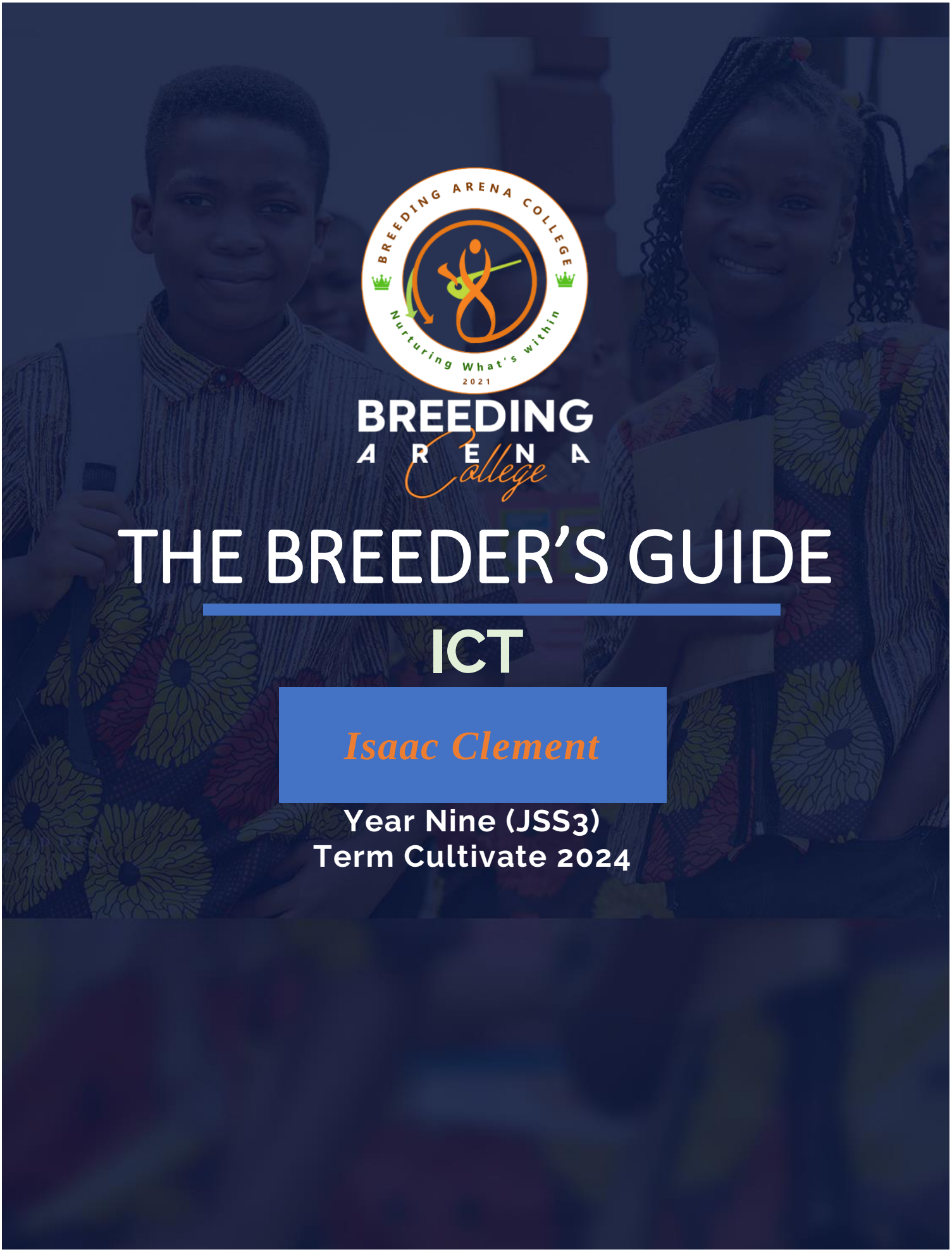

BREEDING ARENA College

THE BREEDER'S GUIDE

ICT

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Year Nine (JSS3)
Term Cultivate 2024

SCHEME OF WORK

ICT

Information & Communication Technology **Sept 18 – July**

WEEK	TOPIC	SUB-TOPICS
1	REVISIONS	
2	Practical uses of Interent	- Uses
3	Digital Divide	- Old and New Economy - Effects of digital divide - Factors contributing to digital divide - Solutions
4	Old and New Economy	- Definitions - Limitations - Benefits
5	Digital Literacy i	- Characteristics and Benefits
6	Digital Literacy ii	
7	Continuous assessment/Mid Term Break	
8	Database	- Concepts of database - Forms of database - Application areas - Examples of database application
9	Spreadsheet	- The package - Uses - Practical
10	Revision	
11	Revision	
12	Examination	
13		

WEEK	TOPIC	SUB-TOPICS

1. REVISION

Objective: By the end of this class, a student should be able to recall last term's work
Duration: 40mins
Week: 1
Teaching Method/Strategy: Method
Entry Behaviour (*How you plan to start your Class***): Interaction**

2. PRACTICAL USES OF THE INTERNET

Objective: By the end of this class, a student should be able to state the practical uses of the internet
Duration: 40mins
Week: 2
Teaching Method/Strategy: Method
Entry Behaviour (*How you plan to start your Class*): Class Discussion

1. **Electronic mail.** At least 85% of the inhabitants of cyberspace send and receive e-mail. Some 20 million email messages across the Internet every week.
2. **Research.**
3. **Downloading files.**
4. **Discussion groups.** These include public groups, such as those on Usenet, and the private mailing lists that ListServ manages.
5. **Interactive games.** Who hasn't tried to hunt down at least one game?
6. **Education and self-improvement.** On-line courses and workshops have found yet another outlet.
7. **Friendship.** You may be surprised at the number of electronic "personals" that you can find on the World Wide Web.
8. **Electronic newspapers and magazines.** This category includes late-breaking news, weather, and sports. We're likely to see this category leap to the top five in the next several years.
9. **Job-hunting.** Classified ads are in abundance, but most are for technical positions.
10. **Shopping.** It's difficult to believe that this category even ranks. It appears that "cybermalls" are more for curious than serious shoppers.

3. DIGITAL DIVIDE

Objective: By the end of this class, a student should be able to define and explain what is digital divide
Duration: 40mins
Week: 3
Teaching Method/Strategy: Method
Entry Behaviour (*How you plan to start your Class*):
The digital divide refers to the gap between those people with effective access to digital and information technology and those without.
It includes the imbalance in physical access to technology as well as the imbalance in resources and skills needed to participate effectively as a digital citizen.

Old and New Economy

Old economy is used to describe the economic era of the early parts of the twentieth century when industrial innovation was expanding in the U.S. and around the world.
The new economy refers to the high-growth innovation of the twenty-first century which has been substantially focused around the use and development of the internet, internet technology, and technology in the cloud.

Effects of Digital Divide:

1. **Economic inequality:** The digital divide creates economic inequality because those who have access to modern technology can easily collect valuable economic information.
2. **Effect on education:** It has an impact on education. Because students who have internet access and computers can acquire more valuable knowledge from the internet.
3. **Democracy:** The use of the Internet can lead to a healthier democracy, and increased public participation in elections and decision-making processes.
4. **Economic growth** is affected by the digital divide because productivity improvements tend to be associated with the use of Information technologies and companies with these technologies may have an advantage and can compete better.
5. **Social mobility:** Computers and computer networks are playing an increasingly important role in people's learning, professional work and career development.

Factors that contribute to the digital divide:
There are several factors that contribute to the digital divide. The following are some of the factors which contribute to this divide:

1. **Gender:** It is stated that in some countries and organizations, females have less access to the internet than males.
2. **Physical disability:** Visually impaired and blind people are fully able to use a computer due to advances in technology such as Jaws, which is one of many screen readers.

3. **Physical access:** The main barriers under this point are lack of telecommunications infrastructure with sufficient reliable bandwidth for internet connections and cost, the ability to purchase and the necessary equipment. This results in a lack of access to technology (Hardware and software).
4. **Lack of ICT skills and support:** People in many disadvantaged groups do not have proper skills in new modern technology.
5. **Attitudinal factors:** This is derived from cultural and behavioural attitudes towards technology. Many people think that new technologies are harmful to the younger generation.

SOLUTIONS TO THE DIGITAL DIVIDE

1. Address the gender gap in Internet access
2. Improve the relevance of online content
3. Increase affordability
4. Increase digital literacy
5. Encourage the establishment of cyber clubs

4. OLD ECONOMY AND NEW ECONOMY

Objective: By the end of this class, a student should be able to define old and new economy
Duration: 40mins
Week: 4
Teaching Method/Strategy: Method
Entry Behaviour (*How you plan to start your Class*):

The old economy is the economy that depends on crude ways of doing things such as subsistence farming, trade by barter and others.

Features of the old economy

1. It is time-consuming
2. It is a labour-based economy
3. Means of communication is slow

Limitations of the old economy

1. Time-consuming
2. Costly
3. Tedious
4. It requires human effort all the time

The new economy is an economy that is built on an advanced way(modern) of doing things.

Features of the new economy

1. Digitized equipment
2. Time, space and distance is irrelevant
3. It is knowledge-based
4. It is faster with reduced error

Limitations of the New Economy

1. Poor technology
2. Poverty
3. Underutilization

Benefits of the new economy

1. Globalization: it has turned the whole world into a global village
2. Job creation: Several job opportunities have been created
3. Electronic entertainment: Music, Videos and education can be performed on a mobile device
4. Digital economy: Digital cameras, tapes and others have changed the economy of my country.

Difference between the old economy and the new economy

1. Inexpensive place to do business was the key.	**Being rich in talent and ideas is the key.**
2. Attracting companies was key	**Attracting educated people is key.**
3. A high-quality physical environment was a luxury, in the way of attracting cost-conscious businesses.	**Physical and cultural amenities are key in attracting knowledge workers.**
4. People followed jobs.	**Talented, well-educated people choose location first, then look for a job.**
5. Location mattered, especially relative to transportation and raw materials.	**Quality places with a high quality of life matter more.**

6. Success = fixed competitive advantage in some resource or skill. The labor force was skills dependent.	**Success = organizations and individuals with the ability to learn and adapt.**
7. Economic development was government-led.	**Partnerships with business, government and nonprofit sectors lead change.**
8. Industrial sector (manufacturing) focus.	**Sector diversity is desired, and clustering of related sectors is targeted.**
9. Fossil fuel dependent manufacturing.	**Communications dependent but energy smart.**
10. Dirty, ugly and a poor quality environment were common outcomes that did not prevent growth.	**Clean, green environment and proximity to open space and quality recreational opportunities are critical.**
11. Connection to global opportunities was not essential.	**Connection to emerging global opportunities is critical.**

5&6. DIGITAL LITERACY

Objective: By the end of this class, a student should be able to define and explain digital literacy
Duration: 40mins
Week:
Teaching Method/Strategy: Method
Entry Behaviour (*How you plan to start your Class*):

Digital literacy is the ability to effectively and critically navigate, evaluate and create information using a range of digital technology.

The ability to use digital technology, communication tools or networks to locate, evaluate, use and create information.

Digital literacy does not replace traditional forms of literacy. It builds upon the foundation of the traditional form of literacy. Digital literacy is the knowledge, skills, and behaviors used in a broad range of digital devices such as smartphones, tablets, laptops and desktop PCs, all of which are seen as networks rather than computing devices.

Digital literacy is the merging of two terms 'DIGITAL AND LITERACY'. However it is much more than a combination of the two terms "DIGITAL" Information is a symbol representation of data and "LITERACY" refers to the ability to read for knowledge, write coherently and think critically about the written word.

A digital literate person can be described as a digital citizen.

THE CHARACTERISTICS OF DIGITAL LITERACY

The characteristics of digital literacy is being aware and able to use the digital tools to identify, manage, access, evaluate, integrate, and analyze digital to understand multiple formats, represented by the computer and also create new knowledge.

BENEFITS OF DIGITAL LITERACY

1. It saves time: Multiple tasks can be done at the same time.

2. You learn faster: Study at your own pace, look up words, facts and figures.

3. It keeps you informed: You have access to current happenings and events all around the world.

4. It keeps you connected: Technology allows you to talk to anyone, anytime and anywhere.

5. Decision making: Digital literacy allows you to search, study, analyze and compare things.

BENEFITS OF DIGITAL LITERACY IN THE CLASSROOM

Easily modified for differentiating instruction

Effective way to teach vocabulary through intentional scaffolding

Provides multiple exposures to academic language

Allows for learning with real world context

Measures authentic assessment

Makes learning easily accessible

Assignment

1. Define Digital literacy and state its characteristics
2. Mention five benefits of digital literacy

7. MIDTERM BREAK

8&9. DATABASE

Objective: By the end of this class, a student should be able to state the uses of database
Duration: 40mins
Week: 5
Teaching Method/Strategy: Method
Entry Behaviour (*How you plan to start your Class*):

WHAT IS DATABASE?

A database is a collection of data or information organised in a manner that allows access, retrieval and uses of data. In one view, databases can be classified according to types of content: bibliographic, full-text, numeric, and images.

A database is an organized collection of data. It is the collection of schemes, tables, queries, reports, views and other objects. The data is typically organised to model aspects of reality in a way that supports processes requiring information, such as modelling the availability of rooms in hotels in a way that supports finding a hotel with vacancies.

CONCEPT OF DATABASE

The concept of database is simply described as the terminologies of database such as

FIELD
RECORDS
FILE
KEY

FORMS OF DATABASE

The following are the forms of database

FLAT FILE DATABASE: flat file database stores data in plain text file. Each line of the text file holds one record with a field separated by diameters such as command or tabs.

HIERARCHICAL DATABASE: in a hierarchical database records are linked in a tree-like structure and each record type has only one owner. E.g an order owned by only one customer

RELATIONAL DATABASE: This is a collection of data items organized as a set formally. Described table from which data can be accessed or reassembled in many different ways without having to recognize the database table. Each table contains one or more data categories in a column. Each role contains unique types of data for the categories defined by columns.

DATABASE MANAGEMENT SYSTEMS

A database management system (DBMS) is a computer program (or more typically, a suite of them) designed to manage a database, a large set of structured data, and run operations on the data requested by numerous users. Typical examples of DBMS use include accounting, human resources and customer support systems.

APPLICATION AREAS OF DATABASE MANAGEMENT SYSTEMS

1. Banking: For customer information, accounts, and loans, and banking transactions.

2. Airlines: For reservations and schedule information. Airlines were among the first to use databases in a geographically distributed manner – terminals situated around the world accessed the central database system through phone lines and other data networks.

3. Universities: For student information, course registrations, and grades.

4. Credit card transactions: For purchases on credit cards and generation of monthly statements.

5. Telecommunication: For keeping records of calls made, generating monthly bills, maintaining balances on prepaid calling cards, and storing information about the communication networks.

6. Finance: For storing information about holdings, sales, and purchases of financial instruments such as stocks and bonds.

7. Sales: For customer, product, and purchase information.

8. Manufacturing: For management of supply chain and for tracking production of items in factories, inventories of items in warehouses / stores, and orders for items.

9. Human resources: For information about employees, salaries, payroll taxes and benefits, and for generation of paychecks

EXAMPLES OF DATABASE APPLICATIONS

The following are examples of database applications:

- computerized library systems
- automated teller machines
- flight reservation systems
- computerized parts inventory systems

Assignment

Briefly explain the forms of Database

State five areas Database management systems can be applied

Give examples of Database applications

10. SPREADSHEET

Objective: By the end of this class, a student should be able to define and state the uses and practical application of spreadsheet.
Duration: 45mins
Week: 6
Teaching Method/Strategy: Method
Entry Behaviour (*How you plan to start your Class*):

A Spreadsheet application is a productivity software in which a computer user can manage personal and business finance with the help of a spreadsheet program.

A spreadsheet is an interactive computer application program for organization, analysis and storage of data in tabular form. Each cell of the array is a model–view–controller element that may contain either numeric or text data, or the results of formulas that automatically calculate and display a value based on the contents of other cells.

Spreadsheet users may adjust any stored value and observe the effects on calculated values. This makes the spreadsheet useful for "what-if" analysis since many cases can be rapidly investigated without manual recalculation. Modern spreadsheet software can have multiple interacting sheets, and can display data either as text and numerals, or in graphical form.

Productivity software is a software that assists people to gain more efficiency and effectiveness while performing daily activities. You can use a spreadsheet program to perform calculations, analyze data and present information.

Example of spreadsheet

LOTUS 1-2-3: This is a spreadsheet program from lotus software (now part of IBM) which has added integrated charting, plotting and database capabilities

STAT VIEWS: This is a spreadsheet program that can perform many analyses by template. It creates a presentation quality graph and table with the singles of the mouse.

MICROSOFT EXCEL: This is a powerful spreadsheet that allows you to organize data, complete calculations, make decisions, graph data and develop reports. It is also has basic features to help you create, edit and format worksheet

GRAPH IN EXCEL

A graph is a great way of representing your data. With graphs, data are easily understood and also they are easily edited for better data presentation. You can create dozens of different charts, from pie chart to bar chart and more.

DATA SENSE: This is the foundation of any chart in the worksheet that you use to create. Chart data is the content of a group of related cells, such as one row or column of data in your worksheet.

CUSTOMIZED CHARTS: Any chart created can be customized and can also change to the formatting of the chart, text, change the chart type and much more.

CHART TYPES

COLUMN
BAR
LINE GRAPH
PIE
SCATTER
AREA
DOUGHNUT E.T.C

USES OF SPREADSHEET

do calculations on data
visualize relationships with dynamic graphs
build and use analytical models
build and use numerical models

Spreadsheet programs also include software that creates graphs and charts from the data provided within the table. This is good for presentations, such as business meetings and research projects, and offers a fresh view of the data. These graphs and charts are customizable and can be specific or general depending on the settings and options chosen.

Assignment

List examples of spreadsheet
Mention four uses of spreadsheet