

**The robot bunny, a new learner profile  
and the fun spelling test in P3:**

# **Annika's day of playful learning**

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**Meet Annika: A playful learner**

Playful. For some educators, the term has negative connotations, conjuring up a sense of silliness and the class clown. This is a misunderstanding. The playful learner finds opportunities to experience choice, wonder, and delight in her learning. She thinks creatively, experiments with new ideas, learns from mistakes, reflects, and tries again. She finds joy in belonging to a playful community where she learns from and with her peers.

This is the second year Rachel Palmer and Astrid McCartan have co-taught this group of P3A's. The children's families come from Denmark, the US, Germany, Italy, Ireland, Japan, Singapore, Sweden, Taiwan and Thailand.

Astrid is a Dane who has taught in England and Denmark. Rachel is an American who moved to Denmark to work at ISB. In the US she taught elementary and high school music.



Meet Annika, who as you will read, exemplifies the playful learner. Born soon after her parents moved to Denmark from Germany, Annika was enrolled at ISB at three, the year the school opened. Her younger sister now is also at the school.

Asked to describe his daughter, Annika's father Sverre includes the adjective playful. He explains, "Annika loves to create stories and structures and she likes solving problems." This runs in the family as both parents are designers at LEGO. Creating and making is a part of home life.

One of Annika's teachers Rachel describes her as, "Really positive and hard working." She agrees that Annika is playful, explaining that while she is "cautious at first--she likes to know where things are going—she is not afraid to try and go in a new direction. She thinks about things in new ways and often has a unique perspective."

Annika's self-concept mirrors that of these adults. She explains, "I like building things and being creative." She also likes school because she has "lots of friends."

In this picture of practice we will follow Annika through a school day in February that includes:

7:45-8:00 Arrival

8:00-9:40 Unit of Inquiry

9:40-10:00 Outside break

10:00-11:30 Social Circle

11:30-12:00 Lunch (during which Amelie attends a student council meeting)

12:00-12:30 Recess

12:30-14:00 English

14:00 After School Club

You will see how Amelie's teachers utilize Pedagogy of Play (PoP) practices to create an environment where playful learners thrive. Two practices are illustrated in particular: creating opportunities for playful learning, and fostering trust and welcoming negotiation.

<sup>1</sup>As a part of the PoP work, we have developed a set of 8 Principles of a Pedagogy of Play. You can find the full set of Principles [here](#). We will refer to these Principles by number throughout this piece.



*Students discussing photos of field trips*

**Welcome to P3A**

It is 7:45 AM and the sun has yet to rise; it is winter in Denmark. 15 minutes before the official start of school more than half the P3A students are in their classroom. Some of the children are standing around at table, chatting amicably about photographs of recent class field trips.

Frederik is at his desk, drawing a picture of Astrid, one of his primary teachers. His other primary teacher, Rachel, has given him her phone with a photo of Astrid to assist with the drawing.

Over the next few minutes the remainder of the children arrive. Annika gives a quick goodbye hug to her mother, goes to her desk, and places her backpack behind her chair. When Rachel calls out, “it’s time for Five-Minute Frenzy,” Annika immediate gets out a pencil and starts working on the math problems on the active board. All the other children follow suit, except for Frederik who, with Rachel’s permission, continues drawing Astrid.



*Frederik drawing Astrid as Markus looks*

Annika (furthest left) working on the “Five-Minute Frenzy” math problems



**“It’s fun making things”: Unit of Inquiry**

A sugar stealer, a book holder and a bathroom cleaning bunny robot are all part of the P3s unit of inquiry on inventions. Units of Inquiry are a core part of ISB’s PYP/IB curriculum with the P3s taking part in six in-depth studies over the course of the year. Currently, they are in the fourth week of a six-week investigation on invention. The central idea is that “people invent to solve problems and improve quality of life.” The P3s have researched past inventions: cars, planes, books, ice cream cones, the internet, guitars, stuffed animals and slime. They have learned about different inventors: Marie Curie, Thomas Edison, Johan Gutenberg, and Bette Nesmith Graham (the inventor of white out).

The children then begin a process where, working in small groups, they identify a problem, brainstorm solutions, and choose one which they elaborate on and share. Learning goals include: collaboration, creativity, communication, and literacy skills.

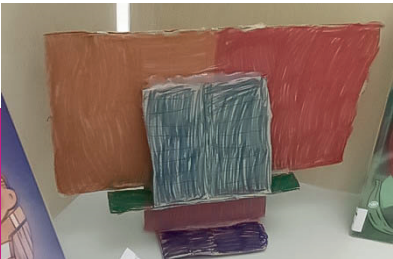
Their fanciful inventions include: the Sugar Stealer which takes sugar out of candy so sweets- adverse parents will let their kids eat more candy; the Book Holder that helps people who are blind access books; and the Book Spot Robot which helps librarians put books back in the right place and is especially helpful in reaching really high places.

Rachel begins today’s 90-minute unit of inquiry session by explaining groups can start working on boards for the exhibition that will share information with families about the inventions, and to test their inventions. Skeptically, Frederik asks why groups need to test their inventions. Rachel explains that this part of the design cycle helps inventors make improvements on their ideas. Frederik then asks how his group can test its invention, the book holder. When Rachel responds that, “You need to ask someone not in your group to pretend to be blind to see how it works” a number of hands go up to volunteer. The Book Spot Robot group decide they need to go ask the librarian for feedback about their invention.

*Sugar stealer*



*Book holder*



*Book spot robot*





After identifying smelly bathrooms as a big problem, Annika and her partners, Zara and Abigail, decide to design a robot to clean toilets. Annika explains that at first they thought a spray bottle would be a good solution, but then, “We realized that there already are a lot of those. We wanted to come up with something new, and Abigail had the idea of a robot. We decided to make it look like a bunny so it would be kid friendly and so little kids wouldn’t get scared.” They sketched prototypes, and then built their robot. The robot’s pipe cleaner arms are designed to extend and retract. There is a cotton ball tail in the back. During today’s period, Annika, Zara and Abigail use the computer to print out text for their display board for the family event.

Asked about the process of creating the robot, Annika explains, “we have been working a lot on it. It’s hard building because it had to look right. But it was kind of fun because I like to try new things out. It’s fun making things.”

*The Bunny Robot*



*Amelie’s sketch of bathroom cleaning Bunny Robot*



Likely it is Rachel and Astrid’s creating opportunities for playful learning (PoP Practice #1) in the unit of inquiry that helps make it fun. While the students’ choice is constrained, they were assigned to invent something to solve a problem; within the assignment there are ample opportunities to generate and share ideas. What problem to solve and how to solve it is up to the children. And the unit of inquiry is all about wonder— imagining, creating, trying, and, of course, inventing.

### **“Meet me at the obstacle course”: Outside Break**

Rachel informs the children that it is time for snack and then outside break. Snack is provided by the school—bread and an assortment of veggies. Children eat and chat. After a few minutes Astrid announces that, “you can go outside when you are done with snack.” Abigail approaches Annika and invites her to play. Annika explains she is still eating. Abigail responds, “OK, then meet me at the obstacle course.”

Outside, Annika makes her way around the playground that surrounds the school and finds Abigail up on a climber at one end of the obstacle course—a series of structures linked together. Annika discovers that the surface of underneath the climber has a thin layer of ice. She invites Abigail down and they slide around together, exclaiming, “it’s so slippery” and “I’m skating.”

Annika then starts off over the obstacle course. She hops across a series of stumps. Abigail follows her. When Abigail slips off the final stump, Annika checks on her friend. Abigail is fine and the friends explore the obstacle course in reverse.

*“Skating” on the ice*



### **“I found a solution”: Social circle**

After 20 minutes P3A returns to their classroom and finds Mette Nielsen ready to facilitate social circle. As the primary grades well-being coordinator, Mette works one on one with children, supports children with special needs (and their families), and facilitates whole classes sessions called social circles to foster a supportive community. Six children have joined the P3As since September, several in the past two months. To nurture a sense of community among the new and established children, Mette has built a curriculum for the group drawing on Danish and international sources.

This is the 8th session of the curriculum. Building on previous sessions, Mette introduces the “big heart,” a heart-shaped pillow that is a concrete marker of kindness. She reminds the children that “last time we had stories of giving and receiving a big heart from home and school. Today we agreed to share stories from ISB: from the classroom, the playground, and after school club.”

Children’s hands go up, indicating stories to share. Mette hands the heart to Anni who tells of getting a group hug from friends when she entered school. She then hands the heart to Annika. Annika recalls how college students from a local design school visited during After School Club and helped children create three dimensional models of their choosing. As classmates nod in recognition, Annika tells how, as the students were leaving she gave one of them a thank you present. Mette notes how this must have made the student feel very happy. Annika hands the heart to Cecilie.

Mette pairs children for an activity aimed at helping them see each other’s strengths. She gives each child a piece of paper with the headings: “I am good at...” “You are good at...” and instructions to fill the paper out about themselves and their partners. Mette pairs Annika with Line. Line is new to the school and is socially defensive; she was bullied by her former classmates. Because of Annika’s open and friendly manner Mette wonders if a friendship might emerge.

*Annika with the big heart*





Things do not start out smoothly. Line immediately questions the point of the assignment.

Line: Why do we have to do this?

Mette: This is a good way to get to know classmates better.

Line is not convinced. She asks Annika the same question.

Annika: She already told you why. Let's start.

Line (to Mette): But what if I can't find something good to say? I'm not saying anything bad about Annika. I just don't know her.

Annika: Everyone is good at something.

Mette: You need to think hard. Even if you have just met someone, you know something that they may be good at.

Line: I don't.

Her partner boycotting the assignment, Annika decides to begin. She writes I am good at...caring, strong, fast, art.

You are good at...writing, strong.

Later, Annika reflects, "That felt hard. We are friends a bit, but we don't play together that much. She was asking me the point. I told her, "Let's just do this. We should just start. Let's make the best of it." Then I found a solution. I wrote what I think and know.

Mette will bring the children's writing and notes about the sessions to a meeting with Rachel and Astrid to discuss next steps in the curriculum as well as discuss the class dynamics in general.

*Annika working on the assignment*



Teachers at ISB recognize that trust is essential in building a playful learning environment (PoP Practice #7). Here teachers are concerned about trust among students. Clearly, the process is not always easy, but it is worth spending time on. Teachers recognize part of the process is welcoming negotiations. Frederik can be skeptical regarding the need for testing his robot. Line is allowed to ask the purpose of an assignment.

**“It’s up to us because we decide if something is fun or not”:**

**Lunch/student council**

At 11:30 Annika grabs lunch in the cafeteria and joins the rest of the student council as the P3A’s elective representative. She looks forward to these meetings because, “You get to talk to people you normally don’t get to. I’ve made new friends. And you get to go have lunch in a different place.” Today, she joins 8 other students, P2 through M7, and the council’s facilitator (here teacher Rachel) around a table in the Creator Space.

The council meets monthly and addresses issues of concern to students. Recently, the council successfully advocated for milk to be included as part of lunch. The council is also a forum where teachers and administrators can bring students’ voices into school decision-making.

Today’s meeting is such an occasion, aimed at getting feedback about a new IB Learner profile the staff is creating about playfulness. Since students’ assessments are based on these profiles, it seems sensible to get student input about the proposed changes.

The draft profile reads:

We approach our learning with a playful mindset, finding opportunities to tinker with new ideas and to approach them with wonder and delight. Our inclination is to frame and reframe our experiences as occasions to be curious, creative, imaginative, and to find joy in exploring the ‘what if...’ space of learning and play. After reading over a draft, Annika shares that, “I like the word playful because it gives me a happy feeling. Playful is a fun way to learn.”

She is not sure what mindset means, and thinks inclination is a funny sounding word.

The children are then asked whose responsibility it is to make things playful at school. Abby, the P4B representative answers, “it’s the teachers, because they set things up.” Amelie disagrees because, “It’s up to us because we decide if something is fun or not.

The teachers can try really hard to make it playful, but we decide.”

In the student council meeting we again see PoP Practice #8—fostering trust and welcoming negotiation—with children having input into an important school policy. Rachel brings the feedback to the group writing the new profile who take consider it seriously as the revise the profile.

**Recess**

During the winter in Billund, a sunny day is a treat. Annika spends 30 minutes under blue skies chatting with friends, playing tag, and revisiting the obstacle course. All told, Annika and her classmates have spent almost an hour outside in self-directed play.

ISB educators see this time as valuable for its own sake and something with a purpose. Through such play children get to know each other in ways not possible in the classroom. Trust is built. This is not automatic. Around the world, bullying is endemic on playgrounds. Supported by social circles and other conversations about the inevitable conflicts, slights, and exclusions that can accompany self-directed play, teachers help children build a big heart towards all members of the community.

**“It’s a surprise to see if you’re right or wrong”: English/Phonics (and the fun spelling test)**

Literacy experts say that third grade is the transition from learning to read to reading to learn. Some children make this transition early and easily. Others take longer and need support. Children learning to read in their non-native language are often in need of such support. A native German speaker who is learning both Danish and English, Annika is in this second category.

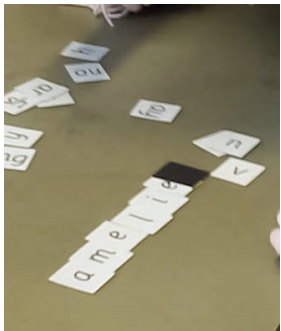
Annika is part of a group from the two P3 classes for whom Rachel provides intensive phonics instruction twice a week. Rachel’s goal is to make these sessions as engaging as possible. As she explains, “I give a lot of thought to make it playful so they don’t hate it.” She adds with a smile, “And so I don’t hate it so I can teach it.”



*Sounding out Annika’s long word*



*Annika building her name*



The group is currently working to master a dozen phonemes including: ar, or, ee, ow, ay, igh, oy, ou, and oo. In a room generally used for the After School Club, children sit in a horseshoe shaped bench with Rachel in the middle. For this 90-minute session Rachel has planned ten possible activities which she will deploy based on the children's interests, input and energy levels.

The session begins with Rachel handing out two packs of alphabet cards, one inch by one inch squares, with a letter or a sound combination (e.g., ou).

Annika: Can we make words?

Rachel: Good idea.

Caleb: Real or pretend?

Rachel: You can choose. But I want you to read them to me.

Annika begins by building her name. She can't find an "e" card for her final letter, so she takes a "ee" card and covers the second e with a card turned upside down.

She then strings 20 cards together.

Annika: Look at my long word. I had the idea that it will sound crazy!

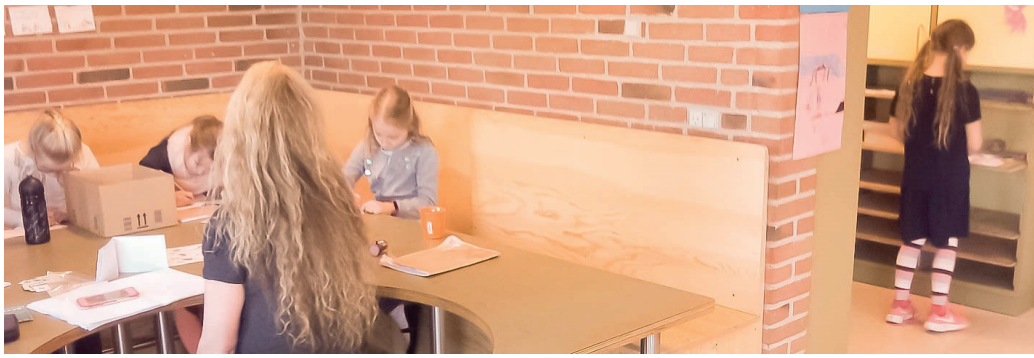
Rachel: Let's read it.

Rachel guides Annika in sounding out her long word. Where there are multiple consonants in a row she suggests, "Let's add a vowel and then see how it sounds."

*Sounding out the gigantic word*







*Taking the spelling test*

Annika’s long word inspires Caleb and Markus to make an even longer word; 44 cards in all. Annika leans forward and joins Rachel and the boys in sounding out this “gigantic word.”

Rachel announces, “Now it’s time to look over spelling words so we’ll be ready for the test next week.”

Markus, Caleb and Annika: Can’t we do it now?

Rachel: You want to do it now?

All seven children: Yes!!!

What follows is a very fun spelling test. As Rachel hands out their individual test booklets, the children position themselves so they can’t “cheat.” Nadia and Mary place a box between them. Markus crawls under the table and Caleb and Annika find positions around the room to take the test.

Rachel: The first word is sprouting. The flowers are sprouting in the garden. Sprouting.

She pauses for 30 seconds to let the children write and then says, “Look up so I can see your eyes so I know you are ready.” Annika laughs, knowing that where she is sitting Rachel can’t see her or her eyes. So she calls out, “I’m ready.”

Rachel: Knee. I don’t want to hurt my knee. Knee.

After all 9 main words are called out, Rachel asks, “are you ready for the bonus words?” There is a cheer and calls of yes. “Giant, scissors, sorcerer, wizard!”

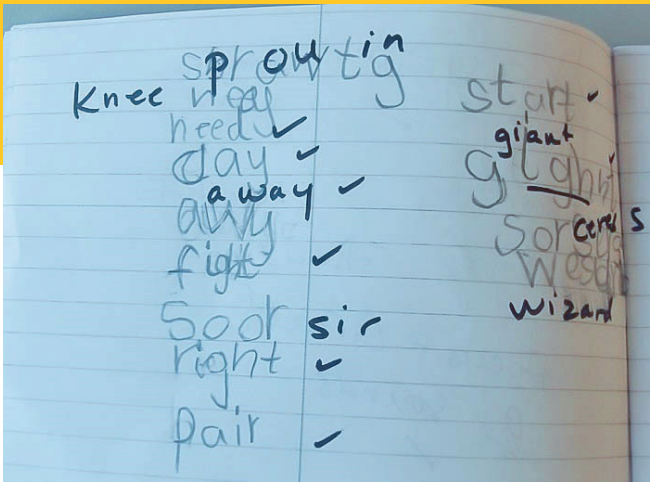
The test completed, the children return to the bench. Rachel offhandedly says, “I’ll grade these later” prompting the children to cry out, “No!” Her question, “Do you want me to grade these now?” gets a resounding yes.

*Grading the test*





Annika reviewing her graded test



Annika's graded test

As she grades the tests, Rachel provides affirmations of key concepts (e.g., “good sounding out the I sound in giant”) and pointers for improvement. The children look on with great interest.

Rachel hands Annika her test booklet back. She examines it carefully.

Asked later about the test, Annika expresses great pleasure in the experience. Despite several wrong answers, Annika explains, “I just like to try. Sometimes it’s hard, but I just like trying to write it down. The surprise is if it is right or wrong. It’s fun, surprising, to see if you’re right or wrong.” That evening Annika happily shares the test results with her parents. They collectively resolve to do a bit more practice on this week’s new spelling words.

There are approximately 30 minutes left in the lesson, and Rachel engages the group in three more activities. First, they brainstorm words for the next spelling test. Here Rachel reminds the children to “focus on words with sounds we need to learn.” For a break, Rachel then reads the group the classic children’s book *Caps for Sale*. There is rapt attention, occasional laughter, and great pleasure as the children engage with the book. A phonics workbook is the final activity. Each child receives a copy and Rachel leads them in a choral reading of the first page: air, stair, ark, mark. The next pages have short sentences with words using the target sounds.

After a choral reading of a couple of pages, Rachel announces, “I have an idea to make this more interesting. You can each have a turn to read a page, and you can change any word you want.” She models how this could work and the children take turns, trying to outdo each other in creating silly sentences. Later Annika explains, “I really liked when we changed words to get something else. That was pretty funny.”

Rachel announces that it is time to return to the classroom. There is audible disappointment and the children spontaneously thank Rachel for the lesson.



*The phonics book*

**‘So cool because you can do whatever you want’: Afterschool club**

Like more than half of ISB students, Annika spends time in Afterschool Club. At 2 Annika says goodbye to Rachel and Astrid and goes outside. At 2:45 Annika, along with most of the children, come inside for various activities that includes library, the creator space and the gym.

Today, Annika sits with Tom and Zara. They each are using hamma beads, brightly colored beads that can be placed on a base to make patterns. Tom explains that the hamma beads, “are so cool because you can do whatever you want.” “But only if you have the right shape” Annika adds.

Rachel is unusually open to negotiation (PoP Practice #8), both asking for children’s input (nominating new spelling words) and responding to their unsolicited requests (taking the spelling test now). Rachel is sympathetic to saying yes to playfulness. The result is a phonics session full of choice (children negotiating, being spontaneous, and having and sharing ideas), wonder (taking risks, learning through mistakes) and delight (being silly, joking, smiling and laughing). The photographs convey the sense of hygge (Danish for coziness) among the group. Perhaps most impressive is the group’s focused attention throughout a long session which involves hard work for these children.





*Silly sentences*

### **“But only if you have the right shape”: Promoting playful learning at ISB**

Annika’s comment provides a useful analogy for playful learning in school. It may be true that almost any lesson can be approached playfully, with a sense of choice, wonder and delight. As Annika argued at the student council meeting, “It is up to us because we decide if something is fun or not.” At the same time, playfulness is not solely a solitary affair and is often activated by what is around us—individuals, materials and activities. In other words, for playful learning to occur, there has to be the right shape.

Rachel, Astrid and Mette provide the “right shape” of environment to Annika and her P3A classmates. They allow children to negotiate, answering skeptical questions and welcoming children’s suggesting, saying yes to playfulness. They structure lessons to invite choice, wonder and delight. This shape stands in sharp contrast to many classrooms where eight-year-olds are taught and tested in ways that provoke anxiety and shame. How wonderful that here a spelling test is seen as fun and as an opportunity to grow. The result is learning in many dimensions. During this day in P3 Annika has learned about creating, about working with members of the community whom aren’t easy to work with; about having conversations regarding complex ideas, and about how to spell giant. And her view of school as a place of playful learning has been confirmed.

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Pedagogy of Play is a research collaboration between the LEGO Foundation and Project Zero, a research organization at the Harvard Graduate School of Education. The project launched in 2015 at International School of Billund, Denmark, and expanded to research sites in South Africa, the United States, and Colombia.

In each site, educators and researchers work together to explore culturally relevant models of playful learning.

To learn more about PoP at ISB, please visit <https://isbillund.com/pop>

To learn more about PoP and Project Zero, please visit [www.pz.harvard.edu/projects/pedagogy-of-play](http://www.pz.harvard.edu/projects/pedagogy-of-play)

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