

Clearing it up

Change the spaces with the appropriate form

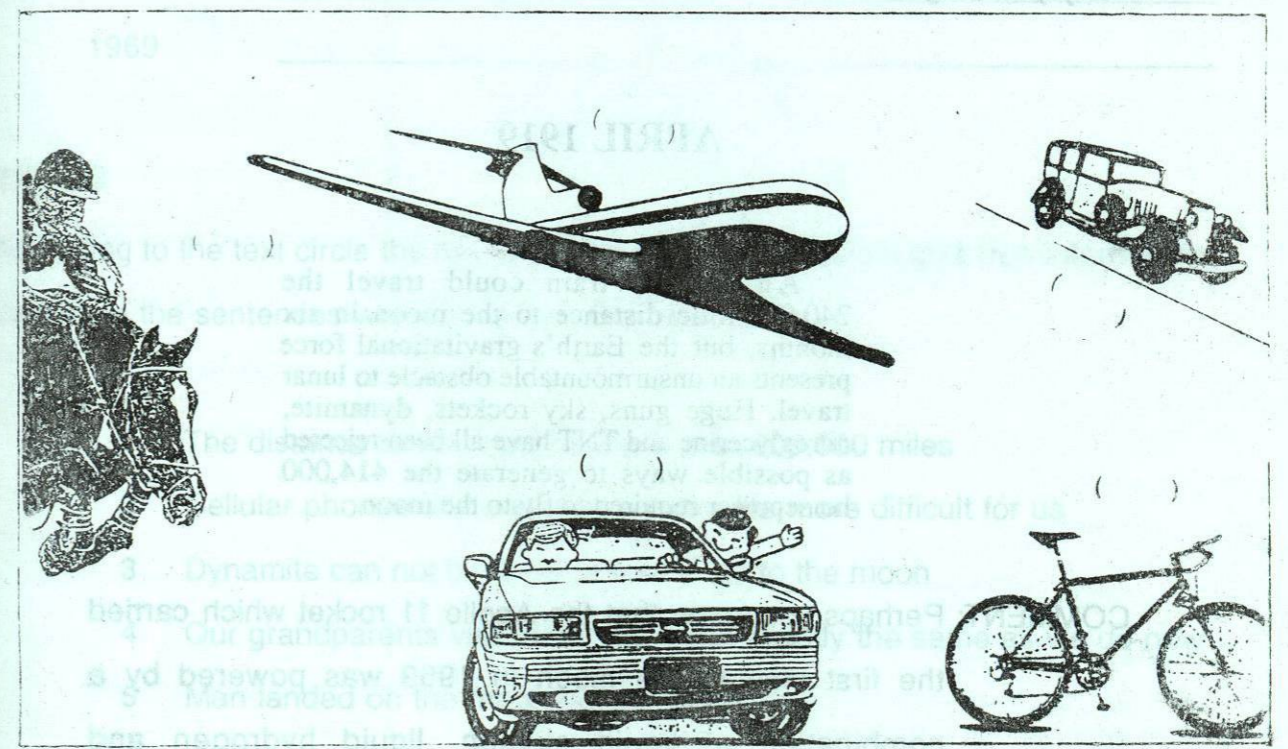


Frida Kahlo

2 Space Technology

Time to read!⁽¹⁾

We have become used to all types of modern transport which make life easier for us such as planes, computers, satellite dishes. But, how did our grand parents travel? Let's look at some news published many years ago.



- II Follow these instructions:
 - a) With a partner, make a list of all the modes of transport that you know
 - b) Now decide which one is the fastest, the slowest, the most expensive and the cheapest

Read

WHAT WAS THE WORLD LIKE?

We have become used to all types of modern devices which make life easier for us such as cellular phones, computers, satellite dishes. But, how did our grand parents visualize their world? Let's look at some news published many years ago:

APRIL 1919

An express train could travel the 240,000-mile distance to the moon in six months, but the Earth's gravitational force presents an unsurmountable obstacle to lunar travel. Huge guns, sky rockets, dynamite, nitroglycerine and TNT have all been rejected as possible ways to generate the 414,000 horsepower required to fly to the moon.

COMMENT: Perhaps you know that the Apollo 11 rocket which carried the first men to the moon in 1969 was powered by a combination of liquid oxygen, liquid hydrogen and kerosene. In modern times, you and all your friends of the same age know that:

Jupiter has been photographed.

The pictures have been sent back to Earth.

They have been studied exhaustively.

Task 1

What do these numbers refer to?

Write the sentences from the text on the lines.

- 240,000 _____
- 414,000 _____
- 1969 _____

Task 2

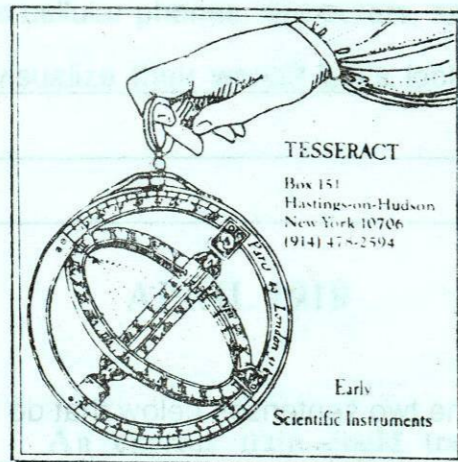
According to the text circle the two sentences below that do not give true information.

Underline the sentences which give true information.

- 1 The distance to the moon is more than 200,000 miles
- 2 Cellular phones and computers make life more difficult for us
- 3 Dynamite can not be used as fuel to go to the moon
- 4 Our grandparents visualized the world exactly the same as we do now
- 5 Man landed on the moon before 1970

Working in pairs find out about the first landing on the moon:

- a Date
- b Names of astronauts who were involved in the mission
- c Famous words expressed upon landing
- d Name of the President of the United States in those days



Clearing it up

Task 1

Let us analyze this structure. Tick the right answer:

Jupiter has been photographed

Who or what took the photos?

- The Mariner space probe
- Not mentioned
- A photo-telescope
- An astronaut

Why do you think it was not mentioned?

- Because nobody knows who did it.
- Because it is not important in this case.

What do we call this kind of grammar structure?

- Active voice.
- Passive voice.

Task 2

Read the text "April 1919" on page 30. Can you find and underline one example of Passive Voice?

Can you think of some other examples? for instance:

Cellular phones have been sold at lower prices.

PRESENT PERFECT PASSIVE VOICE

(You have already practiced the present perfect tense in the previous unit)

Now look:

SUBJECT	HAVE BEEN	PAST PARTICIPLE
JUPITER	HAS BEEN	PHOTOGRAPHED
THE PICTURES	HAVE BEEN	SENT BACK TO EARTH
THEY	HAVE BEEN	STUDIED EXHAUSTIVELY

Task 3

Fill in the boxes with the appropriate words:

HAVE-HAS-BEEN-USED-ORGANIZED

Rocks	have		brought	from the moon
These materials		been	analyzed	in modern labs.
Commercial tours	have	been		to the moon
Dynamite		been	rejected	as fuel
New technology	has	been		recently

Task 4

Put the words in the correct order to make sentences. Think about the meaning of the statements.

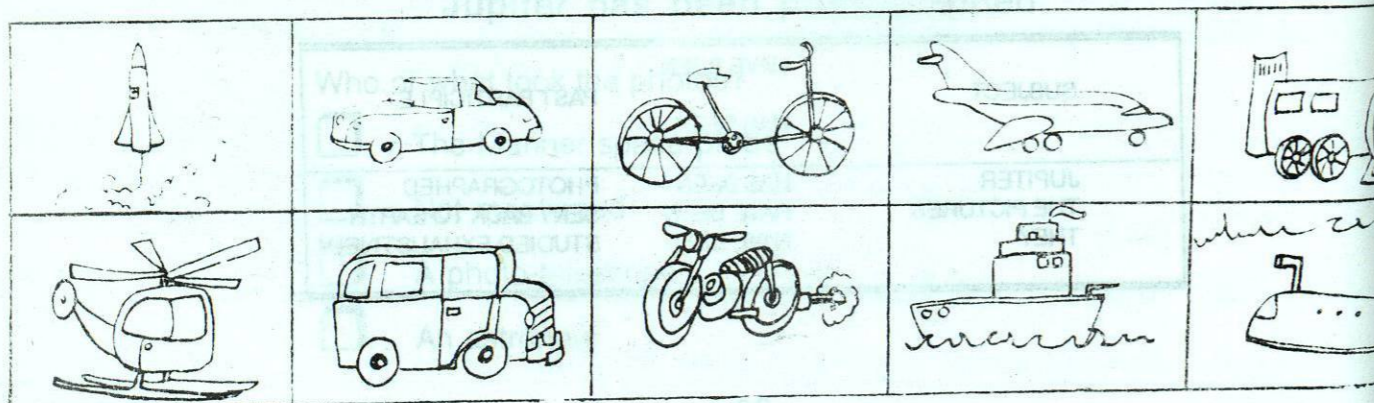
several	has	visited	been	the moon	times
scientific formulas	tested	been	on	it	have
taken many pictures	the moon	been	on	have	
been	have	to Earth	brought	a lot of	rocks
exhaustively	have	analyzed	they	been	

Words at work

Task 1a

Can you label these pictures using this list of words?

Helicopter-rocket-plane- ship-bicycle-submarine-train-car-truck-motorcycle.



Task 5b

Can you name at least 4 means of transportation and where they can be used?

Example:

Camels-deserts

Camels have been used to cross deserts.

_____	_____
_____	_____
_____	_____

Words at work

Task 1

PREFIX UN-

It is added to verbs to indicate a reversal of the action of the verb, as in "unconnected," "unbutton," etc.

SUFFIX -ABLE

It implies power, ability or will to do something, as in "preventable": capable of being prevented.

Match the vocabulary with its corresponding definition.

- | | | | |
|----------------|-----|----|---|
| UNSURMOUNTABLE | () | 1 | Not capable of being prevented |
| UNJUSTIFIABLE | () | 2 | Not capable of bargaining or discussing with a view to reaching agreement |
| UNMITIGABLE | () | 3 | Not capable of systematizing or providing with an organic structure |
| UNNEGOTIABLE | () | 4 | Not capable of showing to be just, right or in accord with reason |
| UNPARDONABLE | () | 5 | Not capable of bringing into harmony |
| UNPREDICTABLE | () | 6 | Not capable of making mild, soft, less severe or less rigorous |
| UNPREVENTABLE | () | 7 | Not capable of being forgiven |
| UNRECEIVABLE | () | 8 | Not suitable for acceptance. That cannot be received |
| UNORGANIZABLE | () | 9 | Not capable of being restored or renewed |
| UNREPAIRABLE | () | 10 | Not capable of being known beforehand |
| UNRECONCILABLE | () | 11 | Not capable of surpassing or going beyond |

Skill: Dictionary use

Answer the following questions by using the dictionary page:

- 1 What are the guide words for this page?
- 2 How do you know whether the word NITROGLYCERINE is a verb, a noun, an adverb or another category?
- 3 How many syllables does the word NITROCELLULOSE have? How can the dictionary help you to decide?
- 4 Where does the word NITROGEN have the stress?
- 5 How many meanings does the word NIZAM have?
- 6 Which of these meanings is used in the following sentence?

"The Kurdistan Area has been surrounded by Nizams from Ankara"

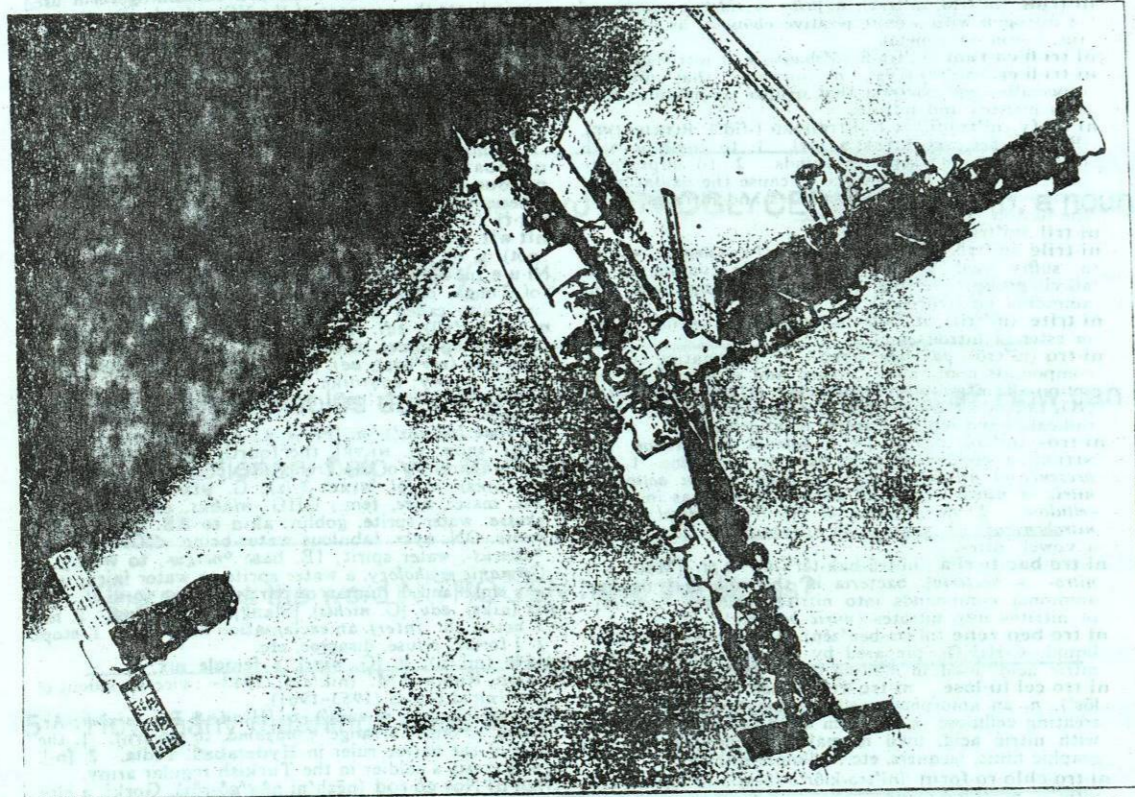
nitric bacteria

nob

nitric acid on nitrates and by the oxidation of ammonia, also called *aqua fortis*.
nitric bacteria, see **nitrobacteria**.
nitric oxide, a colorless gas, NO, prepared by the action of nitric acid on copper, etc.
nitride (ni'trid, ni'trid), *n.* [*nitr-* + *-ide*], a compound of nitrogen with a more positive element, as phosphorus, boron, or a metal.
nitri-fication (ni'tra-fi-ka'shan), *n.* a nitrifying.
nitri-fier (ni'tra-fi'er), *n.* anything that nitrifies; especially, soil bacteria that oxidize ammonium salts into nitrates and nitrates.
nitri-fy (ni'tra-fi'), *v.t.* [NITRIFIED (-fid'), NITRIFYING]. [*Fr. nitrifier*, see **NITER** & **-FY**]. 1. to combine with nitrogen or nitrogen compounds. 2. to impregnate (soil, etc.) with nitrates. 3. to cause the oxidation of (ammonium salts, etc.) to nitrates and nitrates, as by the action of soil bacteria, etc.
nit-rite (ni'trit), *n.* [*nitr-* + *-ite*; cf. *Fr. nitrite*], a salt or ester of nitrous acid.
nit-ro (ni'trō), *adj.* [see **NITRO-**], 1. designating certain compounds containing nitrogen and produced by the action of nitric or nitrous acid. 2. designating the NO₂ radical or compounds in which one or more NO₂ radicals have replaced atoms of hydrogen.
nit-ro- (ni'trō, ni'tra), [*L. nitrum*; *Gr. nitron*; see **NITER**], a combining form used to indicate: 1. the presence of nitrogen compounds made by the action of nitric or nitrous acid and other substances, as in **nitro-cellulose**. 2. the presence of the NO₂ radical, as in **nitrobenzene**. 3. *nitr.* as in **nitrobacteria**. Also, before a vowel, *nitr-*.
nit-ro-bac-te-ri-a (ni'trō-bak-tēr'i-ā), *n.pl.* [*Mod. L.; nitro-* + *bacteria*], bacteria in the soil that oxidize ammonia compounds into nitrites (**nitrous bacteria**), or nitrites into nitrates (**nitric bacteria**).
nit-ro-ben-zene (ni'tra-ben'zēn), *n.* a poisonous yellow liquid, C₆H₅NO₂, prepared by treating benzene with nitric acid, used in making dyes, perfumes, etc.
nit-ro-cel-lu-lose, **ni-tro-cel-lu-lose** (ni'tra-sel'yoo-lōs'), *n.* an amorphous yellow substance obtained by treating cellulose in the form of cotton or wood fiber with nitric acid, used in making explosives, photographic films, lacquers, etc.; cellulose nitrate.
ni-tro-chlo-ro-form (ni'tra-klōr'ō-fōrm', ni'tra-klōr'ō-fōrm'), *n.* chloropicrin.
ni-tro-gen (ni'tra-jen), *n.* [*Fr. nitrogène*, see **NITRO-** & **-GEN**], a colorless, tasteless, odorless gaseous chemical element forming nearly four fifths of the atmosphere; it is a component of all living things; symbol, N; at. wt., 14.008; at. no., 7.
nitrogen cycle, the cycle of processes by which atmospheric nitrogen is converted by natural agencies into compounds used by plants and animals in the formation of proteins, and is eventually returned to its original state.
nitrogen fixation, 1. the conversion of atmospheric nitrogen into nitrates by soil bacteria (**nitrogen fixers**), found in the nodules of certain legumes. 2. the conversion of free nitrogen into nitrogenous compounds of commercial value by any of various processes.
ni-tro-gen-fix-ing (ni'tra-jen-fik'sin), *adj.* capable of nitrogen fixation; said of nitrobacteria, etc.
ni-tro-gen-ize (ni'troj'ə-niz', ni'tra-jen-iz'), *v.t.* [NITROGENIZED (-nizd', -izd'), NITROGENIZING], to combine or impregnate with nitrogen or its compounds.
ni-tro-gen-ous (ni'troj'ə-nəs), *adj.* of or containing nitrogen or nitrogen compounds.
ni-tro-glyc-er-in, **ni-tro-glyc-er-ine** (ni'tra-glis'ēr-in), *n.* a thick, pale-yellow, explosive oil, C₃H₅(NO₃)₃, prepared by treating glycerin with a mixture of nitric and sulfuric acids; glyceryl trinitrate; it is used in medicine and as an ingredient of dynamite.
ni-tro-hy-dro-chlor-ic acid (ni'tra-hi'dra-klōr'ik, ni'tra-hi'dra-klōr'ik), a mixture of one part of concentrated nitric acid with three parts of concentrated hydrochloric acid, used as a solvent for gold and platinum; also called *aqua regia*.

derived from amines and containing the divalent =N-NO radical.
ni-tro-so (ni-trō'sō), *adj.* [see **NITROSO-**], designating or containing the NO radical, or group.
ni-tro-so- (ni-trō'sō, ni-trō'sa), [*L. nitrosus*], a combining form used to indicate the presence of the NO radical.
ni-tro-syl (ni-trō'sil, ni'tro-sēl', ni'tra-sil'), *n.* [*L. nitroso-* + *-yl*], the nitroso radical, or group.
ni-trous (ni'tras), *adj.* [*L. nitrosus*; see **NITRO-** & **-OUS**]. 1. of, like, or containing niter. 2. designating or of compounds in which nitrogen has a lower valence than in the corresponding nitric compounds.
nitrous acid, an acid, HNO₂, known only in solution; it forms salts called **nitrites**.
nitrous bacteria, see **nitrobacteria**.
nitrous oxide, a colorless gas, N₂O, used as an anesthetic; also called **laughing gas**.
nit-ty (ni'ti), *adj.* full of nits.
nit-wit (ni'twit'), *n.* [*nit* (< *G. dial. for G. nicht*, not) or *nit* (louse) + *wit*], a stupid person.
Ni-ue (nē-ōō'ā), *n.* an island in the South Pacific, east of Tonga, belonging to New Zealand; area, 100 sq. mi.; also called **Savage Island**.
ni-val (ni'v'l), *adj.* [*L. nivalis* < *nix*, *nivis*, snow], of, or growing under, snow.
niv-e-ous (niv'i-as), *adj.* [*L. niveus*, snowy < *nix*, *nivis*, snow], snowy; snowlike.
Ni-ver-nais (nē'vār'ne'), *n.* a former province of central France.
NI-vōse (nē'vōz'), *n.* [*Fr. < L. nivosus*, snowy < *nix*, *nivis*, snow; cf. **NEVÉ**], the fourth month (December 21-January 19) of the French Revolutionary Calendar.
nix (niks), *n.* [*pl. NIXES* (-iz); *G. NIXE* (nik'sō)], [*G. nix*, masc., *nixe*, fem.]; OHG. *nixhus*, sea beast, *nichussa*, water sprite, goblin; akin to AS. *nīcor*, water sprite, ON. *nykr*, fabulous water-being < *Gmc. *nikwus-*, water spirit; IE. base **neigw-*, to wash; in *Germanic mythology*, a water sprite or water fairy, usually small and of human or partly human form.
nix (niks), *adv.* [*G. nicht*], [*Slang*]. 1. nothing. 2. no. 3. not at all. *interj.* an exclamation meaning: 1. stop! 2. I forbid, refuse, disagree, etc.
nix-ie (nik'si), *n.* [*G. nixe*], a female nix.
Nix-on, Richard M. (nik's'n), 1913-; vice-president of the United States (1953-1961).
Ni-zam (ni-zām', ni-zam'), *n.* [*Hind. & Per. nizām*; *Ar. nizām*, to order, arrange < *nāzama*, to govern], 1. the title of the native ruler in Hyderabad, India. 2. [*pl. NIZAM*], a soldier in the Turkish regular army.
Nizh-ni Nov-go-rod (nēzh'ni nōv'gō-rōt), Gorki, a city in the central European U.S.S.R.; the former name, N.J., New Jersey.
Njord (nyōrd), *n.* Njorth.
Njorth (nyōrth), *n.* [*ON. Njörthr*], in *Norse mythology*, a Vanir, the father of Frey and Freya.
NKVD, N.K.V.D., [first letters of Russ. *Narodnii Kommissariat Vnutrennikh Del*, people's commissariat of internal affairs], the MVD (from 1934 to 1946).
NL, N.L., New Latin (Modern Latin).
n.l., 1. in *printing*, new line. 2. *non licet*, [L.], it is not lawful. 3. *non liquet*, [L.], it is not clear.
N. Lat., **N. lat.**, north latitude.
NLRB, N.L.R.B., National Labor Relations Board.
N.M., New Mexico; also N. Mex.
N.M.U., **N.M.U.**, National Maritime Union.
NNE, N.N.E., **n.n.e.**, north-northeast.
NNW, N.N.W., **n.n.w.**, north-northwest.
no (nō), *adv.* [*ME.*; AS. *na* < *ne* a, lit., not ever (see **AYE**, **ever**)]. 1. [*Scot. or Rare*], not; *as*, whether or no. 2. not in any degree; not at all; *as*, he is no worse. 3. *nay*; not so; the opposite of *yes*, used to deny, refuse, or disagree. *adj.* [*ME.*, form of *non*, *none* (cf. **NONE**) used only before a consonant; AS. *nan* < *ne* a, lit., not one (cf. **ONE**)], not any; not a; not one; *as*, he is no fool. *n.* [*pl. NOES* (nōz)], 1. an utterance of *no*; refusal or denial. 2. a negative vote or a person voting in the negative.
no (nō), *n.* [*pl. NO*], [*Japan. nō*], a type of Japanese play with a highly stylized plot, almost no stage accessories, elaborate costuming, and much singing and dancing; also *no-gaku*, *noh*.
No., in *chemistry*, nobelium.
No., 1. Noah. 2. north. 3. northern.

Time to read! (2)



In its current configuration, the Russian MIR Space Station is the largest object orbiting the Earth.

Answer the following questions and discuss them with a partner:

Would you like to take a trip to another planet?

Why?

Why not?

What kind of problems could you face?

Talk in your team about these ideas.

Be prepared to report back to the class.

Do you think commercial trips to the moon will be possible Yes No

When do you think the first commercial launch to the moon could take place?

Answer _____

The title of the following text is "The Moon: Luna Landers." Before you read it, work in groups and note down 4 points you think will be included in this article.
