LOUISENLUND PEDAGOGY IN NTARE LOUISENLUND SCHOOL

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Introduction

Effective and meaningful teaching and learning must always focus on the learner and the learner's experience of the world around them. Such experiences of learning take place both at the individual level and through collaborative undertakings within and beyond the learning community. Ntare Louisenlund and the International Baccalaureate Organization share a common vision for education in the 21st century, in which students are the principal actors in the learning process and thus take responsibility for their own academic and personal development. Additionally, both organizations affirm the notion that the development of conceptual understanding and key competencies cannot occur in isolation but requires collaboration within the group and responsibility for one another.

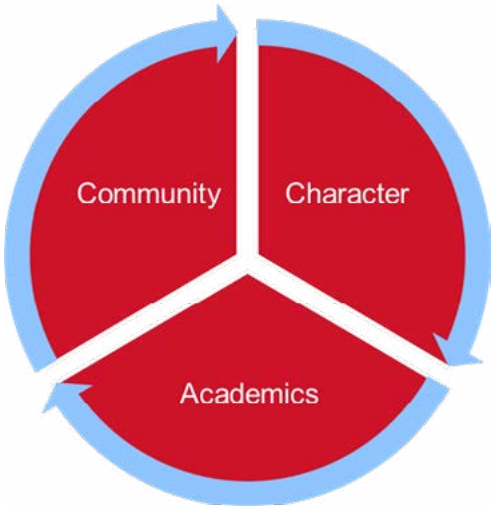
Our Louisenlund Pedagogy (Tschekan, 2018) is fully aligned with and inextricably linked to the recently published IB Programme standards and practices, which will serve as the framework for this supplementary document focused on education in Ntare Louisenlund School. The innovative Louisenlund Pedagogy, conceived by Dr. Kerstin Tschekan, highlights the development of leaner skills and competencies, learner independence and self-directed learning, learning differentiated to meet the needs and interest of individual students, various dimensions of learning, including practical, real-world experiences, effective teamwork and collaboration, and metacognitive reflection on learning processes. Each of these aspects is rooted, not only in the IB Programme standards and practices, but also in the IB's Approaches to Teaching and Learning and in the NEASC Commission on International Education's ACE Learning Protocol. Therefore, affirming and adopting the basic principles and approaches of this new Louisenlund Pedagogy in Ntare Louisenlund School will help us to create a truly learner-centered environment on a firm theoretical foundation. In so doing, we will successfully educate aspiring researchers and innovators in the STEM disciplines, as well as a new generation of young entrepreneurs.

I. Purpose

Ntare Louisenlund School is committed to helping young people become independent, globally minded, and committed personalities capable of taking on responsibility for themselves and for others. Similarly, "the International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect." These mission statements are our foremost learning goals (LP 1)[1] and constitute the foundation of our learning community at Ntare Louisenlund School. Any pedagogical concept adopted by our school community must be rooted in these stated goals and principles. It must also align with Kurt Hahn's vision for education grounded in real-world experience (LP 2), including contact with and respect for the natural world.

It is our conviction that creating independent, lifelong learners who take on responsibility for themselves and others cannot be achieved if the teacher remains at the center of the learning process. While our pedagogy acknowledges the import and impact of the teacher, we believe learners must assume agency and ownership of their learning. We also acknowledge the fact that students' creativity can flourish only when the static system of traditional classrooms and timetables is replaced by new learning spaces and time structures that allow students to pursue and cultivate their own interests and talents within the framework of the established curriculum. Such learning space and time (LP 9) must enable and encourage students to develop according to the IB Learner Profile, becoming knowledgeable and enquiring thinkers and communicators, who are balanced, caring, principled, reflective and willing to take calculated risks to broaden their own perspectives (LP 4). New structures must encourage optimal academic achievement, character formation, and living and learning together in community (LP 10), the three pillars of a Louisenlund education.

[1] LP refers to one of the ten "Learning Principles" from NEASC's ACE Learning Framework. For further information see "Ace Learning: Introduction", New England Association of Schools and Colleges Commission on International Education



School leadership and governance fully supports the newly formulated Louisenlund Pedagogy and has learning space design and professional development plans in place to implement its key principles.

II. Environment

Situated in inspiring natural surroundings in the hills of Nyamata, Ntare Louisenlund's campus is an ideal context for students and teachers to learn and grow together. Through a combination of flexible open spaces (learning studios), seminar rooms, and five state-of-the-art laboratories, the design of Ntare Louisenlund's campus facilitates independent, self-directed learning. At the same time, these spaces are also conducive to collaborative learning experiences and the co-construction of knowledge and understanding within learning groups. Working together in subject groups, Ntare Louisenlund teachers collaborate regularly on unit planning- collating, developing, acquiring, and organizing materials, resources, and equipment needed to ensure the proper use of new learning spaces for such individual and cooperative learning experiences. These units, including a stream of diverse, digital resources, as well as learning tasks, are available on ManageBac and supplemented by other digital learning software. Ongoing professional development, including IB certified teacher workshops, as well as in-house training, prepare subject teachers for their role in teaching, mentoring, and guiding students through meaningful learning sequences.

The learning community plays and indispensable role in ensuring the success of an Ntare Louisenlund education (LP 10). Qualified, caring "house parents" foster the "social, emotional, and physical wellbeing" of students (PSP 0202-03). They not only ensure a welcoming and inclusive environment within the boarding houses, but also encourage and support learners in their academic development, for example through guided reflection. In such reflection, a particular emphasis is placed on the Social and Emotional Learning (SEL) framework and the IB Learner Profile. Communication and regular exchange between boarding house parents and academic mentors remain essential elements in supporting Ntare Louisenlund students to lead balanced lives and succeed academically.

Faculty mentors play an integral role in helping students to identify learning outcomes, meet curricular requirements, set viable learning goals, and structure learning plans to achieve them. The mentor is the learner's first contact with respect to academics, but also plays a fundamental role in the selection and timing of co-curricular experiences. The mentor also aims to foster and gradually develop independence and relative autonomy in our learners, both through the organizational planning of their learning experiences and in the reflection on them. This development constitutes of a gradual shift from joint planning and guided reflection to more independent drafting of learning goals and plans and self-directed reflections on learning.

Further learning support systems include the school therapist, learning coaches, individual and small-group teacher support in Studio Time.

III. Culture

Ntare Louisenlund's Inclusive Education Policy ensures an open, accepted, and globally-minded learning culture for students and staff (LP 7). Our learning community's Admissions Policy guarantees access to our educational programmes for the "broadest possible range of students", including learners with diverse cultural and social backgrounds and differing

interests, attitudes, perspectives and abilities (PSP 0301-01)[2]. Students with a reasonable chance of success and a willingness to learn and integrate into Ntare Louisenlund's learning community are seldom denied admission to our programmes. An extensive scholarship programme helps committed learners from disadvantaged socioeconomic backgrounds gain access to our educational offerings.

Nevertheless, policy implementation provides clarity with respect to curricular and co-curricular requirements, expectations, and learning outcomes, ensuring a climate of accountability and responsibility for staff and students. Within the framework of the Louisenlund Pedagogy, learners cannot simply learn what they wish, while neglecting required disciplines or curricular elements. Students, with the guidance and support of their mentors and subject teachers, must ensure that the academic requirements of the international curriculum are fulfilled throughout their course of study. Nevertheless, we encourage them, within this framework, to pursue their own passions and interests, act creatively, and broaden their perspectives (LP 4; LP5). Learner choice, personalization, and self-directed learning are among the hallmarks of this new pedagogical approach and are compatible with IB Programme Standards and Practices.

A culture of deliberate individual and collaborative reflection ensures the ongoing development of students, teachers, and the learning community as a whole (LP6).

IV. Learning

A cooperative effort, involving IB learners and educators in Stiftung Louisenlund, our partner school in Germany, produced the following definition of learning, which aligns closely with the IB philosophy, ACE Learning, and the updated Louisenlund Pedagogy:

> Stiftung Louisenlund defines learning as a lifelong process of growth and discovery, encompassing the acquisition of knowledge and skills, the fostering of creativity, and the formation of character and personality. Learning is grounded in a cycle of inquiry, action, and reflection, which awakens an individual's curiosity, activates and stimulates cognition, and broadens understanding and competencies. Involving the whole person, such competencies include, not only critical thinking and research skills, but also physical, social, communication, and self-management skills. Though occurring on an individual level and grounded in personal experience, effective learning takes place within the community and through a variety of collaborative processes. It entails both the development of conceptual understanding, applicable in a variety of contexts, and key competencies which enable the individual to become an internationally minded, caring, and balanced member of society. Fundamental aspects of the learning process involve pursuing and achieving goals through persistent hard work, making use of one's potential, and taking on responsibility, both for oneself and for others. Louisenlund recognizes and affirms the social and emotional dimension of learning as being equal to and inextricably linked with the individual's academic formation.

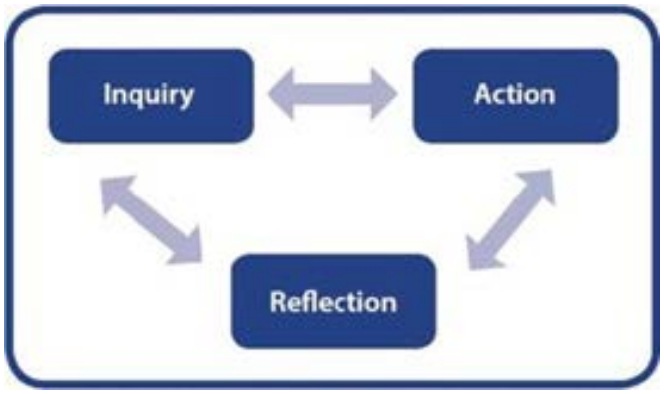
Ntare Louisenlund School's international curriculum upholds the high standards and requirements set forth by the IB Middle Years and Diploma Programme subject guides and informed by the International Baccalaureate's educational philosophy. Ntare Louisenlund's governance, leadership, and faculty are fully committed to maintaining these norms and expectations (LP 8; LP 1). The curriculum is developed and regularly updated through teacher collaboration, both within subject groups and broadly across disciplines. Curricular connections are actively established between subjects, and links to TOK are built into the syllabi of each DP subject course (PSP 0401-01,02).

[2] International Baccalaureate Organization. (2018). Programme standards and practices. In International Baccalaureate. https://www.ibo.org/globalassets/new-structure/become-an-ib-school/pdfs/programme-standards-and-practices-2020-en.pdf

Ntare Louisenlund's curriculum focuses on **competencies, conceptual understanding, and contextual relevance** (PSP 0403-03, 04). Dimensions of learning are broadened through curricular links to co-curricular experiences (CAS and SA experiences) (LP2). The curriculum is available online and accessible to the learning community (MYP unit plans, course outlines, subject guides, syllabi / schemes of work, competency grids and matrices) (PSP 0401-03). The International Baccalaureate's Approaches to Teaching and Learning (2015)[3] align with Ntare Louisenlund Pedagogy and form the foundation of collaborative planning and all learning experiences within our school. These include:

Approaches to teaching	Approaches to learning
• Teaching based on inquiry • Teaching focused on conceptual understanding • Teaching developed in local and global contexts • Teaching focused on effective teamwork and collaboration • Teaching differentiated to meet the needs of all learners • Teaching informed by assessment (formative and summative)	• Thinking skills • Communication skills • Social skills • Self-management skills • Research skills

When combined with course content and clear learning outcomes, the Approaches to Learning lead to the development of competencies which learners can apply to a variety of global and local contexts. This occurs through a cycle of planning, inquiry, action and reflection, graphically presented in the two diagrams below (PSP 0403-01; LP 6):



"Students take ownership of their learning by setting challenging goals and pursuing personal inquiries" (PSP 0402-06). Such independent, self-directed learning, which involves students "making informed choices, supported by teachers acting as coaches and mentors" are found in many areas within Ntare Louisenlund School. These include, but are not limited to:

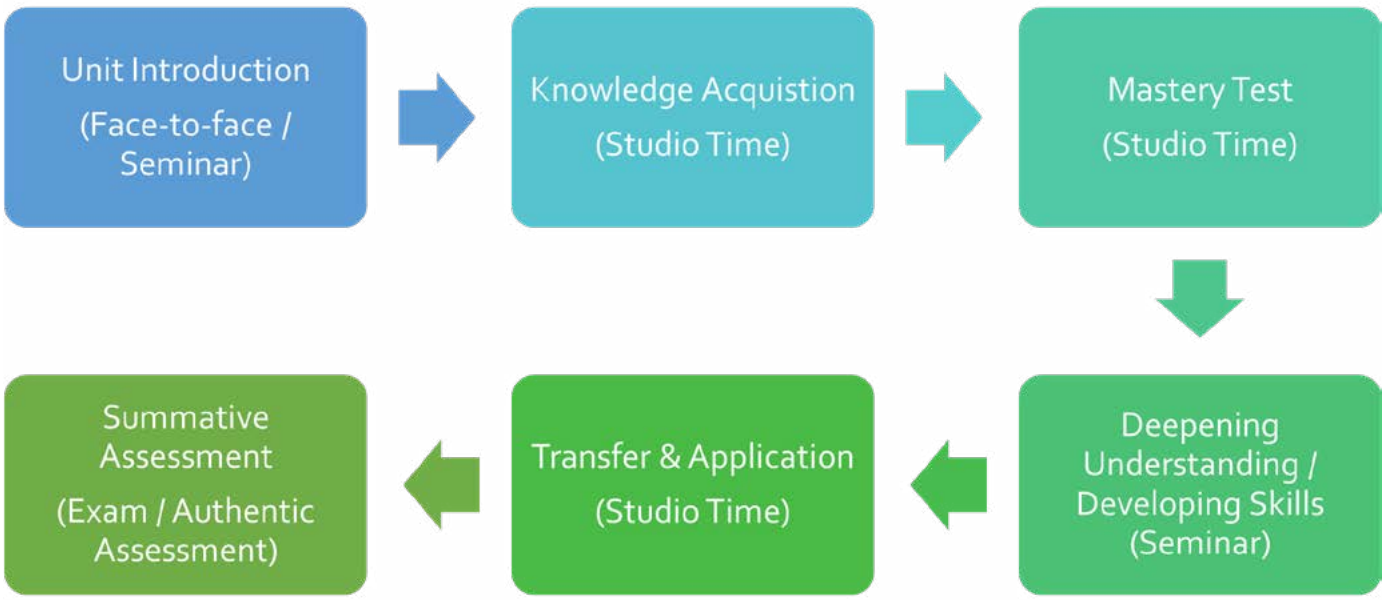
- Selecting Service as Action experiences
- The Community Project (MYP 3 & 4) and the Personal Project (MYP 5)
- Other social entrepreneurial projects and endeavors
- Authentic performance-based assessment, such as exhibitions, portfolios, and simulations
- STEM-Module projects and inquiry-based learning experiences on lab days
- Interdisciplinary Units

[3] *International Baccalaureate. (2015, February). Approaches to Teaching and Learning. Diploma Programme Approaches to Teaching and Learning.*
https://xmltwo.ibo.org/publications/DP/Group0/d_0_dpatl_gui_1502_1/static/dpatl/

Learning is thus personalized, differentiated to meet the needs and interests of each learner. Moreover, both the curricular design and the students' informed choices ensure that content has a relevance both to the learner's local and regional context, cultural background, and broader global context (PSP 0402-07; 0403-03). Through guided learning and, later, self-directed learning, "students grow in their ability to make informed, reasoned, ethical judgments" (PSP 0402-04). They thereby become more independent and able to solve problems, initiate projects, and act creatively.

Affirming the value of this individual dimension of learning, Ntare Louisenlund Pedagogy nevertheless underscores the importance of cooperative learning experiences. Both within and outside of the seminars, subject teachers "promote effective relationships and purposeful collaboration to create a positive and dynamic learning community" (PSP 0403-04; see also LP 10). This standard and practice is based on the conviction that knowledge and understanding are not individually derived, but co-constructed through cooperation, involving effective teamwork, social, and communication skills. Experiential learning, such as scientific experimentation, excursions, and service learning opportunities, is a fundamental component of such collaborative learning (LP 2).

Such independent and cooperative learning experiences can be found in Ntare Louisenlund's "Inverted Classroom" model, which provides the framework for all of our academic learning sequences. The following graphic illustrates the structure and rhythm of the inverted classroom, which includes face-to-face, teacher-facilitated learning experiences in course seminars and asynchronous, teacher-supported, but self-directed learning in Studio Time.



These learning phases are supplemented by laboratory days in the sciences, which provide students with authentic, hands-on learning experiences; laboratory experiments make scientific concepts more tangible, accessible, and applicable to real-world contexts. The lab days also serve to promote STEM excellence, including fostering students' research skills and competence in scientific experimentation.

Teaching must not only be informed by assessment; assessment must also contribute positively to a student's learning experience. Ntare Louisenlund welcomes the IB's shift in emphasis toward formative assessment (assessment for learning), a fundamental aspect of our pedagogy. An ongoing dialogue between learners, subject teachers, mentors, and house parents is necessary to facilitate learner formation and optimize students' achievement on summative assessment.

One such example of formative assessment are the mastery tests included in each subsection of our units to ensure that students have adequately utilized the asynchronous knowledge acquisition phases in Studio Time to acquire basic knowledge and skills in a given topic and are thus prepared to deepen their understanding and further develop their competencies in course seminars. This allows teachers also to gauge students' differing knowledge and skill levels and to adapt and differentiate learning experiences and seminar or laboratory activities accordingly. Beyond the context of mastery assessment, teachers and mentors provide Ntare Louisenlund students with regular, meaningful, criteria-based feedback on formative tasks to ensure progress and development with respect to learning outcomes. As indicated in the Louisenlund Pedagogy (Tschekan, 2018), learners regularly reflect on their experiences of learning, including formative assessment, in a variety of forms, taking teacher feedback into consideration (e.g. ManageBac Service as Action Journal, the Reflections tab in the Lund Portfolio, reflection grids and matrices, dialogue, discussions, questionnaires, etc.). Mentors and house parents ensure student accountability in facilitating such regular, metacognitive reflections on learning (LP 6). Though time consuming, such reflection has proven to promote learner development and improve achievement on summative assessment. Regular metacognitive practice has also helped Louisenlund's IB World School in Germany to foster a culture of reflection and strategic approaches to learning.

Though student-centered, this Ntare Louisenlund and IB approach to learning is inextricably linked to good teaching. According to Hattie (2012), the teacher is the most decisive factor contributing to learners' scholastic success- even in learner-centered contexts. The profession of the teacher is not undermined by Ntare Louisenlund Pedagogy, but rather enhanced by it. To fulfill the expectations of this vocation, Ntare Louisenlund teachers need to be highly skilled and competent, not only with respect to knowledge within their disciplines, but also regarding didactics and methodology. As such, they need to remain reflective practitioners who live and model an attitude of lifelong learning.

In all learning experiences, Ntare Louisenlund teachers need to act not merely as "sages on the stage", but also as "guides on the side" in mentoring students and supporting self-directed learning. Furthermore, they must become "meddlers in the middle" in collaborative learning experiences, participating in the co-construction of knowledge and conceptual understanding, and thereby fulfilling their calling to be lifelong learners. As reflective practitioners, they must also be open to innovation, to ongoing professional development, and regular reflection with respect to their teaching and the growth and development of the learning community as a whole. This includes, for example, maintaining their own portfolio to document their development as educators. Finally, and perhaps most importantly, Ntare Louisenlund teachers must be passionate about what they are teaching to ignite the spark of intellectual curiosity and enthusiasm in their students, leading them to become lifelong learners who have an impact on society.

STEM Education and Inquiry-based Learning

Promoting excellence in STEM education goes hand in hand with fostering inquiry-based learning. Ntare Louisenlund aims to educate young researchers, who derive deep understanding of the world around them through a cycle of inquiry, action, and reflection. The STEM disciplines, by their very nature, methods, and approaches, are particularly suited to IBL. The scientific method itself is rooted in the inquiry cycle. When learners ask questions about physical phenomena in the world around them, they pursue answers to these lines of inquiry through by taking action. By the term 'action' in the STEM context, Ntare Louisenlund School understands gathering data through independent research, experimentation, problem-based learning, project-based learning, and other active learning experiences which promote innovative approaches to exploration and discovery. Through such experiences, our young researchers search for answers to their questions and co-construct their own understandings of natural phenomena. In reporting on their methods and results, our STEM-profile learners engage in a further cognitive dimension of 'action' and also reflect on their learning experiences, thereby probing the metacognitive dimension of learning.

Entrepreneurship and the Inquiry Cycle

Similarly, Ntare's entrepreneurial profile also encourages learners to engage in inquiry, closely aligned with the design-thinking cycle. As learners pursue practical solutions to real-world problems, they listen and empathize. In doing so, they define problems that lead them to questions on how to solve these problems. Learners then take action, exploring, developing, and prototyping solutions. In many cases, this cycle will lead them to create innovative, original products, which they then test and refine through a series of trials. These could include a business model or a physical product to meet particular market needs. Finally, entrepreneurial learners reflect on this inquiry and design cycle, paying attention to process, as well as the results of their own prototyping and testing. This may lead them to new questions and challenges, which start the inquiry cycle anew. With strengthened metacognitive competence, our learners approach these new lines of inquiry better equipped to meet these challenges and pursue solutions in a structured, process-oriented manner. Through inquiry, they become innovators, creators, and designers who aspire to be a new generation of young entrepreneurs.

Artificial Intelligence (AI) in Ntare Louisenlund School

In our digital age, the world and how we learn, communicate, and create are rapidly changing. Artificial intelligence (AI) has already become an omnipresent feature in our schools and will inevitably transform our approaches to teaching and learning. The IBO (2023) acknowledges that "artificial intelligence (AI) technology will become part of our everyday lives – like spell checkers, translation software and calculators. We, therefore, need to adapt and transform our educational programmes and assessment practices so that students can use these new AI tools ethically and effectively" (para. 1). As this statement indicates, how we respond to this development as educators is key. Rather than demonizing and prohibiting AI, it is crucial that we harness its potential to optimize our students' learning and implement it, albeit, with caution, into our instructional design. For example, students could enter key ideas and essential information into AI to generate exemplary texts, such as essays or commentaries, which could serve as models for them when producing original work. Crucial for students' ethical use of AI is their adherence to the school Academic Honesty Policy. Such compliance means students

> should be aware that the IB does not regard any work produced –even only in part –by such tools, to be their own. Therefore, as with any quote or material from another source, it must be clear that AI-generated text, image or graph included in a piece of work, has been copied from such software. The software must be credited in the body of the text and appropriately referenced in the bibliography. (IBO, 2023, para. 2)

As the capabilities of AI increase, Ntare Louisenlund commits itself to utilizing this technology- and maximizing its potential to support student learning. This will include ongoing professional development for staff and an incorporation of AI into the school's instructional design.

The Ntare Portfolio

Portfolios are unique tools for documenting an individual's scholastic development. Rather than providing a mere snapshot of a learner's achievement, portfolios tell a story over an extended period of time (Burke et al., 1994). As Ntare Louisenlund students and teachers design their own unique story, they use their portfolios to "collect, select, and reflect" on evidence of their development (Burke et al., 1994). The Ntare Portfolio thereby serves as both a reflection tool and an instrument for cultivating students' self-management skills. Concretely, the Ntare Portfolio also provides the basis for students' Ntare Louisenlund Mastery Certificate, a personalized developmental report and reference drafted by their mentors, which Ntare Louisenlund graduates receive with their diplomas at commencement. The Ntare Portfolio is a hybrid form of a learner (reflection) portfolio and a process portfolio. It can, however, be transformed into a showcase / presentation portfolio and utilized for students' applications to institutions of higher education, training programmes, or future employers.

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NTARE LOUISENLUND
INTERNATIONAL SCHOOL RWANDA

APPENDIX: LOUISENLUND PEDAGOGY: KEY PRINCIPLES AT A GLANCE

You are the principal actor in your learning process.

Your learning is personalized: individual programme, individual timetable.

You learn to work independently and develop good self-management skills.

You learn holistically, including CAS and SA (co-curricular) experiences.

You are supported each day by mentors and houseparents. Additional coaching is available.

You learn ATL skills, including 21st century skills, such as collaboration, social and communication skills.

You collaborate with peers to co-construct knowledge and understanding.

You use digital media sensibly to support your learning.

You deepen understanding of content and concepts through guided inquiry (Deeper Learning).

You learn strategically through regular reflection and metacognitive strategy (including with your mentor).

You document your own development (Lundportfolio / CAS Portfolio).

You design your own story.

NTARE LOUISENLUND
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