PHONEMES AND ASSOCIATED GRAPHEMES
(compiled from multiple sources: Fry, 2004; Hanna, Hanna, Hodges \& Rudorf, 1966; Moats, 2010; LETRS)

## CONSONANTS

| Phoneme | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| /m/ | m | mm | mn | mb | Im |  |  |  |  |  |  |
| /n/ | n | nn | kn | gn | pn |  |  |  |  |  |  |
| /n/ | n | ng |  |  |  |  |  |  |  |  |  |
| /b/ | b | bb |  |  |  |  |  |  |  |  |  |
| /p/ | p | pp |  |  |  |  |  |  |  |  |  |
| /d/ | d | dd | Id |  |  |  |  |  |  |  |  |
| /t/ | t | tt | bt |  |  |  |  |  |  |  |  |
| /k/ | c | k | ck | ch | que | Ik |  |  |  |  |  |
| /g/ | g | gg | gh | gu |  |  |  |  |  |  |  |
| /f/ | f | ff | ph | gh | If |  |  |  |  |  |  |
| /v/ | v | f | ve |  |  |  |  |  |  |  |  |
| /s/ | s | ss | st | sc | ps | c |  |  |  |  |  |
| \|z/ | z | X | s | ss | zz |  |  |  |  |  |  |
| $15 /$ | sh | ss | ch | ti | ce | ssi | si | sc | ci | tu | s |
| /3/ | s | z | si | g |  |  |  |  |  |  |  |
| 1日/ | th |  |  |  |  |  |  |  |  |  |  |
| $18 /$ | th |  |  |  |  |  |  |  |  |  |  |
| /t/ | t | ch | tch |  |  |  |  |  |  |  |  |
| /d3/ | d | g | j | dg | dge |  |  |  |  |  |  |
| /h/ | h | wh |  |  |  |  |  |  |  |  |  |
| /w/ | w | wh | $u$ |  |  |  |  |  |  |  |  |
| /hw/ | wh |  |  |  |  |  |  |  |  |  |  |
| /j/ | $y$ | i |  |  |  |  |  |  |  |  |  |
| /r/ | y | rr | rh | wr |  |  |  |  |  |  |  |
| III | 1 | le | II |  |  |  |  |  |  |  |  |
| /kw/* | qu |  |  |  |  |  |  |  |  |  |  |
| /ks/* | x |  |  |  |  |  |  |  |  |  |  |
| /gz/* | x |  |  |  |  |  |  |  |  |  |  |

Note. *These phoneme/grapheme pairings illustrated that the qu graphemes is used to represented two phonemes; note the $u$ also represents a /w/ in suede and suave, for example. Thus, it might be more accurate to suggest that $q$ represents $/ \mathrm{k} /$ and $u$ represents $/ \mathrm{w} /$. The grapheme $x$ is used to represent two phonemes. Speakers show dialect variation wherein, for example, exit is pronounced by some speakers with a medial /ks/ but by other speakers with a medial /gz/.

## VOWELS

| PHONEME | WORD | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME | GRAPHEME |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| /æ/ | cat | a | au |  |  |  |  |  |  |  |  |
| /a/ | cot | a | 0 |  |  |  |  |  |  |  |  |
| /ع/ | bet | e | ea | ai |  |  |  |  |  |  |  |
| /i/ | beet | e | y | ee | ea | ei | ey | ie | U | ew | eu |
| /I/ | bit | i | y |  |  |  |  |  |  |  |  |
| /o/ | boat | 0 | oa | OW |  |  |  |  |  |  |  |
| /u/ | boot | U | 00 | Ou | ew | ui | 0 |  |  |  |  |
| /v/ | put | u | 00 | 0 |  |  |  |  |  |  |  |
| /N/ | cut | 0 | u | 00 | ou |  |  |  |  |  |  |
| $10 /$ | caught | a | 0 | aw | augh | au | ough |  |  |  |  |
| $13 / *$ | Bert | ar | er | ir | or | ur | irr | urr |  |  |  |
| /aI/ | bite | i | y | ei | igh | uy | au |  |  |  |  |
| /ei/ | bait | a | ei | ea | ai | ay | eigh | ey |  |  |  |
| /av/ | ouch | ou | OW | ough |  |  |  |  |  |  |  |
| /כI/ | boy | oy | oi |  |  |  |  |  |  |  |  |
| /ju/** | cue | U | ew | eu |  |  |  |  |  |  |  |
| /Ә/ |  | a | e | i | 0 | U | Ou |  |  |  |  |

Note: * We have elected in this table not to differentiate between stressed and unstressed syllable. ** The phonemes /ju/ includes a consonant and vowel. We have listed the combination here as a vowel as it is often referred to as a vowel. In truth, /ju/creates /j/blends, as in cube, beautiful, fuse, music with the consonant blend not represented in the orthography. It is likely these blends are declining as seen in the variable pronunciation of coupon.

