

SCIENTIFIC METHOD

ÌLÀNÀ ÈKỌ IMỌ-JINLE

Level of readership	Primary, Secondary, advanced
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by Fakinlede K

English	Yorùbá	English	Yorùbá
Science	Èkọ̀ imọ-jinlẹ̀	Theory	Àlàyé
Scientist	(ọjọgbọ̀n) Onímọ-jinlẹ̀	Hypothesis	Àròsọ
Matter	Àì-dá (Àì dá: not created: Ohun ti a kò dá)	Law	Ofi
Experiment	Àṣewò	Scientific Method	Ìlànà Ìmọ-jinlẹ̀
Investigation	Ìwádi	Hypothesis	Idábaa (dá àbá)
Research	Iṣewadi	Observation	Akíyèsí
Development	Iṣedagbasoke	Natural	Ayébáyé

<p>Science is a method of inquiry that sets up falsifiable hypothesis and tests them. No statement is scientific unless it is falsifiable.</p> <p>Science: A method of investigation that proposes testable statements (hypotheses) and then subjects the statements to rigorous testing. These statements must be falsifiable – capable of being proven false.</p> <p>Scientific Method:</p> <p>Scientific Method: May be either experimental or naturalistic, but always requires four steps:</p> <ol style="list-style-type: none"> 1. Facts are gathered 2. A problem is stated 3. A hypothesis is proposed (The hypotheses is basically an intelligent 	<p>Èkọ̀ imọ-jinlẹ̀ jẹ ilana bi a ti nṣewadi ohunkohun nipa iṣarọsọ (ṣe arosọ: hypothesize) ti o le mu ki ariyanjiyan waye. Eyi si fun wa laye lati le dan arosọ yi wo, ki a si yẹ ẹ wo fin-ni-fin-ni. Arosọ yi ni lati jẹ eyi ti a le ṣe agbeyewo rẹ lati lee ja irọ inuu rẹ. Niwongbati a ba ti sọ pe ọna imọ-jinlẹ̀ ni a ntọ, ko si arosọ kan ti a le ṣe ti a le sọ pe ko le ni ariyanjiyan ninu. Abakaba ti a ba da tabi ọrọkọrọ ti a ba sọ ti a ko ba le janiyan tabi ki a wa irọ ti o le wa nidii rẹ ki i ṣe ti ilana imọ-jinlẹ̀.</p> <p>Ìlànà Ìmọ-jinlẹ̀:</p> <p>Ìlànà Ìmọ-jinlẹ̀ le waye nipa ti ọna iṣaṣewo (ṣe aṣewo: experiment) tabi ọna iṣakiiyesi (observation) oun-ayebaye (nature), ṣugbọn ọna merin yi ni a nilati tọ:</p> <ol style="list-style-type: none"> 1. A nilati ko ẹri jọ
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<p>guess, but it must be falsifiable)</p> <p>4. The hypothesis is tested (This step requires rigour and objectivity)</p> <p>Theory: A hypothesis repeatedly tested and never falsified becomes a theory</p> <p>Experiment: In an experiment, the scientist controls as many variables as possible, allowing only one to vary at a time. If possible, comparison is made between an experimental group and a control group, which differ only on one factor being tested. Experimental methods are commonly used in physics chemistry, physiology, and genetics.</p> <p>Naturalistic Observations: Used for phenomena that cannot be experimentally controlled. Astronomers or paleontologists cannot experiment with distant stars or extinct dinosaurs, and social scientists cannot practically or ethically manipulate society. They are restricted to those experiments that nature performs for them, and must wait patiently for the right conditions to occur. Ecologists, biogeographers, and comparative anatomists often use naturalistic methods</p>	<ol style="list-style-type: none"> 2. A nilati sọ ohun iruniloju ti a ri ninu ẹri ti a ko jọ yi 3. A nilati ọ́arọ́sọ́ (hypothesize) bi a ẹ́ le wa ọ́na ati ri ojutuu ohun iruniloju yi 4. A si ni lati bẹ́rẹ́ si ẹ́ ariyanjiyan lori arosọ́ yi bóya o tọ́na tabi ko ri bẹ́. (Ilana eleyi gba ki a ẹ́ ayẹ́wọ́ fin-ni-fin-ni ti ko ni kayefi kankan) <p>Àlàyé (Theory): Arosọ́ ti a ba ti ẹ́wadii rẹ́ fin-ni-fin-ni fun ọ́pọ́lọ́pọ́ igba ti a si ri i pe a ko le ri irọ́ kan ninu rẹ́ ni a npe ni Àlàyé (Theory)</p> <p>Àşewò (Experiment): Bi a ba sọ wipe a nşẹ aşewo, a nilati ri i wipe a mu awọ́n okunfa gbogbo, yatọ́ si eyi ti a fẹ́ gbe yẹwo, wa si idaduro niwọ́ngbati a ba nşẹ aşewo yi. Bi o ba ẹ́e ẹ́, a lee ẹ́ akawe okunfa ti a nşẹ ayẹ́wọ́ rẹ́ (experimental group) pẹ́lu ẹ́ka ifişàkàwé (fi ẹ́ ẹ́ àkàwé: control group) ti a mọ́ pe iyatọ́ laarin awọ́n mejeeji ko ju okunfa kan ti a nşẹ ayewo rẹ́. Iru awọ́n ilana Aşewo yi li a nlo fun ẹ́kọ́ kemistri, ẹ́kọ́ fisiiksi, abbl.</p> <p>Işakiyesi oun-ayébayé (naturalistic observation): A nlo ilana yi lati ẹ́wadii awọ́n nnkan ti a ko le fi ilana aşewo wadi rẹ́ (experimentally observed). Awọ́n akẹ́kọ́ edumare (astronomers) tabi awọ́n akẹ́kọ́ ẹ́da aye-atijọ́ (paleontologists) ko le ẹ́ aşewo lori awọ́n irawọ́ to jin rere tabi awọ́n ẹ́ranko to ti parẹ́ (extinct dinosaurs), pẹ́lupẹ́lu, ko si bi awọ́n akẹ́kọ́ awujọ́-ẹ́da (social scientists) ẹ́ le mu ki awujọ́-ẹ́da ẹ́ bi wọ́n ti fẹ́. Nitorina, nwọ́n ko le da ẹ́ aşewo (experiment) ju eyi ti ayanmọ́ (nature) nşẹ fun wọ́n. Nwọ́n si nilati mu suuru de igba ti àşìkò ba fun wọ́n laye lati ẹ́ ayẹ́wọ́ awọ́n nkan ti o ẹ́ wọ́n ni kayefi. Awọ́n akẹ́kọ́ ọ́jò-ẹ́dà (ecologists), akẹ́kọ́ ibùgbẹ́-ẹ́dà, ati akẹ́kọ́ ẹ́yà-ara ni nwọ́n nlo iru ilàná işakiyesi yi.</p>
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