Trainer of Trainers Capacity-Building Manual

The LEGO Foundation
IREX
humans who play
KPLAY

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Preliminaries

0.1 FOREWORD

This Trainer of Trainers (ToT) Capacity-Building Manual introduces participants to the basic concepts of Learning Through Play with Technology (LTPT) and how it can be adapted by teachers in Kenya. The manual aims to help participants facilitate three highly interactive workshops that will motivate and engage participants to try a new mindset in their classroom. It comprises three main sections, namely: Through the Lens of Play, In the Classroom, and Creative Coding using Scratch. During the workshops, participants are encouraged to share their experiences and reflections that enable them to learn about each other as individuals and imagine the possibilities for using play as an instrument for learning.

The manual explicitly shows teachers how the LTPT framework is directly correlated with the following **C**ompetency-based curriculum (CBC) competencies: Creativity & Imagination, Communication & Collaboration, Critical Thinking & Problem Solving, Digital Literacy, Learning to Learn, Citizenship, and Self-Efficacy. These competencies are achieved through the activities in the capacity-building workshops that encourage teachers to take on a learner-centered approach, inviting them to be creative, solve their own problems, work collaboratively, and explore digital tools and new ways of thinking.

The KPLAY project has been piloted in the counties of Kilifi and Kwale. The activities that are included in the manual are highly interactive and aim to engage teachers to take on a learner's mindset as they engage with LTPT. All the activities were tested during the first year of the KPLAY model and have been iterated based on feedback collected from teachers and Curriculum Support Officers (CSOs).

Lucy Maina,

KPLAY Director

0.2 PREFACE

The KPLAY project is led by IREX with technical partner, Humans Who Play, and is generously funded by The LEGO Foundation. KPLAY aims to support primary schools and teachers in the counties of Kilifi and Kwale as they discover, learn, and introduce LTPT in their schools. The activities in this manual have been aligned to the CBC, tested, and co-created with primary school teachers from government schools in the counties of Kilifi and Kwale.

0.3 ACKNOWLEDGMENT

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0.4 ABBREVIATIONS AND ACRONYMS

Abbreviations and acronyms that are used throughout this document.

KPLAY	Kenya Play project
MIT	Massachusetts Institute of Technology | A private research university in the United States of America, the MIT Media Lab's Lifelong Kindergarten research team developed Scratch and the 4P's pedagogy, which are used in KPLAY activities
4P's	Projects, Peers, Passion, and Play
TSC	Teacher Service Commission
CSO	Curriculum Support Officer
SNE	Special Needs Education
HI	Hearing Impaired
KICD	Kenya Institute of Curriculum Design
CEMASTEA	Centre for Mathematics, Science and Technology Education in Africa
LTPT	Learning Through Play with Technology
CBC	Competency-Based Curriculum
CBA	Competency-Based Assessment
ICT	Information and Communications Technology
CoP	Community of Practice

0.5 DEFINITION OF OPERATIONAL TERMS

Common terminology can be found throughout this document.

Teacher	Educators who provide instruction to learners within a school setting
Curriculum Support Officer	Educators who receive training and coaching directly from KPLAY so that they can train and support participants (Curriculum Support Officer - Special Need Education (CSO - SNE))
Facilitator	The person who is running a capacity-building workshop
Capacity-Building	A workshop (as part of a series of three multi-day workshops) for training teachers on how to use KPLAY materials and pedagogical methods
Community of Practice	A group of professional peers who discuss and share in the pursuit of accomplishing similar goals in their individual contexts
Learning Through Play Technology (LTPT)	A pedagogical approach where play and technology are the basis for developing skills in an educational setting
Tinkering	A trial-and-error approach to problem solving, usually in the context of physical materials and electronic hardware
Coding	The process of writing instructions for a computer to perform; can also be referred to as " computer coding" or "computer programming"
Creative Coding	An approach to computer programming where the goal is to create something that is expressive rather than simply functional
Creative Learning	An approach to education that focuses on knowledge building and skill development by creativity and problem solving
Scratch	A block-based visual programming language and coding environment developed by the Massachusetts Institute of Technology (MIT) aimed at people who are learning to code for the first time

Note: This training manual supports differentiated instruction and has also been adapted for the hearing impaired; therefore, the word "sign" will be used across the manual instead of " say."

1. Introduction

1.1 PREAMBLE

This ToT Capacity-Building Manual introduces participants to the basic concepts of LTPT and how it can be adapted by all primary schools including teachers of children with hearing impairments in Kenya.

This manual aims to help participants facilitate three highly interactive workshops that will motivate and engage participants to try a new mindset in their classroom. It is designed to enhance the capacity of participants in pedagogy through the LTPT framework. The manual comprises three main sections: Introduction to Learning Through Play, In the Classroom, and Creative Coding with Scratch. During the workshops, participants are encouraged to share their experiences and reflections that enable them to learn about each other as individuals and imagine the possibilities for using play as an instrument for learning.

Additionally, the manual explicitly shows teachers how the LTPT framework is directly correlated with the following CBC competencies: Creativity & Imagination, Communication & Collaboration, Critical Thinking & Problem Solving, Digital Literacy, Learning to Learn, Citizenship, and Self-Efficacy. These competencies are achieved through the activities in the capacity-building workshops that encourage teachers to take on a learner-centered approach, inviting them to be creative, solve their own problems, work collaboratively, and explore digital tools and new ways of thinking. It is anchored on the overall vision of education in Kenya: "Provision of quality, inclusive and relevant education, training and research for sustainable development."

The KPLAY project has been piloted in the counties of Kilifi and Kwale. The activities that are included in the manual are highly interactive and aim to engage teachers to take on a learner's mindset as they engage with LTPT. All the activities were tested during the first year of the KPLAY model and have been iterated based on feedback collected from teachers and CSOs who already participated in the program. The manual includes everything needed to facilitate a series of three multi-day workshops that occur during an academic year. In this manual, facilitators will find learning objectives, CBC competencies, step-by-step instructions for running activities, worksheets, and slides with facilitator notes for each workshop. In addition to providing a capacity-building framework, this manual also has suggested facilitation strategies. We invite facilitators to use this manual as they see fit, adapt activities to their needs, and introduce new activities that they feel are appropriate for their groups of teachers.

1.2 PEDAGOGY BEHIND KPLAY AND RATIONALE

KPLAY is based on proponents of experiential learning and constructivist theory advocated for in the Basic Education Curriculum Framework (2017). Jerome Bruner's cognitive development theory (1961) emphasizes the significance of categorization in learning as "to perceive, to conceptualize, to learn, to make decisions." Interpreting information and experiences by similarities and differences is a key concept. David Kolb's experiential learning theory (1984) indicates that we change because of experiences, reflection, conceptualization, and experimentation. The learner needs to feel, watch, think, and do. KPLAY adopts these theories and creates an experiential kind of learning.

To further improve the experience of KPLAY, the theory of visible learning by John Hattie (2008) comes into play. Hattie asserts that visible learning and teaching occurs when teachers see learning through the eyes of learners and help them become their own teachers. It entails making student learning visible to teachers so that they can know whether they are having an impact on this learning; this is an important component of

becoming a lifelong learner. Furthermore, KPLAY achieves Gardner's multiple intelligences theory (1983) for learners of different intelligences and diversities through the innovative LTPT approach.

The existing education policy and regulatory framework provide for the infusion of technology in all learning areas. According to Sustainable Development Goal 4, all people should have access to high-quality, inclusive education and lifelong learning—with the majority of progress achieved by 2030. The KPLAY project emphasizes the quality of education through information and communications technology (ICT) infusion and capacity development of trainers while targeting the marginalized counties in Kenya. In addition, the National Education Sector Strategic Plan (NESSP; 2018–2022), the Sessional Paper No. 1 of 2019, and the Basic Education Curriculum Framework (2017) provide for the adoption of CBC and competency-based assessment (CBA). The policies further emphasize the need for hands-on activities in the learning process through innovative and learner-centered approaches as a strategy to enhance learning outcomes and to achieve quality education at a primary-school level.

It is evident that one of the key challenges facing the sector is the integration of ICT in the teaching and learning process, hence the need to build the capacity of educators in this aspect. The NESSP further identified science, technology, and innovation as a key indicator upon which the national goals of education and pillars of Kenya's Vision 2030 are anchored. The various government policies provide for the promotion of linkages and collaborations through public–private partnerships during the ideation of education policies, programs, and activities. The KPLAY project's overall goal is to enhance the capacity of teachers and to improve the learning outcomes of learners. It is planned and implemented in line with these policies and their related guiding principles.

1.3 THE KPLAY THEORY OF CHANGE

If teachers in Kenya understand the value of and have access to localized, easy-to-implement LTPT activities; if they are empowered with the skills and mindsets to embrace and create LTPT; and if they have support from and are held accountable by local education leaders, school leaders, coaches, peers, parents, and communities to use LTPT; then, teachers will integrate LTPT effectively in the classroom, and children in Kenyan primary schools will be able to learn 21st-century skills through play.

1.4 OVERALL GOALS OF THE TRAINING

- Teachers (PP1–Grade 6) build awareness of skills in LTPT and apply it effectively in the classroom.
- Learning outcomes are improved through mainstreaming LTPT in teaching and learning in primary schools, and with special primary schools for learners with hearing impairments (HI).

1.5 TRAINING OUTCOMES

1. Enhance the skills, knowledge, and attitudes of participants in LTPT.
2. Develop CBC core competences values and emerging issues as participants engage in LTPT activities.
3. Create and strengthen a community of practice (CoP) in LTPT.
4. Enhance the competency and confidence of participants in utilizing computing devices and integration of play and technology in teaching and learning.
5. Connect participants with new and emerging education technologies (EdTech), including Scratch, tinkering, and creative coding.

2. LTPT Capacity-Building Framework

2.1 WHAT IS LEARNING THROUGH PLAY WITH TECHNOLOGY?

A growing body of evidence-based research supports learning through play as instrumental in children's positive development, serving as an essential way to foster a range of holistic skills required to thrive in today's world. The addition of technology in learning environments can support meaningful learning when used thoughtfully.

Technologies designed to embrace opportunities for playful interaction are some of the most powerful tools available to support high-quality learning.

"Learning Through Play with Technology" in the KPLAY project includes:

> Tinkering activities where learners use locally available materials (sometimes combined with digital technology) in a hands-on way to build, iterate, and learn from failures and invent new things.
>
> Creative coding platforms where learners create their own stories, games, and animations with the support of an online community using Scratch and Scratch Jr.

Because there are multiple ways to interpret learning through play, we asked teachers who participated in the first year of KPLAY workshops what LTPT means to them. Here's what they told us:

"LTPT means infusion of play in teaching and learning activities through the use of computers, tablets, phones, and other digital devices to make learning enjoyable."

"It means the use of technology during play to enhance learning."

"It means the use of technology to create playful activities to present lessons that create curiosity in learners."

– Teachers who participated in the KPLAY capacity-building workshops

2.2 DEFINITION OF KEY CONCEPTS

FACILITATION APPROACH: MODEL, CELEBRATE, AND ENABLE.

Facilitators will model, celebrate, and enable the learning and exploration of content.

When facilitators model a concept, they both demonstrate and problem-solve with teachers to contribute toward teacher confidence and help to alleviate anxieties around using new technologies. For example, by having facilitators model a problem-solved set or saying/signing things like "I am not sure how to solve this; let's try solving it together," teachers see an example of someone who is not the holder of knowledge but rather the facilitator for collectively solving problems. In turn, this helps teachers embrace a "learning how to learn" approach in their practice.

When facilitators celebrate, they help teachers recognize the pioneering work that they are a part of and reiterate the importance of celebrating the achievements of their learners. When facilitators enable, they support educator exploration of content and give them the opportunity to learn.

In a Snapshot:

You can say/sign:

"I thought I could build a board game about science without any paper, but now I see I need more ideas to test different approaches."

You can say/sign:

"Wow, there are so many unique ideas in this room."

"I didn't think you could build your game entirely with sticks, but I see that it works very well."

You can say/sign:

Generally, asking open-ended questions enables exploration and learning:

"How many different variations of the same game can we all come up with?"

The exploration of content in this way helps to set teachers up for success when implementing LTPT. This framework sets up a foundational mindset that is open to growth, engaging with student learning, and embracing the humor and joy of learning something new; these are all qualities that are fundamental to making LTPT an engaging experience for all who are involved. When learners answer open-ended questions, it promotes critical thinking and a foundational mindset open to growth.

The "*Model it*, *Celebrate it*, *Enable it* " framework is inspired by the "Growth Mindset" pioneer Dr. Angela Duckworth and her research at the Character Lab.

THE 4P's: PROJECTS, PEERS, PASSION, AND PLAY

PROJECTS: People learn best when they are actively working on meaningful projects—generating new ideas and refining these ideas iteratively.

PEERS: Learning flourishes as a social activity, with people sharing ideas, collaborating on projects, and building on one another's work. Interactions with peers should be a central element in the learning process.

PASSION: When people work on projects they care about, they work longer and harder, persist in the face of challenges, and learn more in the process.

PLAY: Learning involves playful experimentation: trying new things, tinkering with materials, testing boundaries, taking risks, and iterating again and again.

COMMUNITIES OF PRACTICE

A CoP is a community of peers who are interested in the same goal and intentionally meet to improve their practice.

VALUES OF PLAY

Learning through play happens when the playful learning activity is:

Actively engaging: Deep and consistent engagement with complex issues, mental immersion, and the ability to stay focused while learning are important.

Joyful: It embraces uncertainty, surprise, purposeful risk, curiosity, and positive experiences that are linked to learning.

Socially interactive: Learning through play activities should emphasize learning as a collaborative process; learners communicate their thoughts and understand their peers through direct interaction and sharing of ideas. They build a deeper understanding and more powerful relationships.

Meaningful: The playful learning activity ensures that learning is important, useful, and valuable within a local context; the learners can create connections by exploring what they have seen, done, or observed others do.

Iterative: Playful learning activity must be adapted and changed a couple times by trying out different ways and possibilities of solving the challenges and questions.

2.3 FIVE CORE FACILITATION PRACTICES

Facilitators are encouraged to bring their own perspective on how they conduct their facilitation. Below are five core practices that we piloted in 2021 that led to high teacher engagement with the KPLAY model and that we encourage facilitators to practice.

Learning Happens in Context	What happens in the capacity-building workshops is connected to our teachers' and students' lives outside of school and to what is valued in our community.
Model	Facilitators model the behaviors that they want teachers and learners to take on when they try new ideas. They are not afraid to ask for help even when they are the ones who are leading the workshop. They openly share their frustration when something does not work, but they make sure to go out of their way to point out what they learned from the experience.
Celebrate	When facilitators see a teacher making an effort to bring what they learned in the workshops to their classroom, facilitators encourage them. Facilitators acknowledge that it may have been difficult and tell the teachers that they should feel proud.

Enable	Facilitators enable teachers to support each other, and they do not let teachers give up if they are struggling or having a bad day.
Imagining Possibilities	Facilitators dream of new ways teachers can implement the model in their classrooms. Facilitators are curious to explore new possibilities and encourage teachers to do the same.

2.4 CBC- ALIGNED TEACHER COMPETENCY MATRIX

The matrix below connects Kenya's new national CBC to the LTPT learning outcomes that are suggested by The LEGO Foundation and applied through the capacity-building workshops. Additionally, this matrix shows what the experience of the teacher as a learner would look like and what teaching and facilitation skills they would need in the classroom.

	Competency Connection to LTPT	Teachers Will Learn to	How It Looks in the classroom	Fluency Needed in Tech or Tinkering Concepts
Creativity & Imagination	Technology is often introduced in a way that emphasizes technical detail over creative potential. LTPT activities show that learning how to code in Scratch, for example, can be a medium for creativity and imagination.	• Playfully explore materials and the world around them. • Use new and found materials to discover creativity in their everyday lives. • Express new ideas through project creation. • Create and customize content with creative ideas; see themselves as a creator." • Connect projects to personal and community interests and experiences.	• Developing ways of introducing technology that spark learners' imagination and ideas. • Providing scaffolding and strategies for learners to ask questions and make observations while creating projects. • Supporting learners in creating projects that express their ideas and interests.	• Play Design: game prototyping, remixing, system design (i.e., mechanics, space, components, challenge, goals, etc.).
Communication & Collaboration	Through LTPT, learners will recognize the power of using technology to create with and for others; "I can do different things when I communicate and collaborate with my peers."	• Learn from others directly and through their projects. Collaborate with others to create projects. • Share and help in ways that empower others. • Feel pride in their own creative work and their learners' projects.	• Support peer collaboration through the ""Creative Learning Spiral," encouraging learners to "imagine, create, test, and share" as part of their process of working together. • Develop strategies for supporting peer learning and feedback.	• Learner Mindset: Teachers are not keepers of information who solve problems for their learners; they are learners themselves who can guide other learners in the steps of "how the student can solve their own problem."
Critical Thinking & Problem Solving	LTPT will help learners feel empowered to solve problems with technology. Through activities like tinkering with electronics, they will learn that there are many ways to solve a problem.	• Make observations and ask questions while creating projects and participating in activities. • Experiment and iterating: Create, test, develop further, and test again. • Test and problem-solve: Test to look for problems and solve them when they arise. • Modularize: breaking a problem into manageable parts to solve it. • Look for and make use of available resources.	• Provide scaffolding and strategies for learners to engage in experimenting and problem-solve as they create projects. • Gain familiarity with and provide resources that help learners to problem-solve. • Developing practices to engage learners with diverse abilities and interests in problem solving, i.e., some learners need direct instruction for troubleshooting; others might just need encouragement or support from a peer.	• Tinkering: process of trial and error to solve a problem, usually with physical objects.

		• Discover ways to solve problems independently and collaboratively.		

	Competency Connection to LTPT	Teachers Will Learn To	How It Looks in the Classroom	Fluency Needed in Tech or Tinkering Concepts
Learning to Learn	LTPT requires awareness of one's learning process and needs. It requires the learner to approach obstacles as learning opportunities through a "Growth Mindset": "Even if I don't know much about this, I know how to figure it out."	• Problem-solve; When they don't know the answer, teachers will be able to break larger questions or tasks into smaller pieces to solve. • Utilize an iterative process of trying out a variety of solutions to learn which solution will yield the best outcome.	• Teachers will not position themselves as being the sole knowledge holder in the room. • Teachers will position themselves as lifelong learners and inspire their learners to follow their example.	• "Growth Mindset": teachers' position themselves as lifelong learners. They will be continually making efforts to learn a variety of new skills throughout their careers.
Digital Literacy	Teachers and learners will feel empowered to use digital devices to explore information and content stored in digital devices, safely and securely.	• Help learners create, save, interact with, and open Scratch projects. • Use video conferencing. • Perform basic tasks with a computer (web browsing, changing settings, using Google Suite, etc.). • Become confident with tinkering practices and technologies, knowing how to help learners create projects using PlayLab materials such as electronics and microcontrollers. • Become fluent in child cyber safety and security protocols.	• Help learners explore multiple ways that they can use creative computing (Scratch), simple electronics, local materials, and prototyping tools to express their ideas across multiple subject areas (art, science, history, etc.) and multiple types of projects (animation, stories, presentations, music, games, simulations, etc.).	• Sequences: identifying a series of steps for a task. • Loops: running the same sequence multiple times. • Parallelism: making things happen at the same time. • Events: one thing causing another thing to happen. • Conditionals: making decisions based on conditions. • Operators: support for mathematical and logical expressions. • Microcontrollers: electronics (micro bit) coding, hardware, interface design, etc. • Circuits, found electronics, paper circuits, soft circuits, e-textiles, etc.
Self-Efficacy	LTPT inherently fosters self-efficacy through the need for learners to problem-solve as they work independently or with peers, in a process of trial and error; learners do not rely on teachers to tell them the answer to their problems.	• See themselves as the facilitators of learning instead of the sole holders of knowledge in the classroom.	• Provide learners with scaffolding to guide them through the process of problem solving.	• "Growth Mindset": Teachers position themselves as facilitators of learning; they will be continually making efforts to learn new facilitation skills throughout their careers to help better guide their learners.
Citizenship	LTPT can help learners to realize the possibilities of what they can contribute to their communities and country by learning skills like coding and tinkering, which can lead to careers in engineering and similar disciplines.	• Encourage learners to create projects that relate their new skills to applications that affect their local communities.	• Help learners discover how their new skills can be applied within their community.	• Creativity: Teachers brainstorm and create links between skills gained, lesson content, and local community applications.

VIRTUAL AND HYBRID SETTING CONSIDERATIONS

If these workshops are conducted in virtual settings, there are a few facilitation considerations that we recommend

Setting up and testing the technology prior to the virtual or hybrid setting.

- Calling on people to share, rather than asking for volunteers, can help keep the workshops flow moving and ensure its timing is maintained.
- When doing any tinkering activities, facilitators can tilt their cameras to show what they are working on and ask teachers to do the same.
- While everyone works together on assignments, playing some background music (for those with residual hearing) can make it feel like a more relaxed tinkering space.
- Asking teachers to upload images of their work to the communication method (WhatsApp, or similar) of their during the workshops can be helpful so that teachers become more comfortable with their peers and don't forget about how they can communicate with these peers.

- Where possible, consider a sign language interpreter to be in the meeting; they can do this on screen, where the hearing impaired can see.
- Additionally, use closed captioning and provide print outs of slides with narration.

Session 1: Introduction to Learning Through Play | 3 Days, 16 Hours

This three-day workshop aims to establish a COP by introducing participants to KPLAY. This session gives participants an opportunity to share their dreams, and to get inspired and motivated. The hands-on activities will enable participants to acquire the basic concepts of LTPT.

Session Outcomes

By the end of the workshop, participants will/should be able to:

- Relate learning through play to their own experiences.
- Be inspired and motivated to try out creative learning / LTPT in their classrooms.
- Be able to explain/narrate the value of LTPT to their peers.
- Feel that they belong to the KPLAY COP.
- Be motivated to engage with their teacher peers regularly.
- Develop confidence to use their computing devices offline and online.

Day 1

Introduction to Learning Through Play / Creative Learning

Resources required for this session:

- Objects of play (brought from home)
- CBC Competencies Information Sheet
- “What Do You See?” worksheet
- Workshop 1 slides (in KSL (Kenya Sign Language) or with interpretation in KSL or side notes)

Ask participants to introduce themselves with their peers; say/sign or fingerspell their name, what school they come from, what grade level(s) they teach (or have previously taught), etc.

Pre-Session Assignment

The facilitator will send a message to the participants ahead of time, asking them to bring an object of play from their childhood (or any point in life).

The facilitator should also bring an object of play.

Image 1: Learners from Funzi Primary School skipping a rope

Activity 1: Objects Used During Play

Resources required for this activity:

- Object of play (brought from home)

The facilitator will display objects of play brought from their childhood and narrate the story about how they used the item for play. The participants will do the same until everyone has shared their objects of play. The facilitator will praise the participants for sharing their objects of play and their childhood memories. The facilitator will encourage deeper thinking by asking everyone to consider:

- *Did you notice how shared memories highlight moments of creativity?*
- *Did you notice how memories highlight moments of fun?*
- *Did you notice how moments shared with other people enabled them to learn something new about themselves and others?*

Activity 2: How Does Play Enhance Learning?

Resources required for this activity:

- CBC Competencies Information Sheet (pages 82–85)

In this activity, the facilitator begins by telling participants to gather any five small objects around them.

The facilitator should model the action by going around their space and collecting five small objects too. The facilitator shows the objects collected to the participants.

Once everyone has collected their five small objects, facilitators inform the group that they will have one minute to create a sculpture by balancing their found objects with each other. We recommend setting a timer for one minute / assigning someone to sign that time is over / raising a handkerchief as a flag for this section. Again, the facilitator should model the activity by building a balanced sculpture. After one minute, the facilitator should ask everyone to look at their peers' creations and celebrate the innovation and creativity displayed.

The facilitator will then encourage critical thinking through key inquiry questions:

- *How do we build a balanced sculpture?*
- *What was difficult about building your balancing sculpture?*
- *How did you solve the challenge you faced while making these objects balance?*
- *What did you observe about everyone else's tower?*

The intention is to show that while everyone had a different tower, everyone learned how to balance their tower and solve the problem in their own way; there was no singular right or wrong answer. It is important to recognize the curiosity, risk, and failure that are required in this type of learning.

The facilitator should illustrate to participants the different types of play.

1. Free Play: Learners have freedom to play games that they want to play. They can choose everything they have the freedom to select their play materials, interest area, and even the plot of the game.
2. Guided Play: Learning experiences that combine the child-directed nature of free play with a focus on learning outcomes and adult mentorship.

There are many ways to play, each with different roles for adults and children. Each type of play poses a different demand the players and requires a variety of attitudes.

For example, some of our objects of play were used during unstructured or free play; the player chose how and where to play without a specific goal in mind. When children fidget with a toy or play outside, that is often free play. The attitude they take during free play is exploration, curiosity, and experimentation. When we played the balanced sculpture game, that was closer to what we call guided play. In guided play, players are supported to achieve one or more learning goals within a play context. In an educational context, the idea is to scaffold children's attempts and not to direct their actions in guided play, children and adults share control of what to do and how. Adults can join children's play to extend the learning possibilities through questioning or suggestions. They can also initiate guided play activities that build on children's interests.

Children can build objects up to the highest point possible. In this regard, an educator can suggest that they compare which sculpture is taller, manually count how many objects each sculpture has, and use objects as a unit of measure to compare heights and lengths of different kinds of objects in the class.

For further practice, the facilitator will lead the discussion through the following questions:

- *Can you think of any guided activities you have done with your learners this term?*
- *Lets reflect on structured play, the types of play that we usually call "*games*." "which games have you observed your learners, or your own children at home, play recently?*

The facilitator will change the balanced sculpture activity slightly to make it a group game to be carried out within two minutes. We recommend setting a timer / assigning someone to sign that time is over / raising a handkerchief as a flag for this game to make it feels like a race. Once the teams are split, the facilitator makes sure that the objective (building the tallest sculpture) is clear to the participants, and then tells them / signs to them to "get on their marks, get set, and go!" before starting the timer.

After the two minutes, the balanced sculptures are judged, and the tallest sculpture is declared. The facilitator then follows up with the following discussion:

- *What did you learn about your group members while building the balanced sculpture?*
- *Was it harder or easier than before?*
- *What did you notice about what the other groups did?*

Debrief participants on how this game illustrates the difference in the style of play between the two activities.

Games operate like guided play with rules, structure, and learning goals. Since the game provides these elements, children may feel a greater sense of choice than in adult-facilitated play activities. Adults have an important role in helping young children get started, introducing game rules and assisting them with taking turns.

For instance, Kode, a stone-throwing coordination game also known as Diketo in other parts of Africa, uses shapes and groupings found in mathematics, as well as concepts of gravity and texture from science. Research on board and digital games suggests that intentionally designed and implemented games support the development of core competencies such as communication and collaboration, critical thinking and imagination, citizenship, and elf-efficacy.

The facilitator will take the participants through the CBC Competencies Information Sheet and ask them / sign for them to choose one competency they learned or focused on while carrying out this activity.

The facilitator will lead the following discussion:

- *How do you think this activity will enhance acquisition of the CBC core competencies in the classroom?*
- *How do you think these competencies can help your learners?*
- *What confuses you about these competencies?*

Reflection

- *When is play considered as learning?*
- *Are there situations where play isn't considered learning?*

Activity 3: What Do You See?

Resources required for this activity:

- "What Do You See?" Worksheet

The facilitator will use the "What Do You See?" worksheet to guide participants through the different images. The facilitator will allow a few minutes for participants to view the images on the worksheet, respond to the prompts below the image, and share their thoughts.

The facilitator and the participants repeat the process to inspire deeper thinking with the following discussion questions:

- *What are the different types of play learners engage in at your school?*
- *Can you think of a time they were learning a skill while playing?*
- *When is play used as a form of learning?*
- *Are there situations where play isn't a form of learning?*

The facilitator and participants will conclude by acknowledging that the day featured a lot of exploration and discussion about play and learning.

Activity 4: Wrap-Up

The facilitator and participants reflect on one thing that inspired them. The facilitator models this by sharing/narrating something that inspired them before turning it over to the participants.

The facilitators celebrate the thoughts that the participants and teachers were sharing by reiterating what they saw and explored what they talked about and how when children play, they are fully engaged and able to learn, grow, and develop skills.

Image 2: Learners from Mwamgunga Primary School building a tower with LEGO blocks.

"What Do You See Worksheet?"

What do you see in the image above? Describe facial expressions and attitudes/body movement.

Image 3: Learners from Mwamgunga Primary School using the schools digital devices to code on scratch

What do you see in the image above? Describe facial expressions and attitudes/body movement.

Image 4: Learners from Mwamgunga Primary School in Kwale County working together as peers on a project using LEGO blocks

What do you see in the image above? Describe facial expressions and attitudes/body movement.

Image 5: A teacher and her students from Jomo Kenyatta Primary School in Kwale County play at the school PlayLab

What do you see in the image above? Describe facial expressions and attitudes/body movement.

Image 6:Learners from Mwamgunga Primary School being assisted by their teacher as they code on Scratch

What do you see in the image above? Describe facial expressions and attitudes/body movement.

Day 2

Introduction to Learning Through Technology

Resources required for this session

- Tablet/laptop
- Workshop 1 slides
- Paper (optional)
- Video 1: PlayLab Tour video in KSL or with sign language interpretation or captions
- Video 2: Peter Tabichi video in KSL or with sign language interpretation or captions
- Digital Literacy Search Answer Key

Activity 1: What Does Technology Mean to You?

Resources required for this activity

- Workshop 1 slides
- Paper (optional)

The facilitator introduces/signs or fingerspells the word “technology” and acknowledges that it can have different definitions. The facilitator will engage the teachers in the following question :

- *What is the first thing that comes to your mind when thinking about technology?*

The facilitator gives the participants a piece of paper and asks them to write down what they think when they hear the word “technology.”

The facilitator will lead the participants to engage in a discussion on their thoughts on technology in compare- son with the list below:

- Computers: A computer is a machine instructed to perform tasks through code.
- Laptops: A laptop is a portable computer.
- Tablets: A tablet is a mobile device that has much of the functionality of a laptop or computer.
- Smartphones: Mobile telephones that can perform many of the functions of a laptop or computer.
- Wi-Fi: A wireless way for devices to interface with or connect to other devices using the internet.
- Internet: A network that connects computers all over the world to each other.
- Printer: A machine that prints text or images onto paper.

The facilitator can encourage further discussion through the following questions:

- Which of these technologies are familiar to you?
- Which of these technologies would be accessible to your classroom?
- Which of these technologies would you choose to use in your lesson and why?
- How do you think technology can help your learners?
- Why do you think technology is important to your learners?

The facilitator celebrates the discussion by highlighting innovative considerations displayed by participants.

Activity 2: Digital Literacy Search

Resources required for this activity

- Laptop
- Internet access
- Digital literacy search answer Key

Basic Digital Literacy

Hardware Components Computer hardware includes the physical parts of a computer.

Examples are:

- Keyboard
- Mouse
- Monitor/Screen
- CPU
- Speakers

Keyboard

A keyboard is for putting information—including letters, words, and numbers— into your computer.

You press the individual buttons on the keyboard when you type.

The number keys are across the top of the keyboard, and the letter keys are in the center of the keyboard.

Software Component

The software comprises the entire set of programs, procedures, and routines that are responsible for directing the work of the hardware.

Examples are Excel, windows, Scratch, etc.

Trackpad

Also known as a touchpad, it is used to click, scroll, zoom in and out, and switch between tabs. Trackpads are commonly found on laptops and used in place of a mouse.

Speaker

A computer speaker is an output hardware device that connects to a computer to generate sound.

Connecting to a Speaker

Insert the device's USB connector into one of the computers ' open USB ports. The device should be automatically recognized. With your laptop turned on, plug in the audio connector cable to the corresponding port on the laptop. Look at the side of the laptop for a small jack that has a drawing of headphones.

Computer Navigation

With a computer, navigation refers to the act of opening and moving through computer menus (like the Start menu in Windows), opening software programs, or viewing files.

Step 1: Open the Lid of laptop

Step 2: Look for power button

Look at your computer. Search for the button on the top-left, top-right, or on the side of the laptop. The power button is normally a small round button, and on most computers has a circle icon.

Press this button down once with firm pressure, but not too hard.

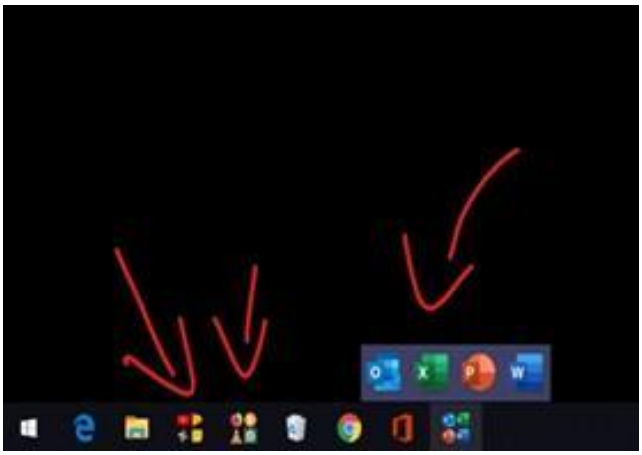
Wait a few seconds for the laptop to turn on.

Running a program for your computer

In each case, start a program by locating its icon and clicking or double-clicking that icon. Here's where to hunt:

The desktop: Locate a program icon or shortcut affixed to the desktop.

Double-click to open the icon and run the program.



Taskbar: Programs pinned to the taskbar are opened with one click. Life is easier if you keep your favorite programs on the taskbar.

The Start menu: Programs you open frequently appear atop the Start menu, on the right. Other programs are pinned as tiles on the left. Click once on the program icon or tile to run the program.

The all-Apps menu: Click all Apps item on the Start menu to view a list of all the apps installed on your PC. Click an item to run that app. Sometimes, you must open a folder to find the app you are looking for.

The Apps menu in Windows 10

Computer Navigation: Mouse

The four basic mouse operations are moving,

clicking, double-clicking, and dragging.

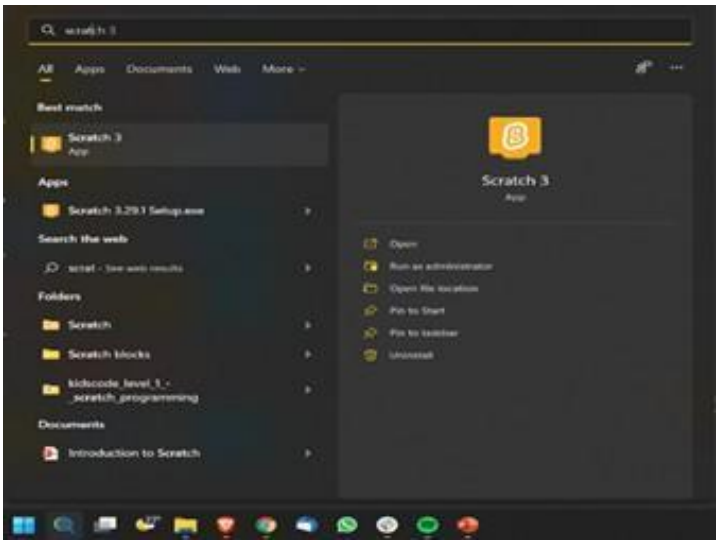
Moving: Sliding the mouse around to change the location of the pointer. Clicking:

Moving the pointer onto an object and clicking the [LEFT] button once.

Double-Clicking: Clicking the [LEFT] mouse button twice (fast).

Dragging: Moving the pointer onto an object, pressing the [LEFT] button, and then moving the mouse while continuing to hold the button down.

Finding a program when you know its name



Sometimes you know the name of the program you want to start. An easy way to locate it is to press the Win key and search in the pop-up bar.

For example, to run the Scratch program, press the Win key and, on the keyboard, type "Scratch"-that is all you need to type because Notepad Scratch appears at the top of the Start menu. Press the Enter key to launch the program.

Connecting to the Internet

Select the Network icon on the taskbar. The icon that appears depends on your current connection state. If you do not see one of the networks icons (or a similar one) shown in the image above, select the Up arrow to see if it appears there.

You can also use a Mi-Fi device to connect to the internet. It is portable, and the connection process is the same as that of joining using Wi-Fi normally.

Digital Literacy Search Answer Key

Definitions

- Hardware: The physical interface for electronics. Hardware is the physical object you can touch that will allow you to interact with a computer, the laptop screen, the keyboard buttons, the mouse, etc.

- Software: Coded programs that allow users to interface with digital components. Software is the way you interact with a computer that you cannot touch, computer programs, the internet, etc.

- OS: Acronym for operating system; the software that comes pre-installed on a computer that connects hardware and software, allowing for a user-friendly way of interacting with a computer. The OS is the translator between hardware and software so that the computer knows how to react to the buttons you push. The OS is completely offline and manages things like the settings of your computer and comes with basic programs like a calculator and a notepad.

- Desktop: The working surface of a computer. When you first start up your laptop, and no computer programs are open, this is the work surface that is called the desktop.

- Internet: A global network that transfers data between computers. The internet is accessible through internet browsers and requires a network connection, either wired or wireless.

- Internet Browser: A computer program that allows users to browse the internet. Common browsers include Google Chrome, Safari, Firefox, and Opera.

- Search Engine: A website that organizes and allows users to search through websites and content available on the internet. Common search engines include Google, Yahoo, and Bing.

Activity 3: Take the PlayLab Tour

Resources required for this activity:

PlayLab Tour Video

PlayLabs are customized school-based spaces for playful interactions and creativity that support the KPLAY project. These are spaces that contain context-appropriate low- and high-tech resources for LTPT that speak to learners. Whether indoors, outdoors, fixed, or mobile, PlayLabs are child-centered and value playfulness, experimentation, curiosity, collaboration, and connection to the community.

The participants watch a video of a PlayLab Tour or visit a physical PlayLab, where possible.

The facilitator will lead the discussion with participants after the visit or watching of the video using the following questions:

- *What did you see the learners do?*
- *Outline/sign some of the terms that were mentioned during the tour. E.g., collaboration table, tinkering and making station, protection area etc.*
- *What do you think tinkering means in this context?*
- *What was the most exciting part of the tour/video?*

The facilitator celebrates the discussion and encourages participants to inspire similar feelings in their learners through the LTPT model.

Activity 4: Why Play and Technology?

Resources required for this activity.

- Peter Tabichi video (video with captions and/or interpretations in KSL)

Peter Mokaya Tabichi Order of Farris Minor (OFM) is a Kenyan science teacher and Franciscan friar at Keriko Mixed Day Secondary School in Pwani, Nakuru County. He won the 2019 Varkey Foundation Global Teacher Award and advocates for Science Technology Engineering and Mathematics STEM in Education.

Facilitators begin by leading the following discussion:

- *What do you think are some common misconceptions about learning through play?*
- *What are some of the misconceptions about learning with technology?*
- *How do these misconceptions connect with the different stakeholders in education (learners, teachers, parents, etc.)?*
- *Do you know of any colleagues in Kilifi or Kwale who are teaching through playful learning and technology?*
    - *If yes, would you say that it is meaningful to our classroom context?*

Facilitators then show teachers the Peter Tabichi video with interpretation in KSL. Facilitators will enable teachers to engage in a deeper discussion with the following questions:

- *What is one idea that stood out for you in the Peter Tabichi video?*
- *How does brother Peter use projects to increase the learners' self-efficacy?*

Facilitators will model by sharing their own responses, something like this:

> *Today, we saw that when children engage in playful learning and technology, they build projects together, they solve problems that are relevant to their lives, and they feel confident. They can learn, grow, and develop specific skills.*
>
> *Different types of play were introduced, and teachers saw how each of these kinds of play important and helps children develop specific skills.*
>
> *Now, when we combine these kinds of play with technology, we ensure that children can learn and interact with their environment in active and productive ways. Specifically, when we add technology into the mix, children gain confidence, agency, and creativity.*

Facilitators will invite teachers to reflect for a moment on the following question:

- *How do you think technology will make you and our fellow participants feel as you incorporate technology and playful learning ideas into your classrooms?*

Facilitators will describe how learners engage with technology when introduced in the classroom by running through the following points:

- *Technology can be challenging, but with play, learners are more willing to try new things. When we play, we embrace new things, and that is what makes playing a game fun. Think of the balancing sculpture you made yesterday. You tried one thing, then you tried another until you figured out how to make the best balancing sculpture. Now, while you were doing that you were not saying, "I can't do this"; you kept trying. Why did you keep trying?*

- *Learners can persevere through challenging problem solving because they find meaning and value in the hard work of learning. Can you think of a time when you experienced something difficult at first, but you went through with it because it was so fun?*

- *Technology requires that learners learn how to work together to solve problems; play helps them learn how to do that. Research in innovation and education tells us that one of the best ways we can support children in learning new technologies is to encourage collaboration. Collaboration, which is one of the skills the CBC highlights, is easily achieved through play. Children naturally know how to play together and can easily apply this mindset to learning a new technology.*

Facilitators will enable further discussion on integrating technology in the classroom:

- *Can you think of an example where group work helped learners learn better? What were you trying to teach?*
    - It will be helpful for facilitators to share an example from their own experience, for example:

In a big classroom where I may not be able to answer all the questions myself, learners can ask their peers before they ask me (the teacher) a question. This allows learners to rethink, reimagine, and recreate each other's ideas through engaging in real-world activities. It also provides what we call those magic "ah-ha moments of learning shared freely between learners' confidence and leadership using prior knowledge and a sense of belonging in how they respond to learning.

- Mention some ways in which learners respond when technology is integrated in learning.

The facilitator then introduces Seymour Papert, a South African-born American mathematician, computer scientist, and educator, who spent most of his career teaching and researching at MIT. The facilitator will expound further that Seymour was one of the pioneers of artificial intelligence and the constructionist movement in education.

Facilitators will invite participants to reflect on the following quote from Seymour :

> *"Rather than pushing children to think like adults, we might do better to remember that they are great learners and to try harder to be more like them."*

Facilitators will allow participants time to reflect, and then lead the following discussion:

- *What three ways do you think teachers can present themselves more like learners?*
- *Discuss three skills or behaviors that teachers can learn from learners.*

Activity 5: Wrap-Up and Reflections

To celebrate the day, facilitators summarize the thoughts that participants shared and reiterate how LTPT can help the learners succeed in life.

Facilitators will model this by sharing/narrating something that inspired them from the session today as well.

Participants share/narrate one thing that inspired them in the session.

Session 2:

In Your Classroom | 2 Days, 9 Hours

In Your Classroom | 2 Days, 9 Hours

This TOT workshop aims to introduce participants to LTPT through hands-on tinkering activities. Participants will also learn about the 4P's, a pedagogy developed by the MIT Media Lab's lifelong Kindergarten team and how they can align it to the CBC to create their own lesson plans.

Session Learning Objectives

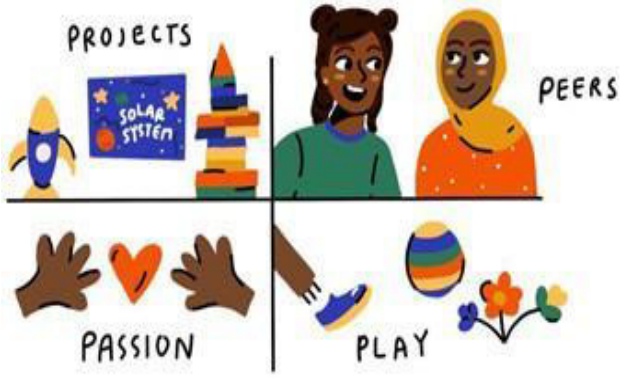
By the end of the session, participants will/should be able to:

- Have hands-on experiences with LTPT that energizes them to find ways of bringing similar activities to their own classrooms.
- Be motivated to create lesson plans that include specific learning outcomes, Key Inquiry questions, Pertinent and contemporary issues, core values, CBC competencies and LTPT activity.
- Leave the workshop with LTPT resources they can test in their classrooms.
- Leave the workshop feeling creative, inspired and motivated.
- The COPs will continue to strengthen and establish a sense of "team" that carried over to school based planning and implementation through the COP.

Image 7: Teachers building a tower during a past workshop

Day 1

The 4P's: Projects, Peers, Passion, and Play:



Resources required for this session:

- Workshop 2 slides.
- 4P's reflection worksheet.
- Cup, scissors, string, tape,
- tissue paper, and a small stone or shell.
- Sticky notes (or similar)
- Pen, papers, markers, glue, colored
- craft paper and old magazines

Pre-workshop Assignment:

Prior to the participants should bring:

- ✓ A video (with session captions and/or interpretation in KSL) or a photo with side notes of the balancing sculpture made in the classroom.
- ✓ Progress with their goals.

Activity 1: Homework Assignment Reflection:

Facilitators ask participants to pair up and share their artifacts, then answer the following questions.

- ➢ *What did you learn while implementing the "obstacle tower" (give explanation of an "obstacle tower" in your classroom?*
- ➢ *What was inspiring? What was challenging?*
- ➢ *What surprised you? What do you want to learn more about during this workshop?*

Facilitators will celebrate the courage of the participants doing the assignment, sharing what they learned, validating their thoughts, and explaining what they are doing is difficult.

Facilitators will then ask the groups to share what they learned and what surprised them about the assignment.

Facilitators will encourage critical thinking by asking participants to consider what they learned.

- ➢ [Pull a statement from participants' answers.]
  Why do you think that is?

Image 8: Parents Playing Kode in a parental engagement session

Activity 2: Technology Scavenger Hunt

Resources required for this activity: Laptop, Scavenger Hunt sheet

Search + Possible Solutions

- A way to browse the internet
    - Software (OS): Find the program and click (or double-click) to open your internet browser.
- A way to change the volume of your laptop
    - Hardware: Most laptops will have buttons on or near the keyboard that will control the volume.
    - Hardware: If using earbuds or headphones, some have buttons that can control the volume of the laptop, when connected.
    - Software (OS): In the toolbar, either at the top or bottom of the screen, there is an icon for a speaker. Clicking on this will open a bar that, when clicked and dragged, will control the volume.
    - Software (OS): In the settings menu, under volume/speaker settings, the volume can also be controlled.
- A place (either on your laptop or online) to type notes
    - Software (OS): The note-taking program that comes with your laptop.
    - Software (Internet): Google Docs (https://docs.google.com), or similar,
- Go to the following website: http://web.whatsapp.com

- Software (internet): In a web browser, locate the address bar (usually along the top of the screen).
- Manually enter the website address and then press the [Enter] (or [Return]) key on the keyboard.
- Highlight the link, copy, and paste in the address bar, and then press the [Enter] (or [Return]) key on the keyboard.

- A recipe for your favorite dessert
    - Software (internet): Type the name of the dessert directly into the address bar and then press the [Enter] or [Return] key on the keyboard- this will use the search engine that the internet browser has listed as the default.
    - Software [internet]: Go to a search engine's website and then type the name of the dessert into the search bar and then press the [Enter] or [Return] key on the keyboard.

- A way to change the background picture of your laptop
    - Software (OS): Find the settings menu of your computer. There will be a category that is something like "appearance" or "desktop" here you will find the settings that control what the background picture is.

- A way to solve the following equation: (42+9) - 3 + 7^3 * 5 =?
    - Software (OS): Use the calculator that comes with your computer. It will be found either in your computer's tools or it could be listed as a computer program.
    - Software (internet): Type "(42+9)-3+7^3* 5 into the search bar of any search engine.

- A place to troubleshoot your internet connection when it is not working properly
    - Software (OS): Find the "Network Settings" and open it. When an internet connection is not working properly, it will be troubleshooted here.

- Connect to a different wi-fi than what you are currently using (mobile hotspot, different *wi-fi* you have the credentials for, etc.)
    - Software (OS): In the toolbar, either on the top or bottom of the screen, there is the Wi-Fi the Wi-fi symbol. When clicked, it opens abbreviated network settings and lists the other available networks. If you have the password credentials and the signal is listed here, you can connect to another network.
    - Software (OS): Same as above, but instead of using the toolbar, you can go to the settings menu and find "Network settings." The change to Wi-Fis can be made as well.

- Start a new Google Document
    - Software (Internet): Navigate to http://docs.google.com and start a new blank document.

- This new Google Document available for you to work on it offline

  Software (Internet): On the top navigation bar for Google Docs, go to File > Make Available Offline.

  Add a sentence to the Group Story found here:
  https://docs.google.com/document/d/1YuOnUYX9jfk4wR2QvAtAdLA7vDFa11y7zGStm0bH3E/edit?usp=sharing

  - Software (internet): Follow the link to the Group story in the Google Document, and then add a sentence to the story.

- Download the current version of the Group Story
  - Software (internet): On the top navigation bar for Google Docs, go to File > Download. Then Choose the file format you want to use for the download.

- Find the Group Story file on your laptop
  - Software (OS): Go to your main save files on your computer and find a folder titled "Downloads". Anything that you download from the internet and save to your computer will be stored in this folder until you move it somewhere else.

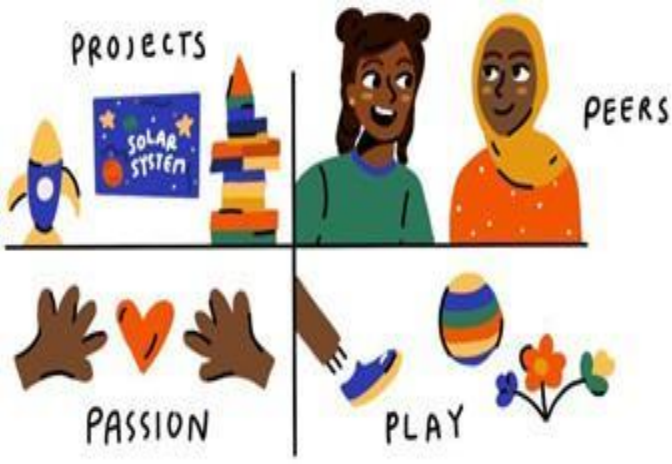
- Upload the Group Story to the COP WhatsApp group
  - Software (OS+ Internet): Sign in to your CoP's WhatsApp group on the website version, available at https://web.whatsapp.com/. In the group chat, attach the downloaded file as an attachment. (Tip: Look for a paperclip icon, or hover over the icons to show what each icon is for.)

Activity 3: The 4P's of Creative Learning:

Resources required for this activity:

- Workshop 2 slides
- 4 P's reflection worksheet.

Using the 4P's worksheet the facilitator will have the participants reflect on their hands-on experience with the same groups. Participant groups will then designate a speaker to share with the larger group at the end.



Facilitators can model by giving an example of an answer to a question on the worksheet. For example, you might choose the "Play" section and list out a few ways that they found the Obstacle tower project to be fun or engaging.

Facilitators can encourage a deeper level of reflection by inviting the groups to share some of their reflections asking each group to share just of their reflections

Following this group reflection activity, facilitators will begin the more formal introduction to the 4P's framework. The Workshop 2 slides have dedicated slides for this section, including notes if facilitators would like to see or use them.

Think of the 4P's as the ingredients you will need for implementing learning through play in the classroom. go through them one by one and unpack the recipe.

Projects: This is the first ingredient. People learn best when they are actively working on meaningful projects (such as rabbit keeping, chicken rearing and growing vegetables) generating new ideas, design- ing prototypes, refining iteratively.

Peers: Our second ingredient is about working together. Learning as a social activity, with people sharing ideas, collaborating on projects, and building on one another's work.

Passion: Our third ingredient is about working on something we are interested in. When people work on projects they care about, they work longer and harder, persist in the face of challenges, and learn more in the process.

Activity 4: Connecting the 4P's to CBC

Resources required for this activity:

- **Workshop 2 slides**
- **Paper, pens/pencils**
- **Sticky notes**

Participants will examine the CBC competencies in detail and understand how a framework like the 4P's can help them link to these competencies in their daily life.

Facilitators will start by showing them the slide with the different CBC competencies.

The 4P's CBC competencies and the connections between the two that one teacher from a workshop found.

Facilitators will ask participants to share what they think each of them means and to give an example. They can use sticky notes to write the definitions in their own words. One educator will briefly (one minute maximum) share for each competency. Facilitators should be ready to share the definitions and examples if the participants do not find them. Then, facilitators will show the next slide and ask teachers to write all the CBC competencies on the left side of a piece of paper. Teachers will write the 4P's on the right side of the **paper and then draw as many links as makes sense to them between the 4P's and the competencies.**

Facilitators can model **by showing how they would draw the connections between CBC and 4P's. Facilitators should say/sign them out loud / with facial expressions and body language as they draw the connections on** their paper. For example, if they connect "Peers" with "Communication and collaboration" Facilitators could **say/sign something like:**
When we work together with our peers, we definitely use and develop communication and collaboration skills, so I'll draw that link.

Facilitators will ask teachers to share what connections they drew on their papers and celebrate everyone's efforts and thoughtfulness. Facilitators might say/sign something

- *"I see a lot of links between the 4P's and the CBC."*
- *Everyone drew different links, that's great. Some of us might have a different answer, and that doesn't mean that it is not true. The same question can yield multiple answers.*
- *We see how a pedagogical principle / framework like the 4P's can help us design lessons that target the competencies.*
- *Some of these links might be obvious right now and some might be less obvious. It's completely okay and normal. We can come back to this framework and find new links when we have more experience and we become experts in learning through play and technology.*

To support teachers in this process, facilitators should prompt them to think about times in their life when they have felt creative and engaged.

Activity 5: The 4P's in Action:

Participants will identify the 4P's in images of children engaged in various projects and situations. For each photo, they will take a minute to observe and answer the questions: what 4P's do you see? How many P's can you spot? Project? Peers? Passion? Play? Participants will take turns in sharing, out and then facilitators will ask participants to explain why they see one of the specific P's.

Facilitators will model using the first photo; they might say/sign something like:

I see "play" because the child is pretending that they are holding a camera and maybe he is roleplaying in a little theater activity. I also see "project" because he constructed the "camera" that looks like a project. I don't see a "peer" directly, but I can imagine he is interacting with a friend.

As teachers share what they see, facilitators should celebrate their observations. They might say/sign something like:

- *You drew some good connections between the theoretical framework and the classroom reality.*
- *I can see that you really have a deep understanding of the 4P's framework and how it might look different in various contexts.*
- *I can see you identified some P's that were not immediately visible. In fact, it's good to remember that sometimes the pedagogical principle can be hidden.*

Once everyone has made their observations, facilitators will enable participants to reflect on this activity by asking something like:

- *Do you think we can always see the 4P's in action so clearly?*

Activity 6: 4P's Friendly Poster Competition

Image 8: Curriculum Support Officers from the counties of Kwale and Kilifi showcasing their projects during a past training session.

In the last activity for the day, participants will develop an even deeper understanding of the underlying pedagogical principles of the 4P's through an adaptation exercise.

Participants gather in groups of three. Their task is to create a poster that illustrates the 4P's framework, but it must be adapted to their specific needs, context, learners, and language. The groups will have about 30 minutes to come up with their adapted framework and a poster to illustrate it. They must be prepared to share with the group and to participate in the friendly poster competition. The poster that receives the loudest clapping will be identified as the winner and will be the selected KPLAY poster.

Facilitators should model how teachers might adapt content to their context. For example, they might say/sign something like:

When we say, "Make your own adaptation," we mean that participants can change the words, add elements, propose a translation, propose a structure change, and more. Come prepared to share an example and model what it is like to adapt someone's existing work. For example:

- *I modified the original 4P's to create my own 4P's.*
  - *Projects: Complete something that you can share with someone.*
  - *Peers: With someone you don't know.*
  - *Personal: Work with something that is meaningful to you!*
  - *Play: Don't forget to have fun.*

Here, I preplaced "passion" with "personal" because it resonates with me more, and I think it will resonate more with my learners too. I also created my own very brief description for what each P means to me.

To help participants get into a mindset of adaptation and enable their creativity to shine, facilitators should make sure to remind them that there are no right or wrong answers. Additionally, they should ask them the following prompts:

"Is there anything missing from the 4P's? Is there another word we can add? For example: Sharing: When we share our work, we learn more."
"Is there anything from the 4P's that you think we should remove?"
"Does this resonate with your culture? How might we translate it to resonate better?"
"How can this be used in the daily life of yourselves and your learners?"

Following the poster creation, facilitators will hold a friendly, informal poster competition. Each group of participants will present their work to everyone, with the audience applauding after each presentation; the loudest/strongest applause will be the winner of this friendly competition. Facilitators should take this opportunity to celebrate everyone's work in the friendly competition.

Facilitators might say/sign things like:

- *We see so many unique adaptations and posters. Who would have thought we could adapt this framework in so many different ways?*
- *I can see how you brought your own voice to this work.*
- *What an interesting perspective; we didn't see this angle before.*
- *We are so grateful for these contributions.*

4P's Reflection Worksheet

Project

A project has a beginning, middle, and end. What were the different steps of your group project?

- Beginning:
- Middle:
- End:

Can you name 2 skills that we develop when we work on projects?

- Skill 1:
- Skill 2:

Peers

How did your group work for this project? Outline the different roles that your team members adopted:

Role 1:

Role 2:
Role 3:
Other:

Can you name 2 skills that we develop when we work with peers?

- Skill 1:
- Skill 2:

Passion

What was interesting to you in this project? How did you bring your own interests to this work?

-
-
-

Can you find 2 skills that we develop when we work on projects we are passionate about?

- Skill 1:
- Skill 2:

Play

What was fun or engaging in this project?

-
-
-

Can you find 2 skills that we develop when we work on projects that are fun and engaging?

- Skill 1:
- Skill 2:

Day 2

What Does LTPT Look Like in Action?
Resources required for this session:

- Workshop slides
- LTPT stations setup guide
- Playful learning facilitation prompts worksheet
- Classroom management worksheet
- Video files (https://bit.ly/classroom-videos)
- Spoken videos accompanied by sign language interpretation

Activity 5: Create a Lesson Plan.

- Paper
- Markers
- KICD sample lesson plan (pages 80–82)

In this activity, participants will use the knowledge learned from the previous activity to prepare a CBC lesson plan of their choice using the 4P's. They can link the lesson to any strand/sub-strand of their choice to ensure that it is relevant to the lesson.

Participants can choose to work individually or in pairs to think of a lesson they would like to bring to their classroom. The facilitator enables brainstorming by saying/signing something like:

Take the worksheet templates to build your lesson plan and think of the strand and the CBC competencies that you would like to focus on. For example, what about using 4P's that connect to a history lesson selected by the learners that can demonstrate the 4P's.

By allowing learners to choose their history lesson, we gain their passion and interest and by including the technical parameters, we are able to focus on the CBC competencies of communication and collaboration, critical thinking and problem solving, self-efficacy /learner agency among others.

At/by the end of the workshop, facilitators share their lesson plan with peers to give and receive feedback. While sharing their lesson plans, facilitators celebrate their ability to come up with a competency-based lesson that leverages the 4P's in the cla ssroom. Facilitators will also point out the use of open-ended prompts and the 4P's. Let the teachers do micro -teaching and the rest of the teachers provide feedback.

At the end of the workshop, participants will have a collection of crowd-sources ideas and plans to use in their classrooms.

Activity 1: LTPT Stations

Resources required for this activity:

LTPT stations setup guide

Playful learning facilitation prompts worksheet (pages 85–86)

Teachers take on a learner's mindset and rotate between four stations, each with a sample LTPT tinkering activity that connects to the CBC competencies. These activities will also prompt participants to adapt them to their own classroom. Facilitators should model the "creative learning" mindset that participants discussed the day before during the 4P's activities and rotate through the stations to troubleshoot and complete the projects.

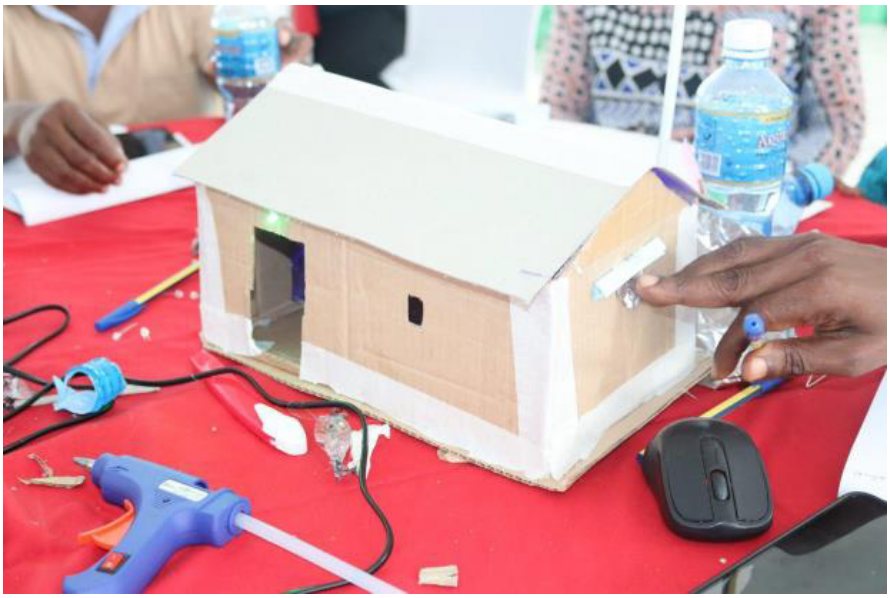


Image 9: KPLAY master trainers working on a window lights experiment.

For tips on how to set up the stations, facilitators can use the LTPT stations setup guide in the Resources chapter.

Introducing the Activities Station – Specific Prompts

Facilitators should model the mindset of a learner as teachers go through the stations. If they are asked a question, they should avoid the instinct to solve the problem for the participant. We recommend asking a set of questions to lead participants to a solution to their problem. For example, if a participant at the paper electronics station is having a problem where their LED bulb is not lighting up, we suggest asking questions like:

- Let's check the foil lines; maybe there's a tear somewhere?
- Let's check to make sure that the positive and negative sides of the battery are where they should be.
- Let's check to make sure that the positive and negative sides of the LED diode are placed correctly.
- Maybe there's something insulating the circuit? Check for this.

Once the participants have finished each station, they should have multiple projects to showcase. Here is an opportunity for celebrating what they have made and to use the 4P's framework to share reflections and feedback.

Facilitators can encourage deeper discussions when participants are sharing their work by using some of these playful facilitation prompts:

- What did you learn today?
- What could you improve after testing your product; how would you do it differently?
- How would you teach this to your peers?
- Put your finger/pencil where things are difficult?
- What makes you feel challenged in this project?
- What was easy?
- What did you enjoy about this?
- What materials do you need more of?
- Which role did you play in your group?

▶ Magic Paper

Present your partner's game or story to the group. Share/narrate your process for how you came up with your idea.

Paper Circuits

How might you change your design to add another light? Was there something that you learned from how your peers solved a similar problem?

Build a Bridge

Think about what bridges mean in real life; they connect people between two physical locations. If you could add a bridge to your community, where would you put it and why?

Scribble Machines

What inspired you from the machines your peers made? What do you think your learners would love doing? Where would they struggle?

More prompts are on pages 85–86.

Activity 2: LTPT Station Reflection

Resources required for this activity:

- Videos and audios files (https://bit.ly/classroom-videos)
- Classroom management worksheet

In this activity, participants reflect on the opportunities, complexities, barriers, and risks of bringing LTPT into their classrooms. They will reflect on what is challenging about adopting the Creative Learning Spiral that they had to do while in the stations, classroom management, and what might be challenging for learners when they experience creative learning.

Facilitators should celebrate the frustration of the learner they just heard and how the teacher stepped back to let them fix it with a peer, while just asking them to take a deep breath. This is the type of independent problem solving that we aim to inspire in learners.

Using post-its and the classroom management worksheet, teachers share three things that they are worried about when introducing LTPT in their classrooms.

Activity 3:

Facilitators will demonstrate how to begin by opening their laptops and navigating to the web browser.

Participants then embark on a digital search, navigating their computers, searching for information online, and familiarizing themselves with both hardware (tablets or laptops) and software (the operating system and internet browser).

The facilitator can reference the Digital Literacy Search Answer Key.

Participants will work in pairs or groups to perform the functions listed below within 15 minutes.

- A way to browse the internet
- A way to change the volume of your laptop
- A place (either on your laptop or online) to type notes
- Go to the following website: https://web.whatsapp.com
- A recipe for your favorite dessert
- A way to change the background picture of your laptop
- A way to solve the following equation: (42+9)-3+7^3*5=?
- A place to troubleshoot your internet connection when it is not working
- Connect to a different Wi-Fi than what you are currently using (i.e. mobile hotspot)
- Start a new Google Document
- Make this new Google Document available for you to work on offline
- Add a sentence to the Group Story in the Google Document
- Download the current version of the Group Story
- Find the Group Story file on your laptop
- Upload the Group Story to the CoP Whats App group

To scaffold this activity for different levels of familiarity with technology, facilitators can display only the first three to five tasks rather than the first entire list. If the entire list is shown, facilitators should make clear that the objective is not to get through the list but rather explore their technology and get through as many items on the list as they can.

After participants finish, the facilitator will enable further discussion with the following questions:

- *Did your group get stuck anywhere? If yes, where?*
- *What is a way of solving the equation using just your laptop (not the internet)?*
- *What is a way of solving the equation using just the internet?*

Activity 4: Wrap-Up

Facilitators can start by celebrating and thanking participants for sharing their worries about introducing LTPT in their classrooms. Facilitators should acknowledge that it can be worrying and stressful to consider trying something new in the classroom. Facilitators should then encourage further reflection and brainstorming of potential solutions by asking the following questions:

- What are the challenges you foresee running in an LTPT classroom?
- Are there any classroom management strategies you might find useful to alleviate those challenges?

Classroom Management Worksheet

LTPT takes skills. It looks easy and simple, but it also requires innovative teaching and classroom management techniques. Let us work on that together!

What are three things you might be less confident about when introducing learning through play in your classroom? (These can be anything that you find stressful.)

1. .....
2. .....
3. .....

What are some ideas for how to manage the classroom when practicing LTPT? Share/narrate your top four tips for classroom management and organization with your peers. Write/narrate them here, and then be ready to share with the group.

Tips for classroom management:

1. .....

   .....

2. .....

   .....

3. .....

   .....

4. .....

   .....

Day 3

Introducing the LTPT Community of Practice

Resources required for this session:

- Paper
- My dreams my classroom worksheet

Activity 1: Defining Our LTPT Community of Practice (CoP)

Resources required for this activity:

- Paper

It is important to engage the participants in the process of establishing their own LTPT COP.

The CoP provides the participants with the support they need to be as confident and innovative as possible.

The facilitator should engage the participants by asking them to write down what comes to their mind when they think of the word "community."

Image 10: Teachers from the KPLAY capacity-building workshop pilot working together to solve a problem during an activity.

The facilitator to enable the participants to define their CoP with the following group discussion:

- *What are some areas you would like support from your fellow participants?*
- *What are five core values that you, as a community of peers, want to embody?*
- *How do you want to engage with your peers?*

The facilitators will end the session by asking participants to introduce themselves on WhatsApp.

Activity 2: My Dreams, My Classroom

Resources required for this activity:

- "My Dreams, My Classroom" worksheet

In the next activity, the facilitator will pair participants and give them 10 minutes to interview each other. Through this activity, participants establish connections with teachers who do not know each other using the "My Dreams, My Classroom" worksheet.

Facilitators enable reflections with the following discussion:

- *What surprised you about your peers when you interviewed them?*
- *How do your peers' classroom dreams connect to the reality of your classroom?*
- *How might you bridge the gap between classroom dreams and the reality of their classroom?*
- *What can we learn from this exercise?*

Facilitators collect the completed worksheets from the participants.

Activity 3: Goal Setting

Resources required for this activity:

- Paper

The facilitator should engage teachers through the following questions:

- *Have you ever set a goal and forgotten about it?*
    - Facilitators model by sharing a personal example here to build empathy and rapport.

The facilitator encourages participants to set goals that are (1) specific, (2) time-based, and (3) measurable

The facilitator engages the participants in a goal-setting activity. The facilitator will ask the participants to take a piece of paper and write down a simple goal that they intend to achieve in the next three months. The facilitator will ask the participants teachers:

- *How can we help each other reach our goals?*

Activity 4: Wrap-Up

In preparation for the next capacity building workshop facilitators will give participants a take home assignment to do before the first day of the next workshop.

Participants conduct the "balanced sculpture" activity they did during the first day with their learners. Facilitators will model this by sharing on WhatsApp some thoughts, observations, or tips that they came up with for implementation of this activity in their classroom.

Facilitators ask participants to take pictures and videos and share on the CoP's WhatsApp group.

Session 3:
Creative Coding with Scratch | 3 Days, 16 Hours

With the previous capacity-building workshop, participants discovered the 4P's of creative learning and were introduced to activities that highlighted found materials, simple electronics, and local games. Participants synthesized their learnings by implementing these concepts within lesson plans and aligning them with the CBC competencies.

This being the last capacity-building workshop, the natural progression is to dive deeper with supporting participants to create their own lesson plans and explore the second vertical of the program: creative coding. Teachers will do so by focusing on Scratch, a block-based programming language and coding platform developed by MIT. Similar to LEGO bricks, the blocks come together to create computer programs. The goal is to take participants on a creative coding journey: from introduction to mastery.

Learning Objectives

By the end of the workshop, the participant should be able to:

- Connect with creative coding and Scratch through their own experiences.
- Leave inspired and motivated to try out creative coding and Scratch in their classrooms.
- Be able to explain the value of learning to code to others.
- Feel that they belong in the KPLAY CoP, feel they will be supported through the creation of their CoPs, and feel motivated to engage regularly with the teachers in their cohort.
- Feel confident using their tablets to use Scratch.
- Understand basic computational concepts of parallelism, data, sequences, algorithms, loops, and conditionals.

CBC Competencies

The following core competencies will be developed while creating Scratch:

- Creativity & Imagination
- Communication & Collaboration
- Critical Thinking & Problem Solving
- Digital Literacy
- Learning to Learn
- Self-Efficacy
- Citizenship

Day 1

Learning to Code with Scratch

Resources required for this activity:

▶ Tablets or laptops to run Scratch

▶ Animate a Name Tutorial worksheet

▶ Scratch Terms Glossary (see Appendix in this document)

Activity 2: Tech Orientation

Resources required for this activity:

- Tablets or laptops to run Scratch
- Scratch Glossary (Appendix)

Scratch is a simple programming application that helps learners to create, animate, tell/narrate stories, and learn basic coding concepts.

In this activity, participants will learn how to set up Scratch on their devices, discover what the software is and does, and get comfortable with the environment, before they start creating projects in Activity 4.

▶ Facilitators start by giving teachers time to power up their laptops and tablets; and give them 10 minutes to explore their device, make sure they know how to connect to the internet, open an internet browser, and search on the internet.

▶ Facilitators then lead teachers through a step-by-step setup. They ask teachers to take the devices accessible to them: tablets, computers, or none; and use slides with screenshots to guide teachers through the installation process (see slide deck for steps).

This activity is all about getting participants to be comfortable with the installation and their work setup. Facilitators should take their time for this setup phase and ensure that they answer questions before progressing to the first creative project.

Scratch Guide

Scratch Interface: Main Interface

Code Tab: This tab displays all of the categories and blocks of code that are available for use in a project.

Costume Tab: This tab displays all of the options for sprites in the project (see diagram below).

Sounds Tab: This tab displays all of the options for sounds in the project (see diagram below).

Green Go Flag: This button can be used to make a project's code run, if the green flag event code block is used.

Red Stop Sign: This button halts all blocks of code in a project.

Code Block Categories: These are categories of code blocks available for use in the project. Clicking on a category will jump to that portion of the code block library.

Code Block Library: A list of all available blocks of code for use in a project.

Workspace: The area where code blocks are placed, dragged, and linked together. Once the blocks are in the workspace, they are a part of the project. To place a code block in the workspace, click on the block in the code block library and drag it to the workspace. To remove a code block from the workspace, it can be dragged back to any part of the code block library.

Stage: The area where the project, in its current state, can be tested, viewed, and played.

Extensions Button: Clicking this button will open the code extensions library, allowing for the importation of additional code block categories.

Sprite Options Window: When a sprite is selected, this window will allow for the sprite to be renamed, to be moved around the stage, to change the size, or to change direction,; and show or hide the sprite on the stage.

Active Backdrops: This area displays the backdrop(s) that are currently in the project.

Active Sprites: This area displays the sprite(s) that are currently in the project.

New Sprite Button: Clicking this button will open the sprite library, allowing for additional sprites to be added to the project.

New Backdrop Button: Clicking this button will open the backdrop library, allowing for additional sprites to be added to the project.

Scratch Interface: Costumes Tab

Costumes: The visuals that are attached to the selected sprite.

Costume Title: The name of the selected costume.

Undo/Redo: Undo or redo the changes made to the costume.

Editing Panel: A panel of tools to edit the grouping and orientation of the selected costume.

Fill and Outline Setting: Setting options to change the color and thickness of the fill and outline of the selected costume.

Select Tool: A cursor that allows for the selection of costume elements.

Brush Tool: A tool that allows for drawing by hand on the selected costume.

Paint Bucket Tool: A tool to fill in an area of the same color within the selected costume.

Line Tool: A tool that allows for drawing straight lines on the selected costume.

Rectangle Tool: A tool that allows for drawing rectangles of any size on the selected costume.

Reshape Tool: A tool that allows for the reshaping of elements within the selected costume.

Eraser Tool: A tool to erase elements within the selected costume.

Text Tool: A tool for typing letters and numbers to be included as a part of the selected costume.

Circle Tool: A tool for drawing circles of any size within the selected costume.

Scratch Interface: Sounds Tab

Sounds: Any sound that has been added to the project will appear listed within the panel on the left.

Name and Copy Tools: Change the name of the sound and can copy, paste, and delete parts of the sound clip.

Sound Visualization: The visualization of the sound clip is helpful when editing clips to see a visual representation of the sound.

Play Button: Preview and play the sound clip.

Playback Editing Tools: Editing tools for the way the sound will be played within the project.

New Sounds Button: Clicking this button will open up the sound library and allow for the addition of new sound clips to the project.

Code Blocks: Motion

Motion blocks are a set of blue blocks that handle the movement of sprites across the screen. Sprites can move, turn, glide, point in directions, jump to a given position, jump to a random position, and more!

Code Blocks: Looks

Looks blocks are the set of purple blocks that handle the visuals of the sprites on the screen. These blocks can create speech and thought bubbles, change a sprite or backdrop, change the colors and sizes of sprites and backdrops, and more!

Code Blocks: Sound

Sound blocks are a set of fuchsia blocks that handle the sounds used in the scene. These blocks can start, stop, and change the characteristics of sounds and music used in a project!

Code Blocks: Events

Events blocks are the set of yellow blocks that handle the events that occur in a project. These blocks can detect when something is clicked, a keyboard key is pressed, or when a condition is met.

Code Blocks: Control

Control blocks are a set of orange blocks that control how the code of a project runs. These blocks can pause, repeat, and set conditions, controlling how the code of a project is carried out.

Code Blocks: Sensing

Sensing blocks are a set of light blue blocks that detect elements within a project and are usually stored within a control block. These blocks can detect when the mouse is touching a sprite, when one kind of sprite touches a different sprite, a key is pressed on the keyboard, and more!

Code Blocks: Operators

Operator blocks are a set of green blocks that handle mathematical and logical equations. These blocks can store, alter, and evaluate numbers and other kinds of data.

Code Blocks: Variables

Variable blocks are a set of dark orange blocks that manage variables used in a project. These blocks can store, set values, and change variables of any type; numbers, words, lists, etc.

Code Blocks: Extensions

Extensions are sets of pre-made code blocks that can be added to a project's library of code blocks. When an extension is added to a project, it shows up on the left side of the menu as a new "type" of code block that is now available to be used.

Code Blocks: My Blocks

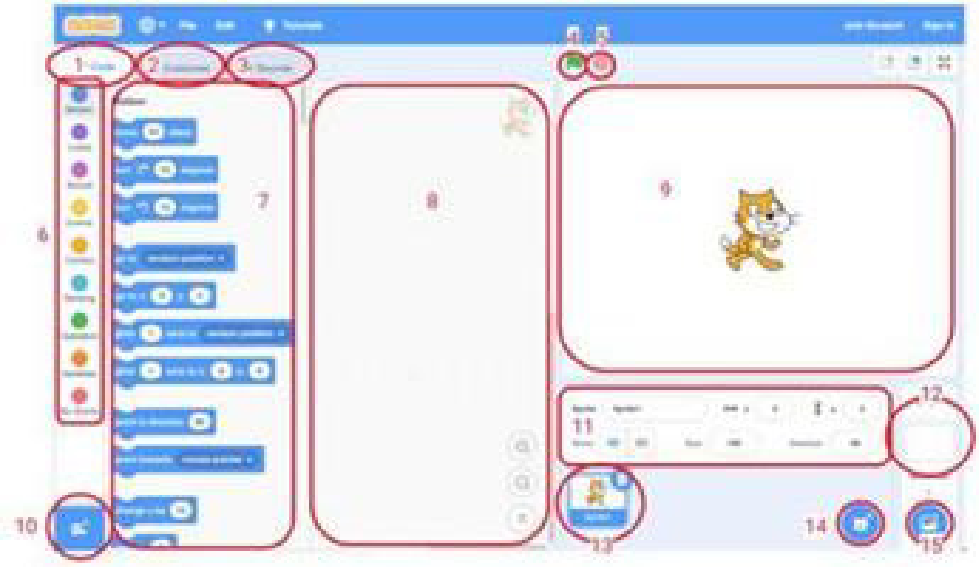
My Blocks are a set of pink blocks that are custom written by users. These blocks are custom written by users and can accomplish operations that are not available through the standard version of Scratch or library extensions.

Activity 3: Animate a Name

Resources required for this activity

▶ Animate a Name Tutorial

Facilitators guide participants through their very first creative Scratch project.



Start with the Backdrop

- To create an animation on Scratch, one would either must use pre-set backdrops or upload their photos to use as the background for the animation.

- To choose a backdrop, you hover the mouse pointer over the button in the bottom right corner of your Scratch interface. The options to either select a backdrop, upload, or paint are revealed.
- Click on the "choose a backdrop" option and a window of available backdrops will open.

ANIMATE A NAME

How can we make a controlled animation using Scratch?

Materials

Laptop or Computer

Scratch Programming Environment available online here

https://scratch.mit.edu

Scratchcards available as PDF online here about:

https://resources.scratch.mit.edu/www/cards/en

scratch-cards-all.pdf

Before you start...

Think about how LEGO blocks interlock with each other. Now look at the scratch blocks. Do you notice any similarities?

What do you think those similarities mean?

Playful facilitation prompts

Can you teach this concept to your peers?

Activity 4: Wrap-Up

Participants and facilitators engage in group discussions, analysis, and reflection on the learning experience with Scratch coding blocks. They discuss the link between CBC competencies and the 4P's.

The participants are guided to highlight the core competencies brought out during the activities. They are encouraged to explicitly show at what level each competency was imparted.

Facilitators begin by allowing an educator group discussion using the slide deck to guide the facilitation of this discussion with the following questions:

▶ *How was the experience of animating the dance sequence on Scratch?*

▶ *Tell us about one of the challenges you faced when completing this animation project?*

▶ *How did you overcome that challenge?*

Day 2

Activity 3: Create a Story and Make Music

Resources required for this activity:

- ▶ Laptops or tablets
- ▶ Create a Story Tutorial worksheet
- ▶ Make Music Tutorial worksheet
- ▶ Scratch Glossary

These are the two Scratch tutorials participants will be following today.

▶ If using Scratch online in a browser, the tutorials can be followed online. If you are offline, the worksheets can be followed.

▶ Participants are encouraged to test their problem-solving skills, remembering that they can use the Scratch Glossary to try to solve their own problem, they canuse the "Help" guide within Scratch, or facilitators can answer questions if they get stuck.

▶ For the "Create a Story" tutorial, highlight how the Citizenship CBC competencycan be connected here; ask the teachers to use the tutorial to create a story about their community or about Kenya.

Participants then reflect on their learning experience and the ones their learners are likely to experience. Facilitators model by pointing out something they observed from the reflections that were shared.

Facilitators might say/sign something like:

I noticed that participants had to analyze their script in order to find the bug and invent the right solution. I can see how creative coding involves a lot of analytical thinking. You have to observe and make logical connections. These are very important for learners to develop CBC competencies

Facilitators encourage participants to reflect by asking them to answer/ or narrate the following prompts:

I encountered this problem:

I solved it this way:

I improved on this skill:

Facilitators celebrate by pointing out how many different skills learners improved on. They might say/sign something like:

We heard about at least different kinds of skills that were improved upon by participants through these creative coding activities. Thank you all for sharing how you have been developing your digital literacy

Activity 4: Inspiration and Case Studies

Resources required for this activity:

▶ Scratch Case Studies worksheet

In this activity, participants will look at the case studies of Scratch being used in the classroom. Participants will feel inspired and will get some ideas to think about how they can bring Scratch into their classrooms. Facilitators then emphasize that these are creative ideas and not compulsory activities to be done. First, they will go through these case studies in pairs or small groups, then they will take some time to reflect as a group.

Case Studies:

▶ Finish the Story: Literacy through Scratch

Case Study Summary: A teacher selects a book from their existing literacy class curriculum. They ask their learners to read the first chapter of the book, using techniques they already use (i.e., reading aloud as a group, analysis of verbs and tenses from book passages, etc.). After their learners have read the first chapter, teachers ask their learners to imagine what the end of the story will be. Using Scratch, the learners tell their version of what the end of the story will be. All of the learners have come up with their own answers to the question, and the teacher celebrates the creativity of the class, pointing out all of the unique ways that learners have told their story with Scratch.

Looking at History: History through Scratch

Case Study Summary: A teacher asks their learners to think about the different history lessons they have learned about and asks volunteers to share/narrate some that they thought of. The teacher then tells learners that they will choose one of the history lessons to animate using Scratch. The teacher encourages their learners to think about how they can use the different people involved in the history lesson to convey facts, timelines, or differing points of view. The learners then create their animations and share them with their peers. The teacher then celebrates (including through signing) how the class used different approaches to accomplish their animation goals.

Shape Game: Mathematics and Geometry through Scratch

▶ Case Study Summary: A teacher asks their learners to make a list of/sign the geometric shapes that they have learned in class. After their learners have shared, the teacher invites learners to create a game in Scratch that uses the shapes they have learned. For example, they can make a shape, and have a sprite walk to the shape to change its color, or they can make multiple shapes that the sprite must move around. The teacher divides the learners into small groups so that they may collaboratively work on this game. Once the student groups have completed their games, they swap tablets (or computers) with another group so that they can play each other's geometry game. The teacher then celebrates all of the different and creative ways that the student groups came up with to create their games.

Facilitators should ask participants to reflect and share their thoughts on the case studies and how they might apply similar scenarios to their own classrooms and learners. Facilitators model/sign by pointing out something they observed from the reflections that were shared. They might say/sign something like:

"*I noticed that the literacy case study resonated with many participants. I wonder if the simplicity of the case study appeals to more participants because it makes it very easy to apply to almost any strand, not just literacy.*"

The facilitator enables teachers to reflect by asking them to answer the following prompt:

If I had to implement one of these case studies, I would choose:

Activity 5: Create a Lesson Plan

Resources required for this activity:

Paper

Markers

KICD Lesson Plan Template

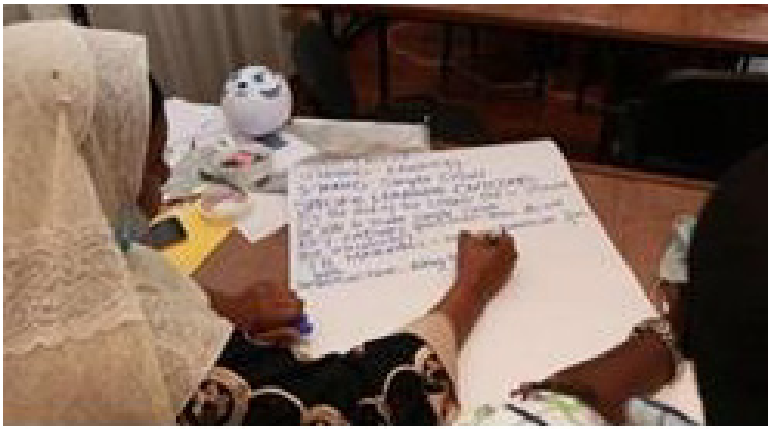


Image 11: Teachers lesson planning at KPLAY training

In this activity, participants will use knowledge learned from the previous activity to prepare a CBC lesson plan of their choice. They can link the lesson to any strand/sub-strand of their choice, in order to ensure that it is relevant to their lesson.

Participants can choose to work individually or in pairs, to think of a lesson they would like to bring to their classroom. The facilitator enables brainstorming by saying something like this:

> *Take the worksheet templates to build your lesson plan and think of the topic and the CBC competencies that you would like to focus on. For example, what about a Scratch project that connects to a history lesson selected by the learners that has to have at least character sprites and at least characters that have a conversation with each other By allowing learners to choose their history lesson, we gain their passion and interest and by including the technical parameters, we can focus on the*
>
> *CBC competencies of citizenship, self-efficacy, critical thinking problem solving, and digital literacy.*

At the end of the workshop, facilitators share their lesson plan with peers to give and receive feedback. While sharing their lesson plans, facilitators will celebrate their ability to come up with a competency-based lesson that leverages Scratch in the classroom. When done, the facilitators will also point out the use of open-ended prompts and the 4P's.

At the end of the workshop, participants will have a collection of crowd-sourced lesson ideas and plans to use in their classrooms.

Activity 6: Wrap-Up and Celebration

Participants will showcase their animations, sequences, games, and everything they have made either in analog or digital form. Each group will demonstrate something and share/narrate what they have learned. Facilitators should celebrate educator efforts and might say/sign things like:

> *This looks fantastic! How do you think your learners would react to an activity like this? Do you think that they would enjoy an activity where they got to create something like this (either analog or in Scratch)?*

Facilitators wrap up by celebrating educator efforts throughout the day and provide them with anything they need to know about joining the final day of the capacity-building workshop.

Day 3

Teaching Creative Coding in the Classroom

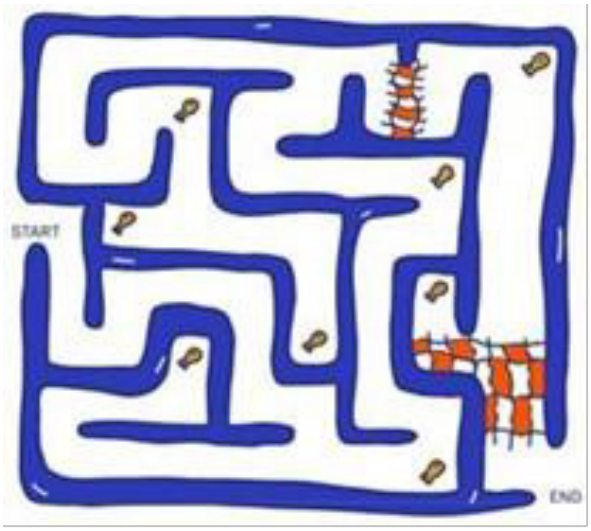
Resources required for this session:

- Tablets or laptops to run Scratch
- Workshop 3 slides
- Partner Maze worksheet
- Operating Data worksheet
- Chase Game Tutorial worksheet
- Catch Game Tutorial worksheet
- Scratch Glossary
- Paper, pens, pencils and markers

Activity 1: Partner Maze

Resources required for this activity:

- Partner Maze worksheet



The session begins with the Partner Maze. Facilitators will have participants get into pairs, and if there is anyone left without a partner, the facilitator can be their partner.

Everyone will look at the Partner Maze worksheet. One side is labeled "Side A" (instructions) , and the other is labeled "Side B" (Maze) .

In each pair, the partners decide who picks "A" or "B" before flipping over the worksheet.

Working within the pair, the participant who picked "A" gives instructions to the partner who picked "B ." The partner who picked "B" is supposed to navigate through the maze under the guidance of the partner who chose "A ."

When a pair completes the maze, they should raise their hands and say that they have finished.

Regardless of which pair finishes first, the other pairs should continue until they complete the maze activity. After the race is over, discuss what was demonstrated. This maze showed the concept of *conditionals*.

Conditionals are logic statements that serve as requirements that need to be fulfilled before something else can happen. Think of them as being the keys to locks very lock is different and requires a specific key in order to be opened. In this activity, the gates are the conditionals. Before the gates can be passed, a certain amount of keys must first be collected. Once that requirement is fulfilled, the gate can be passed.

Ask participants to give examples of conditionals that we see in everyday life.

Activity 2: Operating Data

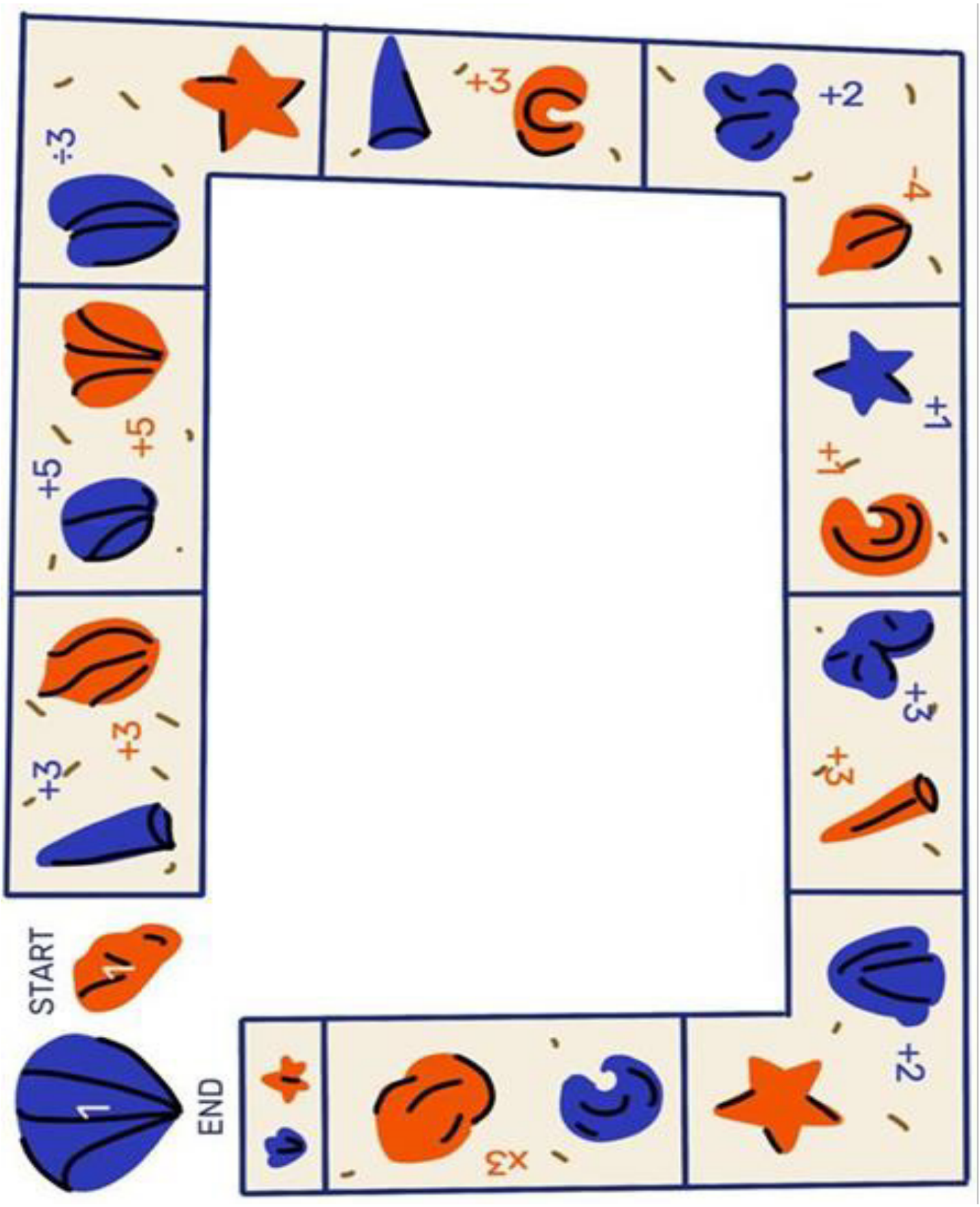
Resources required for this activity:

Operation Data worksheet (on next page)

Facilitators give participants the worksheet and have them take a look. There are shells of two colors that go around the board along with equations in corresponding colors. With each shell starting with a value of one (1), participants will work their way, mime around the board, performing the equations of each corresponding color. Participants will work their way/mime around the board until they reach the beach at the end and circle their answers.

As with all these activities, look at what coding concept was illustrated: operators. Operators are pieces of code that support and logical expressions; think of the instructions used on each space. What do these operators do? They change and evaluate the data. Data refers to the ability to store, receive, and update values. In this example, the data are the numbers in the blue pentagons and red circles. These are values that are stored and changed by the operators. What are some examples of data and operators that we see in everyday life?

Operating Data Worksheet



Activity 3: Chase and Catch Games

Resources required for this activity:

- Tablet or laptop
- Chase Game Tutorial worksheet
- Catch Game Tutorial worksheet
- Scratch Glossary

These are the Scratch tutorials to follow in this workshop. Participants using Scratch in an internet browser can follow the tutorials online, while those offline can follow the tutorial worksheets. Participants are encouraged to test their problem-solving skills while following the tutorials, remembering that they can use the Scratch Glossary to try to solve their own problem, they can use the "Help" guide within Scratch, or facilitators can answer questions if they get stuck.

Participants will then reflect on their learning experience and the ones their learners are likely to experience. Facilitators model by pointing out/signing something they observed from the reflections that were shared /narrated. They might say/sign something like:

I observed some participants get stuck in their creation due to lack of creativity. They then came up with strategies to be more imaginative and expand their project. It was a great example of creative thinking and imagination in action.

The facilitator enables participants to reflect by asking them to answer the following prompts:

I encountered this problem:
I solved it this way:
I improved on this skill:

The facilitator celebrates by pointing out how many different skills learners improved on. They might say/sign something like:

We heard about different skills that were improved upon by participants through these creative coding you all for sharing the development of your problem solving, collaboration, and communication skills.

Activity 4: Peer Teaching

Resources required for this activity:

- Paper
- Pens or pencils

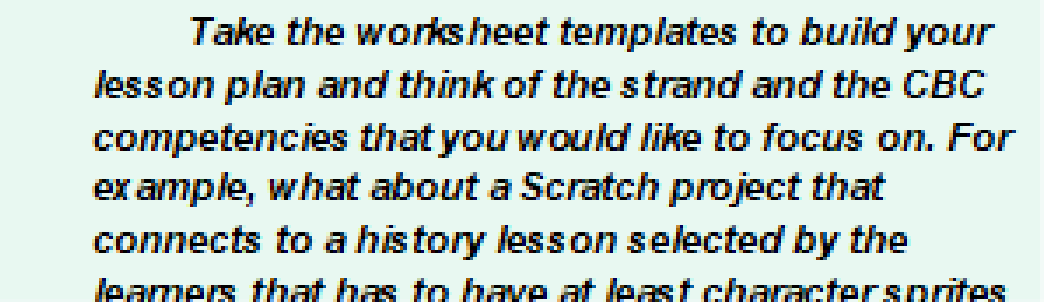
Participants will choose a Scratch activity to practice teaching to their peers so that they gain experience teaching Scratch and can identify gaps in their understanding of Scratch and/or this style of facilitation. They will receive feedback from their peers and ask questions where necessary.

Activity 5: Create a Lesson Plan

Resources required for this activity:

- Paper
- Markers
- KICD Sample Lesson Plan Template

In this activity, participants will use knowledge learned
from the previous activity to prepare a CBC lesson plan of
their choice using Scratch. They can link the lesson to any strand/sub-strand of their choice to ensure that it is relevant to the lesson.
Participants can choose to work individually or in pairs to think of a lesson they would like to bring to their classroom. The facilitator enables brainstorming by saying/signing something like:



At/by the end of the workshop, facilitators share their lesson plans with peers to give and receive feedback. While sharing their lesson plans, facilitators celebrate their ability to come up with a competency-based lesson that leverages Scratch in the classroom. When done, facilitators will also point out the use of open-ended prompts and the 4P's.

Activity 6: Celebration and Goal Setting

Resources required for this activity:

- Paper
- Pens or pencils

Participants in groups will showcase their animations, sequences, games, and everything they have made.

Research shows when goals are specific, time-based, and measurable, one is more likely to succeed. Facilitators will guide participants to set goals to be achieved in the next three months.

- The participants are given a piece of paper to write down/narrate a simple goal regarding KPLAY.
- Using communities of practice, they share/narrate the goal with a peer for accountability.

The group discussion ends with a reflection of resources. The participants reflect on leveraging locally available materials and new resources acquired for the development of a creative lesson.

APPENDIX

This appendix includes samples of slides and resources that are used in the KPLAY ToT capacity-building workshops.

- KICD Sample Lesson Plan Template
- CBC Competencies Information Sheet
- Playful Learning Facilitation Prompts

KICD Sample Lesson Plan Template

Name of school	Grade	Learning Area	Date	Time	Roll
	6	Art and Craft			

Strand: Indigenous Kenyan Crafts

- Sub-strand: Pottery
- Sub-sub-strand: Slab Technique

Specific Learning Outcomes:

By the end of the lesson, the learner should be able to:

- Describe a cuboid form, modeled using slab technique and decorated for aesthetic effect.
- Model a cuboid form using slab technique and decorate it for aesthetic effect.
- Appreciate a cuboid form, modeled using slab technique and decorated for aesthetic effect.

Key Inquiry Questions:

- Why does one ensure even thickness of slabs when modeling an object?
- How can one join slabs when modeling forms?

Learning Resources:

- Reference Books
- Clay
- Water
- Cutting Tools
- Battens
- Sample Cuboid Slab Forms

Organization of Learning:

The lesson will be outdoors. Learners will be in groups first and then work individually. They will share materials.

Introduction:

The teacher will guide learners in observing sample cuboid slab forms for motivation.

Lesson Presentation:

- Step 1: The teacher will guide the learners to use the digital content or print materials to find out the steps of modeling a cuboid form using slab techniques and ways of decorating it; learners to share in class.
- Step 2: The teacher will guide learners as they work together to prepare clay by kneading it in readiness for modeling. Sensitize the learners to the need to keep sources of clay, e.g., unpolluted riverbanks and marshes.

Suggestions/Tips:
The core competence of communication and collaboration will be developed as the learner works with others in preparing the clay.

This enhances the PCI on ESD in regard to environmental conservation.

Look for opportunities to help the learners to model respect and unity as they work together preparing the clay.

Step 3: The teacher will demonstrate how to roll out a slab of clay and guide learners to individually model a cuboid form using the slab technique while observing even thickness of the slabs and using slip to join the slabs.

Core Values Developed:
Learners will be guided to observe integrity in the use of materials and following procedures.

Step 4: The teacher will guide learners to individually decorate the cuboid form using a combination of embedding and piercing.

Core Values Developed:
Responsibility will be inculcated as learners observe safety precautions while using cutting tools for embedding and piecing the cuboid to decorate it.

Step 5: The teacher will guide learners to display and talk about their own and others' artwork.

Core Competencies Developed:
Learning to learn will be developed as the learner models the cuboid form using slab technique.

Creativity and imagination will be developed as the learner decorates the cuboid form using a combination of embedding and piercing.

Self-efficacy will be developed as the learner speaks about their own artwork.

Communication will be developed as the learner discusses the artworks with others during the display.

Conclusion:

The teacher will summarize by emphasizing the use of slabs with even thickness when making forms and the use of slip to join the slabs.

Extended Learning:

With the help of parents and caregivers, learners collect clay, prepare it, and make cuboid slab forms decorated by embedding and piercing.

Lesson Reflection:

Most learners enjoyed the modeling activity, but a few needed assistance in decorating their slab forms.

For a single lesson, one or two core competencies, values, and PCIs are recommended.

CBC Competencies Information Sheet

Communication and Collaboration

What are some ideas for how your learners can practice their communication and collaboration skills?

Communication is conveying intended information from one person to another through a mutually understood language. It is the exchange of thoughts, messages, opinions and information by speech, signals, writing, or behavior.

Collaboration is a purposeful relationship in which all parties choose to cooperate in order to achieve a common objective. An important aspect of the CBC is that learners will be involved in various learning activities.

Most of these activities will require being done in pairs, small groups, or whole classes. For the learners to achieve the intended learning outcomes, they will need to talk to each other using polite language and effective total communication. Besides the use of effective and appropriate language, the learners will be required to cooperate and work together to achieve learning outcomes. Communication and collaboration is a competence that the learners will acquire to help them in school, at home, and in their daily lives.

Critical Thinking and Problem Solving

When do you think your learners currently use their critical thinking and problem-solving skills?

Critical thinking is one of the key learning outcomes that is envisaged in the provision of quality education. There are three types of critical thinking. These are reasoning, making judgements, and problem solving.

When learners acquire the competence of critical thinking, they are able to use logic and evidence to arrive at conclusions as opposed to being subjective. This competence also enables the learners to explore new ways of doing things. The learners will appreciate the fact that there are various perspectives of addressing an issue.

Critical thinking is very important, and it is applicable throughout our lives. Critical thinking and problem solving helps create an open mind and readiness to listen. The learners will also appreciate information or opinions that may sometimes conflict with their earlier-held beliefs and positions. Competence is useful for learners of all ages and in all subjects and disciplines across the basic education curriculum.

Creativity and Imagination

How else might creativity and imagination be leveraged in classroom settings?

Creativity and imagination is the ability to form new images and sensations in the mind and to turn them into reality. In creativity and imagination, learners imagine things that are not real and form pictures in the mind. The imagined things are those that have neither been seen nor experienced, but the learners will turn those pictures into real things.

Creativity and imagination may also refer to the power of forming mental images of things not wholly perceived in reality and creating physical representations of those images. Imagination happens and remains in the mind. Creativity takes imagination to the next level whereby something new and valuable is formed.

In the CBC, learners and their teachers will imaginatively and creatively form images and ideas in their minds. They will then convert these ideas and images into real and visible creations. Imaginative and creative learners will always make life interesting for themselves and others around them because they are able to create new ideas that add value to their lives and to those of others around them.

This ability is present in most learners, but in most cases, it is hidden. The ability is developed when the teachers encourage learners to think as individuals. The teacher will achieve this by exposing the learners to challenging situations that help to expand their thinking and creativity skills. The curriculum is fairly flexible, and it creates room for innovative ways of teaching the learners. The key objective is to provide learners with a conducive opportunity to explore their full potential in imagination and creativity and to apply them in school, at home, and in their day-to-day lives.

Citizenship

What types of citizenship might our learners feel in our classrooms?

Human nature will always form communities based on a common or shared identity. The common identity naturally develops in response to a certain human need. The needs could be economic, social, political, or religious. A group of people with these common needs and shared identity will naturally grow bigger and stronger to form a community.

Such a community will develop a set of shared values and build a governance framework to support its beliefs. The individuals in this community identify themselves as citizens.

Citizenship is the state of being vested with rights, privileges, and duties of a member of a certain community. Citizens have a sense of belonging to one's nation. When learners acquire the sense of citizenship, they are able to deal with situations of conflict and controversy in a knowledgeable and objective manner. They will understand the consequences of their choices and actions. Citizenship inculcates respect for oneself and for other people. It also develops a unique approach to members of the community that is anchored on equity and justice.

Digital Literacy

How might we foster digital literacy for all of our learners?

In the CBC, digital literacy is the ability to use and manipulate digital devices to explore information and content stored in digital devices. Such digital devices include tablets, desktop computers, laptops, and phones, among others. Digital literacy therefore focuses mainly on the ability to search, evaluate, and use information channeled through digital platforms.

In education, learners are presumed to be digitally literate if they can safely and securely use technology to access and explore information while being able to assess the nature of the information to enhance learning. Digital literacy as a competence therefore encompasses the knowledge, skills, and appropriate application of a variety of hardware platforms such as computers, cell phones, mobile devices, and their software. Digital literacy should not be limited to web search or internet application software. We live in a very dynamic technological world. As such, this form of literacy is ever-changeably innovated.

The teacher and the learners should be prepared and equipped to match and cope with the demands of this ever-changing industry.

Digital literacy therefore challenges traditional thinking and practices. It leads to innovation, creativity, and transformational learning by the learners and the teacher. In order to face the ever-changing world of technology, teachers and learners are required to acquire, develop, and keep updating their digital literacy competence.

Learning to Learn

What is an instance where you observed your learners showing persistence in something they were learning?

Learning to learn is a wide concept in education. It is the pursuit of and persistence in learning, as well as organizing our own learning by managing our time and information. This is achieved when the learner works individually or as part of a group. Learning to learn therefore requires awareness of one's learning process and needs. It requires the learner to identify learning opportunities and develop the ability to overcome obstacles in order to learn successfully. Once the learners acquire this competence, they will be able to build on prior learning and life experiences. There are four pillars of learning:

Learning to Know

This is the most basic form of learning. Learners will acquire academic knowledge but with little or no application.

Learning to Do

Learners will acquire knowledge and do certain activities using that knowledge, e.g., in sports.

Learning to Be

This combines the first two pillars and helps the learner to be what they want to be in life. Learners can act with growing independence, discernment, and personal responsibility.

Learning to Live Together

This is the epitome of learning. The learner will acquire and apply the first three pillars of learning and co-exist with others in society.

Self-Efficacy

How might instilling our learners with self-efficacy help them in their life?

Self-efficacy refers to one's belief about their ability to perform certain tasks or assignments. It determines how a person perceives and thinks about a certain task. Self-efficacy has the potential to determine success in accomplishing tasks and assignments.

When a learner has a strong sense of self-efficacy, they are able to accomplish personal tasks in many ways. A learner with a strong sense of self-efficacy is confident when approaching difficult tasks. They perceive difficult tasks as challenges to be overcome as opposed to threats that should be avoided. Self-efficacy stimulates deep interest in new learning activities. Such a learner will set themselves stretch goals while at the same time working toward achieving them.

In education, self-efficacy develops live application skills like self-esteem and confidence. Self-esteem and confidence enable the learner to apply and maintain spirited efforts when faced with failure to convert such situations into successes. A learner with a strong sense of self-efficacy develops interest and courage to pursue personal, family, and community goals that would lead to personal accomplishment.
The learner will take cognizance of the available resources and take personal responsibility for their use, care, and protection.

A learner with strong self-efficacy will demonstrate self-assertiveness, empathy, effective communication, negotiation skills, non-violent conflict resolution skills, and peer pressure resistance skills.

Playful Learning Facilitation Prompts

These prompts are quick, easy-to-use tools for facilitating learning through play. They are little things to say, questions to ask, mindsets to adopt, and ideas for when you might be feeling uninspired. Think of these prompts as the little nudge you need to get inspired and build confidence.

Prompts for a Creative Learning Mindset

- Can you find another way to make this?
- How many other ways can you make this?
- How could this become blue? Fast? Fun?
- What can we do to make this more complex?
- How many ways did you have to try before you reached this result?
- What was your "aha" moment?
  What was the most interesting moment in this project?
- Who will you share this with?
- What is the story behind your project?
  Find a peer who got to the same answer with a different reasoning.
- How do you know your solution is working/correct?
- What would break this?
  Can you convince someone who disagrees with you?
- Does this always work?

Prompts for Making Something

- Make something for your family.
- Make something to use on the beach.
- Make something for your best friend.
- Make something that can help transport water.
- Make something that represents an animal you love.
- Make something with 7 legs.
- Make a board game about geography.
- Make a story with live animation.
- Make something that would allow you to live on a cloud.
- Make something that you would give to a fish.
- Make something for someone in another country.
- Make something that lets you explore another culture.
- Make something with 8 parts.
- Make something with only your favorite color.
- Make something from the future.
- Make a friend.
- Make something with your friend's creation.
- Make a prompt for someone else.

Prompts for Feeling More Calm and for Classroom Management

- Shake every part of your body for 60 seconds.
- Take 6 deep breaths.
- Close your eyes and relax one muscle at a time.
- Play Simon Says with all the learners.
- Walk around the classroom and find someone to express your gratitude to, then go sit quietly.
- Write down 3 things you are grateful for.

Prompts for Having Fun

- Choose a nickname for this session.
- Invent a new silly rule for this class.
- Make silly hats with LEDs that everyone wears in this class.
- Say "Yes" to everything (with safety).
- Invent a "Yes" day for playful learning.
- Speak only in rhymes.
- Play "I, Spot" (also called "I, Spy").
- Ask a learner to become the teacher.

Prompts for Assessment

- Everyone presents their project, and the class walks around the room to visit the different stations.
- Show me how you might solve this in a different way.
- Can you teach this concept to your peers?
- Put your finger/pencil where things are difficult.
- What makes you feel challenged in this project?
- What was easy?
- What did you enjoy about this?
- What materials do you need more of?
- Which role did you play in your group?

Scratch Terms Glossary

Scratch Interface: Main Interface

1. Code Tab: This tab displays all of the categories and blocks of code that are available for use in a project.
2. Costume tab: This tab displays all of the options for sprites in the project (see diagram below).
3. Sounds Tab: This tab displays all of the options for sounds in the project (see diagram below).
4. Green Go Flag: This button can be used to make a project's code run if the green flag event code block is used.
5. Red Stop Sign: This button halts all blocks of code in a project.
6. Code Block Categories: These are categories of code blocks available for use in the project. Clicking on a category will jump to that portion of the code block library.
7. Code Block Library: A list of all available blocks of code for use in a project.
8. Workspace: The area where code blocks are placed, dragged, and linked together. Once the blocks are in the workspace, they are a part of the project. To place a code block in the workspace, click on the block in the code block library and drag it to the workspace. To remove a code block from the workspace, it can be dragged back to any part of the code block library.
9. Stage: The area where the project – in its current state – can be tested, viewed, and played.
10. Extensions Button: Clicking this button will open the code extensions library, allowing for the importation of additional code block categories.
11. Sprite Options Window: When a sprite is selected, this window will allow for the sprite to be renamed, to be moved around the stage, to change the size, or to change the direction; and show or hide the sprite on the stage.
12. Active Backdrops: This area displays the backdrop(s) that are currently in the project.
13. Active Sprites: This area displays the sprite(s) that are currently in the project.
14. New Sprite Button: Clicking this button will open the sprite library, allowing for additional sprites to be added to the project.
15. New Backdrop Button: Clicking this button will open the backdrop library, allowing for additional sprites to be added to the project.

CRITERIA	EXCEEDING EXPECTATION	MEETING EXPECTATION	APPROACHING EXPECTATION	BELOW EXPECTATION
Describe/sign what a cuboid form modeled using the slab technique and decorated for aesthetic effect may look like.	Describe (using total communication or by clearly signing) what a cuboid form modeled using slab and coil techniques and decorated for aesthetic effect may look like.	Describe / clearly sign what a cuboid form modeled using the slab technique and decorated for aesthetic effect may look like.	Describe/sign what a cuboid form modeled using the slab technique and decorated for aesthetic effect may look like with some support from the teacher.	Attempts to describe/sign what a cuboid form modeled using the slab technique and decorated for aesthetic effect may look like with lots of errors.
Prepare clay ready for modeling a cuboid form using the slab technique and decorated for aesthetic effect, while observing safety measures.	In a dust cot, prepare sieved clay in correct tenderness while observing safety measures ready for modeling.	Prepare clay ready for modeling in correct tenderness while observing safety measures ready for modeling.	Prepare clay ready for modeling in correct tenderness ready for modeling. However, fails to observe safety measures.	Has difficulties in preparing clay in correct tenderness ready for modeling and can only achieve it with the teacher's support. They cannot observe safety measures.
Model a cuboid form using the slab technique while observing safety measures.	In a dust cot, model two cuboid forms using the slab technique for one and coil technique for the other while observing safety measures.	Model a cuboid form using the slab technique while observing safety measures.	Model a cuboid form with little support from the teacher while observing safety measures.	Attempts to make slabs only and fails to join them to make a cuboid form even with support from the teacher.
Decorate using a combination of embedding and piercing the cuboid form modeled using the slab technique for aesthetic effect.	Decorate with complex patterns of embedding and piercing the cuboid form modeled using the slab technique for aesthetic effect while observing safety measures.	While observing safety measures, decorate using a combination of embedding and piercing a cuboid form modeled using the slab technique for aesthetic effect.	Decorate using either embedding or piercing a cuboid form modeled using the slab technique for aesthetic effect with some support from the teacher while observing safety measures.	Attempts to decorate slabs with doodles and with a lot of support from the teacher.
Store the cuboid form modeled and decorated using the slab technique for aesthetic effect in a safe place in the classroom and then clean the working surface.	Take photos, then store the cuboid form modeled using the slab technique and decorated for aesthetic effect in the classroom cupboard while celebrating it by dancing as they clean the working surface and the dust cot.	Display and then store the cuboid form modeled using the slab technique and decorated for aesthetic effect in the classroom cupboard and clean the working surface.	Store the cuboid form modeled using the slab technique and decorated for aesthetic effect.	Leaves the slabs, waste materials, containers, and tools on the working surface.

NOTE: The rubric above was prepared with the consideration that the final users (practicing teachers) were already trained on the interpretation of the CBC and CBA, and can therefore prepare the Standards and Performance Tasks.

INDIVIDUALIZED EDUCATION PROGRAM (IEP) TEMPLATE

Name of school……..……. Level/Grade……..... Learning Area / Subject……

Name of the Learner	Strand & Sub Strand	Area of Strength	Area of Need	Specific Learning Outcomes	Learning experiences	Resources	Assessment Methods and Tools	Date of Initiation	Date of Termination	Reflection