Word Articulation and Sentence Articulation
Record Form

Arizona™-4

Arizona Articulation and Phonology Scale, Fourth Revision

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Name/ID			Year	Month	Day	Dialect
Andrew Simucase		Date of testing				
		Date of birth				
Gender	Grade	Chronological age*				Examiner
☐ Male ☐ Female		*Do not round up to the next month or year				

SCORE SUMMARY

Word Articulation	Sentence Articulation
Transfer total column sums from page 3 and add together to determine the Total Error Value	Transfer total column sums from page 6 and add together to determine the Total Error Value

Word Articulation

☐ Initial Consonants + ☐ Final Consonants + ☐ Vowels = ☐ Total Error Value

100 Total Possible Score − ☐ Total Error Value = ☐ **Word Articulation Total Score**

Sentence Articulation

☐ Initial Consonants + ☐ Final Consonants + ☐ Vowels = ☐ Total Error Value

100 Total Possible Score − ☐ Total Error Value = ☐ **Sentence Articulation Total Score**

SPEECH INTELLIGIBILITY INTERPRETATION VALUE

Word Articulation Total Score	Sentence Articulation Total Score	Total Score range	Interpretation of articulatory proficiency
☐	☐	95.0 to 100	Sound errors are absent or minimally noticed in continuous speech
☐	☐	85.0 to 94.5	Speech is intelligible, although noticeably in error
☐	☐	70.0 to 84.5	Speech is intelligible with careful listening
☐	☐	60.0 to 69.5	Speech intelligibility is difficult, even with careful listening
☐	☐	45.0 to 59.5	Speech usually is unintelligible
☐	☐	0 to 44.5	Speech is unintelligible

WORD–SENTENCE ARTICULATION CRITICAL DIFFERENCE SCORE

Difference between Total Scores for Word Articulation and Sentence Articulation = ☐   Significant? ☐ Yes ☐ No

LEVEL OF ARTICULATORY IMPAIRMENT

Word Articulation					Sentence Articulation				
Standard score (SS)	Confidence interval ☐90% ☐95%	Percentile rank	Test-age equivalent	Severity range	Standard score (SS)	Confidence interval ☐90% ☐95%	Percentile rank	Test-age equivalent	Severity range
				☐ Within Normal Limits (SS of 86 or higher) ☐ Mild (SS of 79 to 85) ☐ Moderate (SS of 71 to 78) ☐ Severe (SS of 70 or lower)					☐ Within Normal Limits (SS of 86 or higher) ☐ Mild (SS of 79 to 85) ☐ Moderate (SS of 71 to 78) ☐ Severe (SS of 70 or lower)

PERCENTAGE OF SPEECH IMPROVEMENT (FOR RETESTING)

Word Articulation	Sentence Articulation
[(☐ Total Score at retesting − ☐ Total Score at initial testing) ÷ ☐ Total Score at initial testing] × 100 = ☐ Percentage of Speech Improvement	[(☐ Total Score at retesting − ☐ Total Score at initial testing) ÷ ☐ Total Score at initial testing] × 100 = ☐ Percentage of Speech Improvement

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Registration required.

Picture card no.	Sound no.	Target word	Target sound	CIRCLE ONLY ERRORS			Error (Record the production)	Notes (Include full word transcriptions, behavioral observations, and responses to Language Prompts)
				Sound values				
				Consonants		Vowels		
				Initial	Final			
1	1	horse	h-	1.5				
2	2	**baby**	b-	1.0				
3	3	bathtub	æ			2.0		
	4		-b		0.5			
4	5	pig	p-	1.0				
5	6	cup	-p		0.5			
6	7	nine	n-	2.0				
7	8	train	-n		3.5			
8	9	**monkey**	m-	1.5				
	10		ʌ			1.0		
9	11	comb	k-	3.0				
	12		oʊ			1.5		
	13		-m		1.5			
10	14	cake	eɪ			1.5		
	15		-k		1.5			
11	16	**wagon**	w-	1.5				
	17		g-	1.5				
	18		ə			3.5		
12	19	dog	d-	2.0				
	20		ɔ			1.0		
	21		-g		0.5			
13	22	**table**	t-	3.5				
	23	red	ɛ			2.0		
	24		-d		3.0			
14	25	cat	-t		5.0			
15	26	jumping	dʒ-	0.5				
	27		-ŋ		1.5			
16	28	shoe	ʃ-	1.0				
	29		u			2.0		
17	30	fish	ɪ			3.5		
	31		-ʃ		0.5			
18	32	**TV**	v-	1.0				
19	33	five	-v		1.5			
20	34	**ladder**	l-	2.0				
	35		ɚ			2.0		
21	36	ball	-l		3.5			

Column subtotals for sounds 1–36 (Add circled error values only)			

WORD ARTICULATION

Picture card no.	Sound no.	Target word	Target sound	CIRCLE ONLY ERRORS Sound values Consonants Initial	Final	Vowels	Error (Record the production)	Notes (Include full word transcriptions, behavioral observations, and responses to Language Prompts)
22	37	ai<u>rpl</u>ane	pl- (*l* blend)	0.5				
	38	**yellow**	j-	2.5				
23	39	co<u>ld</u>	-ld (*l* blend)		0.5			
24	40	bird	ɝ			0.5		
25	41	<u>f</u>ork	f-	1.5				
	42		oɚ			3.5		
	43	knife	aɪ			1.0		
	44		-f		1.5			
26	45	car	ɑɚ			0.5		
27	46	ear	ɪɚ			0.5		
28	47	<u>r</u>ing	r-	1.5				
29	48	<u>tr</u>ees	tr- (*r* blend)	0.5				
	49		i (long *e*)			1.0		
	50	<u>th</u>is	ð-	2.5				
30	51	<u>ch</u>air	tʃ-	1.0				
	52		ɛɚ			0.5		
	53	<u>gr</u>een	gr- (*r* blend)	0.5				
31	54	wa<u>tch</u>	ɑ			1.0		
	55		-tʃ		0.5			
32	56	<u>th</u>umb	θ-	1.0				
33	57	mou<u>th</u>/ tee<u>th</u>	-θ		0.5			
34	58	<u>z</u>ipper	z-	1.0				
35	59	no<u>s</u>e	-z		2.5			
36	60	<u>s</u>un	s-	2.5				
37	61	house	aʊ			0.5		
	62		-s		2.0			
38	63	<u>st</u>eps/ <u>st</u>airs	st- (*s* blend)	0.5				
39	64	ne<u>st</u>	-st (*s* blend)		0.5			
40	65	**carro<u>ts</u>**	-ts (*s* blend)		0.5			
41	66	boo<u>ks</u>	ʊ			0.5		
	67		-ks (*s* blend)		0.5			

Column subtotals for sounds 37–67 (Add circled error values only)			

Total column sums (error values) for all sounds (1–67)		
Initial Consonants	Final Consonants	Vowels

(Transfer these three sums to the Word Articulation section on the front page of this Record Form to calculate the Total Error Value and Word Articulation Total Score)

WORD ARTICULATION

Additional Word Articulation items – You must administer these items if you intend to code Phonology

Picture card no.	Sound no.	Target word	Target sound	Error (Record the production)	Notes (Include full word transcriptions, behavioral observations, and responses to Language Prompts)
42	68	ch<u>ee</u>se	ʧ-		
	69		-z		
43	70	**gi**r**affe**	ʤ-		
	71		r-		
44	72	j<u>ar</u>	ʤ-		
	73		ɑɚ		
45	74	<u>br</u>i<u>dge</u>	br- (*r* blend)		
	75		-ʤ		
46	76	he<u>li</u>cop<u>ter</u>	l-		
	77		ɚ		
47	78	um<u>br</u>e<u>ll</u>a	br- (*r* blend)		
	79		l-		
48	80	e<u>l</u>epha<u>nt</u>	l-		
	81		-nt		

Additional notes | Use this space to record additional notes from the administration.

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SENTENCE ARTICULATION

Sample sentences		Administration method	
S1. Don't forget your cap and gloves.	**S4.** It's hard work to climb on rocks.	☐ Reading	☐ Imitation
S2. Look at the spider web.	**S5.** I cannot chew with my loose tooth.		
S3. Knock on the door to go inside.			

				CIRCLE ONLY ERRORS				
				Sound values				
				Consonants				
Sentence no.	**Sound no.**	**Target sentence**	**Target sound**	**Initial**	**Final**	**Vowels**	**Error** (Record the production)	**Notes** (Include transcriptions of additional sound errors and behavioral observations)
1	1	The horse is pretty.	h-	1.5				
2	2	The baby is in the bathtub.	b-	1.0				
	3		æ			2.0		
	4		-b		0.5			
3	5	Look at the pig play with the cup!	p-	1.0				
	6		-p		0.5			
4	7	I have nine cars on my train.	n-	2.0				
	8		-n		3.5			
5	9	The monkey took my comb!	m-	1.5				
	10		ʌ			1.0		
	11		k-	3.0				
	12		oʊ			1.5		
	13		-m		1.5			
6	14	Put the cake in the wagon.	eɪ			1.5		
	15		-k		1.5			
	16		w-	1.5				
	17		g-	1.5				
	18		ə			3.5		
7	19	The dog is under the table.	d-	2.0				
	20		ɔ			1.0		
	21		-g		0.5			
	22		t-	3.5				
8	23	Look at the red cat!	ɛ			2.0		
	24		-d		3.0			
	25		-t		5.0			
9	26	I was jumping and lost my shoe.	ʤ-	0.5				
	27		-ŋ		1.5			
	28		ʃ-	1.0				
	29		u			2.0		
10	30	The fish likes water.	ɪ			3.5		
	31		-ʃ		0.5			
11	32	The best TV is at five.	v-	1.0				
	33		-v		1.5			
12	34	Put the ladder and ball away.	l-	2.0				
	35		ɚ			2.0		
	36		-l		3.5			

Column subtotals for sounds 1–36 (Add circled error values only)			

SENTENCE ARTICULATION

Sentence no.	Sound no.	Target sentence	Target sound	CIRCLE ONLY ERRORS — Consonants Initial	Final	Vowels	Error (Record the production)	Notes (Include transcriptions of additional sound errors and behavioral observations)
13	37	The airplane is yellow.	pl- (*l* blend)	0.5				
	38		j-	2.5				
14	39	Ice cream is cold.	-ld (*l* blend)		0.5			
15	40	Look at the bird fly.	ɝ			0.5		
16	41	I eat with a fork and knife.	f-	1.5				
	42		oɚ			3.5		
	43		ɑɪ			1.0		
	44		-f		1.5			
17	45	My car is blue.	ɑɚ			0.5		
18	46	I hear with my ear.	ɪɚ			0.5		
19	47	I lost my ring by the trees.	r-	1.5				
	48		tr- (*r* blend)	0.5				
	49		i (long *e*)			1.0		
20	50	This chair is green.	ð-	2.5				
	51		tʃ-	1.0				
	52		ɛɚ			0.5		
	53		gr- (*r* blend)	0.5				
21	54	Watch me move my thumb.	ɑ			1.0		
	55		-tʃ		0.5			
	56		θ-	1.0				
22	57	I have a mouth and teeth.*	-θ		0.5			
23	58	This coat has a zipper.	z-	1.0				
24	59	My nose got red in the sun.	-z		2.5			
	60		s-	2.5				
25	61	My house has steps and stairs.*	ɑʊ			0.5		
	62		-s		2.0			
	63		st- (*s* blend)	0.5				
26	64	I see a nest.	-st (*s* blend)		0.5			
27	65	Let's eat carrots and read books.	-ts (*s* blend)		0.5			
	66		ʊ			0.5		
	67		-ks (*s* blend)		0.5			

Column subtotals for sounds 37–67
(Add circled error values only)

	Initial	Final	Vowels

Note. See Manual Chapter 2 for guidelines on which target word
 to consider when scoring sounds 57 (-θ) and 63 (st-).

Total column sums (error values) for all sounds (1–67)			
	Initial Consonants	Final Consonants	Vowels

(Transfer these three sums to the Sentence Articulation section on the
 front page of this Record Form to calculate the Total Error Value
 and Sentence Articulation Total Score)

Target sound	Imitation Contexts items									+ or −
f	faa fæ	aafaa æfæ	aaf æf	fee fi	eefee ifi	eef if	foo fu	oofoo ufu	oof uf	
ʤ	jaa ʤæ	aajaa æʤæ	aaj æʤ	jee ʤi	eejee iʤi	eej iʤ	joo ʤu	oojoo uʤu	ooj uʤ	
ʃ	shaa ʃæ	aashaa æʃæ	aash æʃ	shee ʃi	eeshee iʃi	eesh iʃ	shoo ʃu	ooshoo uʃu	oosh uʃ	
v	vaa væ	aavaa ævæ	aav æv	vee vi	eevee ivi	eev iv	voo vu	oovoo uvu	oov uv	
l	laa læ	aalaa ælæ	aal æl	lee li	eelee ili	eel iəl	loo lu	ooloo ulu	ool uəl	
l blends	flaant flænt	klee kli	ploo plu	eelk iəlk	ayflay eɪfleɪ	eetlee itli	zold zoʊld	ooshloo uʃlu	oolt ult	
j	yaa jæ	aayaa æjæ		yee ji	eeyee iji		yoo ju	ooyoo uju		
ʧ	chaa ʧæ	aachaa æʧæ	aach æʧ	chee ʧi	eechee iʧi	eech iʧ	choo ʧu	oochoo uʧu	ooch uʧ	
r	raa ræ	aaraa æræ	rai rɑɪ	ree ri	earee ɪɚri	roy rɔɪ	roo ru	ooroo uru	rau rɑʊ	
r blends	grayve greɪv	draasp dræsp	freez friz	troos trus	aaskree æskri	grayfrer greɪfrɚ	krootfraat krutfræt	werstroo wɝstru	breeskee briski	
r vowels	zerk zɝk	tearch tɪɚʧ	slerp slɝp	porzer poɚzɚ	larksee lɑɚksi	airtree ɛɚtri	erthaur ɝθɑʊɚ	sorlshoo soɚlʃu	werfor wɚfoɚ	
ð	thaa ðæ	aathaa æðæ	aath æð	thee ði	eethee iði	eeth ið	thoo ðu	oothoo uðu	ooth uð	
θ	thaa θæ	aathaa æθæ	aath æθ	thee θi	eethee iθi	eeth iθ	thoo θu	oothoo uθu	ooth uθ	
z	zaa zæ	aazaa æzæ	aaz æz	zee zi	eezee izi	eez iz	zoo zu	oozoo uzu	ooz uz	
s	saa sæ	aasaa æsæ	vaas væs	see si	eesee isi	ees is	soo su	oosoo usu	roos rus	
s blends	oofs ufs	sleeks sliks	aaskor æskoɚ	istwer ɪstwɚ	flookst flukst	staaksee stæksi	speezor spizoɚ	toespoon toʊspun	sqwaattle skwætəl	

Multisyllabic items

prelerseek prɛlɚsik	chingthrow ʧɪŋθroʊ	varshtearg vɑɚʃtɪɚg	thilodrench θɪlodrɛnʧ
zvorprice zvoɚprɑɪs	proonzairkeelt prunzɛɚkilt	spuhzeteefer spʌzɛtifɚ	charlethsblocks ʧɑɚlɛθsblɑks

SUPPLEMENTAL SENTENCES

Target sound	Supplemental sentence	Errors/Notes
f	Find the hat and take it off.	
dʒ	May I have just one more, please?	
ʃ	She made a big wish.	
v	The van is made of flowers.	
l	Look at the doll.	
l blend	My blue coat is getting old.	
j	You are great!	
tʃ	The children went to the beach.	
r r blend r vowel	The ride at her party was fun.	
	The girl ran to the door.	
	Where is the barn?	
	We are near the park.	
	Her hair is short.	
	She has an older brother.	
	The grass needs water.	
	Here is your milk.	
ð	The boy did not bathe.	
θ	I lost my third tooth.	
z	Going to the zoo is fun!	
s	We like to sing in class.	
s blend	Toy stores are the best!	
multisyllabic	**Lemonade** is my **favorite** drink.	
multisyllabic	The **thermometer** says it is one **hundred degrees outside**.	

PICTURE DESCRIPTION AND STORY RETELL

Circle picture(s) administered	Pet store Zoo Playground Soccer game
Circle administration method	Picture Description Story Retell
Record of examinee's utterances	

MLU (for Picture Description administration method only)

Calculate mean length of utterance (MLU) for each picture administered by counting the total number of morphemes and dividing by the total number of utterances

[ ] ÷ [ ] = [ ]

Total number of morphemes   Total number of utterances   Mean length of utterance (MLU)