

14. The /ed/ in all these verbs is pronounced as /d/ except in:

- a- believed b- ordered c- called d- ended

15. The /ed/ in all these verbs is pronounced as /id/ except in:

- a- ended b- wanted c- educated d- washed

Unit 3-Student's Book-page 32-33 **Emphatic Stress**

التشديد التوكيدي

When we want to emphasize certain information in a sentence, we **stress** that part.

عندما نريد التأكيد على معلومات معينة في جملة ، فإننا نشدد على ذلك الجزء.

When we want to emphasize certain information in a sentence, we that part.

- a-stress b- unstress c- repeat d-take away

(Note: We usually stress the key words in sentences such as: nouns, pronouns, verbs, adjectives and adverbs.

ملاحظة: عادة ما نؤكد الكلمات الرئيسية في الجمل مثل: الأسماء والضمائر والأفعال والصفات والظروف.

Listen to this sentence. The stress can go on three different parts.

استمع إلى هذه الجملة. يمكن أن يستمر التشديد على ثلاثة أجزاء مختلفة.

We need to be at the *meeting* at *four* o'clock.

يجب أن نكون في الاجتماع في الساعة الرابعة.

1-We need to be at the meeting at four o'clock.
The meeting is at four, not five.
2- We need to be at the meeting at four o'clock.
You and I have to be there at four, but the others don't.
3-We need to be at the meeting at four o'clock.
We need to be at the meeting, so we must arrive at the building earlier.
4-We need to be at the meeting at four o'clock.
The meeting is at four not the match.

1. The meeting is at four, not five. The stress is on:

- a- meeting b- the c- four d- is

2. We have to be there at four, but the others don't. The stress is on:

- a- We b- there c- four d- don't

3. We need to be at the meeting, so we must arrive at the building earlier. The stress is on:

- a- We b- meeting c- building d- need

4. The meeting is at four not the match. The stress is on:

- a- meeting b- four c- not d- match

Listen to the following sentences. Mark the main stress, then choose the correct ending of each sentence.

استمع إلى الجمل التالية. ضع علامة على الشدة الأساسية ثم اختر النهاية الصحيحة لكل جملة.

1 I live at number 11 **Johnson Street**,.....

- a ... not my brother. b ... not number 12. c ... not Oxford Street.

2 **Alison** used to be a singer,.....

- a ... not a piano player. b ... but she isn't now. c ... not Mike.

3 The news is on Channel 1 **now**,.....

- a ... not later. b ... not the film. c ... not Channel 3.

1-I live at number 11 **Johnson Street**:

- a- Not my brother b- not Nader c- not number12 d- not Oxford Street

2-**Brian** used to be a singer,

- a- Not Mike b- not piano player c- but he is not now d- not a teacher

3-The news is on Channel 1 **now**,

- a-not later b- not the film c- not the match d- not Channel3

Unit 3-Activity Bok-page 26

Listen to these sentences. Place stress according to the meaning.

- No, Frank bought a **car** yesterday.
 - Did John buy a car yesterday?
 - Did Frank buy a motorbike yesterday?
 - Did Frank buy a car last week?
 - Did Frank sell a car yesterday?
- No, **David** taught at London University for three years.
 - Did Liam teach at London University for three years?
 - Did David teach at Oxford University for three years?
 - Did David teach at London University for ten years?
 - Did David live at London University for three years?

Match the correct sentence to its implied meaning according to the words in italics.

طابق الجملة الصحيحة بمعناها الضمني وفقاً للكلمات المكتوبة بخط مائل.

- "**Peter** told John that a deal like this wasn't allowed." "أخبر جون بيتر أن صفقة مثل هذه غير مسموح بها"
It clarifies that **Peter**, as opposed to someone else, told John not to make the deal. يوضح أن بيتر، على خلاف أي شخص آخر، أخبر جون ألا يعقد الصفقة.
 - "Peter told **John** that a deal like this wasn't allowed." "أخبر بيتر جون أن صفقة كهذه غير مسموح بها!"
It clarifies that John was told not to make the deal, not someone else. وتوضح أن جون طلب منه عدم عقد الصفقة، وليس شخص آخر.
 - "Peter told John that **a deal like this** wasn't allowed." "بيتر أخبر جون أن صفقة مثل هذه غير مسموح بها"
It emphasizes the fact that John had been told **not to make the deal** but did so anyway.
 - "Peter told John that a deal like this **wasn't allowed**." "أخبر بيتر جون أن صفقة مثل هذه لم تكن مسموحة"
It emphasizes that Peter said the deal **was not allowed**, indicating that John thought or said the opposite.
-
- "**Peter** told John that a deal like this wasn't allowed."
It clarifies that Peter, as opposed to someone else, told John not to make the deal.
It clarifies that John was told not to make the deal, not someone else.
It emphasizes the fact that John had been told not to make the deal but did so anyway.
It emphasizes that Peter said the deal was not allowed, indicating that John thought or said the opposite.
 - "Peter told **John** that a deal like this wasn't allowed."
It clarifies that Peter, as opposed to someone else, told John not to make the deal.
It clarifies that John was told not to make the deal, not someone else.
It emphasizes the fact that John had been told not to make the deal but did so anyway.
It emphasizes that Peter said the deal was not allowed, indicating that John thought or said the opposite.
 - "Peter told John that **a deal like this** wasn't allowed."
It clarifies that Peter, as opposed to someone else, told John not to make the deal.
It clarifies that John was told not to make the deal, not someone else.
It emphasizes the fact that John had been told not to make the deal but did so anyway.
It emphasizes that Peter said the deal was not allowed, indicating that John thought or said the opposite.
 - "Peter told John that a deal like this **wasn't allowed**."
It clarifies that Peter, as opposed to someone else, told John not to make the deal.
It clarifies that John was told not to make the deal, not someone else.
It emphasizes the fact that John had been told not to make the deal but did so anyway.
It emphasizes that Peter said the deal was not allowed, indicating that John thought or said the opposite.

Is the first sound in each word voiced or voiceless?

هل الحرف الأخير في كل كلمة هو صوت جهور أم مهموس؟

Choose the word that ends with a voiced sound:

- 1- a-path b-answer c-laugh d-mistake
- 2- a-miss b-ash c-sick d-sing
- 3- a-fish b-black c-keep d-show
- 4- a-run b-church c-speak d-deep

Choose the word that ends with a voiceless sound:

- 5- a-young b-answer c-bath d-need
- 6- a-live b-sound c-pass d-judge
- 7- a-draw b-sleep c-ring d-globe
- 8- a-tax b-fun c-calm d-brand

Choose the word that starts with a voiced sound:

- 9- a-kite b-van c-fan d-take
- 10- a-pack b-fish c-dream d-time
- 11- a-shark b-thin c-then d-threat
- 12- a-bed b-car c-school d-pick

1-answer 2-sing 3-show 4-run 5-bath 6-pass 7-sleep 8-tax 9-van 10-dream 11-then 12-bed

1. Sounds that make our vocal cords vibrate when they are produced are called:
 - a- voiced consonants
 - b- voiceless consonants
 - c- both b and a
 - d- stress
2. Sounds that don't make our vocal cords vibrate when they are produced are called:
 - a- voiced consonants
 - b- voiceless consonants
 - c- both b and a
 - d- homographs
3. All vowels are
 - a- voiced
 - b- voiceless
 - c- both a and b
 - d- stress
4. church:
 - a- voiced sound
 - b- voiceless sound
5. gentle:
 - a- voiced sound
 - b- voiceless sound
6. sister:
 - a- voiced sound
 - b- voiceless sound
7. zoo:
 - a- voiced sound
 - b- voiceless sound
8. January:
 - a- voiced sound
 - b- voiceless sound
9. path:
 - a- voiced sound
 - b- voiceless sound
10. young:
 - a- voiced sound
 - b- voiceless sound
11. laugh:
 - a- voiced sound
 - b- voiceless sound

Unit 6-Word Stress with Two Syllables

التشديد على الكلمة ذات المقطعين

There are many two-syllable words in English whose meaning and class change with a change in stress.

If we stress *the first syllable*, it is usually a *noun* or an *adjective*. PRESENT PRESENT (*noun or adjective*)

But if we stress *the second syllable*, it usually becomes a *verb*. PRESENT preSENT (*verb*)

Word Stress with Two Syllables

1. We need to increase **inCREASE** our sales figures. (verb) نحن بحاجة إلى زيادة أرقام مبيعاتنا.
2. He's showed an **increased** interest in the project. (adjective) لقد أظهر اهتماماً متزايداً بالمشروع.
3. They **import** their goods from the UK. (verb) يستوردون بضائعهم من المملكة المتحدة.
4. This is a cheap **import**. (noun) هذه سلعة مستوردة رخيصة.
5. The **present** city was founded in 944. (adj) تأسست المدينة الحالية عام ٩٤٤.
6. He's going to **present** his friend, Maher. (verb) سيقدم صديقه ماهر.
7. This is one of the **rejects** from the factory. (noun) هذا هو أحد المنبوذين من المصنع.
8. He **rejected** her advice. (verb) رفض نصيحتها.

1-If we stress the first syllable, it is usually....

- a- a noun b- an adjective c- a verb d- both a and b

2-If we stress the second syllable, it is usually....

- a- a noun b- an adjective c- a verb d- both b and c

3-We need to **inCREASE** our sales figures. The word (increase) is a/an...

- a- verb b- noun c- adjective d- both b and c

4-They **import** their goods from the UK. The word (import) has stress on...

- a- the first syllable b- the second syllable c- no syllable d- both a and b

5-This is one of the **rejects** from the factory. The word (rejects) has stress on....

- a- the first syllable b- the second syllable c- no syllable d- both a and b

6-He **rejected** her advice. The word (rejects) has stress on :

- a- the first syllable b- the second syllable c- no syllable d- both a and b

7-The **present** city was founded in 944. The word (present) has stress on :

- a- the first syllable b- the second syllable c- no syllable d- both a and b

8-He's showed an **increased** interest in the project. The word (increased) has stress on :

- a- the first syllable b- the second syllable c- no syllable d- both a and b

9-This is a cheap **import**. The word (import) has stress on :

- a- the first syllable b- the second syllable c- no syllable d- both a and b

10-He is going to **present** his friend. The word (present) has stress on :

- a- the first syllable b- the second syllable c- no syllable d- both a and b

Unit 7- Silent Letters

الأحرف الساكنة

A silent or mute letter in a word is a letter that is written but not pronounced.

logically	climb	muscle	Wednesday	make
halfpenny	alight	exhaust	business	knife
mnemonic	autumn	sword	castle	colleague
knee	ghost	scissors	whale	bomb
wrist	guitar	tissue	salmon	calm

Listen and put the following words in the correct balloons:

Silent «k»	Silent «h»	Silent «b»	Silent «l»	Silent «w»
knot	rhyme	comb	should	wrong
knight	honest	thumb	calm	answer
knock	where	crumb	yolk	whole
know	choir	doubt	talk	write

Listen and type the missing silent letter.

- In my country, most rain falls in *autumn* and winter.
- We visited the church and the *castle* when we went to the ancient city.
- Who wants to be a millionaire* is a general *knowledge* quiz.
- Excuse me! Your answer isn't right, it's *wrong*.

1. The sound /k/ is silent in all of the following except:

- a- knot b- knight c- know d- king

2. The sound /h/ is silent in all of the following except:

- a- rhyme b- hand c- honest d- where

3. The sound /b/ is silent in all of the following except:

- a- comb b- thumb c- crumb d- robot

4. The sound /l/ is silent in all of the following except:

- a- calm b- yolk c- should d- whole

5. The sound /w/ is silent in all of the following except:

- a- what b- wrong c- whole d- write

Choose the silent letter or letters

- | | | | | |
|--------------|------|-----|-----|------|
| 1-wrong | a- w | b-r | c-n | d-g |
| 2-autumn | a-t | b-u | c-n | d-m |
| 3-make | a-m | b-a | c-k | d-e |
| 4-whale | a-w | b-h | c-a | d-l |
| 5-knife | a-k | b-n | c-i | d-f |
| 6-Scissors | a-s | b-c | c-i | d-r |
| 7-logically | a-l | b-g | c-c | d-a |
| 8-climb | a-c | b-l | c-m | d-b |
| 9-half | a-h | b-a | c-l | d-f |
| 10-exhaust | a-e | b-x | c-h | d-s |
| 11-mnemonic | a-m | b-n | c-o | d-i |
| 12-knees | a-k | b-n | c-e | d-s |
| 13-wrist | a-w | b-r | c-t | d-s |
| 14-colleague | a-c | b-o | c-g | d-ue |
| 15-tissue | a-t | b-i | c-u | d-e |
| 16-rhyme | a-r | b-h | c-y | d-m |
| 17-where | a-w | b-h | c-e | d-r |
| 18-knock | a-k | b-n | c-o | d-k |
| 19-yolk | a-y | b-o | c-l | d-k |

20-crumb	a-c	b-r	c-m	d-b
21-doubts	a-d	b-b	c-t	d-s
22-whole	a-w	b-h	c-o	d-l
23-knows	a-k	b-n	c-o	d-s
24-write	a-w	b-r	c-i	d-t
25-calm	a-c	b-a	c-l	d-m
26-knight	a-k	b-n	c-t	d-i
27-note	a-n	b-t	c-o	d-e
28-thumb	a-th	b-u	c-m	d-b
29-muscle	a-m	b-u	c-c	d-l
30-Wednesday	a-w	b-e	c-d	d-n
31-alight	a-a	b-l	c-gh	d-t
32-business	a-b	b-s	c-i	d-n
33-sword	a-s	b-w	c-r	d-d
34-ghost	a-g	b-h	c-s	d-t
35-guitar	a-g	b-u	c-t	d-r
36-comb	a-c	b-o	c-m	d-b
37-salmon	a-s	b-a	c-l	d-m
38-knot	a-k	b-n	c-o	d-t
39-talk	a-t	b-a	c-t	d-k
40-honest	a-h	b-o	c-n	d-s
41-should	a-sh	b-o	c-l	d-d
42-answer	a-a	b-n	c-s	d-w
43-choirs	a-c	b-h	c-o	d-s
44-knowledge	a-k	b-o	c-n	d-l

Unit 8-Syllable Stress

التشديد على المقطع

Syllable stress is often determined by the *prefixes* and *suffixes* that have been added to the basic form of the word. In words with prefixes such as *a, un, be, in, pro, ex, ob, dis*, etc., the stress is almost always on the second or third syllable, i.e. prefixes are not stressed in English words. Similarly, suffixes such as *-ness, -able, -ous*, etc. are not stressed.

غالباً ما يتم تحديد التشديد على المقطع من خلال البادئات والوحدات التي تمت إضافتها إلى الشكل الأساسي للكلمة. في الكلمات ذات البادئات مثل *a, un, be, in, pro, ex, ob, dis*، إلخ، يكون التشديد تقريباً بشكل دائم على المقطع الثاني أو الثالث، أي لا يتم التشديد على البادئات في الكلمات الإنجليزية. وبشكل مشابه، لا يتم التشديد على اللاحقات مثل *-ness* و *-able* و *-ous* إلخ.

Underline the stressed syllable.

1 l oudness	amb i tious	d angerous
2 s ociable	re l iable	c omfortable
3 ir r esponsible	s ensible	im p ossible
4 c ompetitive	t alkative	agg r essive
5 un f riendly	in s ecure	

Underline the stressed syllable and practice saying them.

1. d angerous	un l ievable	ill l egal
2. im p robable	acc o untable	res r pectable
3. pre d ictable	sug s estible	im p ossible
4. su s erlative	dist i ncitive	inter i active
5. un s afe	mis b e h ave	re u se
6. in c orrect	indep e ndent	insuff i cient

Listen and check.

- In words with prefixes, the stress is almost always on the....
a- second b- third c- first d- both a and b
- In words with suffixes, the stress is almost always on the....
a- second b- third c- first d- both a and b
- Both suffixes and prefixes are
a- stressed b- not stressed c- both a and b d- none
- The stressed syllable in (impossible) is
a- im b- po c- sible d- both a and c
- The stressed syllable in (unsafe) is
a- un b- safe c- both a and b d- none
- The stressed syllable in (reuse) is
a- use b- re c- both a and b d- none

Unit 9-Homographs

اللفظة المتجانسة - المتماثلات اللغوية

Homographs are words that are spelled the same but have completely different meanings, origin, and possibly pronunciation.

المتماثلات اللغوية هي كلمات لها نفس الكتابة ولكن لها معاني مختلف تماماً وأصل وربما نطق مختلف.

Read the following sentences then match the words in bold to their definitions below. Use a dictionary to check the pronunciation of each underlined word.

اقرأ الجمل التالية ثم طابق الكلمات بالخط العريض مع تعريفاتها أدناه. استخدم قاموساً للتحقق من نطق كل كلمة تحتها خط.

bow (n) القوس	close to قريب من	lead رصاص	wind رياح	object شيء
bow (n) انحناءة	close يغلق	take the lead يأخذ زمام المبادرة، يبدأ	wind its way يأخذ طريقاً متعرجاً	object يعارض

- After shooting the bull with his **bow**₁, the Spanish archer made a grand **bow**₂ to the audience.
بعد إطلاق النار على الثور بقوسه، قدم رامي السهام الإسباني انحناءة كبيرة للجمهور.
a the polite gesture of bending at the waist b a weapon used for shooting arrows
أ-الإيماءة المهذبة المتمثلة في الانحناء عند الخصر ب-السلاح المستخدم في إطلاق السهام
- As she went to the store **close**₁ to her house, the woman was careful to **close**₂ and lock the front door.
عندما ذهبت إلى المتجر القريب من منزلها، كانت المرأة حريصة على إغلاق وقفل الباب الأمامي.
a to shut يغلق b being nearby كونها قريبة
- The city took the **lead**₁ in getting **lead**₂ out of the municipal waste.
أخذت المدينة زمام المبادرة (أخذت مركز الصدارة، بدأت) في استخراج الرصاص من النفايات البلدية.
a a type of metal نوع من المعدن b starting in front يبدأ في المقدمة
- The **wind**₁ blew softly as we watched the river **wind**₂ its way through the valley.
هبّت الرياح بهدوء بينما كنا نشاهد النهر يشق طريقه المتعرج عبر الوادي.
a to move or have a curving course يتحرك أو يكون لديه مسار منحن b the moving of air حركة الهواء
- I **object**₁ to being given this **object**₂!
أعارض على إعطائي هذا الشيء.
a an item عنصر أو شيء b to disagree لا أوافق، أعارض

object شيء	present (n) هدية	tears(n) دموع	wound (n) جرح	live (v) يعيش	close to قريب من
object يعارض	present (v) يقدم	tear(v) يمزق	wound(v) لفّ	live(adj) حي	close يغلق

1. I **object**₁ to that **object**₂ in class because a cell phone is distracting.

a. noun : an item

b. verb: to disagree

أعترض على ذلك الشيء في الصف لأن الهاتف الخليوي يشتت الانتباه.

2. It is the perfect time to **present**₁ the **present**₂ to your mother.

a. verb: to offer or give

b. noun: a gift

إنه الوقت المثالي لتقديم الهدية لأمك.

3. She has **tears**₁ in her eyes whenever she **tears**₂ old photos.

a. verb : to damage

b . noun: drops of liquid come out of eyes

تفرغ الدموع في عينيها كلما مزقت الصور القديمة.

4. The bandage was **wound**₁ around the **wound**₂.

a. noun: an injury in the skin

b. verb: twisted or wrapped around

تم لف الضمادة حول الجرح.

5. How long will the **live**₁ fish **live**₂ without food?

a. verb : to survive

b . adjective : not dead

إلى متى ستعيش سمكة الحية بدون طعام؟

6. The shoes were too **close**₁ to the door for it to **close**₂ completely.

a. adjective : near

b. verb : to shut

كان الحذاء قريباً جداً من الباب الدرجة أنه لا يمكن إغلاقه تماماً.

Unit 10-Question Intonation

ارتفاع وانخفاض طبقات الصوت عند السؤال

Listen and practice. Notice how the intonation rises and falls in questions.

1 In **wh-questions**, we use *falling intonation*; the speaker's voice rises then falls

on the last content word. (if being asked for the first time, or asking for information we don't know)

e.g. *What's **the time**?* *Where do you **live**?* *falling intonation*

2 In **Yes / No questions**, we use rising intonation; the speaker's voice rises on the last content word or phrase. (if we are checking information we think we already know, our voice goes up at the end)

e.g. *Are you going to the party **tonight**?* *Have you got **a pen**?* *rising intonation*

3 **Question tags expecting confirmation**, we use *falling intonation*.

e.g. *You're French, aren't you?* *He's very tall, isn't he?*

4 **Question tags showing less certainty**, we use *rising intonation*.

e.g. *You're French, aren't you?* *Your train leaves at six, doesn't it?*

5 In **questions that offer choices**, the speaker's voice *rises* on the first choice(s), and *falls* on the last choice.

e.g. *Do you prefer reading **poetry or prose**?* *Would you rather be a **doctor, psychologist or an engineer**?*

Read the questions below. Does the intonation rise (R) or fall (F) at the end? Listen and check.

1 **Do** you like pop music?

2 Would you like to walk **or** to take the bus?

3 The movie was great, **wasn't it**?

4 **What** time does the museum open?

5 People use first name here, **don't they**?

6. Your parents are from Italy, **aren't they**?

7. Do you prefer to study **nursing or education**?

8. **Have** you talked to a professor?

9. **Where** was the article published?

10. Would you rather have **tea, coffee or cappuccino**?

Unit 11-Strong and Weak Forms of Auxiliary verbs

الأشكال القوية والضعيفة للأفعال المساعدة

Weak	Strong
Am I late?	Yes, I am .
Are they going?	Yes, they are .
This cat's fast?	Yes, it is .
Who's coming?	Ali is .
Was the weather terrible?	Yes, it was .
Has the rose died? The milk's gone sour, hasn't it?	Yes, it has .
Have you ever been there?	Yes, I have .
Do they come early?	Yes, they do .
Does the train leave at five?	Yes, it does .

Decide whether these statements have weak or strong forms of the auxiliaries.

- 1 He's my best teacher.
- 2 Do they play any sport?
- 3 She was late.
- 4 Yes, we **have**.
- 5 Have you ever seen it?
- 6 Yes, there **are**.
- 7 Does she speak French?
- 8 She **has** decorated the room, **hasn't** she? – Yes, she **has**.

Pronunciation

اللفظ

Tick whether these words in bold have strong or weak forms.

	Weak	Strong
1. I'm tired.
2. "The girls are beautiful, aren't they?" – "Yes, they are ."
3. "Where is John?" – "John's here."
4. " Does he earn a good living?" – "Yes, he does ."
5. This watch is mine.
6. " Can I help you?" – "Sure, you can ."
7. The men have eaten.
8. "Has he paid the bill?" – "Yes, he has ."

Unit 12- Sound Linking

اللفظ - ربط الأصوات

• Sound linking is a way of joining the pronunciation of two words so that they are easy to say and flow together smoothly.

الربط الصوتي هو طريقة لربط نطق كلمتين بحيث يسهل نطقهما ويجريان معاً بسلاسة

• Consonant to vowel linking is when one word ends with a consonant sound and the next word begins with a vowel sound, the words are linked together.

الربط الحرف الصوتي مع الساكن هو عندما تنتهي كلمة واحدة بصوت ساكن وتبدأ الكلمة التالية بصوت متحرك (حرف صوتي) ، يتم ربط الكلمات معاً.

Look at the following phrases. Notice the consonant-vowel links.

- 1- at **e**ight **o**'clock
- 2- as soon **a**s possible.
- 3- **a**n interesting film.
- 4- **a** car **a**ccident **a**t night.

In pairs, read the following sentences. Put the links in the right places as the example.

في أزواج، اقرأ الجمل التالية. ضع الروابط في الأماكن الصحيحة كما في المثال

e.g. I am reading **a book a** about history.

- 1- First **of all**, I'm going to book **a** ticket.
- 2- My father **is** an old man.
- 3- Ted **is** using **a** computer **at** the moment.
- 4- I'm **interested in** art **and** music.

Listen and check your answers.

Listen and read the following sentences. Note the links between words, then practice saying them aloud.

- 1-Galileo was **a** famous **astronomer in** the 17th century.
- 2-Astronomers need **a** lot of math **and** physics courses.
- 3-I've just received **a** present for the good work **I** do.
- 4-If the weather **improves**, we'll have dinner **out**.
- 5-I **have** always enjoyed watching sports **on** TV.
- 6-We bought **a** big flat **in** the center **of** the city.

Look at the following sentences. Mark the links between words.

1. If I had **enough** money, I would travel **around** the world.
2. I read **a** story about **a** poor man who suddenly became rich.
3. My mother is afraid **of** travelling by air, so we had to travel by train.
4. Can I **have** **a** box of chocolate please?
5. Jane **and** Mary need **a** lot of experience to get **a** job.
6. The plane to London will take **off** at **eleven o'**clock.