Grade 10 ICT

Term 3 - 22 complete lesson plans

Ready to teach, in the KICD lesson-plan format | 40-minute lessons | PDF and editable Word

ABOUT THIS PACK

22 complete, ready-to-teach Grade 10 ICT lesson plans for Term 3, covering the internet, digital communication and digital citizenship.

TOPICS IN THIS PACK

Topic	Name	Lessons
3.1	The Internet	6
3.2	Digital Communication	10
3.3	Digital Citizenship	6

INSIDE EVERY LESSON PLAN

- The specific learning outcomes, key inquiry question, core competencies, values and PCIs, and the resources needed.
- A timed lesson flow: what the teacher does and what the learners do, from introduction to summary.
- The key content (a worked example, notes or a practical with its expected results), then four practice questions with the answers for the teacher.
- The common mistake to watch for, and ideas for learners who need support and for those ready for more.
- A four-level CBC assessment rubric (EE, ME, AE, BE), homework, and a blank reflection space to fill in after teaching.

A TASTE OF LESSON 1

The internet, the web and what people use them for

By the end of the lesson, the learner should be able to: a) explain what the internet is and how it differs from the World Wide Web; b) name common services offered through the internet

> **The internet and its services**
> The internet is a huge network of networks that connects millions of computers and devices around the world, so that they can exchange data. It began as a research network and now reaches homes, schools, businesses and phones. In Kenya it is reached through undersea fibre-optic cables that land at Mombasa, satellites, and the mobile and fixed networks of internet service providers.

You also receive this pack as an editable Word file, so you can change any lesson to suit your class before you print it. Lessons follow the order of the KICD curriculum design.

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The internet, the web and what people use them for

Strand 3.0 Internet and Web Technologies > Sub-strand 3.1 The Internet | Lesson 1 of 6 | 40 minutes

SCHOOL	TEACHER	DATE
CLASS / STREAM	TIME	ROLL (B / G)

SPECIFIC LEARNING OUTCOME(S)

By the end of the lesson, the learner should be able to: a) explain what the internet is and how it differs from the World Wide Web; b) name common services offered through the internet

KEY INQUIRY QUESTION(S)

- How can the internet be harnessed to facilitate communication and information gathering?

CORE COMPETENCIES, VALUES AND PCIS IN THIS LESSON

COMPETENCY	**Learning to learn**	Learners say what they found easy or hard and decide their next step.
COMPETENCY	**Self-efficacy**	Learners attempt each task with confidence and see that effort improves results.
COMPETENCY	**Digital literacy**	Learners use a phone, tablet or the class computer to explore or check the idea.
VALUE	**Respect**	Learners listen while others explain and accept correction politely.
VALUE	**Responsibility**	Learners look after shared materials and finish every task.
PCI	**Online safety**	Learners follow safety rules when using materials and moving about.
PCI	**Life skills**	Learners practise decision making and working with others.

LEARNING RESOURCES

A chart showing internet services and how a device reaches the internet | Printed search results pages and sample emails for schools without internet | Manila paper and marker pens | Notebooks and pencils

ORGANISATION OF LEARNING

Whole class for introductions; pairs at a device, one searching and one recording; individual work for writing and sending emails; where connectivity is poor, use printed pages and offline simulations.

KEY WORDS

internet | World Wide Web | browser | URL | ISP | router | bandwidth | search engine | email | attachment

THE LESSON AT A GLANCE

Introduction	Teacher models	Guided practice	On their own	Wrap-up
6 min	9 min	10 min	9 min	6 min

LESSON FLOW

Stage	Minutes	The teacher	The learners
Introduction	6	Greet the class and ask: "In one day, how many times do you or your family use the internet, perhaps without noticing? Think of messages, payments, news, music or lessons." Take two or three answers, link them to earlier work, then state today's outcome.	Answer the starter question, recall what they already know and read the outcome aloud.
Step 1: Teacher models	9	Take learners through "The internet and its services" (steps and key ideas on the next page), explaining as you go. Use a chart showing internet services and how a device reaches the internet, printed search results pages and sample emails for schools without internet, manila paper and marker pens. Ask learners to predict what comes next before you show it.	Watch, predict the next step, ask questions and note the key steps in their exercise books.
Step 2: Guided practice	10	Give questions 1 and 2. Move round the groups, ask "How do you know?" and correct errors kindly on the spot.	Work in pairs or small groups, explain each step to a partner and check one another's answers.
Step 3: Independent practice	9	Set questions 3 and 4 for individual work. Mark as you walk round and note who needs help in the next lesson.	Work on their own, then swap books with a partner to check.
Summary and conclusion	6	Ask two or three learners to state the key idea in their own words. Give this exit question and check the answers: "Give one reason why a farmer or a trader might use the internet."	Say the key idea in their own words and answer the exit question in the exercise book.

STEPS AND KEY IDEAS

The internet and its services

The internet is a huge network of networks that connects millions of computers and devices around the world, so that they can exchange data. It began as a research network and now reaches homes, schools, businesses and phones. In Kenya it is reached through undersea fibre-optic cables that land at Mombasa, satellites, and the mobile and fixed networks of internet service providers.

The World Wide Web, often called the web, is only one service on the internet: a collection of web pages that are opened with a browser and found by a web address, or URL. Email, messaging, video calls and file transfer also use the internet but are not the web.

Common services are: the web, for information and websites; email and messaging, for written communication; voice and video calls; social media, for sharing and communities; e-commerce and mobile banking, for buying and paying; e-learning, for lessons and courses; cloud storage, for keeping files online; and streaming, for music and video. People use them to communicate, find information, learn, work, trade and relax.

PRACTICE QUESTIONS - WITH ANSWERS FOR THE TEACHER

No.	Question	Answer
1	What is the internet?	**A huge network of networks that connects computers and devices around the world so they can exchange data.**
2	What is the difference between the internet and the World Wide Web?	**The internet is the network itself; the web is one service on it, made of web pages opened with a browser.**
3	Name three services offered through the internet.	**For example: the web, email, messaging, video calls, social media, e-commerce, e-learning, cloud storage, streaming.**
4	Give one reason why a farmer or a trader might use the internet.	**For example: to find market prices, receive payments, buy supplies, or learn new methods.**

WATCH OUT FOR

Learners say the internet and the web are the same. Email and video calls use the internet but are not web pages.

ASSESSMENT RUBRIC - THE FOUR CBC LEVELS

Level	What the learner can do
Exceeds expectations (EE)	Can explain what the internet is and how it differs from the World Wide Web confidently and accurately, explain the method used, and apply the idea to new or unfamiliar problems.
Meets expectations (ME)	Can explain what the internet is and how it differs from the World Wide Web accurately in familiar situations; notices and corrects slips without help.
Approaches expectations (AE)	Can partly explain what the internet is and how it differs from the World Wide Web, or does so with prompts from the teacher or a partner; makes some errors.
Below expectations (BE)	Cannot yet explain what the internet is and how it differs from the World Wide Web without direct help; needs the idea taught again with concrete objects.

SUPPORT AND EXTENSION

Learners who need support	Give service icons on cards for learners to match to a purpose such as learning, paying or talking.
Learners ready for more	Explain why sending an email is an internet service but not a web page. (Answer: An email travels over the internet between mail servers and is opened in a mail program or a web mailbox, but it is a message, not a page found by a web address, so it is not the web itself)
Inclusion	Seat learners with low vision near the board and read aloud whatever you write; use large, clear, tactile materials; allow extra time; pair with a patient partner; use gestures or Kenyan Sign Language for the key words.

HOMEWORK AND FOLLOW-UP

Redo questions 3 and 4 neatly in the exercise book. Then tell someone at home what you learned about "the internet, the web and what people use them for" and bring one question of your own to ask next lesson.

TEACHER SELF-CHECK

- Did every learner get a turn to handle materials or explain their thinking?
- Did most learners meet the outcome? Write down the names of those who did not.
- Was the pace right — did any step take too long or too short a time?
- Which competency and value did I see learners showing?
- What will I change the next time I teach this lesson?

REFLECTION ON THE LESSON / SELF-REMARKS

Write this after teaching - what worked, what to change, which learners need follow-up.

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What is needed to connect to the internet

Strand 3.0 Internet and Web Technologies > Sub-strand 3.1 The Internet | Lesson 2 of 6 | 40 minutes

SCHOOL	TEACHER	DATE
CLASS / STREAM	TIME	ROLL (B / G)

SPECIFIC LEARNING OUTCOME(S)

By the end of the lesson, the learner should be able to: a) name the components needed for an internet connection; b) work out simple data and time figures for a connection

KEY INQUIRY QUESTION(S)

- How can the internet be harnessed to facilitate communication and information gathering?

CORE COMPETENCIES, VALUES AND PCIS IN THIS LESSON

COMPETENCY	**Learning to learn**	Learners say what they found easy or hard and decide their next step.
COMPETENCY	**Self-efficacy**	Learners attempt each task with confidence and see that effort improves results.
COMPETENCY	**Digital literacy**	Learners use a phone, tablet or the class computer to explore or check the idea.
VALUE	**Respect**	Learners listen while others explain and accept correction politely.
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LEARNING RESOURCES

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ORGANISATION OF LEARNING

Whole class for introductions; pairs at a device, one searching and one recording; individual work for writing and sending emails; where connectivity is poor, use printed pages and offline simulations.

KEY WORDS

internet | World Wide Web | browser | URL | ISP | router | bandwidth | search engine | email | attachment

THE LESSON AT A GLANCE

Introduction	Teacher models	Guided practice	On their own	Wrap-up
6 min	9 min	10 min	9 min	6 min

LESSON FLOW

Stage	Minutes	The teacher	The learners
Introduction	6	Greet the class and ask: "A school buys new computers but cannot get online. What else must it arrange for them to reach the internet?" Take two or three answers, link them to earlier work, then state today's outcome.	Answer the starter question, recall what they already know and read the outcome aloud.
Step 1: Teacher models	9	Take learners through "Connecting to the internet" (steps and key ideas on the next page), explaining as you go. Use a chart showing internet services and how a device reaches the internet, printed search results pages and sample emails for schools without internet, manila paper and marker pens. Ask learners to predict what comes next before you show it.	Watch, predict the next step, ask questions and note the key steps in their exercise books.
Step 2: Guided practice	10	Give questions 1 and 2. Move round the groups, ask "How do you know?" and correct errors kindly on the spot.	Work in pairs or small groups, explain each step to a partner and check one another's answers.
Step 3: Independent practice	9	Set questions 3 and 4 for individual work. Mark as you walk round and note who needs help in the next lesson.	Work on their own, then swap books with a partner to check.
Summary and conclusion	6	Ask two or three learners to state the key idea in their own words. Give this exit question and check the answers: "A file of 50 megabytes is downloaded at 8 megabits per second. About how long does it take?"	Say the key idea in their own words and answer the exit question in the exercise book.

STEPS AND KEY IDEAS

Connecting to the internet

To connect you need: a device, such as a computer, tablet or phone; a way to reach the network, such as a modem or router for a wired or Wi-Fi connection, or a SIM card and mobile data for a phone; an internet service provider (ISP), the company that supplies the connection and charges for it; software, such as a browser and the operating system; and payment for the service, usually a monthly plan or a data bundle.

The connection type can be fibre, which is fast and steady; mobile data such as 4G or 5G, which is flexible but depends on the signal; satellite, which reaches remote places; or a hotspot, in which one phone shares its data with other devices by Wi-Fi. A router sends data between your devices and the ISP, and the ISP connects to the wider internet.

Data and speed. Suppose a video call uses about 0.5 GB of data an hour. A three-hour call would use 3 × 0.5 = 1.5 GB, and if a bundle cost KSh 100 for each GB, the call would cost 1.5 × 100 = KSh 150. Speed is measured in megabits per second: a file of 100 megabytes is 100 × 8 = 800 megabits, so at 8 megabits per second it takes 800 ÷ 8 = 100 seconds to download.