

**CODE**  
**FOR**  
**CHANGE**

**SCHOOLS**



**CODEJIKA.COM**

OVERVIEW



# WHAT IS CODEJIKA?



CodeJIKA is a **teen coding brand**. A program created for energetic, **under-resourced, offline, mobile-oriented**, and developing market youth. Our mission is to create awesome experiences, cool online and offline tools, and a fun curriculum to support the youth of today and leaders of tomorrow.

CodeJIKA has 3 Pillars:

1. Ecosystem of student-run **coding clubs**.
2. An **online platform** to learn coding online for FREE.
3. A **media campaign** to advocate coding in every secondary school.

**Code for Change** is a non-profit which believes in the potential of youth.

**Impacted +272 206 since 2019**

Advocating for digital skills for youth since 2009.

[www.codeforchange.co.za](http://www.codeforchange.co.za)

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**What's Unique:**

- Offline and Online Coding Curriculum
- National Vision
- Teen-oriented, peer-learning style
- AI-driven online learning & grading\*

# What is Coding?

1. CODING, IS TELLING A COMPUTER WHAT YOU WANT IT TO DO, WHICH INVOLVES TYPING IN STEP-BY-STEP COMMANDS FOR THE COMPUTER TO FOLLOW.

2. ALMOST ANYTHING POWERED BY ELECTRICITY USES CODE.

3. COMPUTERS CAN UNDERSTAND DIFFERENT LANGUAGES TOO,.. (LIKE PYTHON, C, C++, JAVASCRIPT, RUBY AND PHP, AMONG OTHERS)

NORMALLY LOOKS like this:

```
print 'Hello, world!'
```

```
1  function asdf(a){
2  }
3
4  var html = `
5      <div style="width: 100%"
6          <p>foo bar</p>
7      </div>
8  `;
9
10 function blah(){
11
12 }
```

**B** [bloom.bg/1GzWRDU](https://bloom.bg/1GzWRDU)

 <https://youtu.be/cKhVupvyhKk>

<https://dailytekk.com/what-is-coding-15-facts-for-beginners/>

# Why Coding in Schools?

1. A LANGUAGE,  
& ESSENTIAL SKILL  
BEST TAUGHT YOUNG.

2. EVERY INDUSTRY  
NEEDS CODE

3. INCREASING  
NATIONAL  
COMPETITIVENESS

"WE NEED TO FUTURE-SAFE OUR WORKFORCE."

PRAVIN GORDHAN - NOV 2016 CNBC/JSE



BANKING:

**J.P.Morgan**

Re-skilling 90,000 Employees  
with IT Skills

AUTOMOTIVE:

**TESLA**

A Technology Company

HAND-MADE RUSKS:

Nibbly bits

Using Raspberry Pi simply coded to  
monitor oven temperature, timing &  
batch management for ISO compliance.

# Testimonials: What schools say



**We have witnessed so many changes** and improvement in our ICT subject, many students are now enrolling for the subject in grade 10,... Thanks for Code for Change for playing such a big role." Mrs. Mamosebo - Principal, Ivory Park Secondary

"Students do not want to leave the computer lab, they are enjoying the program and some are teaching other students this coding thing." Mr Masenya- Principal - Itirele Zenzele, Diepsloot



**"Coding is a skill**,... it's something not everybody can do and should be started at a young age." - Ms. Makhubedu - Principal, Diepsloot 3

"CodeJIKa opened our eyes to the computer science world, we are now offering robotics, agriculture technology and droning as after school programs" - Katlehong School of Engineering.

# How coding clubs benefit the school:

## 1. SCHOOL BENEFITS:

- **Join a Network** of forward-thinking Schools teaching code.
- Students take part in **awards and win prizes.**
- Excitement and school **innovation increases.**

## 2. LEARNER BENEFITS:

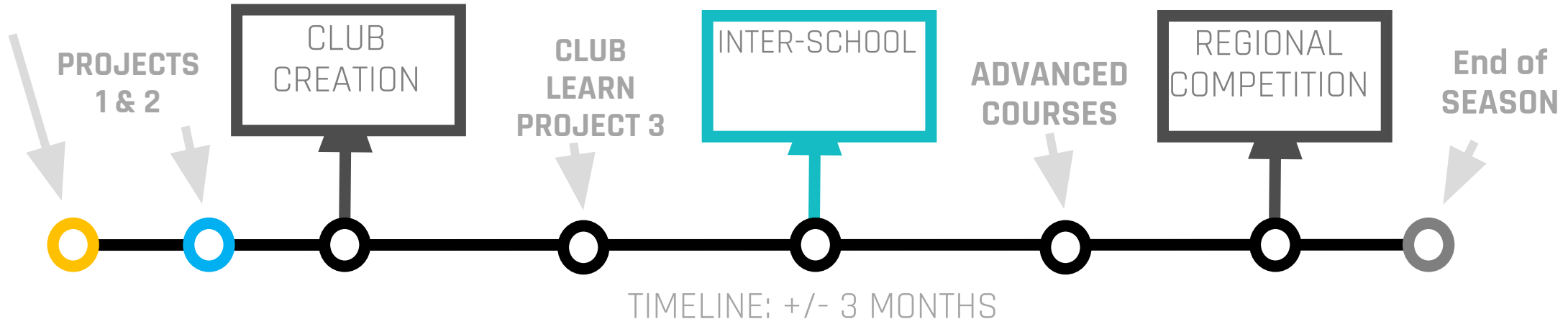
- **Learners take responsibility** for the club and lab.
- **Career Opportunities** post graduation.
- Girls coding and **pursuing STEM.**
- Rocketing coding **Superstars.**

## 3. ACADEMIC BENEFITS:

- **Pass rates increase** on ICT subjects.
- Enrollment rates increase in ICT subjects.
- Dropout rates decrease on ICT subjects.
- **ICT comprehension** and sophistication increases.
- School's confidence to **offer** ICT subjects **elective** increases.

# TIMELINE

START of SEASON  
ROADSHOW



## 3 STEPS:

### 1. INITIATE TRAINING

CREATE A SUITABLE SCHEDULE WITH YOUR IT TEACHERS.

### 2. ADD CLUB LEADERS

ENTHUSIASTIC &/OR TECHNICALLY GIFTED - STUDENTS

### 3. ASSIGN CLUB MENTORS

CAN BE TRAINERS, TEACHERS OR VOLUNTEERS.

# What Option is best for my school?



## OPTION 2: After school coding sessions

Learners and the teacher meet weekly.  
Follow the CodeJIKa.com curriculum and complete it.  
Part-take in Competitions (online & offline),  
Improve their coding skills by creating awesome websites.

Required: Access to lab. Recommended 4 hours per week.



## OPTION 2: Student Run Coding Clubs

Learners to meet weekly and go through the curriculum as a club.  
Peer to Peer is a great way for students to collaborate to support one another.  
Gives students accountability.  
The teacher/coach will be facilitating and ensuring the students reach their milestones.

Required: Access to lab. Recommended 4 hours per week.



# How clubs work?

## 1. LEARN THE BASICS:



Complete Projects:

*PROJECT 1: HTML  
COURSE PROJECT 2:  
CSS COURSE*

## 3. ACHIEVE MILESTONES:



EXAMPLE OF MILESTONE:

MAKE LOCAL BUSINESS WEBSITE  
- OR - SCHOOL WEBSITE



CATEGORY:

ONLINE ENTREPRENEUR

## 2. FORM CLUB:



1. BUILD YOUR TEAM

*Minimum 5 members.*



2. SIGN MOU

*We provide the  
template. You just fill it  
in.*



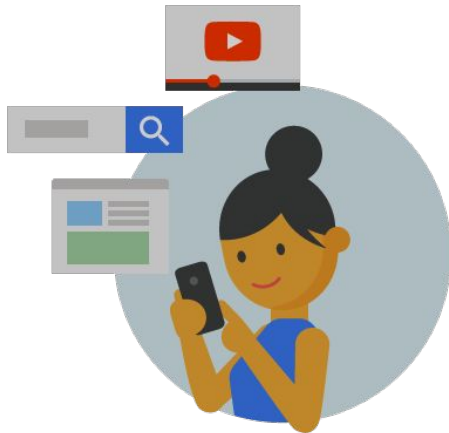
3. Get your projects...

*& start coding your websites.*

# Vision-casting:

## Be a Hero

Do you like working on your phone?



From being a user...

*WHAT IS AN ONLINE CONSUMER  
HOW DO PEOPLE MAKE MONEY OFF OF ME ONLINE?*

Why not Switch



To being a creator!

*WHAT IS AN WEB DEVELOPER?  
FIND OUT MORE HERE*



A HERO - Using Code!

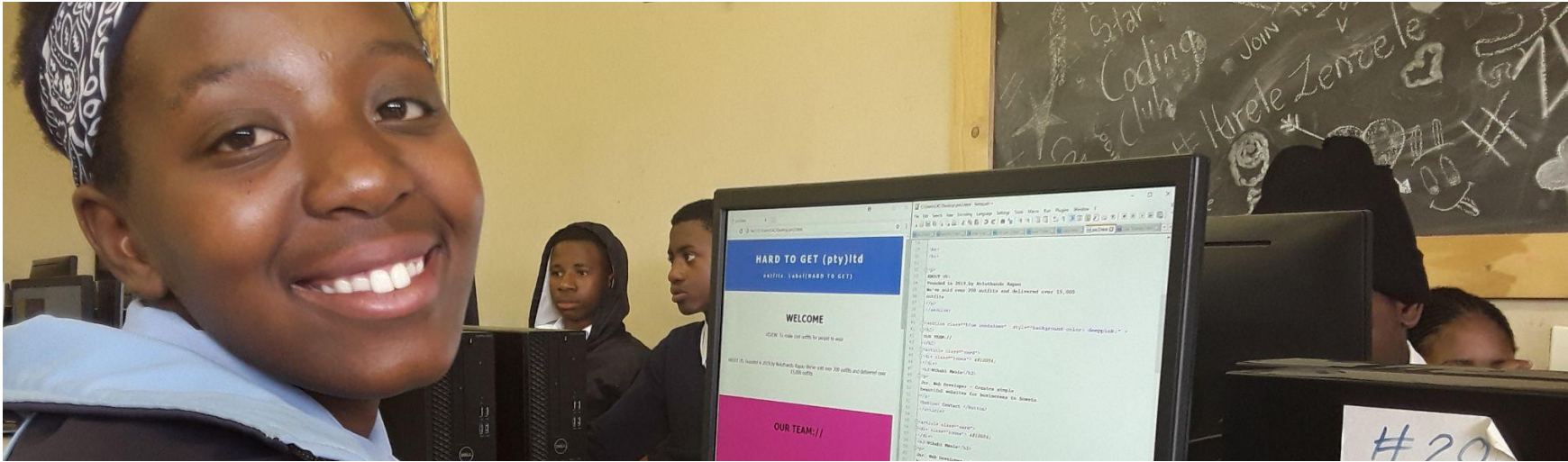
START NOW

i want to be a hero

# PILLAR 1: IN - SCHOOL

## HOW IT WORKS

Hands-on: Tight-knit team and efficient implementation processes.  
This is run by the IT teachers from the schools.



# Our Secret Sauce



## Short-Courses / Tight Deadlines

Saturday intensive boot camps.

3-week, fun, high-intensity interventions

## Super Clear Obvious Outcomes

From Day One of our Intro RoadShow Students know that they will be building websites for their communities in a short period of time.

## Competition

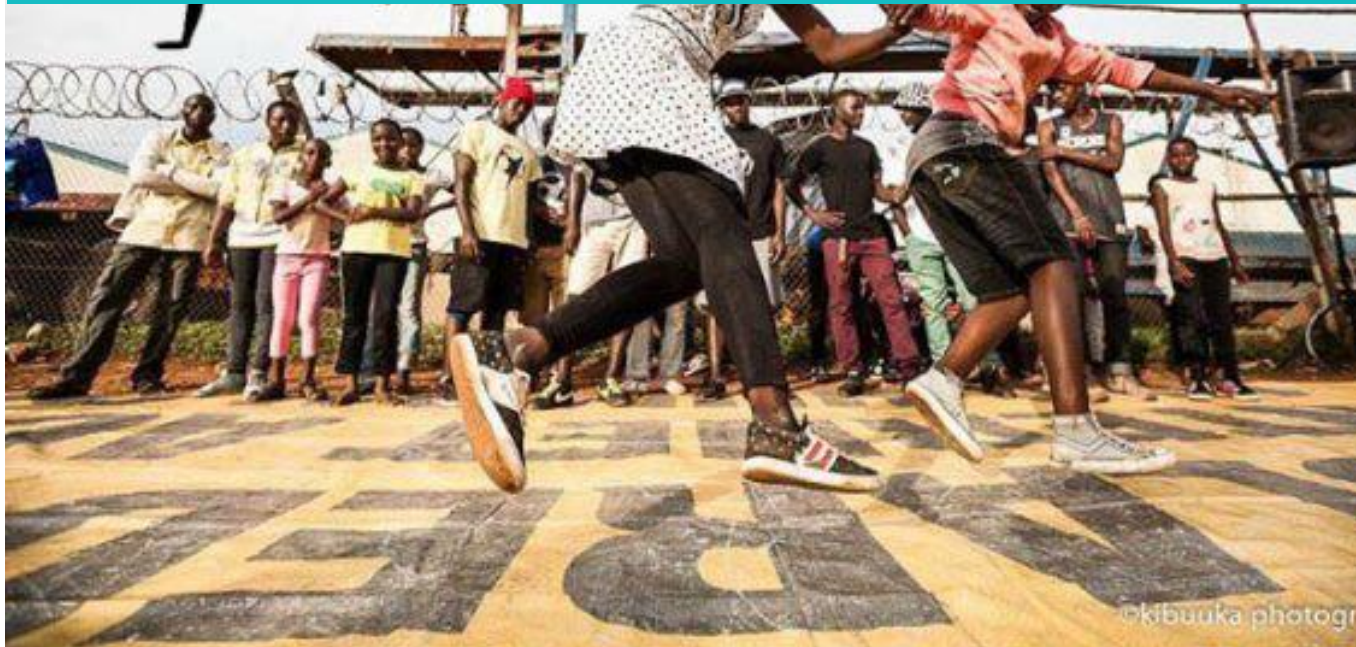
Competition between Students, between Trainers & between Interns increases dynamics & motivation.

## Training Style

A series of Intensive, practical projects.

# Phase I: IGNITION

## UNDERSTAND:// BUILD// FIRST STEPS



### Students Learn:

How to make a webpage in HTML

Add pictures, tables & a menu

How to position and style elements in a webpage

How to add snippets of JavaScript Code

How to create interactive forms with JavaScript functions.

**First Steps: 3 Weeks**

# Phase II: COMBUSTION

PLAY:// SKILLS / MAKE  
FRIENDS



## Students Learn:

Understand 10 basic concepts of JavaScript

HTML & CSS webpage.

Edit a large and complex webpage.

## Final Project:

Make website for local business, school/assoc.

The Basics: 3 Weeks

# Phase III: CREATION

BUILD:// SKILLS /  
EXPERIMENT



## Events:

A student-run coding club is fostered and stimulated through:

- Inter-School Competitions
- Intra School Competitions
- Practical Workshops
- Meet-up - School Coding Club Management Planning Meeting

Talent Emerges: 6 Months

FAQ:

PILLAR 1: IN - SCHOOL  
& SUSTAINABILITY





# Girls & Coding:

Is this a program for girls? How do you address under-represented groups?

## Girls & Women:

- #CodeChikas - A theme and in-program push to promote and encourage girls in coding.
- Approx. % of our total number of learners are female.
- Half of our IT Coding mentors are female.
- Clubs are encouraged to include girls.
- Roadshows are oriented to encourage both sexes to engage in ICT and learn to code.
- Special attention is provided for girls in competitions and events.

## General:

- Tech Engineers from low-income households - We address this directly
- Knowledge of ICT in government schools - We address this directly.
- Branding is oriented to under-represented groups.

# Is CodeJIKA Accredited?

CodeJIKA is a non-accredited, hands-on, after-school coding learning movement providing immediate, medium- and long-term solutions to ICT Education in secondary schools.

This is the roadmap for alignment with curriculum.

## Stage 1.

- Align with ICT Curriculum
- Practical Section Online Exams

## Stage 2.

- Add outstanding outcomes for ICT Curriculum for HTML & DB Practical Components.

## Stage 3.

- Provide outcomes and curriculum for IT Coding & SQL elements.

# How do you monitor progress?

School baseline survey:

## Non-IT Schools:

- Awareness of Coding
- Knowledge of ICT Career Ops
- ICT Career Ops for Women
- Desire to take ICT Electives
- Plans for Tertiary ICT-related Careers
- ICT & Coding Skills

## ICT Offering Schools:

- # students in ICT class
- Previous Pass rate of ICT Students
- Average Grade of ICT Students
- Teacher usage of ICT resources

# How students connect with careers?

CodeJKA is a non-accredited, hands-on, after-school coding learning movement providing immediate, medium- and long-term solutions to ICT Education in secondary schools as well as a pipeline for scarce ICT skills to industry.

This is accomplished through information and vision casting embedded in the program, opportunities listing on the platform and identifying key skill and leaders through referrals, awards, challenges, competitions and hands-on engagements.

## 1. Skills

- Encourage learners to take ICT related subjects.
- Teach them to code.

## 2. Vision

- Provide vision ideas and dreams about where ICT and Coding skills can take a career.
- Examples of careers and companies, what they do and how they operate.

## 3. Linkages & Info

- Work with; Scholarship programs, Training programs, universities and colleges to host a basic, useful listing of relevant ICT related career opportunities.

## 4. Up-stream Partnerships

- Collaborate in applying for and referring gifted learners into further development studies and/or opportunities from other players in civil society, academia or the private sector.

# THE VISION:

2023: **500,000 youth learning basic coding.**



## 24-MONTH VISION:

TO SEE 15 YEAR OLD KIDS MAKING MONEY FROM WEB DESIGN, WHILE IN SCHOOL, IN OUR COMMUNITY.

## 10 -YEAR VISION:

A LARGE POOL OF CONFIDENT, ETHICAL DEVELOPERS INCREASING THE COMPETITIVENESS OF THE AFRICAN INDUSTRY AND SMES.

## OUR BELIEF:

KIDS HAVE THE RESOURCES TO EMPOWER THIS ECONOMY - LET'S LET THEM.

# Our Message to Youth

We Believe in You

We See an Amazing and Empowering  
Future for You

We're Here for You

# Our Philosophy

Break rules - Expect more

Think differently

Youth are the Now - Provide the tools and  
let them explode.





great,  
FO...nera  
CHANGE  
- Nelson

Corporate Site: [www.code4change.org.za](http://www.code4change.org.za)  
CodeJIKa Site: [www.codejika.com](http://www.codejika.com)  
Our Team Video: <https://youtu.be/da82NlbzsHo>  
Township Startup: <https://www.youtube.com/watch?v=VkcWVRGnTdE>