

Dry Activities

Activity 4D – Bioenergy wordsearches

Wordsearches are provided for use at a range of educational levels Primary, Key Stage 3, Key Stage 4 and Post-16. The wordsearches cover vocabulary and concepts associated with bioenergy research that students are expected to be familiar with at the educational level specified. There will also be a few words that are included that may be specific to bioenergy research and not covered in the curriculum designed to stretch students and enrich their understanding of the topic. It would be advisable to introduce students to the words and their meanings in the course of the learning session.

Wordsearches support the literacy component of science and will help with spelling, reading, writing, scientific communication, understanding, revision of the terminology and definitions.

The wordsearches can be used in many ways:

- introduction to the topic to elicit prior knowledge
- recapping a previous session
- to build up word lists for wall display
- a fun end of session exercise
- as a takeaway activity

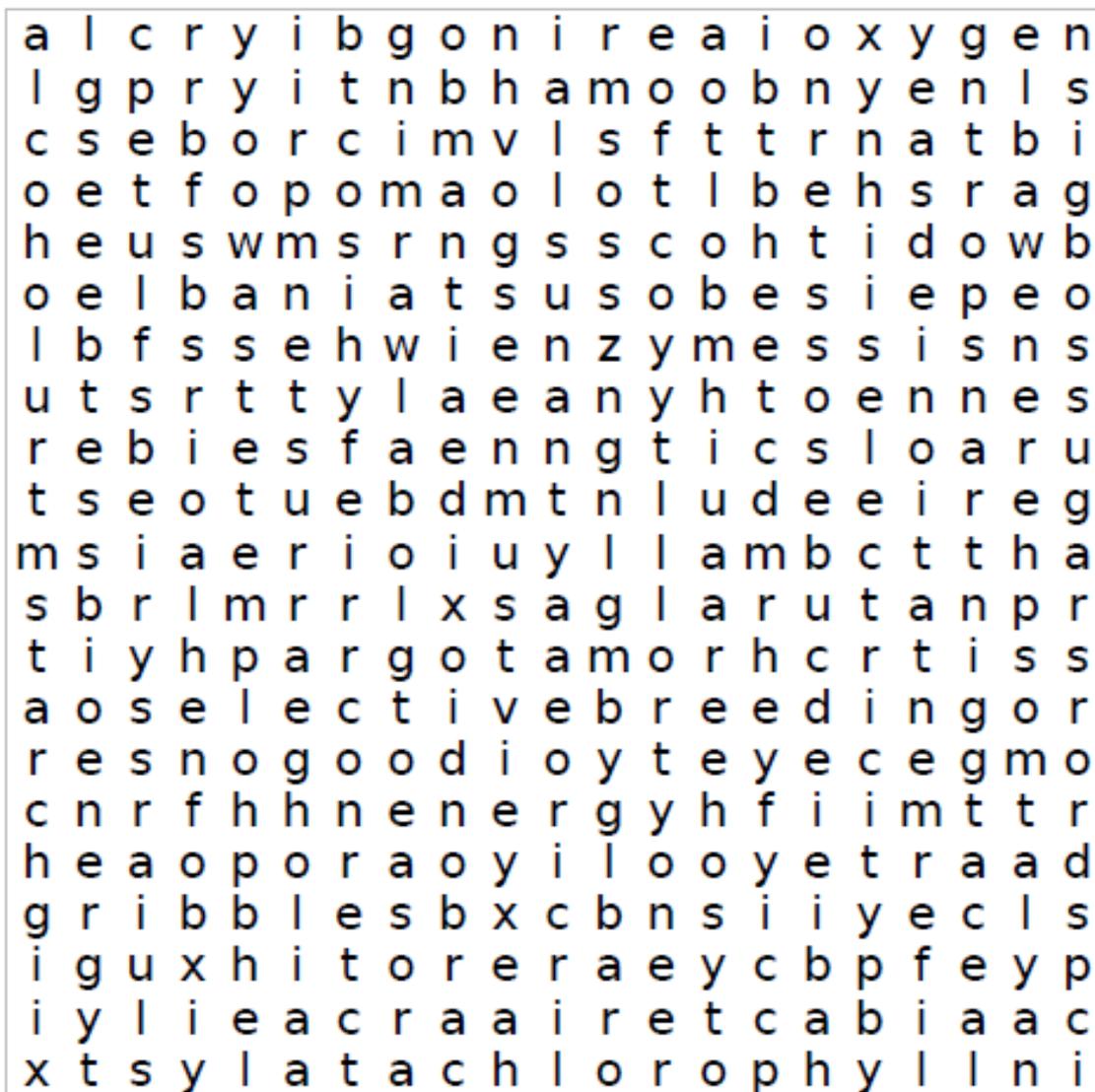
Crosswords and wordsearches provide many levels of differentiation. They can be completed individually or as a group, with or without support sheets listing the words.

They can be used to differentiate by task allowing the student to select a crossword or wordsearch. If the wordsearch is completed with ease then the student can be encouraged to attempt the crossword. Students will have recently found the same words in the wordsearch and so feel more confident in attempting the crossword.

A solution for each crossword and wordsearch is provided which allows students to check their own work and thereby allow you to spend more time engaging with other students.

Word exercises such as sentence loops allow students to expand their vocabulary specific to the subject, and when completed within a group the activities promote discussion and therefore promote their oracy skills.

Introductory Wordsearch



bioenergy
 biofuel
 fossil fuel
 bioethanol
 alcohol
 carbohydrate
 energy
 carbon dioxide
 oxygen
 natural gas
 methane
 sustainable
 renewable
 transport

biomass
 yield
 waste
 microbes
 yeast
 fermentation
 catalyst
 enzyme
 gribbles
 photosynthesis
 algae
 varieties
 electricity

crops
 starch
 sugars
 chromatography
 distillation
 atmosphere
 aerobic
 glucose
 bacteria
 gene
 chlorophyll
 selective breeding
 global warming

Introductory Wordsearch Answers

a l c r y i b g o n i r e a i o x y g e n
l g p r y i t n b h a m o o b n y e n l s
c s e b o r c i m v l s f t t r n a t b i
o e t f o p o m a o l o t l b e h s r a g
h e u s w m s r n g s s c o h t i d o w b
o e l b a n i a t s u s o b e s i e p e o
l b f s s e h w i e n z y m e s s i s n s
u t s r t t y l a e a n y h t o e n n e s
r e b i e s f a e n n g t i c s l o a r u
t s e o t u e b d m t n l u d e e i r e g
m s i a e r i o i u y l l a m b c t t h a
s b r l m r r l x s a g l a r u t a n p r
t i y h p a r g o t a m o r h e r t i s s
a o s e l e c t i v e b r e e d i n g o r
r e s n o g o o d i o y t e y e c e g m o
c n r f h h n e n e r g y h f i i m t t r
h e a o p o r a o y i l o o y e t r a a d
g r i b b l e s b x c b n s i i y e c l s
i g u x h i t o r e r a e y c b p f e y p
i y l i e a c r a a i r e t c a b i a a c
x t s y l a t a c h l o r o p h y l l n i

Intermediate Wordsearch



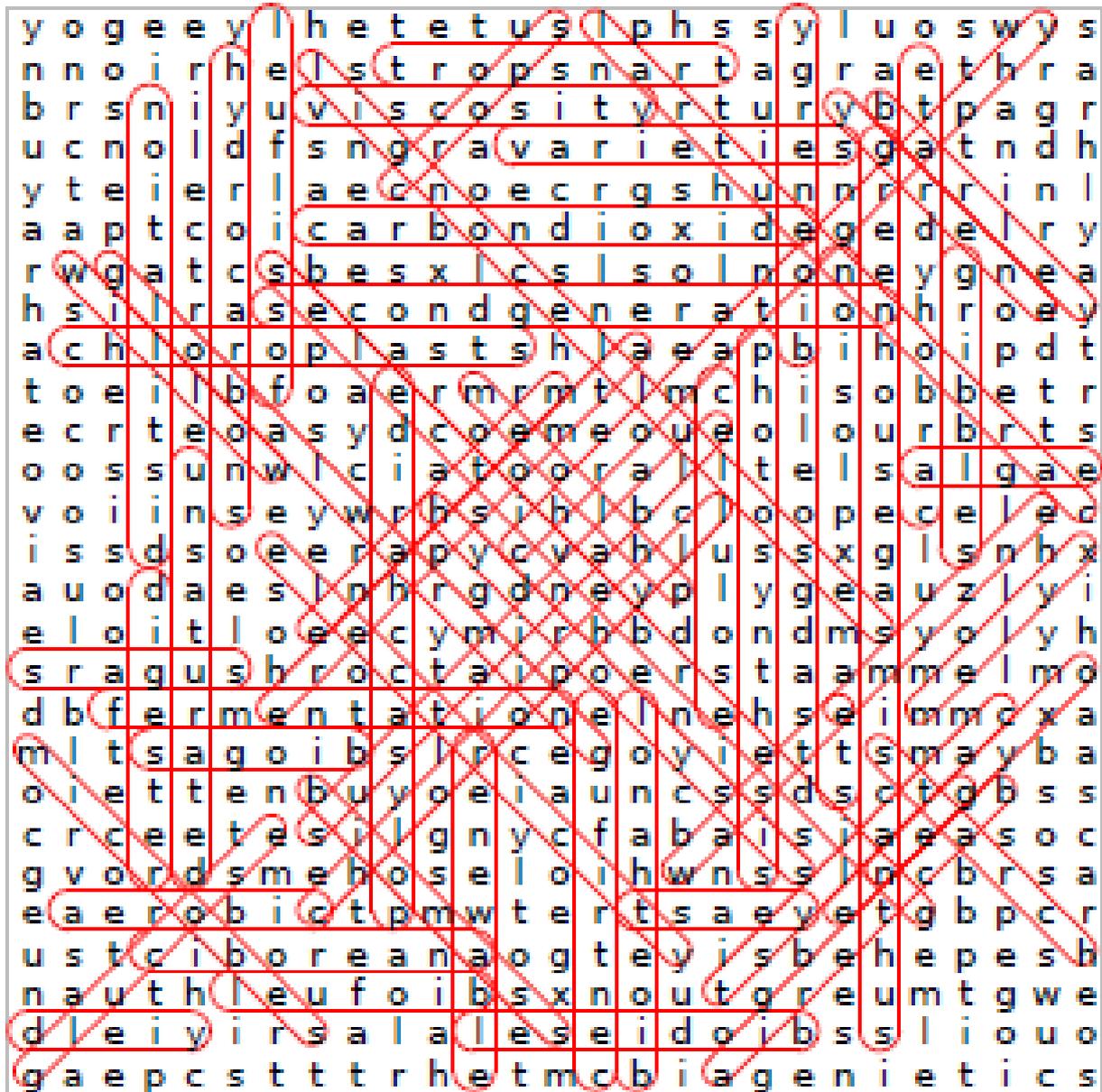
bioenergy
biodiesel
oxygen
sustainable
waste
anaerobic
second generation
chloroplasts
transport
hydrolysis
viscosity
atmosphere
gene
phloem
greenhouse gas

biofuel
carbohydrate
biogas
renewable
microbes
catalyst
lignocelluloses
algae
crops
polysaccharide
chromatography
aerobic
chlorophyll
selective breeding
miscanthus

fossil fuel
energy
methane
biomass
yeast
enzyme
steam explosion
varieties
starch
hydrocarbons
distillation
glucose
cellulose
carbon neutral
willow

bioethanol
carbon dioxide
digester
yield
fermentation
gribbles
photosynthesis
electricity
sugars
unsaturated
centrifuge
bacteria
xylem
global warming
barley

Intermediate Wordsearch Answers



Advanced Wordsearch

n n l e s e i d o i b r h i s y r t a y i g p y d i s b
 g o a e l a i l f e s c c p o s a n c i l r c h r c o o
 o e i t a b i i o t d a o l h n a c e d r e a b l e e l
 t s n y a m a g n i m r a w l a b o l g a e u l l o b e
 h b n e w s d n o b c i d i s o c y l g t n t f g i e y
 l o e l r a e o i c h r o m a t o g r a p h y c o a e m
 s h r c e g s c s a m s d o r l g o p g l o x m a i e i
 b l e e d l y e o g t e c e l l u l o s e u a y b b b i
 t s p s n s f l l n l s t t t e n o l d d s s t l i o l
 o n a l a n e l p b d u h r r e i y i s e n i r e g n
 e e t f v o r u x w b g c s a a h b s r l g e s l s m o
 m o m o r b m l e e a i e o n n y c a e a a g o o n s f
 y b o c i r e o m t n e r n s e e i c c a s o c t l t r
 n a s h t a n s a n s z c g e e c t c t r a n s p o r t
 o r p l l c t e e p e a y a s r i e h e m d a i c a c a
 b n h o n o a s t r r i w m t v a h a d l e h v e e a d
 i l e r o r t b s b l a r h e a p t r e y n t c n l n m
 o r r o e d i x o i d n o b r a c n i v l a e a r e s l
 e r e p s y o n g f s e r c i r r y d o e b m g c a m s
 t e g l s h n n n a a e o t f p t s e l n l a u y o t i
 h n u a p e i y g r e n e o i b t c e u y e c w r x i s
 a e f s u n c o i d c n w b c u n s a t u r a t e d o y
 n o i t a c i f i r a h c c a s m b b i o b u t a n o l
 o t r s o b g n i n o i t i t r a p n o b r a c s f e o
 l a t a b y g e b y a r t s i s e h t n y s o t o h p r
 l a n a e r o b i c h l o r o p h y l l g t n l s o a d
 w e e f a t t y a c i d a s n o i t a l l i t s i d c y
 n x c a t a l y s t r l n h o e t e r t r u c e b i t h

bioenergy
 biobutanol
 biogas
 biomass
 fermentation
 glycosidic bonds
 lignin
 chloroplasts
 perennial
 hydrocarbons
 chromatography
 transesterification
 methanogens
 xylem
 global warming
 synthetic biology

biofuel
 energy
 methane
 yield
 anaerobic
 enzyme
 lignocelluloses
 algae
 starch
 unsaturated
 distillation
 atmosphere
 gene
 phloem
 greenhouse gas

bioethanol
 carbon dioxide
 sustainable
 waste
 catalyst
 gribbles
 steam explosion
 transport
 hydrolysis
 viscosity
 centrifuge
 glucose
 chlorophyll
 selective breeding
 carbon partitioning

biodiesel
 oxygen
 renewable
 yeast
 saccharification
 second generation
 photosynthesis
 crops
 polysaccharide
 Van der waals
 fatty acid
 bacteria
 cellulose
 carbon neutral
 directed evolution

Advanced Wordsearch Answers

