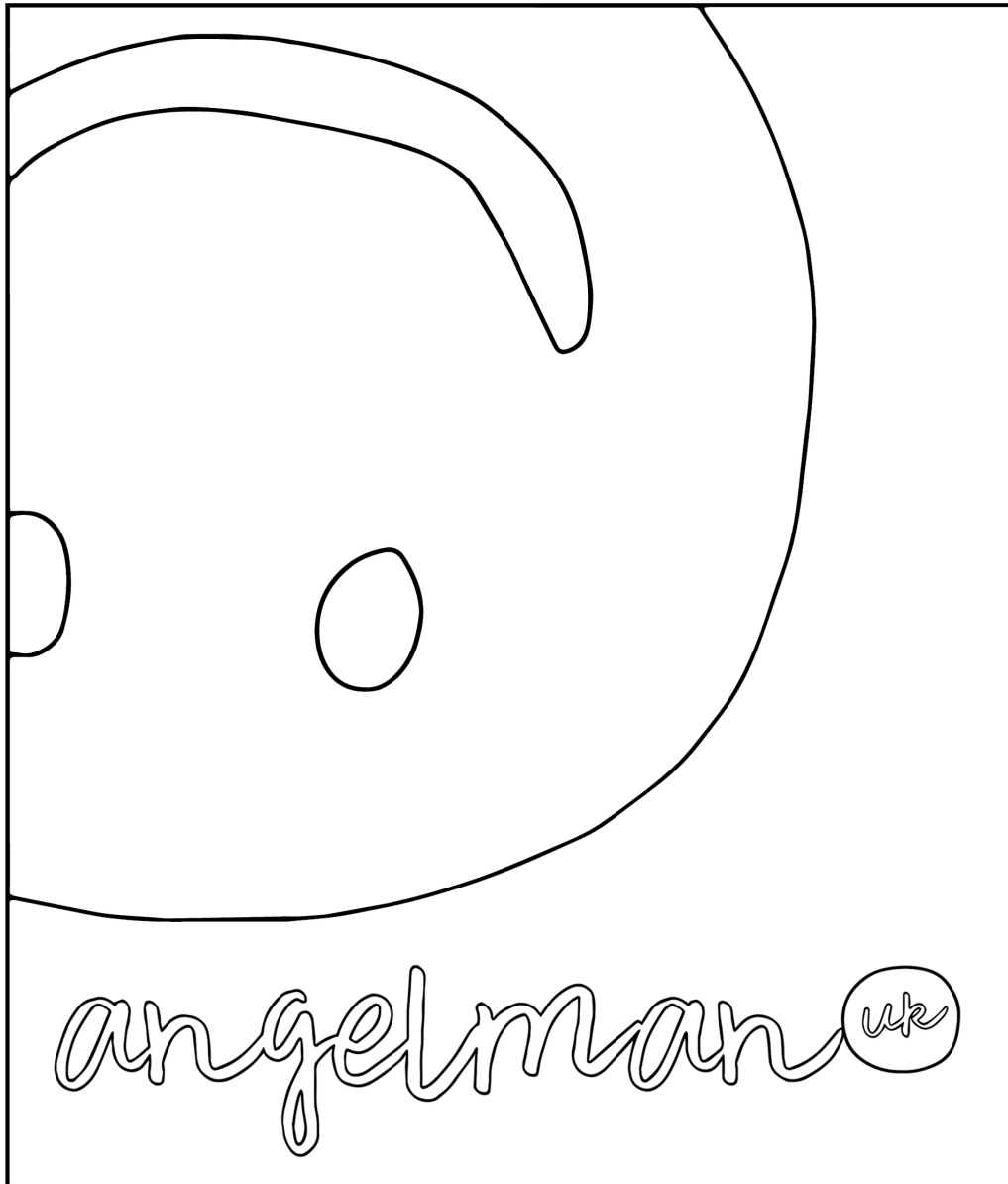




# activity pack

This pack belongs to

.....



support education research

# Angelman Syndrome

G	C	H	R	O	M	O	S	O	M	E	N	E	M
O	E	M	O	R	D	N	Y	S	A	A	C	N	F
F	K	I	N	D	N	E	S	S	R	F	H	O	Y
L	A	U	G	H	A	R	A	R	E	I	R	I	A
A	N	G	E	L	M	A	N	Y	A	F	P	T	E
A	O	A	P	H	S	C	S	N	T	T	L	A	H
M	L	T	S	U	N	H	O	A	F	E	I	C	C
G	M	S	D	N	A	O	F	G	A	E	I	I	C
M	E	A	C	E	Y	C	R	N	M	N	A	N	O
E	D	P	M	P	H	O	I	I	I	G	H	U	N
M	C	R	P	D	E	L	E	L	L	H	I	M	C
N	C	A	Y	C	C	A	N	B	Y	D	F	M	D
E	H	O	P	H	F	T	D	I	E	N	R	O	N
I	M	S	N	E	A	E	M	S	M	T	M	C	F

PASTA  
ANGELMAN  
HAPPY  
FIFTEEN  
LAUGH  
RARE  
SIBLING  
KINDNESS  
SYNDROME  
FRIEND  
COMMUNICATION  
CHOCOLATE  
FAMILY  
CHROMOSOME  
DNA

Play this puzzle online at : <https://thewordsearch.com/puzzle/1981447/>

# angelman syndrome

## what is it?

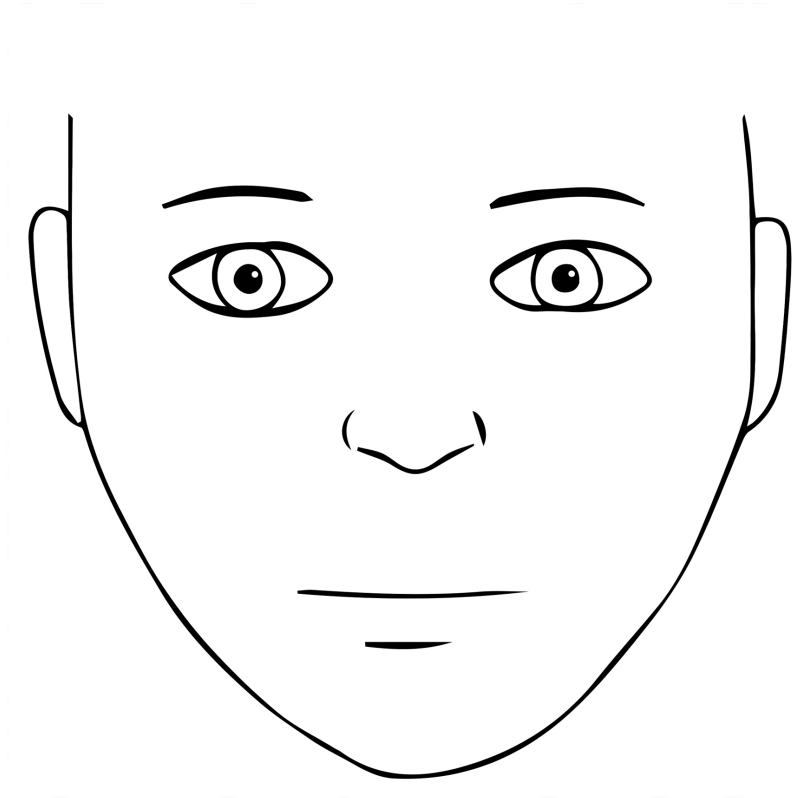
Angelman Syndrome (AS) is a rare genetic disorder that affects around 1 in every 15-20,000 people. People with Angelman Syndrome develop a bit differently to other people, they might have difficulty learning, be unable to speak and have problems with movement and balance. Most people haven't heard of AS, and it can be very difficult to understand because there is so much to learn. We want to help you understand that even though someone with Angelman Syndrome may be different to you, they still have activities they enjoy, family & friends that they like to spend time with and also things they find a bit tricky - just like you.

People with Angelman Syndrome may have very similar characteristics. A characteristic is the way you look or act. Lots of people with Angelman Syndrome have blonde hair, blue eyes and big smiles. But not everyone is the same. Some have brown or black hair and some may have green or brown eyes. Some people will be happier than others and some might be grumpy! Some like playing with water or eating chocolate but others don't. Some people can walk and some need to use a wheelchair. Most people with Angelman Syndrome can't talk so they may be learning to use an iPad or other tablet to talk for them. If someone uses an iPad to talk for them, it's the same as using their real voice and we need to listen to what they say because it might be very important or interesting.

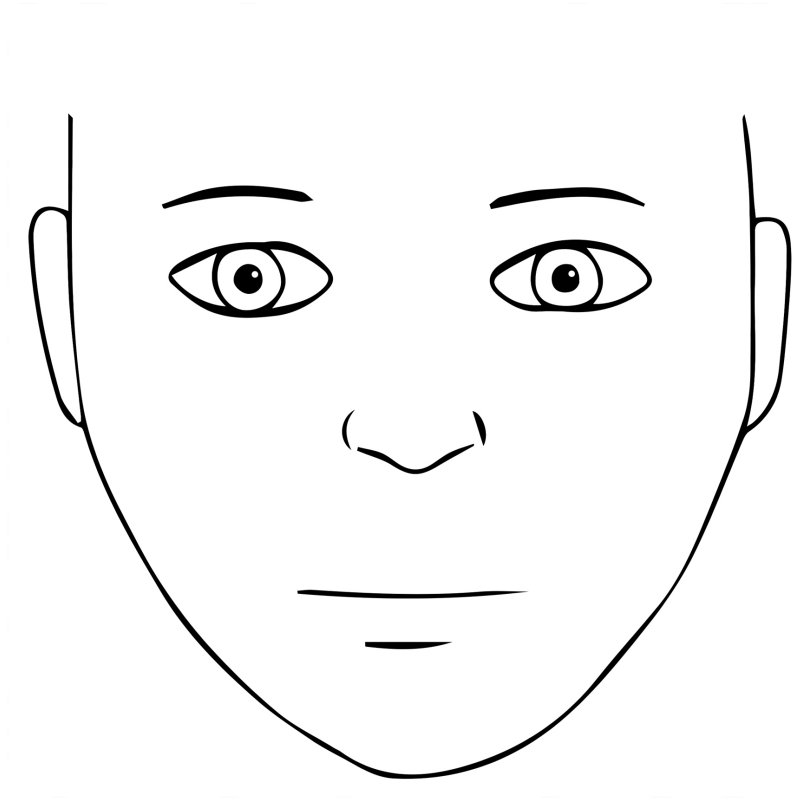
**REMEMBER** - just because your sibling or friend can't talk, they can understand what you say and they have feelings just like you. They like to feel happy, loved and important. We can make them feel important and happy by treating them with respect and using respectful language when we talk to them or about them to our friends.

# characteristics

Can you use the faces on this page and the next to make your brother, sister or friend with AS? Can you draw yourself? Do you look similar or very different?



# characteristics



# Angelman Syndrome - characteristics

N	R	S	E	Y	L	S	Y	L	L	R	Y	D	I
S	L	E	E	P	P	M	E	T	O	R	A	R	E
D	E	T	E	R	M	I	N	E	D	U	A	I	S
R	A	R	R	E	C	L	L	P	I	R	D	T	H
W	A	T	E	R	P	E	H	G	U	A	L	Y	T
L	Y	S	P	E	L	I	P	E	I	E	I	L	A
P	E	Y	E	I	U	D	E	T	I	C	X	E	E
F	R	I	E	N	D	L	Y	B	R	N	G	R	E
P	T	E	R	P	U	R	D	I	R	E	N	D	T
E	A	G	D	E	E	A	S	G	R	L	O	A	D
E	G	E	N	T	L	E	H	U	N	G	R	Y	D
W	R	S	U	R	R	A	S	L	I	X	T	A	U
P	Y	T	L	H	Y	P	P	A	H	E	S	R	D
A	R	D	I	S	A	B	I	L	T	Y	T	E	E

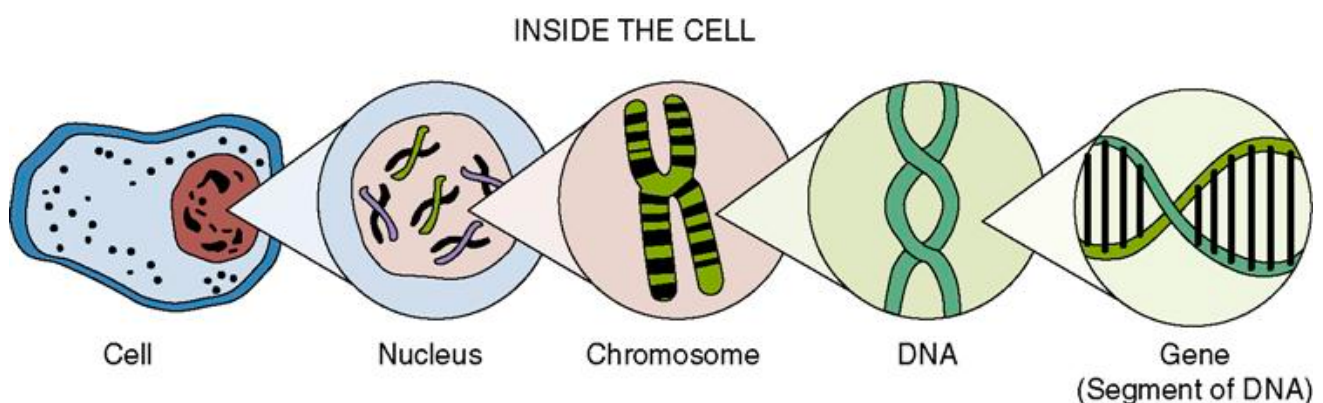
LAUGH  
EPILEPSY  
GENTLE  
HAPPY  
SLEEP  
HUNGRY  
FRIENDLY  
LOUD  
STRONG  
DISABILITY  
EXCITED  
DETERMINED  
WATER  
SMILE  
RARE

Play this puzzle online at : <https://thewordsearch.com/puzzle/1981683/>

# chromosomes & DNA

In all the cells in our bodies, we have 22 pairs of chromosomes and two extra chromosomes that say whether we are male or female (females are XX, males are XY). For each pair, we get one copy from our mum (the maternal copy) and one from our dad (the paternal copy). A chromosome is a structure which is inside the nucleus or middle, of a cell. Each chromosome is made up of protein and DNA. DNA stands for Deoxyribinucleic acid. It's a very big word so we say DNA instead. DNA is what makes every human unique and different. It's very important that at conception, (when a baby is made) the right number of chromosomes are passed from mum and dad, and that those chromosomes are not damaged in any way. Sometimes, if the chromosomes are damaged or the wrong amounts are passed on, the baby may not develop properly. This is what happens in Angelman Syndrome. If the Chromosome 15 which comes from the mum is damaged or broken in a very specific area, the baby will have Angelman Syndrome. You can read more about how Angelman Syndrome is caused on our website.

[www.angelmanuk.org/what-is-angelman-syndrome](http://www.angelmanuk.org/what-is-angelman-syndrome)





# DNA models

You can use pipe cleaners like the example below or anything else you can find at home to make your own DNA model. You could try lollipop sticks, lego, cotton buds, straws, pom poms or even sweets!

When you have finished making your model, try labelling it with as many things you can think of that make you special and unique!

We'd love to see them! If you are under 13 ask an adult to upload them to our facebook group or Instagram.



Choose two colours for the outside strands and 4 colour for the middle strands



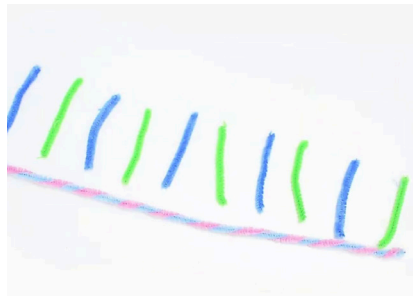
Take the two colours (one of each) for the outside strands and twist them together



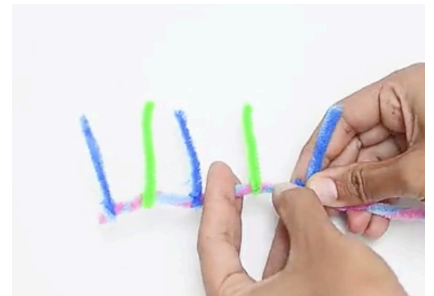
Repeat this step so you have two twisted strands



Take one pipe cleaner in each of the other colours and cut them into 5 equal strips



Take one of your twisted strands, and two of your middle colours and lay them out, alternating the colours



Twist each of the smaller strands around the outside so they are attached



Repeat with the other twisted strand and the other two middle colours you chose, then sellotape the middle section together



Now you can gently twist your double helix model so that it looks more like the DNA that you are made of! Well done



# Angelman Syndrome - Science

T	E	I	E	D	P	T	D	R	A	N	R	S	I
H	S	T	A	L	E	R	H	C	L	R	C	G	T
E	N	R	U	O	C	N	O	E	I	G	M	U	C
O	M	I	C	S	E	T	E	T	R	S	U	R	I
R	U	A	T	S	L	S	C	G	E	A	I	D	M
Y	T	L	A	S	L	I	C	C	G	I	P	P	P
R	A	C	D	E	I	T	O	I	R	P	N	Y	R
E	T	R	L	P	O	N	M	O	S	A	I	C	I
S	I	I	S	U	U	E	U	T	O	L	M	E	N
E	O	S	A	N	D	I	O	S	E	A	S	O	T
A	N	P	E	E	I	C	O	D	L	O	E	H	I
R	O	R	E	I	T	S	O	A	R	I	P	A	N
C	E	N	S	D	G	M	E	R	O	P	S	M	G
H	O	N	R	E	M	O	S	O	M	O	R	H	C

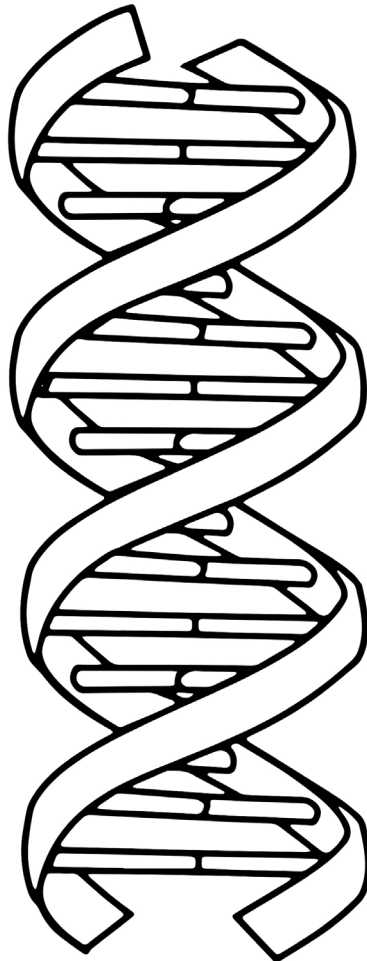
CELL  
MODEL  
UPD  
THERAPY  
RESEARCH  
MOZAIC  
ICD  
GENE  
ASO  
DNA  
MUTATION  
CRISPR  
THEORY  
TRIAL  
CHROMOSOME  
IMPRINTING  
DRUG  
SCIENTIST  
PROTEIN

Play this puzzle online at : <https://thewordsearch.com/puzzle/1981933/>

# your DNA

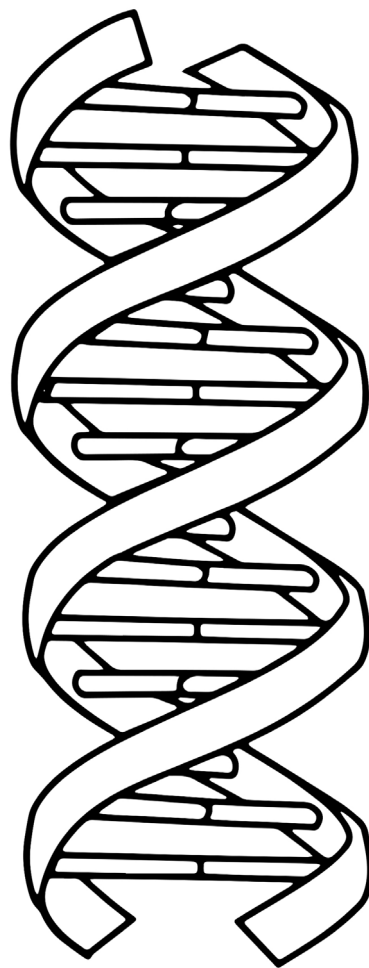
What's in your DNA? What makes you different to your brothers & sisters or your friends?

Are you a good listener? Do you like to make people laugh? Maybe you're great at baking or playing a musical instrument... colour in your DNA and tell us what makes you unique in the space below!



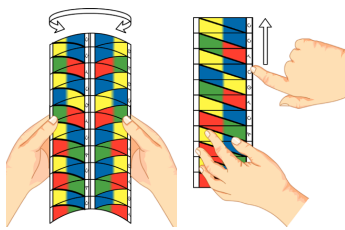
Now try doing the same activity but tell us about your brother, sister or maybe a friend. What makes them different to you?

Do you think it's good that we are all different? Why?



# origami DNA

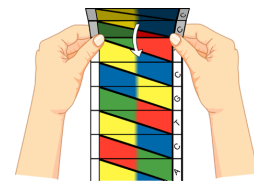
If you'd like to try a harder challenge, have a go at making this origami model of DNA with the template on the next page. You could colour in the different sections or write something different about yourself or the person you know with Angelman Syndrome that makes them unique.



- 1** Fold in half lengthwise. Make all creases as firm as possible (use your fingernail!)



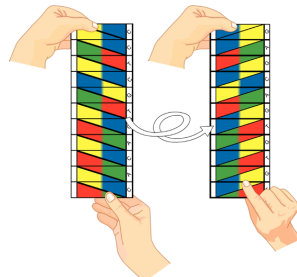
- 2** Hold the paper so that the thick lines are diagonal and the thin lines are horizontal. Fold the top segment down and then unfold.



- 3** Fold the top two segments down along the next horizontal line. Unfold.



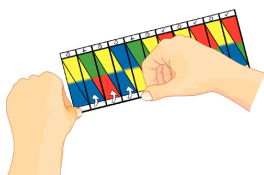
- 4** Repeat for all segments.



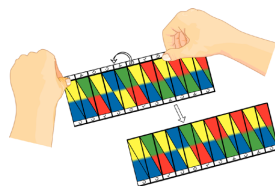
- 5** Turn the paper over.



- 6** Fold along the first diagonal line. Unfold and fold along the second diagonal line. Repeat for all diagonal lines.



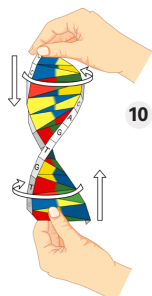
- 7** Fold the white edge without letters up.



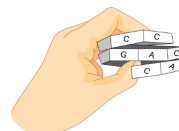
- 8** Fold the other edge away from you. Partly unfold both edges.



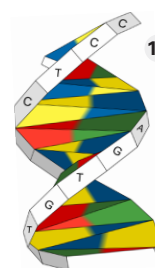
- 9** You can now see how the model is starting to twist.



- 10** Twist and turn the paper while pushing the ends towards each other.  
Be brave!

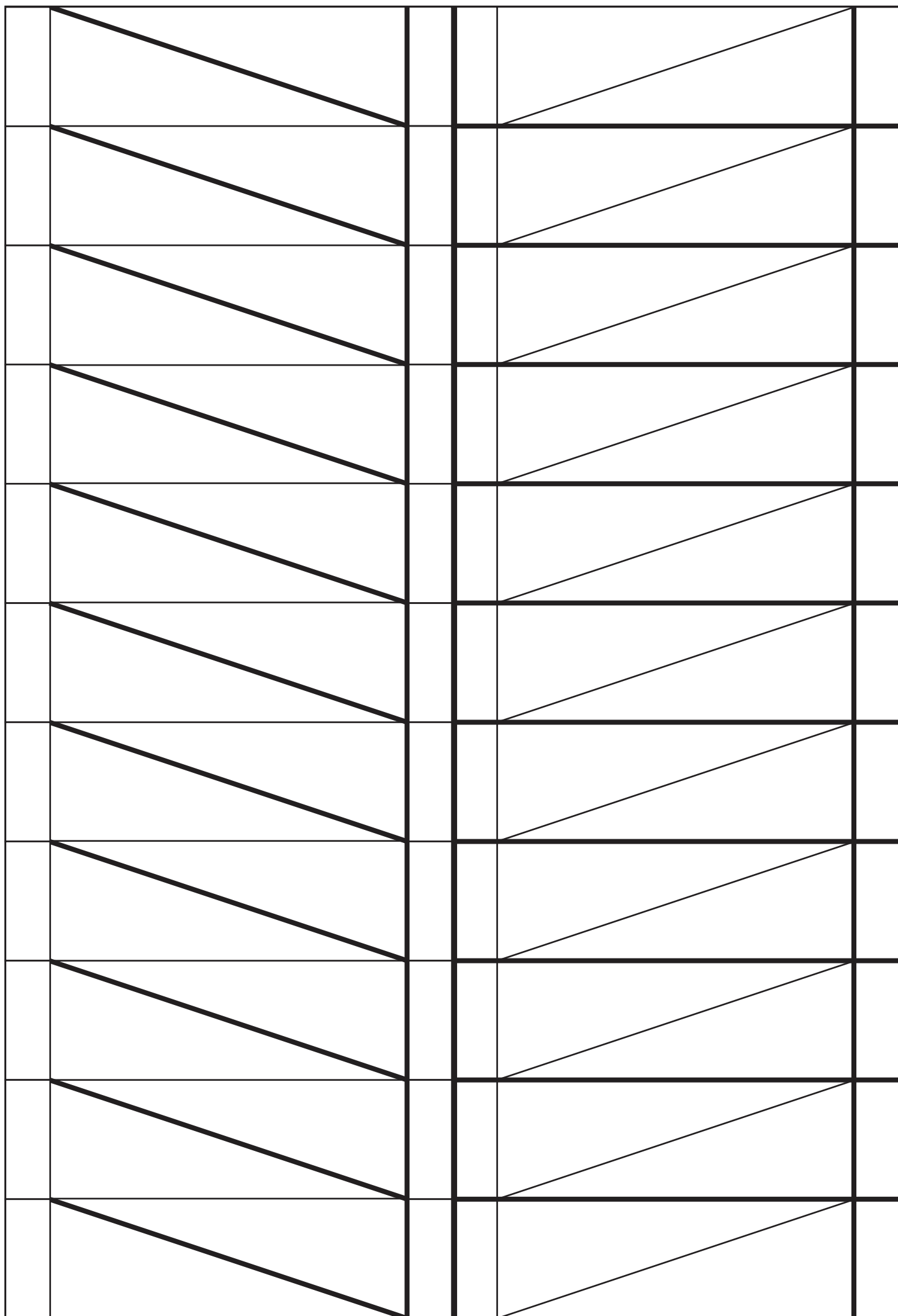


- 11** Now let go!



- 12** Admire your completed DNA double helix!  
Only another 2,999,999,989 (or so) more to complete your whole genome!

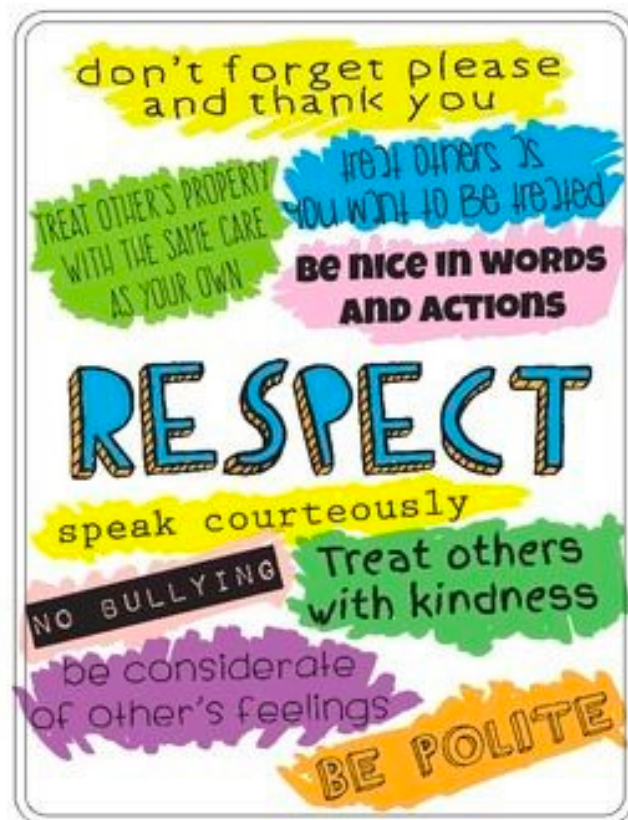
Origami model: Alex Bateman, Thoki Yenn



# respect

Its very easy to show respect to people with Angelman Syndrome. You do this by treating them the same way that you would want to be treated. This means that we are kind to them, we don't shout or bully them or use words which might make them feel bad. We should listen to what they are saying or trying to say even if we don't really understand them. We should help them if they need it but we should also try to teach them to help themselves. This might mean not doing everything for them or letting them help us when we are cooking or tidying up. We can also show respect in the way that we talk to or about people with Angelman Syndrome. Its not nice to call people bad names just because they are disabled or different.

Can you think of words or names that we shouldn't use? Instead of using these words can you think of other words that sound nicer to use instead? Make a list of words on the next page that you've heard that might make your friend or sibling feel bad. And then cross out those words with a red pen or crayon and swap them for words or names which would make them feel happy or important.



# respect



# respect

Part of showing respect is accepting that everyone has 'human rights'. Human rights are standards or laws that protect the dignity of all human beings. This means that everyone is equal and should be treated the same regardless of age, gender, colour, language, religion, place they were born, whether they are rich or poor or whether they are disabled. Treating people with respect and dignity means that we understand the rights of others and we do our very best to make sure that everyone is treated fairly. Disabled people are sometimes treated badly or unfairly by other people. Sometimes this is because people are scared of things that they don't understand or they think that people with learning disabilities are not as clever as other people. We know that this isn't true!

1. If you have a friend or a sibling with Angelman Syndrome or another disability what can you do to make sure that they are treated fairly?

Maybe you could hold an awareness day at school or talk about Angelman Syndrome in your school assembly? If you need help please get in touch with AngelmanUK and we can send some things to help you.

# respect

2. Can you make a word cloud using words which show respect for others? Add your own as you go along. You can draw your diagram here or use an app on your iPad or computer.

Respect, Dignity, Human Rights, Inclusion, Choice, Education, Care, Love, Friendship

# Angelman Syndrome - Respect

N	K	I	N	D	N	E	S	S	D	E	V	O	L
T	U	N	R	P	O	T	E	N	T	I	A	L	A
N	D	N	A	T	S	R	E	D	N	U	N	I	D
Y	T	I	N	G	I	D	T	Y	A	E	R	Y	M
V	E	I	A	T	M	I	S	G	R	I	D	D	I
E	L	M	B	E	Y	U	E	I	G	N	N	G	R
S	G	P	I	L	R	S	T	U	D	E	N	T	E
E	C	O	L	E	U	G	A	E	L	L	O	C	I
T	N	R	I	S	T	H	G	I	R	U	R	N	T
M	A	T	T	I	E	S	T	R	E	N	G	T	H
U	R	A	Y	N	S	E	L	A	E	M	E	O	A
S	Y	N	N	T	R	Y	I	F	R	I	E	N	D
E	C	T	G	V	A	L	U	E	G	I	Y	L	T
Y	L	I	M	A	F	K	T	C	E	P	S	E	R

STUDENT  
IMPORTANT  
STRENGTH  
ADMIRE  
RESPECT  
POTENTIAL  
VALUE  
FAMILY  
FRIEND  
UNDERSTAND  
DIGNITY  
RIGHTS  
ABILITY  
KINDNESS  
LOVE  
COLLEAGUE

Play this puzzle online at : <https://thewordsearch.com/puzzle/1982009/>

# have a go

What does respect mean to you? How do you show respect for others and yourself?

Try thinking of some words that link to having respect that can help finish off this acrostic poem. Some examples might be: T - treating others how you would like to be treated or E - everyone's feelings are important.

**r**  
**e**  
**s**  
**p**  
**e**  
**c**  
**t**

# showing respect

What are some of the things you do to show respect? Share some of your ideas for showing respect at home, school and to your friends and family. If you have any extra ideas you can use the space around the clouds.

at home

at school

to my friends

to my family

# emoji story

Can you write a story using emojis about a day in the life of your brother, sister or friend with Angelman Syndrome? You can use the emojis to write about how you feel about life with your sibling or friend with AS. We know that you may have bad days or negative feelings sometimes and its ok to talk about the bad things as well as the good.



Our sibling trustee, Sian, has written one as an example about her brother Gareth who has AS...



Gareth laughs a lot, he loves hugs but sometimes gets frustrated if we don't understand what he wants. He always waves to people he meets and wants everyone to clap when he does something good. He gives kisses by licking your cheek! Two of his favourite things are birthdays and Christmas, he loves presents. He finds going to the toilet very VERY funny!

# dream activity

Draw an activity that you wish you could do with your brother, sister or friend with AS Think about why you can't do this activity right now and what you can do to change this. For example, maybe you would like to paint a picture with them but they can't hold a brush, Could you paint with your hands or feet instead?

# communication

Using the Proloquo2Go communication boards in the pack see if you can have a conversation without using your voice. You could use a PDD book or an app on an iPad if you have one in your house. Just a suggestion, why don't you stick the two boards together so you make one core board.

Can you ask for your favourite food or activity?

How do you ask to use the toilet?

Can you talk about the weather or if you are too hot or too cold?

Can you tell someone that you are hurt or not happy?

Have fun using them to say different things.

If you can't use your voice, how do you talk about the things that are important to you? Think about how hard it must be for someone with Angelman Syndrome to do this all the time. It's no wonder they get frustrated or cross sometimes is it? Write down ways that you can make communication easier at home or school. Think about using photographs, symbols, real things like a hair brush or a cup (these are called 'objects of reference') or having an iPad or communication book available all the time.



# Angelman Syndrome - Communication

O	Y	P	E	T	I	R	W	I	U	B	G	N	A
G	U	E	D	E	V	I	C	E	A	O	K	L	O
W	D	A	P	I	W	G	W	C	E	O	S	R	C
S	S	P	U	C	A	P	S	T	L	K	T	L	E
E	E	H	O	O	R	E	I	T	P	A	O	T	S
R	E	O	I	S	D	D	N	L	V	S	A	N	E
U	G	T	U	L	F	E	G	O	R	C	W	A	I
T	A	O	P	O	L	M	I	L	I	S	T	E	N
S	U	G	O	B	V	C	O	N	G	E	E	A	G
E	G	R	D	M	E	C	U	G	F	T	A	D	E
G	N	A	E	Y	E	M	S	B	A	E	C	I	D
G	A	P	S	S	M	A	I	C	C	L	M	I	G
K	L	H	I	O	P	C	G	E	E	A	G	C	N
H	K	A	C	S	O	S	N	Y	A	P	T	O	H

SIGN  
DEVICE  
SING  
VOICE  
LANGUAGE  
PHOTOGRAPH  
GESTURES  
FACE  
IPAD  
BOOK  
COMMUNICATE  
SYMBOLS  
LISTEN  
WRITE  
DRAW

Play this puzzle online at : <https://thewordsearch.com/puzzle/1981875/>



a	b	c	d	word 	message 	yes 	Please get my AAC 	Charge my iPad 	You're welcome 	I have something to say 
e	f	g	h	email 	social media 	I don't know 	not ready 	That's not what I said 	Excuse me 	Let's chat 
i	j	k	l	m	n	maybe 	Please wait 	Something's wrong 	I'm joking 	I'm sorry 
o	p	q	r	s	t	no 	I need to talk to you 	Ask a yes/no question 	all heart eyes 	please 
u	v	w	x	y	z	whatever 	Do it myself 	I need a break 	LOL 	thank you 
1	2	3	4	5	.	oops/ backspace 	Please repeat that 	Help calming down 	poop 	Hurry up! 
6	7	8	9	0	space 	? 	Help 	I don't understand 	Chat 	awesome 

# have a go

Let's try another acrostic, this time using the word 'angelman'. What do you think of when you think of someone with a learning disability like Angelman Syndrome?

a  
n  
g  
e  
l  
m  
a  
n

# Angelman Syndrome - food and drink

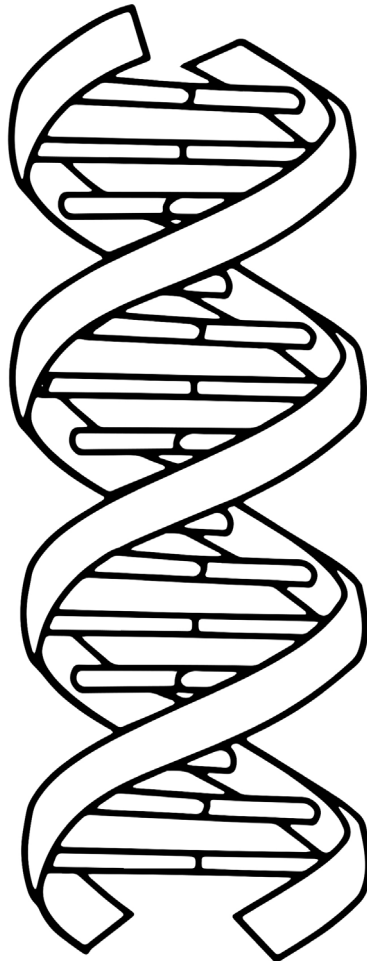
T	R	U	H	G	O	Y	I	P	T	A	E	E	I
Y	E	C	H	B	A	N	A	N	A	H	O	I	A
O	E	G	U	L	C	Y	E	D	A	W	E	E	S
S	C	S	O	E	R	S	E	S	T	Y	M	E	C
P	U	E	U	I	E	S	S	M	T	E	E	I	H
T	A	P	A	E	S	T	S	O	S	C	M	C	O
P	S	D	H	E	E	N	D	O	P	I	A	M	C
U	E	C	R	E	C	M	E	T	A	R	I	I	O
D	L	T	W	T	U	H	C	H	S	O	M	L	L
D	P	S	J	T	S	C	U	I	T	I	U	K	A
I	P	T	U	D	T	H	P	E	A	T	Y	N	T
N	A	M	I	K	A	O	M	M	R	O	J	D	E
G	O	L	C	T	R	A	T	S	P	O	A	O	L
A	P	A	E	U	D	E	A	D	T	R	B	O	O

SMOOTHIE  
SWEETS  
RICE  
YOGHURT  
DAIRY  
BANANA  
CUSTARD  
CHOCOLATE  
JUICE  
MILK  
PASTA  
PUDDING  
CHEESE  
DESSERT  
APPLESAUCE

Play this puzzle online at : <https://thewordsearch.com/puzzle/1981601/>

# DNA

Now you've completed your activity pack, why don't you have another go at thinking about the DNA that makes your brother, sister or friend with AS different but amazing in their own way. Can you think of anything different that you didn't write down or draw before?





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