchange opportunity to connect with native Russian-speaking scientists. While a semester-long course is one approach to establishing connections between Russian language and STEM content, I offer in the Appendix to this article stand-alone lesson plans that can be used in Russian language courses at all levels, from Novice to Superior. These are lessons that were developed as part of the online course taught during the pandemic, but regardless of whether they are employed as part of in person or online courses, they are meant to be completed asynchronously, as preparation for interpersonal or presentational communication during subsequent synchronous sessions.

2. Why Russian for STEM?

We have data suggesting that student professional interests in Russia-related fields have shifted and diversified since the collapse of the Soviet Union. Careers in government service, business, journalism, education, and the military are of increasing interest to our graduates (Merrill 2013; Martin 2020, 30-31). Being proficient in discussing developments in STEM fields in a second language is excellent preparation for our students to enter these career areas, which require both intercultural competence and an understanding of technological and scientific innovation. STEM language courses are potentially useful recruiting tools as well. Advertising a Russian for STEM course at student orientations may entice learners who are planning to major in STEM fields to join our beginning Russian language classes. The promise of a course integrating student interest in the sciences, alongside international policy discussions, cross-cultural exchange, and perhaps even STEM internships abroad, could boost enrollments in lower-level language courses and motivate students to continue into the third- or fourth- year level to take this specialized course.

As Grandin and Berka (2014) argue in their article about an innovative

dual degree program in engineering and world languages at the University of Rhode Island, "the realities of a technologically driven global society demand a reconsideration of the roles of the humanities. To be liberally educated today demands significant background in both humanistic and technical endeavors" (29). The University of Rhode Island's International Engineering Program (University of Rhode Island n.d.), as well as a similar dual degree STEM + World Language program at the University of Kentucky (University of Kentucky n.d.) and MIT's Road Maps to STEM + Languages degree and career options (Massachusetts Institute of Technology n.d.) are model programs for showcasing the pathways available to combine student interests and professional ambitions in STEM and world language fields. Developing stand-alone Russian for STEM courses, or even simply integrating STEM content into our existing language classes may be useful first steps toward demonstrating to administrators the interest students have in these kinds of dual degree programs as well as our programs' ability to adapt to student preferences.

Even if institutions do not aspire to dual degree programs, students at all levels, from Novice to Superior, can benefit from lessons on science and technology as part of the regular curriculum. At the core of this vision for Russian for STEM is a recognition that students graduating from our programs should be poised to engage with Russia as a fully modern, technological, and scientific global power. The Russian for STEM lessons I propose here are not aimed primarily at supporting future Russian-speaking scientists, although that is one possible outcome. The central goal, rather, is to begin to prepare students for careers as global language professionals—translators, business leaders, public health experts, intelligence specialists, diplomats, and journalists—by equipping them with a solid foundation in the lexical, conceptual, and communicative strategies that are employed in the fields of science and technology.

3. Russian for STEM as Humanities Pedagogy

Higher education administrators, politicians, and parents in recent years have forcefully advocated for the usefulness and employment potential of STEM majors for college students (Cohan 2012; Gates and Mirkin 2012; Lewin 2013; Jay 2014; Jaschik 2016; Stover 2017). There are equally powerful voices advocating for students to develop the critical thinking, historical understanding, analytical writing, and intercultural competence skills that emerge from training in the humanities (Bérubé 2013; Hirsch 2013; Schmidt 2018; Ruggeri 2019). One lesson that has emerged from teaching STEM topics in a fully online format during a global pandemic is just

how much the humanities, social sciences, and sciences have in common. Although these distinct fields approach questions and problems from different perspectives, each discipline takes an interest in how humans exist in the world. STEM content lessons in world language classrooms are based on human exploration and observation of the world, and the way humans and nature interact in this world and in outer space. A Russian for STEM course should not be seen as capitulation to the forces in higher education that suggest that STEM is the only guaranteed path to success. Rather, STEM language learning makes use of Humanities methods in ways that challenge the unnecessarily limited, anti-Humanities way in which some people imagine STEM (Beam 2016). Russian for STEM is wonderfully subversive of this disciplinary divide because the course is as much about culture, history, politics, and everyday life as it is about science, technology, engineering, and mathematics. A language and culture course that empowers students to talk about science and technology and their connections to history, culture, and the natural world will prepare students well to take positions in the twenty-first century working world, where connections increasingly need to be drawn, as the World-Readiness Standards suggest, among the products, perspectives, and practices of people around the globe (National Standards Collaborative Board 2015).

Russian for STEM has broad appeal not only among STEM majors, but also among those majoring in the Humanities and Social Sciences. My course, for instance, attracted students from several different areas of campus: an Honors College Russian major who was also pre-med; a heritage learner chemistry major who was applying to pharmacy school; an international studies major who was a member of Air Force ROTC; a retired community member enrolled in our institution's program for citizens in our state aged 65+ for continuing education; and two MA students from our Patterson School of Diplomacy and International Commerce who were pursuing a diplomacy concentration. The varied composition of student interests and foci meant that the group approached the material from different perspectives and knowledge bases, which allowed for productive collaboration on assignments and a diverse array of presentation topics based on the students' personal interests. As one of the diplomacy graduate students put it, "My favorite part of the course has been learning from other students with expertise in the hard sciences. At the Patterson School we study many global issues — like COVID-19 and climate change — that can only be resolved through policy informed by science. The class feels like a practice interaction between the science and policy focused students

that needs to happen in the real policymaking world" (Piercy 2020).

While colleagues across the U.S. seem to recognize the value of teaching subject matter that may align better with our students' future careers in Russia-related fields, instructors of Russian may hesitate to teach Russian for STEM. A major point of resistance to such a course is that instructors of Russian may not feel capable of teaching a STEM topics course because we ourselves are not specialists in these content areas. I operate, however, from a belief that language instructors are absolutely qualified to teach STEM language courses. It is precisely our training as specialists in language, literature, and culture that positions us well to support students in meeting these challenges. The fact that we are not specialists in science, technology, engineering, and mathematics means that we must necessarily cede the "sage on the stage" model of pedagogy in favor of the "guide on the side" paradigm (King 1993). Our personal subject matter gaps enable us to embrace more collaborative, student-centered learning models, which we know work well for cultivating lifelong learners. At the same time, we possess skills, knowledge, and organizing principles that are critical to the process of teaching and learning the language of STEM fields. Language teachers are skilled at scaffolding assignments, guiding textual analysis, building new lexical bases, and illuminating grammatical structures. Philologists are particularly adept at helping students make sense of the stylistic and genre conventions of texts, including science journalism, research articles, and informational presentations about developments in STEM. STEM texts are conducive to supporting students' acquisition of grammatical structures, including verbal governance, participles, passive constructions, nominalization of verbs, devices of coherence and cohesion, and complex syntax.

Teaching the subject matter of STEM fields in another language is not substantially different from teaching about literature, art, film, business, or history. At the core of any work on Languages for Special Purposes are vocabulary development, lessons on complex syntax and stylistics, and the facilitating of opportunities for improving intercultural competence, all areas in which traditionally trained language teachers are more than equipped to support our students (Humbley, Budin, and Laurén 2018). Russian for STEM lessons also work well for engaging the World-Readiness Standards because the material offers numerous opportunities for exploring cross-cultural comparisons of responses to disease, climate change, or natural disasters; connecting with Russian-speaking scientist communities at home and abroad; learning how scientific inquiry relates

to politics, diplomacy, and international relations; and analyzing linguistic and stylistic differences in science communication.

4. Russian for STEM as Cultural Content

Reflecting on data from recent studies, Kraemer, Merrill, and Prestel (2020, 57) ask whether Russian instructors might look in new directions for potential course material that connects with broader cultural competence:

> The main focus of traditional Russian programs has been on developing language skills, with cultural content often understood as literature, usually in translation (Merrill 2013). Programs should ask if this approach achieves the objective of preparing globally competent students who can meet the challenges of the 21st-century job market. If they decide the answer is no, one solution is to move toward a model that emphasizes global competence as defined in the World-Readiness Standards; that is, developing students' ability to "use the language to investigate, explain, and reflect on the relationship between the products and perspectives of the cultures studied" (NSCB 2015).

One of the key takeaways from my pilot semester teaching Russian for STEM was that materials from STEM fields can be harnessed for discussions of a wide range of topics related to cultural practices, products, and perspectives across different national traditions. In the World-Readiness Standards, the term "practices" refers to "patterns of social interactions accepted by society" (Cutshall, 33). "Products" are "[tangible and intangible] items required or justified by the underlying beliefs and values of that culture" (Cutshall, 33), and "perspectives" are understood as meanings, attitudes, values, and ideas that "represent that culture's view of the world" (Cutshall, 33). Within this Standard, students are meant to "demonstrate an understanding of the relationship between practices and perspectives of the culture studied" as well as the relationship "between the products and perspectives of that culture" (Cutshall, 33). What are some examples of how these relationships can be studied in the context of STEM content?

Our units exploring vaccine development and climate change in Russia and around the world enabled students to explore the dynamic relationships between the cultural concepts "products, perspectives, and practices." We discussed perspectives and products as we studied how and why the Russian Federation became the first nation to release a COVID-19 vaccine. A video we used featuring a Russian-speaking vaccine researcher in Israel led to inquiries into the broader topic of diaspora communities

and Jewish emigration from the former USSR. We investigated culturally specific responses to the global pandemic by comparing our own Centers for Disease Control and Prevention website to that of the Russian Ministry of Health to observe different practices, products, and perspectives connected to informing the public about mitigating the spread of the coronavirus. At the same time, we read and discussed how different countries had different priority populations for early vaccine distribution. In studying the way climate change is shaping the Russian Arctic, we looked at the economic potential of and cultural perspectives on the Northern Sea Route, an engineering "product" that is transforming the shipping industry around the world. We also explored how climate change is impacting the way of life for native peoples in communities in the Russian Far North, which allowed us to explore ethnic, linguistic, and cultural diversity across the regions of Russia.

The topic of outer space also intersects with aspects of culture in compelling ways. Developments in space exploration relate to major questions about the future, but space is also integral to everyday life and the relationship between the practices and products of people living in twenty-first century developed societies. As Gen. John Raymond noted in a recent interview about the importance of space for the average person living in the US, Russia, China, or Europe today, "If you did any kind of internet banking, that was enabled by space capabilities. If you went to the gas station and bought gas at the pump and didn't have to walk inside to pay, that was enabled by space station [sic]. If you got a weather report, that was enabled by space station. It is fused into everything that we do… everything that we do is enabled by space" (Swisher 2021, 19:25-20:39). Furthermore, the history of the space race and contemporary competition and cooperation in space has as much to do with politics, diplomacy, and cultural history as it does with science and technology. Studying the history, structure, and mission of the International Space Station and U.S.-Russian cooperation and competition in space creates myriad opportunities for analysis of cultural perspectives, practices, and products related to technology, but also to other aspects of culture such as visual art. Moscow's Muzei Kosmonavtiki (https://kosmo-museum.ru/) and the Smithsonian's National Air and Space Museum (https://airandspace.si.edu/) each have robust websites available for exploration and cross-cultural comparison. Space also offers to cultural studies a vast archive of Soviet and American posters and artwork celebrating and commemorating major developments in space exploration which can be used to analyze the history of technology, as well as visual rhetoric and artistic innovation. Soviet posters on space

themes are widely available and easily accessible online (Jones 2019). The United States also commissioned work from major artists, including Andy Warhol, Norman Rockwell, and Annie Leibovitz, to visually document the U.S. space program, materials that are ideal for exercises in description and cross-cultural comparison (Halliday 2019). Even the part of my course in which students learned about and practiced identifying the distinctions between different genres of scientific and scholarly reporting (*annotatsia, referat, retsenzia*) offered an opportunity for cross-cultural comparisons of data analysis practices and research reporting methods within scientific communities. Additional topics of cultural and political relevance might include science and literary creation (doctors as writers; Soviet and post-Soviet science fiction); the social history of technology (the periodic table, cinema, photo-journalism, satellites); and the biochemistry and politics of doping in Olympic sports.

While Russian for STEM is not what typically comes to mind when we think about teaching culture, these instructional materials offer surprising avenues for meeting students' desire for curriculum that prepares them for a globally interconnected society. Science and technology are in many ways the study of everyday life, of interactions between humans and the natural world. The history of science informs and illuminates other aspects of cultural history, and science and the arts can inspire one another in profound ways, as any lover of science fiction knows. Indeed, we might think of the culture of scientific inquiry as a cultural category unto itself, one that will prepare our learners to be successful global language professionals in jobs as diverse as translator, journalist, diplomat, doctor, or scientist.

5. Blended Learning and Lesson Plans for Novice to Superior Levels

In the absence of a formal textbook for my course, almost all the materials I developed were housed in OneNote, a free, highly customizable note-taking app from Microsoft. A key benefit of OneNote is that it handles a variety of media extremely well and it has excellent functionality for collaborative work. Instructors can embed links, videos, podcasts, maps, and images in pages of the virtual course notebook, and learners who have a stylus and tablet can write directly into the document, which is updated in real time, while others can annotate using built-in annotation tools. Students can easily copy learning materials to their own personal folders in the course notebook, or they can work together on collaborative activities. Homework and personalized vocabulary lists can be stored in the private folders accessible only to the individual student and the instructor. Online

learning platforms and a pedagogical approach that asked the students to co-create the material under study affords participants the flexibility to respond to the ever-evolving nature of scientific discovery and technological innovation. Remote learning also facilitates student-centered approaches to teaching and learning a language and encourages the types of practices needed for students to become life-long learners (Martin 2016).

As we reflect on the experience of teaching online during the pandemic and contemplate our return to "normal," many instructors are assessing the benefits of continuing to engage learners in asynchronous learning activities to build certain skills, while ensuring that our more limited face-to-face instructional time is used for activities that demand more interaction and shared physical space. Blended learning is not a new concept (Spasova and Welsh 2020), but it is one that we anticipate will have broader appeal in the post-pandemic learning environment (Gacs, Goertler, and Spasova 2020).

The lesson plans that follow in the Appendix are primarily asynchronous learning activities that emerged from tasks I created for the fully online Fall 2020 Russian for STEM course. The lessons are substantially revised to fit the needs of learners at each level, Novice through Superior. Each activity includes an interpretive reading or listening task designed around an authentic video, audio, or reading text from a variety of Russian news and popular science sources. In most cases this is followed by a presentational or interpersonal speaking or writing activity to apply the lessons of the interpretive mode tasks. The activities are meant to support a blended learning approach to Russian for STEM and offer students ample time to process and explore the lexical, grammatical, and cultural factors at work within the topics under investigation. The activities that appear here are presented as asynchronous learning activities, but they can function as the point of departure for activities an instructor may develop for in-person sessions as well.

The Novice level activity asks learners to read, listen to, and map the geographic regions that comprise the Russian Arctic. The activity also includes a suggestion to extend this activity and build learners' knowledge base about the effects of climate change on Arctic communities and the environment through a reading in English and a task in which learners add the locations mentioned in the article to their digital map. While a 2020 article in *The New Yorker* is suggested, any recent news article on this topic would be a suitable substitute. The Intermediate activity is built around a short news story about the 2016 return of the participants in the "Year in Space" project on the International Space Station. The activity asks learners

to employ new vocabulary to answer a set of simple questions about the mission. The Advanced level activity focuses on vaccine development. A *BBC Russian* video about work on a coronavirus vaccine at a laboratory in Israel asks students to employ new vocabulary and structures to explain the typical stages of vaccine development and testing protocols. Suggested Superior level activities build on the vaccine development work to engage students in a debate about the benefits and drawbacks of releasing a vaccine during a global health crisis before it has undergone all stages of clinical trials. Another activity offers an exercise in reading and translating key passages from published research studies related to COVID-19 stored in a database of scientific journal articles from around the world on the website of the World Health Organization.

6. Recommended Resources and Textbook on Structure of Scientific Texts

Instructors will find a wealth of STEM content resources on the websites of the Arctic Council, ROSATOM, ROSCOSMOS, and the Russian Ministry of Health, as well as the popular science portal *PostNauka* and the website *Arzamas*, which features a short course on the history, culture and engineering technology of the Moscow Metro (https://arzamas.academy/courses/79)and a course on the history of Soviet cybernetics and its impact on everyday life in the USSR (https://arzamas.academy/special/cybernetics). Students working at the Advanced level and above will also find useful E.V. Orlova, *Nauchnyi tekst: annotirovanie, referirovanie, retsenzirovanie*, a 2013 textbook designed for advanced level learners of Russian and aimed at foreign medical students and graduate students in health sciences who are studying in Russia. The book is intended to help students to solidify their understanding of the written and genre conventions of the three main types of scientific summary text in Russian: *annotatsia, referat* and *retsenzia*. The textbook employs examples of scientific articles that are all drawn from the field of nutrition sciences, which students from most academic backgrounds are generally equipped to follow. The subject matter is clear and accessible, and the exercises are constructed around authentic scientific publications in top journals in this field. The book opens with charts explaining the purpose and discursive structure of each of the three text types. The book then takes learners through exercises in stylistics to train them to recognize and produce their own versions of these text types. Exercises include topics such as bibliographic conventions; nominalization of verbs; devices of coordination and conjunction in various semantic contexts; common constructions for introducing evidence and examples;

the use of verbal adjectives and verbal adverbs in academic discourse; passive constructions; and direct and indirect reported speech. Although it targets students at the Advanced level and above, the Orlova book is a strong model for curriculum designers interested in developing new Russian for STEM coursework at any level because of the way it balances content with key aspects of scientific discourse strategies and training in grammar and syntax.

7. Conclusion: Support Structures and Future Directions in Russian for STEM

Instructors interested in incorporating more STEM content into their courses will find that a number of colleagues are already teaching Russian for STEM courses or are using topics in science and technology in Russian as the foundation for Russian language learning. For more than 20 years, Wellesley College professor of Russian Thomas Hodge and aquatic ecologist Marianne Moore have co-taught a Spring semester course on the history, culture, and biology of Lake Baikal, followed by a summer of limnology research on site in Siberia (Mogolov 2017). Svetlana Abramova teaches a STEM Russian course at the University of Washington and developed a summer STARTALK program for high school heritage learners of Russian that features Lego robotics projects, lessons on the history and mechanics of aerospace technology, and site visits to the local Museum of Flight, all conducted in Russian (STARTALK 2021). Valentina Zaitseva at the University of Washington teaches a 1-credit add-on course in Medical Russian for first year Russian learners in which students acquire a variety of medical terminology and gain opportunities for practicing medical communication, as well as reading and analyzing written texts (University of Washington n.d.). Maria Khotimsky at MIT has also developed a new Russian for STEM course at the Advanced level that includes study of historical contributions of Russian scientists and inventors in a global perspective as well as explorations of problems in technology and society (MIT Global Languages 2021). Olesya Kisselev and William Comer (2019) coauthored a paper about their interdepartmental collaboration with colleagues at Portland State University to develop a Russian Environmental Sustainability course. In fact, colleagues across the federally funded Russian Flagship programs that support students of all majors in acquiring high-level Russian language skills are working to integrate the principles of Languages for Special Purposes (LSP) and Languages Across the Curriculum (LAC) by featuring lectures by local Russian-speaking STEM scholars (Alsufieva et al. 2021).

The activities and lesson samples that accompany this article are intended as models; they may be adapted to fit the needs, interests, and proficiency levels of students at your institution. Whether these lessons are integrated into traditional Russian language courses—the way one might integrate the study of a poem, an artwork, a film clip, or a popular song—or as the basis for a stand-alone Russian for STEM course, instructors of Russian should feel empowered and capable of bringing these topics into our classrooms. Living through and teaching during the COVID-19 pandemic has demonstrated that scientific inquiry and innovation are inextricably tied to education, politics, culture, history, and the ordinary lives of individuals around the globe. Envisioning STEM content as a variation on the more traditional culture or history lesson means that we can train our learners to engage productively—and in Russian—with human aspects of scientific innovation and discovery in cross-cultural perspective.

While the lesson plans offered in the Appendix present STEM content in place of other kinds of content-based instruction, there is more work to be done to further align our learning goals with the realities of how global languages and STEM topics come together in the working world. If we as a field are truly committed to preparing our graduates to enter professions that demand both proficiency in world languages and facility with the content and discourse of STEM fields, we must cultivate more robust partnerships with individuals working within these areas and industries. Developing stronger partnerships with professionals in STEM fields or STEM-adjacent fields (like military, government, translation and interpreting, and journalism) will enable curriculum designers to understand the language needs of professionals in these sectors more fully. As a first step, we can look to our college and university colleagues who are working in STEM to learn more about what is happening on the ground and what kinds of international partnerships are possible in their fields. We can draw on resources about occupational standards from entities like the National Career Clusters (https://careertech.org/career-clusters) to access clear articulations of specific skills that are essential to each scientific domain of the STEM or STEM-adjacent professions. We must also work to develop curricular programs that enable the combination of Languages for Special Purposes frameworks with Project-Based Learning activities (Neville and Britt 2007) to provide students with high-impact opportunities for immersive experiences navigating STEM-related contexts and problems in the target language.

Appendix

Mapping Arctic Geographies	
Theme/Topic	Regions of the Russian Arctic
Skill Area(s)	Interpretive Listening, Reading, and Writing
Target Proficiency Level Details	**Novice:** Novice-level speakers can communicate short messages on highly predictable, everyday topics using isolated words and phrases that have been encountered, memorized, and recalled (ACTFL 2012, 9). Writers at this level can produce lists and notes based on practiced material. Listeners at this level can best recognize items from lists of keywords, cognates and formulaic expressions that are contextualized and predictable. (ACTFL 2012, 14, 19)
Essential Question(s)	What areas (oblasts, autonomous okrugs, major cities) of Russia are considered part of the Arctic? How is climate change affecting these regions?
Description and Objectives	While many learners of Russian can locate Moscow and St. Petersburg on a map, the regions that make up the Russian Arctic are less well known. However, these regions of the Far North are essential for the study of climate change and its effects on the Russian economy, the ecology of the region, and the way of life of the peoples of the Far North. This activity asks learners to listen to, read, and map the major regions of the Russian Arctic using the opening segment of the Тоже Россия (Also Russia) podcast episode on "Города Арктики" (Arctic Cities) and a digital mapping program such as Google Maps or Яндекс Карты. A follow-up activity prompts them to read (in English) about the effects of climate change on the communities and ecology of the Russian Arctic, add additional key locations to their maps, and summarize key aspects of the article in English.
Resource / Text	**Тоже Россия Podcast Episode Link:** https://soundcloud.com/polka-academy/tozhe-ep-16

Activity/Activities What will learners do?	**Instructions and Materials for Students** Instructions and materials may be copied directly into worksheets, your campus LMS, Microsoft OneNote, or other online platforms for remote or asynchronous learning.
Students are provided with the transcript of the first minute of the podcast, in which the host introduces the program.	**Here is a transcript of the first minute of the podcast in which the host introduces the program (English translation below). After a very brief intro extract from the main interview, you will hear the text transcribed below (it comes approximately 20 seconds into the recording). As soon as the host finishes this introduction, he will list the major regions from west to east.** «Всем приве́т, э́то подка́ст То́же Росси́я, бесе́ды о на́шем неочеви́дном насле́дии. С ва́ми Дми́трий Опа́рин и Мари́я Семендя́ева. Сего́дня мы бу́дем говори́ть об Арктике и о кра́йнем се́вере, и о райо́нах кра́йнего се́вера. Мы бу́дем говори́ть об аркти́ческой урбаниза́ции и наве́рно ну́жно сра́зу поясни́ть что зна́чит се́вер, что мы понима́ем под райо́нами кра́йнего се́вера и наве́рно на́до сра́зу переч и́слить э́ти райо́ны. Во-пе́рвых, е́сли мы идём от за́пада на восто́к к кра́йнему се́веру отно́сится:» “Hello everyone, this is the podcast “Also Russia”, conversations about aspects of our heritage that are not well known. With you are Dmitrii Oparin and Maria Semendyaeva. Today we will be discussing the Arctic, the Far North, and its regions. We will talk about Arctic urbanization and first we should explain what we mean by the North, what regions comprise the Far North, so first of all we will list them. If we go from west to east, the Far North includes:”

Students are provided the list and asked to number them in order as they hear them in the podcast. They should expect to listen multiple times, as the host speaks quite quickly.	**Listen to the speaker and number the territories in the order in which he lists them. You will probably need to listen multiple times.** Far North: __ Камча́тка (Камча́тский край) __ Коря́кский автоно́мный о́круг __ Магада́нская о́бласть __ Му́рманская о́бласть __ Не́нецкий автоно́мный о́круг __ Таймы́р (Таймы́рский (Долгано-Не́нецкий) автоно́мный о́круг) __ Чукоткa (Чуко́тский автоно́мный о́круг) __ Эвенки́я (Эвенки́йский райо́н) __ Яку́тия (Респу́блика Са́ха) __ Яма́л (Ямало-Не́нецкий автоно́мный о́круг) Additional territories: __ Арха́нгельская о́бласть __ Каре́лия __ Ко́ми __ Нори́льск __ Сахали́нская о́бласть __ Ха́нты-Манси́йский автоно́мный о́круг

Students create a Google map and mark the locations from the list. Nearly identical instructions can be followed on www.yandex.ru, which will provide geographical locations entirely in Russian.	**Now create a Google Map and place each location on your map.** 1. Open Google Maps and click the menu button in the top left corner. 2. Click Your Places > Maps > Create Map. 3. Name your map and enter in a description. 4. Add markers for your desired locations. You can label these markers, add descriptions, change the color or shape, and add an image. **Alternative: Create a Yandex Map and place each location on your map.** 1. Open Яндекс Карты and click the menu button in the top right corner. 2. Click Мои карты > Создать карту. 3. Name your map (Название) and enter a description (Описание). 4. Use the search box (Адрес или объект; Найти) to find your key locations. 5. You may adjust the settings and then click Готово (Ready) to place a mark or Удалить (Delete) to delete it. **Use Russian Wikipedia to find the locations if you are struggling to locate them via the map programs.**
Students rehearse the list of locations with attention on stress placement and vowel reduction and record themselves reading the list. This can be done with audio alone, or with accompanying video.	**You will now create an audio recording of yourself reading these locations from West to East. You may record using audio only or record with video and show the locations on your map as you recite them. To prepare, listen to the podcast multiple times and imitate the speaker's pronunciation of each location. Pay particular attention to stress placement and vowel reduction as you work to pronounce them correctly in Russian. When you are ready to record, begin your list with the phrase:** Гла́вными райо́нами росси́йской А́рктики явля́ются ("The main regions of the Russian Arctic are"):

Extended Reading	Read the article linked below by journalist Carolyn Kormann about the effects of climate change on Russian Arctic communities. Locate each city or region mentioned in this article and label them on your digital map. Then complete the short written response described below. https://www.newyorker.com/news/annals-of-a-warming-planet/a-disastrous-summer-in-the-arctic **Short Response Paper.** In this article "A Disastrous Summer in the Arctic" from June 27, 2020 in The New Yorker, Carolyn Kormann reports on the effects of a warming planet and record high temperatures on the people and ecology of Russia's Arctic regions. Explain in 1-2 paragraphs (in English) the most important takeaways from the article. What surprised you? What was most concerning? If you were to conduct more research on some aspect of this article, what would you like to investigate further? Formulate 2-4 research questions you would like to investigate.
Estimated Time	Listening and Mapping Arctic Regions: 1 - 1.5 hours Practice Reading Aloud and Recording: 45 min - 1 hour Additional Reading, Mapping and Short Response Paper: 1-1.5 hours

Suggested Assessment	Check number order and map points for completion. Offer holistic suggestions about pronunciation of location list; model correct stress placement, vowel reduction and devoicing in recorded feedback to students. Assess the Short Response Paper on a 1-5 scale: 5: exceptionally detailed, thoughtful response with well-formulated future research questions 4: response includes details from the text and the research questions follow logically from the text 3: response includes general summary of text with few details; research questions are unrelated or unclear 2: summary shows little relationship to the text; research questions are difficult to understand or not closely related to the topic 1: incomplete and/or missing research questions

Year in Space (Год в ко́смосе)	
Theme/Topic	Joint Russian-American "Year in Space" Project of the International Space Station
Skill Area(s)	Interpretive reading, writing to convey information (interpersonal and presentational); grammar work on an expression that uses genitive, prepositional, and accusative cases to explain what scientific researchers are studying
Target Proficiency Level Details	**Intermediate:** At the Intermediate level, readers can understand main ideas and some supporting details conveyed in simple, predictable, loosely connected texts. Writers at the Intermediate level can create with the language and communicate simple facts and ideas. They produce discrete sentences, strings of sentences and some connected sentences. They can manage vocabulary on a variety of everyday topics, topics of personal interest, and topics that have been studied. They may show emerging evidence of the ability to tell or retell a story and provide additional description. (ACTFL 2012, 13, 23)
Essential Question(s)	**Who participated in the Year in Space project, how did the mission conclude, and what was the purpose of the mission?**
Description and Objectives	Students will become familiar with key vocabulary needed to discuss a major joint U.S.-Russia mission on the International Space Station. Using key vocabulary provided ahead of time, along with guided reading questions, students will practice interpreting a written text about the "Year in Space" mission. The extension activity asks learners to focus on the grammar of a key expression used to articulate the goals of a scientific study. The expression requires the use of genitive, prepositional, and accusative cases to convey the influence of one thing on another thing within a particular setting.

Resource / Text	**Ке́лли и Корние́нко верну́лись на зе́млю, пробыв в ко́смосе це́лый год** Астрона́вт Ке́лли и космона́вт Корние́нко успе́шно заверши́ли ми́ссию на МКС 02.03.2016 Америка́нский астрона́вт Скот Ке́лли и росси́йский космона́вт Михаи́л Корние́нко верну́лись на Зе́млю по́сле выполне́ния годи́чной ми́ссии на Междунаро́дной косми́ческой ста́нции (МКС). Как сообща́ет Национа́льный комите́т по астрона́втике и иссле́дованию косми́ческого простра́нства США (НАСА), ка́псула корабля́ «Сою́з ТМА-18М» с уча́стниками экспеди́ции приземли́лась в Казахста́не. В соста́в ми́ссии наряду́ с 51-ле́тним Ско́ттом Ке́лли, вошли́ росси́йские космона́вты 55-ле́тние Михаи́л Корние́нко и Серге́й Во́лков. После́дний провёл в ко́смосе 6 ме́сяцев. Ке́лли приве́тствовал встреча́ющих слова́ми «как чуде́сно сно́ва вдохну́ть во́здух Земли́». Во вре́мя ми́ссии на МКС, Ке́лли и Корние́нко вы́полнили 5440 оборо́тов вокру́г Земли́, преодоле́ли 232 млн. киломе́тров и 10 880 раз ста́ли свиде́телями восхо́да и захо́да Со́лнца. О́ба они́ провели́ столь дли́нный пери́од вре́мени в ко́смосе в ра́мках иссле́дования по выявле́нию влия́ния дли́тельного пребыва́ния в откры́том ко́смосе на те́ло челове́ка. Э́тот прое́кт явля́ется одни́м из эта́пов пла́на НАСА по вы́садке челове́ка на Марс.
Activity/Activities What will learners do?	**Instructions and Materials for Students** Instructions and the reading text may be copied directly into worksheets, your campus LMS, Microsoft OneNote, or other online platforms for remote or asynchronous learning.

Key vocabulary	**Study the following key vocabulary to prepare for the reading assignment. Can you combine some of the words to form a sentence?** (e.g.Yesterday the participants on the International Space Station landed at 2:35pm.) земля́ – Earth ко́смос – space, outer space возвраща́ться / верну́ться – to return завершать / заверши́ть ми́ссию – complete a mission МКС (Междунаро́дная Косми́ческая Ста́нция) – International Space Station сообща́ть / сообщи́ть to convey, inform уча́стник – participant приземли́ться – to land, to return to earth соста́в – composition, membership выполня́ть / вы́полнить – to complete, fulfill преодоле́ть – to overcome; to traverse эта́п – stage вы́садка – landing
Pre-reading Questions	Read the discussion questions and look up any unfamiliar words before you turn to the reading text. ***Дава́йте поговори́м по-ру́сски!*** 1.Кто уча́ствовал в э́той ми́ссии «Год в ко́смосе»? 2.Ско́лько лет э́тим космона́втам? 3.Ско́лько вре́мени они́ провели́ в ко́смосе? 4.Когда́ они́ верну́лись? 5.Где приземли́лась ка́псула корабля́ «Сою́з ТМА-18М»? 6.Как сказа́ть по-ру́сски NASA? (write out the full translation) 7.Ско́лько оборо́тов вокру́г Земли́ вы́полнили Ке́лли и Корние́нко? 8.Каку́ю ми́ссию плани́рует НА́СА в бу́дущем? 9.Как сказа́ть по-ру́сски “sunrise” and “sunset” и ско́лько ви́дели Келли и Корниенко? 10.What word do Russians use for the American term “astronaut”? Bonus: What is the name of the Russian space agency? (look it up online)
Students answer the discussion questions using information from the text.	**Read the text (see “Resources / Text” above) and underline and/or number the parts of the text that provide answers to the discussion questions. Answer the questions in writing (or record spoken answers)** using complete sentences**.**

Extension: Grammar and Syntax This exercise asks the students to analyze and practice a present tense grammatical construction used to explain the focus of scientific research.	**Grammar and Syntax: Talking about scientific research** Return to the final paragraph of the text where it explains one of the main goals for the Year in Space mission. **One thing they were testing was the:** влияние длительного пребывания в открытом космосе на тело человека Analyze the case endings for each phrase to help make sense of the sentence. Consider the glossary of words in the nominative case as you work to translate these phrases. **влияние длительного пребывания** What case are the underlined endings in this phrase?_____ влияние – influence (чего? of what) (начто? on what) длительный – prolonged пребывание – presence *Your translation:* **в открытом космосе** открытый – open космос – space *Your translation:* **влияние ... на тело** (case:) **человека** (case:) тело – body человек – person *Your translation:* Now put it all together. How would you translate the full phrase? влияние длительного пребывания в открытом космосе на тело человека Using this phrase as a model, compose 3 sentences in Russian explaining what your scientist colleagues are studying. Use the chart below and put each element into the correct case.

Они изучают влияние [чего?] [где?] [на что?]
They are studying the influence of what where on what

e.g. "the influence of carbon dioxide in the atmosphere on global warming"

Они изучают влияние….
They are studying the influence…

чего? (GEN) "of what"	где (PREP) "where"	на что (ACC) "on what"
1) углекислый газ *carbon dioxide*	атмосфера *atmosphere*	глобальное потепление *global warming*
2) загрязнение *pollution*	океан *ocean*	морская экология *marine ecology*
3) глобальное потепление *global warming*	Арктика *Arctic*	местное население *local population*

Estimated Time	Vocabulary and Pre-Reading: 30-45 minutes Reading and Discussion question responses: 45 minutes Grammar and Syntax Extension Activity: 30-60 minutes

Suggested Assessment	**Written Responses** **5** Student answered the questions with full, detailed sentences using the vocabulary from the exercise and the accompanying text. Answers are accurate and contain almost no grammatical or spelling errors. **4** Student answered the questions with full sentences using the vocabulary from the exercise / text. Answers contain few factual errors and few grammar or spelling errors. **3** Student attempted to answer with full sentences, but the answers contain multiple factual errors and grammar errors. **2** No attempt to answer in full sentences, many errors **1** Incomplete or student has obviously used online translation software **For the Grammar/Syntax section, grade holistically, circling incorrect case endings in the phrases.** **Offer students the opportunity to correct their errors (in both sections) for up to full points.**

Год в космосе (an alternative assignment)	
Theme/Topic	Joint U.S.-Russia "Year in Space" Project on the International Space Station
Skill Area(s)	Interpretive listening
Target Proficiency Level Details	**Advanced:** At the Advanced level, listeners can understand the main ideas and most supporting details in connected discourse on a variety of general interest topics.They can compensate for limitations in their lexical and structural control of the language by using real-world knowledge and contextual clues. Listeners may also derive some meaning from oral texts at higher levels if they possess significant familiarity with the topic or context (ACTFL 2012, 17).
Essential Question(s)	**Who participated in the Year in Space mission, why were they selected, what training was involved, and what were the goals of the project?**

Description and Objectives	For an Advanced level activity on the Year in Space, instructors assign a ROSCOSMOS video "Долгая дорога к Марсу," which offers additional details about US astronaut Scott Kelly and Russian cosmonaut Mikhail Kornienko's "Year in Space" mission. The discussion questions that follow prompt learners to engage in interpretive listening and to explain in writing or in speech the goals of the mission, the selection criteria for participants, as well as nature of the training for, and execution of, the mission.
Resource / Text	«Долгая дорога к Марсу», ROSCOSMOS, April 2, 2016 video: https://www.youtube.com/watch?v=J8jDm0ktLfw
Activity/Activities What will learners do?	**Instructions and Materials for Students** Instructions and the reading text may be copied directly into worksheets, your campus LMS, Microsoft OneNote, or other online platforms for remote or asynchronous learning.
Key Words	**Look up unfamiliar words and abbreviations from this list before you begin.** РОСКО́СМОС год в ко́смосе сотру́дничество экипа́ж МКС (междунаро́дная косми́ческая ста́нция) опыт полёта кора́бль стартова́ть подгото́вка, трениро́вка стыко́вка, расстыковка ЦПК (Центр Подгото́вки Космона́втов) Звёздный Го́род

Discussion Questions	**Вопросы к обсуждению** 1) Что такое год в космосе? Когда произошла эта миссия? 2) Почему выбрали именно этих космонавтов для миссии? 3) Как космонавты готовились к миссии? 4) Почему Михаил Корниенко участвовал в таком эксперименте? Какова цель этой миссии? 5) Напишите 2 вопроса, которые вы хотели бы задать космонавтам.
Extension activities	**Advanced+ Level:** The website for ROSKOSMOS currently features a set of short videos explaining and demonstrating some of the experiments currently being conducted on the International Space Station. Students can work through these videos and accompanying written descriptions of the experimental design to generate additional vocabulary lists and offer paragraph length summaries in Russian of the purpose and design of these experiments. https://www.roscosmos.ru/29966/
Estimated Time	Video and question responses: 45-60 minutes Extension activity: 2 hours

COVID-19 Vaccine Development in Israel	
Theme/Topic	Vaccine Development and Clinical Trials
Skill Area(s)	Interpretive listening, Writing paragraphs
Target Proficiency Level Details	**Advanced:** At the Advanced level, listeners can understand the main ideas and most supporting details in connected discourse on a variety of general interest topics. Listeners may also derive some meaning from oral texts at higher levels if they possess significant familiarity with the topic or context (ACTFL 2012, 17). Writers at the Advanced level can narrate and describe in the major time frames of past, present, and future, using paraphrasing and elaboration to provide clarity. Advanced-level writers produce connected discourse of paragraph length and structure. (ACTFL 2012, 12).
Essential Question(s)	**What is the process like for scientists working to develop new vaccines during a global pandemic? What procedures are involved in vaccine clinical trials?**
Description and Objectives	This assignment involves vocabulary development and listening comprehension at the Advanced Level. The video discusses a lab in Israel that is working to transform a vaccine developed for coronavirus in chickens into a vaccine that could be used for coronavirus in humans. The scientist details the main stages of vaccine development. Comprehension questions are provided in English to aid learners in focusing on new structures and vocabulary, while a follow-up activity asks learners to summarize in writing (paragraphs in Russian) the key takeaways from the video and what specifically happens at each of the three stages of clinical trials.
Resource / Text	**Video**: BBC youtube channel: https://www.youtube.com/watch?v=FpfU37sO-x8 Fully subtitled version here: https://www.youtube.com/watch?v=LYXef1XCEgQ&t=57s
Activity/Activities What will learners do?	**Instructions and Materials for Students** Instructions and the reading text may be copied directly into worksheets, your campus LMS, Microsoft OneNote, or other online platforms for remote or asynchronous learning.

Pre-Viewing Cognates quiz	**Pre-Viewing: Cognates quiz. Read this list of cognates aloud. Mark the ones you recognize.** коронави́рус бакте́рии ви́рус лаборато́рия вакци́на микробио́лог кри́зис генети́ческий код адапта́ция имму́нная реа́кция эффекти́вность спрей-аэрозо́ль синтези́ровать мута́ция
Activating Cognates and Orienting to Video	**Watch the video on COVID-19 vaccine development and listen for the cognates.**
New Vocabulary Work	**New Vocabulary: Translate the following words and phrases that you will hear in the video into English.** белко́ (производи́тели белка́, строе́ние белка́) произво́дство вакци́ны ферме́нтер разрабо́тка, си́нтез вакци́ны вакци́на про́тив + чего́? (GEN) труди́ться на бла́го челове́чества испо́льзовать в ка́честве + чего́ (GEN) разраба́тывать / разрабо́тать поражать / поразить (заражать / заразить) сравни́ть что / с чем (ACC/INST) по сравне́нию с чем (INST) заболева́ние к на́шему / моему́ удивле́нию обнару́жить клини́ческие испыта́ния, эксперименты́ (на ком / на + PREP) прове́рка вакци́ны эта́п / фа́за (до)клини́ческие испыта́ния (на ком) проверя́ться (на что) прививка безопа́сно сли́зистая оболо́чка явле́ние позволя́ть / позво́лить

Comprehension Questions	**Watch the video again and answer the following questions based on information from the video.** 1. What is in the petri dishes shown at the opening of the video? What are they for? 2. What is the English name for the organization whose acronym is ВОЗ? 3. How many vaccines were in development at the time the video was filmed? 4. What were these scientists working on before COVID-19 hit? 5. What advantage do scientists in this lab potentially have over other vaccine developers? 6. What evidence do they have that their technique could work? 7. What does the first stage of vaccine development entail? 8. What happens in the second stage? 9. What is the third stage? 10. Will the vaccine be given as an injection? Explain. 11. How long does the lab director estimate it will take to produce the vaccine? 12. What does the scientist say about viruses that move between animals and humans?
Written summary (paragraphs) with focus on stages of clinical trials	**Writing in Russian** Write 2-3 paragraphs in Russian summarizing the video. In particular, focus on explaining what happens during the three stages of clinical trials. Bonus: Create a Russian language quiz for fellow students based on the content of the video (~10 items total). You could create shortanswer questions, fill in the blank questions, multiple choice, true/false (верно/неверно), etc.
Cultural Investigation	**On language and culture**: Why is this scientist who works in a laboratory in Israel speaking Russian? To learn more about the Russian diaspora community in Israel, read https://en.wikipedia.org/wiki/Russian_language_in_Israel. For more on the history of Russian immigration to Israel and the contemporary political culture of Russian Jews in Israel, see the September 2020 Brookings Institute Foreign Policy Report, "The Other Tribe: Israel's Russian-speaking Community and How it is Changing the Country" by Lily Galili, and Zvi Gitelman's monograph *The New Jewish Diaspora: Russian-Speaking Immigrants in the United States, Israel, and Germany* (Rutgers University Press, 2016).

Estimated Time	Cognates quiz: 5 mins Additional Vocab Work: 30-45 mins First viewing: 5 mins Listening to respond to questions: 15-30 mins Written responses to questions: 10 mins Paragraph summary: 30-60 mins Cultural investigation: 30 mins+
Suggested Assessment	Check English language comprehension answers for accuracy. Provide students with opportunity to correct factual errors for full credit. Focus assessment on paragraph length summary of key portions of the video with an emphasis on the three stages of clinical trials. Offer students the opportunity to revise their paragraphs following the feedback for up to full credit. **Paragraph summary evaluation** **5** Student produced a detailed, coherent paragraph that is well structured, incorporates new vocabulary from the video, and addresses with clarity and accuracy what happens at each stage of clinical trials. **4** Student produced a detailed, mostly coherent paragraph. There may be some problems with the organizational structure, but student has accurately explained what happens at each stage of clinical trials. **3** Student struggled to produce a coherent paragraph, significant problems with structure. Sentence level writing is satisfactory, but more work is needed to incorporate new vocabulary and explain with more clarity or accuracy the stages of clinical trials. **2** Major errors in accuracy, missing required information about clinical trials, little success with composing a paragraph, writing is difficult to understand OR the work obviously relies heavily on translation software instead of working from structures in the video. **1** Incomplete assignment

Vaccine Debate	
Theme/Topic	Debating the Merits and Drawbacks of Early Vaccine Approval
Skill Area(s)	Reading, Writing and Speaking at the Superior Level, presentational and interpersonal speaking in a structured debate format
Target Proficiency Level Details	**Superior:** At the Superior level, readers are able to understand texts from many genres dealing with a wide range of subjects, both familiar and unfamiliar, that use precise, often specialized vocabulary and complex grammatical structures. Superior-level readers are able to understand lengthy texts of a professional, academic, or literary nature. (ACTFL 2012, 21) Writers at the Superior level are able to produce most kinds of formal and informal correspondence and demonstrate the ability to explain complex matters, and to present and support opinions by developing cogent arguments and hypotheses. They organize and prioritize ideas to convey to the reader what is significant and typically make arguments requiring at least a series of paragraphs. (ACTFL 2012, 11) Speakers at the Superior level are able to communicate with accuracy and fluency in order to participate fully and effectively in conversations on a variety of topics in formal and informal settings from both concrete and abstract perspectives. They are able to construct and develop hypotheses to explore alternative possibilities, and they employ a variety of interactive and discourse strategies, such as turn-taking and separating main ideas from supporting information through the use of syntactic, lexical, and phonetic devices. (ACTFL 2012, 5)

Description and Objectives	For a Superior level activity on vaccine development, use Brown et al. 2014 *Mastering Russian Through Global Debate* to prepare students for a debate about the merits and drawbacks of releasing a new vaccine during a global health crisis before it has undergone all stages of clinical trials. Students prepare by reading articles from online news stories about Russia's Sputnik V vaccine. They develop position papers "for" and "against" such a decision and then devise counterarguments to anticipate their opponents' comments. Position papers and counterarguments are edited and revised ahead of the live debate.
Resource / Text	To prepare ahead of the debate, students should conduct independent research into the case of Russia's Sputnik V vaccine. They should work to find news reports from Russian and American perspectives related to Russia's early release of the vaccine ahead of the completion of third stage clinical trials. Students may also benefit from this podcast (link below), which examines the history of Soviet vaccine diplomacy to contextualize historically Russia's decision to make its vaccine available early and widely (in English). "Why Russia is Exporting So Much Vaccine," *The Daily.* April 26, 2021. https://www.nytimes.com/2021/04/26/podcasts/the-daily/russia-vaccine-coronavirus-vladimir-putin.html
Estimated Time and Assessment	Debate preparation should be staged over several weeks. See Brown, et al. 2014 for detailed guidance on researching, writing position papers, anticipating counterarguments, staging the debate and assessment instruments.

Extension Activity	**Working with Published Research Studies on COVID–19** Throughout the pandemic, the World Health Organization maintained a continually-updated database of COVID research and clinical trials happening around the world (World Health Organization, n.d.). While clinical trials reports were not available in Russian, it was possible to narrow the results of the research studies to show only Russian-language papers. This interpretive mode assignment allowed students to put their knowledge of the structure of scientific texts to use in deciphering a new research study related to the material from the coronavirus unit.
Reading and Translation Role Play Prompt	You have just moved to Atlanta to begin work as a language analyst at the headquarters for the U.S. Centers for Disease Control and Prevention (CDC). Your supervisor oversees gathering briefs on COVID research happening around the world. As a Russian language analyst, you've been assigned to her team. Your first task is to summarize in English a recent article published by Russian scientists reporting research on some aspect of the coronavirus. Use the WHO database of global research on coronavirus disease to locate an article of importance. In addition to the summary, you are also asked to prepare a translation of a short passage (~½-1 page) that you find to be the most salient part of the article. Database link: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov

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