SUBJECT: BASIC TECHNOLOGY

TOPIC: UNDERSTANDING TECHNOLOGY

JSS1:BASIC TECHNOLOGY

LESSON OBJECTIVE

At the end of this lesson, students should be able to:

- **Define technology**
- **State types of technology**
- **State at least five professions related to technology**

- State at least five products of technology used at home, schools and in industries.
- Importance of technological literacy
- Who should study technology.

Definition

Technology can be defined as the application of scientific knowledge to solve human needs and comfort.

Technology deals with applying science to solve other people's problems. If, on the other hand we apply science to solve our personal problems, that is termed science, not technology.

TYPES OF TECHNOLOGY

1. Developed Technology: This is the type of technology that makes use of modern methods and application of science to solve problems. Examples include using airplane, cars, trains, etc for transportation.

2. Under-Developed Technology: This type of technology is the application of indigenous or traditional technology to provide for one's needs. Example includes using a horse-drawn cart, or trekking as a means of transportation, grinding stone for grinding pepper, Charcoal iron for ironing.

Difference Between Developed And Under-Developed Technology

s/n	Activities	Under-developed Technology	Developed Technology
1	Communication	Face-to-face communication, letter writing and the use of gong.	The use of e-mails, faxes, telephone,
2	Health Care	The use of herbal drinks not measured, hand feeling for testing patients, etc.	The use of digital and clinical thermometers and stethoscopes, use of accurately prescribed drugs, etc.
3	Security	The use of staff, bow and arrows, cutlass, knife or daggers, etc.	The use of guns, bullets, explosions, armored cars and CCTVs. The use of magnetic

s/n	Activities	Under-developed Technology	Developed Technology
4	Education	The use of slate and chalkboards, the use of slide and metric rules, etc.	marker boards, calculators, computers, projectors, etc. The use of bicycle,
5	Transportation	Trekking, the use of horse-drawn carts, donkeys, etc.	motorbikes, motor vehicles, trains, aircraft and ship The use of oven, kiln,
6	Food Preservation	The use of staff, bow and arrows, cutlass, knife or daggers, etc.	The use of guns, bullets, explosions, armored cars and CCTVs. The use of magnetic

s/n	Activities	Under-developed Technology	Developed Technology
7	Shelter	The use of thatch, palm frond, bamboo, wood, molded wall, etc.	Cement, gravels, steels, asbestos, iron roofing sheets, etc.
8	Food Production (Farming)	The use of cutlass, hoe and knives.	The use of tractor, combine harvester, etc.

TECHNOLOGY-RELATED PROFESSIONS

1. Electrical and Electronics Profession: This is the assembling, installation, testing, troubleshooting and repair of electrical wiring, fixtures, control devices and other related equipment in buildings and other structures.

2. Mechanical Technician Profession: This area covers refrigeration repairs, air conditioning, elevator installation, servicing and repair of other equipment.

3. Building Profession: This area is quite wide. It includes the following;

i. **Plumber:** They install, repair and repair pipes, fixtures and other plumbing equipment used for water distribution.

ii. **Bricklayer:** They lay blocks, bricks, concrete, stone, etc, to construct or repair walls, chimneys and ovens.

iii. **Painter and Decorators:** These do apply paints, wallpapers and other finishes to interior and exterior surfaces of buildings.

iv. **Roofer:** They install, repair or replace flat roofs or tiles on sloped roofs.

v. **Blueprint Interpreters:** They read and interpret blueprints or building plans.

vi. Tile setters: Tillers cover interior and exterior walls, floors and ceilings with ceramics, marble and terrazzo.

vii. Glazier: These are professionals who cut, fit and install glasses in residential, industrial or public buildings.

4. Woodwork Profession: This profession may include the following:

i. Carpenters: Carpenters make use of both hand and power operated tools associated with both rough and finished carpentry. The work may include construction, repair and general maintenance of building facilities.

ii. Luthier: These are woodworkers specialized in the construction of musical instruments.

iii. **Cabinet Makers:** These are woodworkers who can install hinges, catches, drawer pulls on completed projects and follow drawings to produce or repair items of wood.

iv. **Production Woodworkers:** These are professionals who set up and operate various woodworking machines to shape pieces from wood products.

v. **Furniture Finishers:** These persons normally finish woodwork by smoothening, filling, treating and finishing pieces.

5. Metalwork professionals: They include the following:

i. Welders: hey operate welding machines to join both ferrous and non-ferrous metals.

ii. Sheet metal workers: They fabricate, assemble, install and repair sheet metals.

iii. Machinists: These professionals make use of lathe machines to cut or grind metals to appropriate sizes.

iv. Tool and die makers: They make, repair and modify special tools, dies, jigs, fixtures and gauges using metals, alloys which requires precise dimensions.

v. Iron worker job: These are professionals that fabricate, erect, hoist, install, repair and service ironwork, precast concrete used in the construction of buildings, bridges, highways, etc.

Advantages of Technology

The application of technology has improved our lives immensely in all spheres of life, especially in our modern society. The following areas will make us appreciate such benefits:

1. Improved Standard of Living: Technology has improved our standard of living in the provision of farm implements, cars, home appliances, mobile phones and other gadgets too numerous to mention.

2. Economic Growth and Development: The application of technology has improved the quality of most roads in Nigeria, provision of electricity, bridges and machines for industries.

3. Improved Health Care Delivery: Technology has reduced death rate and increased life span since most diseases can now be diagnosed with modern equipment.

4. Industrialization: Technology has led to the building of big industries where most goods are produced in large quantities.

5. Improved Method of Production: With technology, farmers can produce food on commercial, large scale level using mechanized method.

Disadvantages of Technology

1. Pollution: With industrial toxic wastes and burning of petrochemicals, our water, air and land become polluted.

2. Unemployment: Technology has made it possible for machines to replace man in most industries, which has resulted in job loss and unemployment for most persons.

3. Quick Running Down of Natural Resources: With technology, deforestation takes place fast and our eco-system is weakened. We are always afraid that if the trend is not curbed, man run the risk of turning the earth into a desert of some sort in the future.

Products of Technology Found at Home

The following products of technology can be found in our homes:

1. Television

2. Radio

3. Microwave

4. Cell phone

5. Air-conditioner

6. Wall clock

7. Gas cooker

8. Electric fan

9. Kerosene stove

10. Refrigerator, etc.

Products of Technology Found in Schools

The following are some products of technology found in schools:

1. Drum set
2. Magnetic marker board
3. Air-conditioner
4. Ceiling fan
5. Bench vice

6. Calculator

7. Computers

8. Weighing balance

9. Piano

10. First aid box

11. Water dispenser, etc.

Products of Technology Found in Industries

The following products of technology can be seen in industries:

1. Fax machines

2. Industrial generators

3. Computers

4. Oven

5. Heat extractor

6. Air-conditioner

7. Telephones

8. Fork lift truck

9. Photocopy machine

10. Machines.

Why Technology Literacy Is Need

Students are expected to become designers, engineers, inventors, and technologists in the classroom. Literacy in technology gives man-power and skills to use technological devices efficiently and effectively. Examples are atm(automatic teller machines) card for withdrawing money, E-mail for communication etc.

However, technology is for every individual both males and females and also for the following establishments.

1. **Schools**
2. **Hospital**
3. **Banks**
4. **Government development and companies, etc.**

Role Models In Technology

Role models are good examples to others, especially children and the young ones that are learning. However, it is very important to stress that the primary purpose of a role model is to serve the society by building technology of locality through hard work.

Characteristics Of Role Models In Technology

1. Must be focused and intelligent, that is, eye on the big picture of technology always.
2. Must have drive and be visionary, ability to make things possible in technology world.
3. Must continue to seek new knowledge because knowledge aids technology.
4. Must be proactive and not reactive towards existing design work.
5. Must be able to work with others to get greater result.

Examples of Role Models

1. James watt: A Scottish that designed the first steam engine in 1963.
2. Stephen Son: A British that invented Railway engine in 1814.
3. Joseph Niepce: A french man that invented photography in 1826.

4. Joseph Henry: An American that first invented Electric motor in 1831.
5. Alexander Graham Bell: An American that invented telephone in 1876.
6. Cart Benz: A German that invented first motor car in 1885.

EVALUATION

- What is technology and state it types
- State at least three technology related profession
- State reason why everyone in society should be technologically literate
- Mention three role models in technology.

THANKS FOR WATCHING!!!